DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY

MUHIMBILI MEDICAL CENTRE

This is to certify that all the cases in this book were treated by Dr. Godson Noe Koka Maseu under my direct or delegated supervision.

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HEAD, DEPARTMENT OF OBSTETRIC

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OBSTETRIC AND GYNAECOLOGICAL CASES AND COMMENTARIES

BY

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A DISSERTATION SUBMITTED FOR THE DEGREE OF MASTER OF MEDICINE (OBSTETRICS AND GYNAECOLOGY) OF THE UNIVERSITY OF DAR ES SALAAM.

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INTRODUCTION

I. ORGANIZATION OF OBSTETRIC AND GYNAECOLOGICAL SERVICES IN DAR ES SALAAM.

Muhimbili Medical Centre is one of the four consultant and teaching hospitals in Tanzania mainland. It receives referral cases from the three district hospitals in Dar es Salaam namely, Temeke, Ilala and Mwananyamala and also from private hospitals and dispensaries within Dar es Salaam. In addition, the centre also receives patients outside Dar es Salaam mainly from coast region, central, eastern and southern parts of Tanzania.

The centre was formed by an act of Parliament as a parastatal organization in July 1977 and it incorporates the Faculty of Medicine of the University of Dar es Salaam. The main duties of the centre are three fold:

i) Provision of curative and preventive services.

ii) Conduction of research projects.

iii) Training of different cadres of medical personnel e.g. postgraduate doctors, medical, dental and pharmacy undergraduate students, grade A nurses, health officers, radiographers, laboratory technicians and several other cadres. The department of Obstetric and Gynaecology is one of the departments in the surgical services devision.

OBSTETRIC SERVICES:

High risk obstetric patients are chanelled to the centre from the three district hospitals, private hospitals and dispensaries within Dar es Salaam and its suburbs. These units have their own Maternal and Child Health (M.C.H.) Clinics run by midwives and Maternal and Child Health Aids (MCHA). In these clinics, antena-

tal, postnatal and family planning services are offered. The selection of high risk patients is done according to a prescribed list of risk factors which is found in appendix I.

The normal cases are followed up antenatally and delivered in some of these untis which have maternity wings. Any intra-partum or postpartum complication arising is referred to Muhimbili which has a total of 162 obstetric beds distributed in 5 wards as follows:

i) Ward 33 is reserved for firm A patients

ii) Ward 37 caters for firm B patients

iii) Labour ward - 14 beds

iv) Ward 35 has 9 beds for obstetric intensive care patients

v) Ward 38 and 39 caters for firm C and D patients respectively.

ANTENATAL CARE AT MUHIMBILI NEW MATERNITY BLOCK.

The antenatal clinic in the New Maternity Block is run by consultants, specialists and residents daily except Saturdays and Sundays and Mondays. Apart from the referral cases from the peripheral clinics, it also provides services to grade I patients and staff who book at the centres' clinic. As there are four firms in the department (A, B, C and D) each firm has its own clinic day every week.

At booking, each patient is provided with a form M.F.C.W.I (refer to the copy attached). On the top of the form, the patient's identity is recorded - this includes name, address, age, occupation, religion and husband's name. Her gravidity and parity are then recorded and the past and present obstetric histories. Enquiry is made into the patient's past medical, surgical, gynaecological, family and social history. On physical

examination, the important features which are looked for include the general condition of the patient, pallor, musculo-skeletal, deformity, edema and jaundice. The height, weight, pulse and blood pressure are then recorded and the abdomen is palpated for any tender areas or masses. The liver and spleen are palpated for enlargement and renal angles for tenderness. The size of the fundus is estimated and compared with the dates. The lie of the foetus and position is assessed and the foetal heart is recorded. Thereafter, the examination is completed by thorough systemic examination which include the oropharynx, nose and ears, the neck breasts, chest, cardiovascular system and the limbs.

Urine is routinely examined in the clinic for albumin and sugar. Blood is taken for serological screening for syphilis (VDRL), haemoglobin estimation, blood grouping (A.B.O.) and Rhesus factor. Depending on the findings on physical examination, other additional investigations may be requested such as glucose tolerance test, ultrasonography and radiological investigations.

Every patient is supplied with ferrous sulphate tabs 200mg thrice daily to take after meals, folic acid tablets 5mg once daily, chloroquine tablets two tablets (300mg) weekly for prophylaxis throughout pregnancy and the pueperium. The patients are individually given health education on general health including diet, smoking, breast and teeth hygiene, travel, rest, coitus and clothing. For the primigravidae what is expected of them in labour and the process of labour is explained to them in simple language. Any problems arising in the course of pregnancy are managed accordingly.

membranes, post datism, antepartum haemorrhage, bad obstetric history, previous or elective Caesarean section and pyrexia of unknown origin including malaria.

INTRAPARTUM CARE:

The average number of deliveries per day in Muhimbili Medical Centre is 30 - 40 births. This range gives an annual range of 10,000 - 15,000 deliveries.

The deliveries which take place in Muhimbili Maternity wing are the high risk cases referred from the peripheral units and a few normal grade I cases. The cessation of Ocean Road Hospital to cater for the normal deliveries placed some strain on Muhimbili initially due to big patient but the situation has now improved slightly with opening of the maternity wings in Mwananyama, Ilala and Temeke District Hospitals.

ADMISSION TO THE LABOUR WARD:

On admission to the labour ward, the reason for admission is noted particularly the history of the onset of labour, drainage of liquor or vaginal bleeding. The antenatal card is then scruitinized for any at risk factors which is noted on the admission form which is continuous with a composite partogram. The patient is then thoroughly examined, note being taken of her general condition, pallor, blood pressure, oedema, temperature and height if unknown. Then, the fundal height, the size of the foetus, lie, presenting part and foetal heart are recorded. Urine is tested for albumin, sugar and ketone bodies. Vaginal examination is done where indicated as described under special procedures. Depending on the stage of labour, an enema may be given.

PROGRESS OF LABOUR.

The progress of labour is monitored graphically using a modification of Philpott's composite labour record in which all the details of labour progress, foetal and maternal condition are entered on a single piece of paper against a time scale. A copy is attached at the end of the introduction.

Partographic recording is started when the patient is in the active phase of labour i.e. having regular uterine contractions and the cervix is 3 cm. or more delated. When labour is established, it is expected that cervical dilation will progress at a minimum speed of 1cm per hour. An "alert line" is drawn 3 hours to the right of the initial vaginal examination. Another line known as the "action line" is drawn four hours and parallel to the right of the "alert line". These lines act as guide lined in monitoring the progress of labour and that in the absence of other contingencies, the patient is expected to deliver before crossing the "action line". Examples of actions which can be taken are augmentation of uterine contractions or Caesarean section. Thus, the partogram is very useful in detecting normal labour progress from abnormal progress and in so doing, action can be taken in time so as to avoid damage to the mother and the baby.

In addition to cervical dilatation, the progress of labour is monitored also by the descent of the foetal head. This is achieved by palpating abdominally the number of fifths of the head and the pelvic brim and this is recorded in the appropriate space in the partogram. Alternatively, this is assessed by the number of cm above or below the ischial spines. The state of the membranes and liquour are designated as: I = intact, M = Meconium stained and C = clear liquour. Uterine contractions are assessed

objectively according to their strength, duration and frequency. A week contraction is one which lasts for less than 20 seconds while moderate ones last for 20 - 40 seconds and strong ones last for more than 40 seconds. The number of contractions per 10 minutes is counted and recorded. Other parameters also recorded on the partogram are: the foetal heart, maternal pulse and blood pressure, urine testing for albumin, sugar and ketones bodies, temperature and the treatment given.

The labour ward is also equiped with a B scan Ultrasound machine and electrocardiotocographic machine. The former is frequently used but the electrocardiotocographic machine is not due to some technical faults.

The labour ward is divided into 3 rooms. All patients on oxytocin drip and those with trial of scar as well as those with E.P.H gestosis are placed in room one. Room two has 3 high beds. These mainly cater for those patients with breech presentations, multiple pregnancy or those patients where instrumental delivery is anticipated. It is also used for stitching episiotomies and tears (first and second degree). Patients with problems other than those mentioned above are managed in room 3. Room 2 is supposed to be a second stage room but is rarely used as such. There is also a trolley for resuscitation of the newborn in room 2. The constituents of the latter are shown in Appendix II.

Most deliveries are conducted by midwives of which there are 4 on the average per shift, while abnormal deliveries are conducted by doctors. The team of doctors consist of medical students, interns, residents or registrars. The medical students perform deliveries and repair of episiotomies under supervision. There is always a doctor in the labour ward for 24 hours and there is

also a senior doctor - specialist or consultant on call. The team of doctors and nurses working in the labour ward is far from adequate owing to the big patient load.

Although several efforts have been made to avoid sepsis in the labour ward, the standard of asepsis still remains far from ideal. Scrubbing brushes and soap are not available and sometimes even sterile gloves or swabs and antiseptic lotion are unavailable.

In the first stage of labour, pethidine and pethilorphan are the only analgesics used. Lignocaine 1% is used to infiltrate the perineum before an episiotomy is used. Epidural anaesthesia or other forms of anaesthesia are not used intrapartum.

Before delivery is conducted, the medical attendant scrubs and puts on sterile rubber gloves. The perineum is cleaned by antiseptic solution mainly Savlon 1:200 or cetrimide 1:30. The patient is encouraged to bear down with the contractions and as the head crowns, support of the perineum is done. Further encouragement to bear down is made and the head is delivered. The neck is checked from presence of cord around it which is then put away. Delivery of the anterior shoulder is effected by flexing the head downwards from the pubis. An assistant gives ergometrine 0.5mg intravenously or intramuscularly if there are no contraindications such as cardiac disease, pre-eclampsia or hypertension. The posterior shoulder is born by flexing the head upwards towards the pubis. The rest of the delivery is almost spontaneous. The child is held head down at a lower level than perineum.

The newborn's mouth and oropharynx are sucked clear of mucus using a mucus extractor. The cord is then clamped at

two places with long straight artery forceps and cut in between with a sterile pair of scissors. Apgar score of the child is determined in the first minute. See Appendix III. The child is wrapped in cloth and taken to resuscitation room for further resuscitation and finally application of a cord tie, examined for any obvious malformations and then given to the mother. The contents of the delivery dray are enumerated in Appendix IV. Delivery of the placenta is done by controlled cord traction as is described in obstetric case number 8. Vitamin K, 1mg intramuscularly is given to those babies born by instruments, premature babies and breech deliveries.

POST-NATAL CARE:

Post delivery the condition of the mother is monitored and the post delivery blood pressure and pulse are taken. Any evidence of undue vaginal bleeding is taken note of and treated according. Mothers and babies in good h general condition are usually transferred to ward 35 postnatal ward for further observation for at least 12 hours. If all is well they are discharged after haemoglobin has been checked if there is clinical suspicion of anaemia and after the child has had B.C.G. vaccine.

Upon discharge the patients are given appointments to attend the postnatal clinic in six weeks' time especially those who had difficult labours and pueperal periods. Prophylactic iron tablets and folic acid and weekly chloroquine tablets are continued for all these weeks. In the postnatal clinic, the mothers' general condition is assessed and the blood pressure is taken. The abdomen and the pelvis are examined for any abnormality. Family planning advice is given. The baby is also seen by the paediatrician.

OBSTETRIC INTENSIVE CARE UNIT (WARD 35).

This is a special 9 bed intensive care ward in which critically ill patients are admitted. About 50% of the cases admitted into this ward are those with severe E.P.H gestosis and Eclampsia. Other obstetric emergency conditions admitted into this ward include severe anaemia, epilepsy, bad obstetric history, severe hypertension, cerebral malaria, diabetes mellitus and cases of cardiac disease. The ward has a high bed for operative vaginal deliveries.

II. GYNAECOLOGICAL SERVICES.

Gynaecological patients are referred from peripheral dispensaries, health centres, private hospital, district hospitals and regional hospitals all over the country. However, the majority come from Dar es Salaam and its suburbs. Patients from upcountry are mainly those for radiotherapy or ones with vesico-vaginal fistulae. All the patients are admitted through the casuality. Emergency cases receive immediate attention while the cold cases after having been clerked and investigated are scheduled for definitive treatment. These are mainly cases of uterine fibroids, genital prolapse and urinary fistulae.

There are two gynaecological wards which have in 73 beds in total. These wards are always congested with many floor cases as the patients' load is heavy with a high turn over rate.

The main indications for admission are abortions and their complication which account for about 60% of all gynaecological admissions (Mtimavalye 1978, 1979/80). Other reasons for admission include Pelvic inflammatory disease, ectopic

pregnancies, uterine fibroids, ovarian tumours and cervical cancer.

Evacuation of the uterus for incomplete abortion is the commonest gynaecological operation. This used to be performed in the side room of one of the gynaecological wards but owing to poor working condition in the room, all the evacuations are nowadays performed in theatre. Infected cases and very anaemic patients are treated and resuscitated first before evacuation. The septic cases are kept on high doses of antibiotics commonly consisting of Crystalline Penicillin 5 Meg units 4 - 6 hourly and Chloramphenicol 500mg - 1gm 6 hourly intravenously. Evacuation is then done after attaining good plasma levels of the drugs usually after 3 - 6 hours.

The main emergencies encountered in gynaecology are rupture tubal pregnancy, acute pelvic inflammatory disease with or without peritonitis, oelvic abscess, septic shock, ovarian cyst accidents such as torsion or rupture or bleeding into the cyst.

Patients who have undergone surgery are given outpatient gynaecological clinic appointment for follow up. As in obstetrics, it is not possible to follow all the patients because of the heavy patient load.

There is a special infertility clinic which is held once a week by firm A. The clinic is fully booked as far ahead as 4 - 5 months. Other firms mix the infertility cases with other gynaecological cases.

Patients with carcinoma of the cervix are worked up and after examination under anaesthesia for biopsy and staging of the disease they are transferred to Ocean Road Hospital for

radiotherapy. Usually, external beam irradiation is given in divided doses until a dose of 8,000 rads is achieved. Intracavitary irradiation was not available when this account was written. After radiotherapy, patients are reassessed and may be discharged to attend follow up after three months time depending on their response to treatment.

III. SPECIAL PROCEDURES:

In the cases presented, some procedures are repeated many times. These are going to be described here and reference can be made to them where need arises.

i) Examination under Anaesthesia (EUA)

This procedure is common in obstetrics and gynaecology. In gynaecology it is done for diagnosis of pelvic masses in abese patients or young children. It is also done in the staging of certain genital malignancies e.g. carcinoma of the cervix. E.U.A has a place in cases of primary amenorrhoea in order to determine the presence or absence of the uterus, haematometra, uterine malformations and urinary fistulae.

In obstetric practice E.U.A is indicated in cases of severe Antepartum haemorrhoea due to placenta praevia. It is also done in cases of undetermined cause(s) of post partum haemorrhage especially with a uterus which has a previous scar.

Anaesthesia:

General anaesthesia is used as described for Caesarean section. Sometimes after induction with thiopentone 250mg intravenously, the anaesthesia can be maintained with a mixture of N_2O, Oxygen and halothane using a face mask without intubation.

PROCEDURE:

In the theatre the patient is anaesthetized in supine posi-

tion. She is then put in lithotomy position, the legs supported by lithotomy poles. The end of the table is dropped down and the patient is gently pulled down so that her buttocks rest at the edge of the operating table.

The doctor and assistant scrub for 5 minutes with soap and brush. After drying the hands with sterile towel, they put on sterile rubber gloves. A tray for E.U.A as well for Caesarean section are kept ready in cases of placenta praevia.

The vulva and vagina are cleaned with 1:200 Savlon or 1% Chlorhexidine solution and the patient is draped in sterile towels and leggings. With the left hand holding the labia apart from external urethral area is swabbed once with a gauze. The urinary bladder is then catheterized by inserting a metal or rubber catheter and the urine is collected in a kidney dish.

A lubricated Auvard's or Sim's speculum is gently introduced into the vagina and the cervix is then visualised. A sponge holding forceps without a sterile swab aids this visualization by gently pushing a way anteriorly the anterior vaginal wall which may be obstructing the view of the cervix. Using sterile gauze swabs the vagina is mopped dry. The cervix and vagina are inspected for any source of bleeding. The instruments are then removed.

The middle finger is lubricated and then gently introduced with the index finger into the vagina by pressing down the fouchette. The four fornices are palpated in turn for any masses between the examining fingers and the presenting part. Then one finger is gently introduced into the cervical os and gently advanced to explore the lower segment as far as about 3 inches.

If no placenta can be felt, the membranes are ruptured with a sterile Kocher's forceps. The patient is sent to the ward and labour is angmented with oxytocin by titrating it against uterine contractions. If placenta praevia is found, it is graded and managed according to the following guideline. In grades I and II anterior the membranes are ruptured and an Oxytocin drip is set up and labour monitored as is described in Obstetric case number 3 Caesarean section.

ii) Vaginal examination in labour.

The main indication for vaginal examination in labour is to assess cervical dilatation, effacement, station of the presenting part, caput or moulding, shape and capacity of the pelvis.

The hands are thoroughly scrubbed using a boiled brush and soap for 5 minutes with running water. A sterile disposable pair of gloves or rubber gloves are then put on. A screen is put around the patient. With the patient in dorsal position with her legs flexed at the knee joints, the vulva is swabbed with left hand; first on the left side and then on the right side using swabs soaked in the antiseptic solution (Savlon 1:200 or 1% chlorhexidine). This is done using swabs picked with the right hand and handed over to the left hand and the swabbing is done once only anteroposteriorly. The labia are then parted using the left hand and the vaginal introitus is then swabbed once anteroposteriorly using a fresh swab with the right hand. While still parting the labia, the middle and then the index finger of the right hand are gently introduced into the vagina by pressing down the fouchette. Before these fingers are inserted they are first lubricated with hibitane or any other antiseptic cream.

iii. MAKING AND REPAIR OF AN EPISIOTOMY:

An episiotomy is a deliberate incision made in the perineum to widen the vaginal outlet in the process of birth.

In all cases requiring an episiotomy a J-shaped postero-lateral type is done. This done after scrubbing and wearing sterile gloves. The vulva is cleaned as has been described. The perineum is infiltrated with 1% lignocaine and as the presenting part distends the perineum two fingers are inserted into the vagina and the episiotomy is made between the two fingers using Mayo's scissors. Bleeding can be very brisk in which case the bleeders are clamped and ligated using chromic catgut number 2/0.

In repairing episiotomies, the vaginal mucosa is first sutured with continuous chromic catgut No. I. The deeper tissues are then stitched with a few interrupted Number 1 chromic catgut sutures. The perineal skin is finally sutured with some interrupted catgut stitches.

iv) Urethral Catheterization.

The doctor scrubs and puts on sterile rubber gloves as in any other sterile procedure.

The patient is placed in lithotomy position with legs apart supported by two assistants. The labia are swabbed as described in vaginal examination. The labia are then held apart with the left hand until the urethral meatus is visualized. Using the right hand the external urethral meatus is swabbed once anteroposteriorly. A sterile urethral catheter held with sterile gauze is dipped into chlorhexidine cream is gently introduced into the urethra. Slight suprapubic pressure is applied to ensure complete emptying of the bladder.

v) Opening and closure of the abdomen:

a) Opening.

In all the cases of laparatomy and Caesarean section a sub-umbilical midline incision was used. Although this incision is quicker to perform as the area is relatively avascular, it has the disadvantage of poor healing and incisional hernia or burst abdomen may be the result.

Having anaesthetized the patient in dorsal position, the abdominal site is cleaned with Savlon 1:200 or cetrimide 1:30 or 1% chlorhexidine solution. The cleaning is done in such a way that the sub-umbilical midline area is cleaned first then moving peripherally so that the which area below the nipples to the level of the knees is cleaned. Weak iodine solution 7% is then applied in the same manner. The excess amount of iodine is wipped off using a dry swab on sponging forceps or using spirit.

The skin is cut boldly with a scalp from just below the umbilicus to about the level of the upper border of the symphysis pubis. The blade is changed and then the subcutaneous fat is cut so as to reach the rectus sheath. Active bleeders are secured with small artery forceps and tied with plain catgut 2/0.

A small vertical incision is made on the anterior rectus sheath. The slit edges of the rectus sheath are held by two Spencer Wells forceps. A pair of Mayo's scissors is then introduced under the rectus sheath through the incision with the blades closed. By opening the scissors below the rectus sheath a tunnel is made between the rectus muscle posteriorly and the rectus sheath anteriorly. The rectus sheath is then cut longitudinally above and below the slit. The two Spencer Wells

forceps are then applied at the medial leaf of the rectus sheath. The medial edge of the rectus muscle is identified. By sharp gentle dissection using the scalpel, separation of the rectus muscle from the underlying posterior leaf of the rectus sheath, tranversalis fascia and peritoneum is achieved.

The peritoneum is gently picked at two points using two long artery forceps making sure that the gut is not included. A cut is made between the forceps with a scalpel. In situations in which there is a lot of retroperitoneal fat this procedure may have to be repeated. With the left index and middle fingers inserted in the peritoneal cavity, the peritoneum is opened in layers uder direct vision by cutting in between the two fingers in layers with a pair of Mayo's scissors. This procedure is done above and below. Care is taken not to inquire the bladder or big vessels.

b) Closure of the abdomen.

Closing the abdomen is done after one has satisfied oneself that haemostasis has been achieved and that the linen and instrument count are correct.

The peritoneum together with the rectus sheath are held by artery forceps on the inferior and superior aspects and also in the middle area. The peritoneum is then stitched with continuous chromic catgut Number 0 on a round body needle. To minimize adhesions, the peritoneum is inverted while stitching. The rectus sheath is sutured with continuous chromic catgut Number 2 or polyglycolic acid suture number I on a trocher needle. Occasionally the anterior rectus sheath was sutured with non-absorbable material such as silk, ethilon or tickron. This was mainly done in cases in which wound healing is likely

to be impeded as in anaemic or malnourished patients and also in cases of repeat operations. The subcutaneous layer was only approximated in obese patients with plain catgut number 2/0. The skin was closed with No. 0 silk interrupted suture on a cutting needle.

BED SIDE TESTS:

i) Urine testing for proteinuria.

Freshly voided or catheter specimen of urine in a clean container is used. Catheter specimen of urine was obtained in patients with vaginal discharge or bleeding.

The test is done using albustix reagent strips. The test area of the reagent is made up of cellulose impregnanted with tetra bromophenol buffered to an acid p.H. In the presence of protein the yellow test area turns green. A strip of the test paper is deeped into fresh uncentrifuged urine in a container and almost immediately it is compaired to a scale on the bottle containing the strips. The amount of protein in the urine is recorded as follows:

i) Trace (5 - 20mg/100 ml.)
ii) 1+ (30mg/100 ml.)
iii) 2+ (100mg/100 ml.)
iv) 3+ (300mg/100 ml.)
v) 4+ (1000mg/100 ml.)

ii) Gycosuria.

A qualitative test using clinistix reagent strip is employed. The reagent strip is impregnated with glucose oxidase, peroxidases and orthotolidine. In the presence of glucose oxidase, glucose is converted to gluconic acid and hydrogen peroxide. In the presence of peroxidase, hydrogen peroxide

convertes orthotolidine to the blue oxidazed form. This is the basis of a positive test if on dipping clinistix reagent strip into urine, the test area turns blue.

APENDIX I:

The basis for referral and delivery in the New Maternity Block is as follows:

I. PREVIOUS OBSTETRIC HISTORY

Caesarean section

Instrumental delivery

Manual removal of the placenta

Third degree perineal tear

Antepartum haemorrhage

Postpartum haemorrhage

Diabetes mellitus

Cardiac disease

E.P.H. Gestosis

Hypertension

Eclampsia

Grandmultiparity

(≫ para 8)

II. PHYSICAL FINDINGS.

Musculoskeletal deformities

Anaemia in pregnancy

Height below 145 cm. in primigravidae

Abnormal lie

Malposition or malpresentations

Multiple pregnancy

Polyhydramnios

Intra uterine fetal death.

III. PREVIOUS GYNAECOLOGICAL OPERATIONS.

Third degree perineal tears, repair of vesico-vagina fistulae, myomectomy and operations for genital prolapse or urinary incotinence.

IV. COMPLICATIONS OF LABOUR AND MISCELLANEOUS.

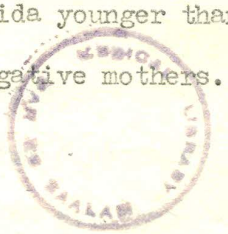
Fetal distress

Poor progress of labour

Premature rupture of membranes

Primigravida younger than 16 or older than 35

Rhesus negative mothers.



APPENDIX II:

NEWBORN RESUSCITATION TRAY

1. Laryngoscope
2. Ambu respirators
3. Mucus extractor
4. Sucker
5. Endotracheal tubes
6. Oxygen
7. Vit. K_1
8. 10% Dextrose
9. 10% Calcium Gluconate
10. Needles and syringes - 10 cc
    - 5 cc
11. Gauze swabs
12. Nasal catheters
13. 8.4 Sodium bicarbonate 20 ml. ampoules.

APPENDIX III.

APGAR SCORE

SIGN	SCORE 0	SCORE 1	SCORE 2
Heart rate	Absent	Below 100 per minute	Over 100 per minute
Respiratory effort	Absent	Gasping, Irregular	Good crying
Muscle tone	Limp	Some flexion	Active motion
Colour	Body pale of blue	Body pink extremities blue	Complete pink
Reflex irritability	No response	Cry	Vigorous cry

APPENDIX IV:

DELIVERY TRAY.

1. Two long artery forceps
2. One pair of scissors
3. Antiseptic lotion (1% Chlorhexidine, 1:200 Savlon)
4. A pair of rubber gloves
5. 6 sterile swabs and pads
6. Ergometrine lample
7. Lignocaine 1%
8. Two syringes and needles
9. Sterile towel.

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0.1 ADVANCED ABDOMINAL PREGNANCY : LAPARATOMY AND DELIVERY OF A LIVE NORMAL BABY.

Name of patient: Mrs. C.T.

Reg. Number: 4353/84

Age: 28 years

Address: Kinondoni A area Dar es Salaam.

Date of admission: 30. 4. 1984

Date of operation: 4th May 1984

Date of discharge: 14th May 1984

SUMMARY:

Mrs. C.T., a gravida 5 para 4 patient was referred to the high risk antenatal clinic in Muhimbili Medical Centre from Magomeni. She presented with a history of 9 months amenorrhoea and intermittent abdominal pains which had been of increasing intensity for the previous one week.

She was admitted to the antenatal ward and clinical and radiological investigations revealed an extrauterine pregnancy. This was confirmed at laparatomy and a live male baby weighing 2.6kg. was delivered. The placenta and membranes were removed intact and her post operative recovery was uncomplicated.

HISTORY OF THE PRESENT PREGNANCY:

The patient did not remember the exact date of her last normal menstrual period. She vaguely recalled that she had her last period sometimes in early August 1983 and that she was 9 months amenorrhoeic. She first felt fetal movements in mid November 1983.

She booked for antenatal care in Magomeni on 15/3/1984 where she was found to be 32 weeks pregnant and her haemoglobin

and blood pressure were reported to be 70 (10.4gm/dl) and 110/60 mmHg respectively. There were no abnormalities detected in her second visit on 2/4/1984. On the third visit (30/4/84) she was noted to have abdominal tenderness and the fetus was in transverse lie for which she was referred to Muhimbili on the same day.

On arrival in Muhimbili Medical Centre she reported that she had been well until about one week ago when she developed intermittent sharp abdominal pains which had been increasing in intensity for the past one week. She also reported that fetal movements were painful for the past one month.

There was no history of fever, dysuria or vaginal bleeding or discharge. She denied history of any episode of vaginal bleeding in this pregnancy. Her bowel habits were normal and her appetite was good.

PREVIOUS OBSTETRIC HISTORY:

She was para 4 and had 3 living children. In her third pregnancy she developed abdominal pains and vaginal bleeding with cessation of fetal movements at term. She was admitted and blood transfusion was given and she delivered a fresh still birth after labour was induced with artificial rupture of membranes and oxytocin drip.

Apart from this complication, the rest of her pregnancies were uncomplicated antenatally, intrapartum and their pueperia were normal.

GYNAECOLOGICAL HISTORY:

Her menarche was at the age of 14 years. Her menstrual periods lasted for 3 - 5 days in a regular cycle of 30 days. The flow was normal. She did not remember for certain her last

to her booking blood pressure of 110/60 mmHg. The jugular venous pressure was not elevated. There was no evidence of cardiomegaly clinically. The first and second heart sounds were normal and there were no murmurs.

Abdominal examination.

The abdomen was asymmetrically distended more towards the left with obvious bulge in the flanks bilaterally. It was moving with respiration. Fetal movements could be seen. There were no surgical scars or therapeutic marks.

It was generally soft to palpation, and slightly tender and fetal parts could palpated easily. The fetus was once felt moving.

The uterine fundus corresponded to that of a 36 weeks pregnancy size. The fetus was high in the abdomen and was in transverse lie with the head in the left lumbar area. Uterine contractions could not be elicited on abdominal palpation.

The liver and spleen were not palpable. The renal angles were not tender.

The fetal heart could be picked just below the umbilicus and was 144 beats per minute and regular. A uterine souffle could not be heard.

Vaginal examination.

The external genitalia and vagina were normal. The cervix was healthy with a bluish tinge and parous os. There was no bleeding noted in the external os.

On digital examination the cervix was soft with a closed os. It was felt displaced to the right side and it was high. On bimanual palpation the uterus was enlarged to 8 weeks pregnancy size and it was felt separate from the abdominal mass.

DIAGNOSIS: Advanced extra-uterine pregnancy.

PLAN OF MANAGEMENT:

The patient was admitted to the antenatal ward for work up and planned for laparatomy on an elective list.

INVESTIGATIONS:

a) Haematological:

- Haemoglobin 10.4 gm/dl.
- Blood grouping and cross-matching - Group O Rh. D positive. Three units of blood equivalent to 1500ml were made ready for the operation.
- White blood cell count: Total 8,800/mm^3 with a differential of 76% Neutrophils, 23% Lymphocytes and 1% Eosinophils.
- Serological test for syphilis (V.D.R.L.) - negative.

b) Urine.

Negative for proteinuria, glycosuria and pathogens.

c) Radiological.

Plain abdominal A.P and lateral X-ray views were requested.

i) A.P view: Number 28246 - showed a mature fetus in tranverse lie away from the maternal pelvis. Maternal intestinal gas shadows intermingled with fetal parts could be seen. There was no uterine shadow around the fetus.

ii) Lateral view: Number 28247 - showed fetal skeleton superimposed on maternal spine. There were no obvious fetal skeletal malformations.

PREPARATION FOR LAPARATOMY:

Pre-operatively, the haemoglobin of the patient was 10.6 gm/dl. She was re-cross matched and 2 more units (1000 ml) of Group O Rh D positive were reserved for the operation.

Abdominal preparation for laparatomy was done as it has been described elsewhere, Nothing was allowed orally after 10 p.m on the night before the operation.

Pre-medication:

The patient was pre-medicated with atropine 0.6mg intramuscularly on arrival in theatre. Pethidine was not given. An intravenous drip was set up with a big canula. Catheterization was not done as the patient had been instructed to pass urine some minutes before.

Induction of Anaesthesia and Maintainance:

Anaestheisia was induced by freshly prepared thiopentone sodium 250mg intravenously slowly. The patient was relaxed with 40mg suxamethonium bromide slowly intravenously. Intubation with a cuffed endotracheal tube was done. Anaesthesia was maintained with a mixture of Oxygen and ether using intermittent positive pressure ventilation after paralysing the patient with gallamine triethiodide (Flaxedil). Smooth anaesthesia was achieved and the patient remained well relaxed throughout the operation. There was no vomiting.

PROCEDURE AND FINDINGS:

The skin site which consisted of an area from the level of the breasts to the thighs was clenaed with Savlon 1:200 solution starting from the midline. Weak iodine was then used in the same manner and the excess amount of iodine was dried off using a dry swab on a sponge holding forceps. Sterile towels were then applied to drape the area. A sucker was secured in position.

The abdomen was opened through a subumbilical midline incision using the same technique as has been described in the

introduction. On opening the abdomen, an intact extrauterine pregnancy attached to the posterior abdominal wall and right broad ligament was noted. Kicking movements of the fetus were witnessed through the membranes which were completely surrounding the fetus. The uterus was enlarged to that of 10 weeks pregnancy size and was soft with multiple small subserosal fibroids. The left tube had few adhesions to the membranes and the right tube was stretched on the gestational sac.

Using a pair of Kocher's forceps, the membranes were gently picked and ruptured. The liquor was clear and was sucked off with a sucker. Delivery of a male baby of an Apgar score of 6 was easily achieved after excision of the membranes at the site of amniotomy using a Mayo's scissors and a non-toothed dissecting forceps.

The placenta was attached to the posterior abdominal wall and partially to the right broad ligament through a small pedicle which was about 3cm wide. This pedicle was doubly clamped with two Kocher's forceps and the placenta was removed in toto with the membranes and the right tube which was adherent to them. The stump was transfixed with chromic catgut number 2 at two places care being taken to avoid puncturing the vessels in the stump by taking bites peripherally in the stump.

The peritoneal cavity was explored for any undue bleeding sites and there were none. There were no blood clots. Both ovaries looked healthy and liver and spleen were normal.

The abdomen was then closed in 3 layers without leaving a drain. The peritoneum was closed by chromic catgut number 2/0; the rectus sheath with chromic catgut number 2 on a cutting needle and the skin with silk. The blood loss was about 500 ml.

THE INFANT:

The Apgar score of the baby was 6 at 1 minute. It had no obvious congenital malformations. It was a male baby, weighing 2.6kg and it looked mature. The baby was sent to the neonatal unit for care and was discharged to its mother on the second day.

POST-OPERATIVE MANAGEMENT:

1. The blood pressure and pulse of the patient were monitored half hourly for the next 6 hours and then 4 hourly. A 4 hourly temperature chart was started. These parameters remained normal.
2. The patient got one unit of blood intra-operatively and she was to get the remaining 500ml of blood thereafter continue with an intravenous drip of Dextrose Saline 2.5L per 24 hours.
3. An input and output chart of fluids was to be started and maintained for the next 48 hours.
4. She was given Pethidine injection 100mg intramuscularly 4 - 6 hours for 24 hours to relieve pain.
5. Ampicillin injection 500mg intramuscularly was given 6 hourly and then capsules 500mg 4 times daily for 4 days after the first 48 hours for prophylaxis.
6. Haemoglobin was to be checked on the second post-operative day. This was 9.6 gm/dl.

FOLLOW UP:

The patient recovered well from anaesthesia. Her condition was good and improved steadily post-operatively. On the first post-operative day she was afebrile and pink. Bowel sounds

were present and the intravenous drip was discontinued. She was started on oral fluid sips and ambulation started.

In the following days there was steady improvement. The wound healed well by primary intention and stitches were removed on the 8th post-operative day. The mother and her baby were discharged in good general condition on the 10th day post-operatively.

The patient was seen again in the postnatal clinic 5 weeks later on 26th June, 1984. She had no complaints. There was nothing remarkable per abdomen. The uterus was normal size and there were no pelvic masses. Her haemoglobin was 11.8gm/dl.

COMMENTARY:

Advanced abdominal pregnancy is an uncommon obstetric condition. Hospital figures show an incidence ranging from 1 in 402 to 1 in 15,000 deliveries [1, 2, 3]. In Muhimbili Medical Centre, the incidence is in the range of 1 in 3259 deliveries or 1 per 53 ectopic pregnancies[4].

The great majority of abdominocyesis are of the secondary type commonly following tubal abortion. Rarely, abdominal pregnancy may occur after migration of the fertilised ovum through a Caesarean section scar rent in the uterus or as a result of implantation of the fertilised ovum primarily in the peritoneal cavity.

Primary abdominal pregnancy is extremely rare. The criteria for its diagnosis is based on the following points namely:

i) The finding of normal fallopian tubes and adnexae without evidence of a recent pregnancy.

ii) Absence of uteroperitoneal fistulae.

iii) The finding of pregnancy exclusively related to the peritoneal surface[5].

In this particular case, it was difficult to tell whether this was a primary or secondary abdominal pregnancy. This was because the pregnancy was advanced and the tubes could not be studied for either rupture or abortion. Moreover, the pregnancy was not exclusively related to the peritoneal surface.

Unlike in this case, the diagnosis of abdominal pregnancy in the majority of cases can be extremely difficult because of the variable presenting features. Clinical examination can be suggestive but not definitive. However, the cornerstone in the diagnosis of abdominal pregnancy is a high index of suspicion[6, 7]. In fact, it has been shown that once the diagnosis is suspected, proving its presence is rarely difficult[7]. Although the presenting features of abdominocyesis can be extremely variable, abdominal pain, vaginal bleeding in early pregnancy together with recurrent abdominal pain, painful fetal movements and difficulty in fetal palpation which were in this particular case have been found to be very useful symptoms and signs in making a diagnosis[4]. The simple radiological investigations done in this case almost confirmed the diagnosis in this particular case. The salient findings were a term sized fetus in transverse lie high up in the abdomen on a plain antero-posterior view and fetal skeleton superimposed on maternal spine and maternal gas shadows intermingled in the fetal skeleton on a lateral view. Other useful radiological signs which were not found in this case were those stated by Greech 1965 namely:

i) Fixed fetal lie on repeated X-ray views.

ii) Unusual clarity of the fetal skeleton due to absence of

uterine wall.

iii) Abnormal placent shadow.

However, there are several pit falls of radiological findings as far as the diagnosis of abdominocyesis goes. Fetal overlap of the maternal spine is rarely demonstrated[8] and it has been shown even in intrauterine pregnancy particularly in the rare sacculated uterus. Absence of uterine shadow around the fetus may be difficult to ascertain admist inflammatory or oedematous thickening of the membranes. Pelvic arteriography is regarded as conclusive and the definitive diagnostic sign is a lithopaedion (8, 9). Other diagnostic tools in abdominal pregnancy include ultrasound which seem to be more specific and less invasive than X-rays.

Two crucial questions which arise in the management of a case of abdominal pregnancy and these are when to operate and what should be done to the placenta. In this particular case, laparatomy was done almost immediately after the diagnosis was made. Opinion is divided as to when a laparatomy should be done. Many authors advocate immediate surgical management because of the fear of pre-operative intra-abdominal haemorrhage whereas others advocate an expectant management in hospital and intervention when there is impanding threat of maternal or fetal well being or when the fetus is rearable in extra-uterine life.

There is no controversy that the maternal outcome is far better when the placenta is removed at laparatomy if circumstances allow. If the placenta is left in situ, several complications can arise. These infection, secondary haemorrhage, hypofibrinogenemia, intestinal obstruction or paralytic ileus and prolonged febrile morbidityleading to prolonged hospital

stay or even maternal death.

Fetal outcome in abdominal pregnancy is also known to be poor. In East Africa a fetal loss of 100% was reported in a study of 13 cases from 1971 to 1977. Fetal demise is invariably certain if the membranes are found ruptured at laparatomy. With intact membranes, pressure deformities are common. These include: deformities of the spine, chest, both extremities, facial asymmetry and torticolis[10]. None of these were found in this particular case.

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0.2 SEVERE ANAEMIA IN PREGNANCY : BLOOD TRANSFUSION AND PARENTERAL IRON THERAPY : NORMAL DELIVERY.

Name: Mrs. R.I. A 17 year old primigravida.

Occupation: Housewife

Reg. No: 367020

Address: Mtoni kwa Aziz Ally, Dar es Salaam

Date of admission: 6th February 1984

Date of discharge: 11th February 1984

Date of delivery : 5th April 1984

SUMMARY:

Mrs. R.I. was referred from Temeke Hospital at a gestational age of 28 weeks on account of anaemia. She was investigated for the cause of anaemia and treated with packed cells and parenteral iron.

She delivered normally and she was discharged with a good haemoglobin. Some aspects of malaria and the management of anaemia in pregnancy are discussed.

HISTORY OF THE PRESENT ILLNESS:

Mrs. R.I. was referred from Temeke hospital on account of a 2 day history of general body weakness, palpitations and dizziness. She reported that she was seven moths pregnant and that she was otherwise well unti two days prior to admission when she developed the above symptoms. The general body weakness was more marked when she indulged in strenous exercises and she admitted that she became dyspnoeic in doing so. There was no history of fainting attacks, fever or headaches or swelling of the legs. Her appetite was good and her micturition and bowel habits were normal. There was no history of cough or

chest pains or difficulty in breathing. R/o pyelonephritis

She went to Temeke hospital where she was told that she was anaemic and was advised to go to Muhimbili Medical Centre with donors for blood transfusion.

PREVIOUS MEDICAL AND SURGICAL HISTORY:

The patient had not had any surgical operation nor had she suffered from any severe or chronic illness. She had never had jaundice or bone pains in the past. However, she had fever, general malaise and headache about 5 days back for which she was treated with chloroquine and aspirin at Temeke as an out-patient and she got cured on the next day.

GYNAECOLOGICAL HISTORY:

The patient did not remember the age at which she had her menarche. She reported that she had regular normal menstrual periods lasting for 4 days in a cycle of about 30 days. She had never had menorrhagia. Her last normal menstrual period started on the 6th July 1983, thus her expected date of confinement was 13th April, 1984. She was therefore 28 weeks pregnant.

OBSTETRIC HISTORY:

She was a primigravida. She booked in Temeke M.C.H. clinic when she was 24 weeks pregnant and all was well with her. Since her booking visit, she had not any other problems besides the ones mentioned earlier. She denied having had any vaginal bleeding or discharge or swelling of the feet.

FAMILY HISTORY:

None of her relatives had diabetes or hypertension or mental disease. There was no history of contact with a case of pulmonary tuberculosis. There was no history of twins in her family neither

her husband's. None of her family members had suffered from jaundice. The size of her family consisted of four people and they were staying in two rented rooms.

SOCIAL HISTORY:

She was a primary school leaver who was married to a carpenter. She neither smoked nor drank alcohol and she was a housewife. The house they were staying in had a pit latrine. She was acustomed to wearing shoes always and used a mosquito net at night time.

DIETARY HISTORY:

She denied any history of food taboos. Her appetite had been good ever since she became pregnant. The main foods they ate were maize, beans, green vegetables and they could afford meat once or twice a week. She had a small vegetable garden in her compound.

CLINICAL EXAMINATION:

General examination:

The patient looked ill and very pale. She was 162cm tall and she weighed 65kg. There was no musculoskeletal deformity. She was afebrile and not jaundiced. There was no edema or lymphadenopathy.

Mouth and Throat.

The gums and teech were healthy and there were no septic foci in the oropharynx.

Neck:

The thyroid gland was not enlarged and the cervical lymph-nodes were not palpable.

Chest:

The breasts were well developed and symmetrical. Clear fluid could be expressed from the nipples which were normal. There were no lumps or tender areas palpated.

She was not dyspnoeic. The thoracic cage was symmetrical. Breath sounds were versicular and there were no added sounds.

Cardiovascular system:

The pulse rate was 102 beats per minute, regular but of increased volume. It was not collapsing, The jugular venous pressure was not elevated. The blood pressure was 110/60mmHg.

There was no evidence of cardiomegally clinically. The first and second heart sounds were normal and there were no murmurs or other added sounds.

Abdominal examination: Inspection Palpation

① The abdomen was uniformly distended and ② it was moving with respiration. There were ③ few striae gravidarum and a ④ well marked linea nigra extending above and below the umbilicus. ⑤ There were no scars or tortuous vessels or masses visualized.

On palpation, the abdomen was soft with no areas of tenderness. There were no masses. The liver and spleen were not palpable. The renal angles were non-tender.

The fundus corresponded to 28 weeks pregnancy size. The fetus was in longitudinal lie and the head was presenting. Fetal movements were palpable and the fetal heart was 142 beats per minute and it was regular.

Vaginal examination:

The vulva and perineum were normal. There was no discharge. The cervix looked healthy and nulliparous. It was soft, long

and the os was closed. There were no pelvic masses. The bony pelvis was normal in shape and the sacral promontary could not be reached. The outlet was normal and the subpubic angle was more than 90 degrees.

DIAGNOSIS:

A diagnosis of anaemia in pregnancy was made.

MANAGEMENT.

The plan of management was to investigate the degree and cause of the anaemia and to correct it as son as possible.

INVESTIGATIONS.

i) Full blood picture:

Haemoglobin 4.8gm/dl, Haemotocrit 18%, M.C.H. 20pg M.C.H.C. 28% M.C.V. 70 μm^3, Reticulocyte count 0.5% Platelet count: Adequate. Peripheral blood film: Moderate hypochromiasia and anisocytosis; Mild poikilocytosis and polychromasia. There were scant malarial parasites.

NB. This picture was consistent with iron deficiency type of anaemia.

Total white blood cell count 9,600/mm^3 with a differential of 59% Neutrophils, 39% Lymphocytes, 1% Eosinophils and 1% Basophil.

ii) Stool: Hookworm ova seen Cause !!

iii) Mid stream specimen of urine:

No sugar or albumin. Sediment microscopy: Nothing abnormal detecte

Culture and sensitivity - no abnormality detected.

iv) V.D.R.L.: Negative

v) Blood grouping and cross-matching:

Group O, Rh D positive. About 1000ml of packed cells were requested and obtained as the patient came with 4 donors.

BLOOD TRANSFUSION:

Before transfusion of the packed cells was commenced. The patient was given 40mg of Frusemide intramuscularly about 10 minutes before transfusion. She was propped up in a semi-Fowler's position and transfusion started. The rate of the drip was maintained at about 25 drops per minute.

The patient remained in good condition and had no reaction to the blood. Two days later her haemoglobin was re-checked and it was found to be 7.2gm/dl.

ANTI-HELMINTHIC, ANTIMALARIAL AND HAEMATINIC THERAPY:

On the second day of admission, the patient was dewormed with Bephenium hydroxynaphthoate (Alcopar) 5gm sachet once daily in the early morning for three consecutive days.

Parenteral iron in the form of total dose iron dextran (T.D.I.) was administered on the fourth day. The total dose in mg was calculated using the formula total dose = Weight of the patient in pounds x haemoglobin deficit in percentage x 0.3. This dose was given in 1 litre 5% dextrose drip.

Before the drip was set the patient was given 50mg Promethazine orally half an hour before the drip was set up. The site on the left arm where the drip was going to be set was washed with soap and water and left to dry. On close interrogation, the patient had no history of allergies.

The drip was set up using a medium sized plastic canula after her temperature, pulse and blood pressure were taken as

baseline. The drip was cautiously run at a rate of 10 drops per minute for the first 15 minutes while the patient's condition in terms of pulse, blood pressure, fever, skin rash were monitored closely. Having observed no untoward side-effects, the drip rate was increased to about 40 drops per minute while the patient was under close observation until the drip was finished. The patient was observed in the ward until the next day and she had no complications. She was then discharged on folic acid 5mg once daily, chloroquine tablets 300mg once weekly and instructed to attend the high risk antenatal clinic in Muhimbili Medical Centre after two weeks.

FURTHER PROGRESS AND OUTCOME OF THE PREGNANCY:

She was seen again on 27th February, 1984. She was well. The fundus had grown to about 30 weeks of gestation and it corresponded to the dates. She was mildly pale (Haemoglobin was 8.2gm/dl) and not icteric. Her weight was also increasing satisfactorily.

Peripheral blood film revealed a reticulocytosis of 5%. She received her first dose of tetanus toxoid and was discharged on folic acid and chloroquine and instructed to attend the clinic again after two weeks.

The subsequent visits were unremarkable. She got her last two doses of tetanus toxoid at 35 and 37 weeks. Her haemoglobin had risen to 10.2gm/dl. at 37 weeks. She had no history of fevers or yellow eyes or bleeding per vaginum.

She went into spontaneous labour at 39 weeks on 5/4/84 and had a normal delivery of a healthy male baby weighing 3kg. Blood loss in the process of delivery was only 200ml. Placenta and membranes looked normal and weighed 500gm. She was discharged

on the next day post-delivery in good general condition. The baby was also in good condition. Prophylactic antimalarials and hematinics were continued until 6 weeks after delivery.

FOLLOW UP:

She was seen 6 weeks later in the post-natal clinic on 20th May 1984 and she was well. Her haemoglobin was 11gm/dl. She was educated on the importance of prevention of anaemia by good nutrition, wearing of shoes, using latrines and attending the antenatal clinic early for proper supervision of pregnancy.

COMMENTARY:

Anaemia in pregnancy is an important cause of maternal morbidity and mortality in Muhimbili Medical Centre. Mtimavalye et.al 1980 found that it was the commonest cause of antenatal admissions during the same period of time and also in the years 1976 and 1978.

Prompt treatment of anaemia in pregnancy was instituted once the diagnosis was made in order to prevent maternal and fetal complications associated with the disorder. Among the fetal effects of anaemia in pregnancy is intrauterine hypoxia which if prolonged, it can lead to intrauterine growth retardation. This effect can be reversed if maternal anaemia is quickly corrected before birth. Other fetal complications of anaemia in pregnancy include late abortions, still births, prematurity and early neonatal deaths.

Cardiac failure is the most serious of all the maternal complications. This commonly occurs when the haemotocrit is below 14% in patients with hypervolemia. Pancytopenia from severe folate deficiency is another dangerous complication and the presence of petechiac and ecohymosis should draw attention to it. Joynson

et. al. 1972[4] and Srikantia et al. 1976[5] reported that anaemia is associated with impairement of cell mediated immunity. This partly explains why infections that have been dormant in the absence of anemia often flare up when severe anaemia develops. None of these complications were noted on this case as the condition was treated promptly.

The patient presented was found to have a scanty malarial parasitemia which was treated. Pregnancy predisposes to an increased prevalence and intesity of malaria especially in mid-pregnancy. In areas where Plasmodium falciparum is holoendemic, repeated haemolysis from malaria infection leads to anaemia. Three mechanisms are known to be involved in the causation of this type of anaemia namely: folate deficiency, hypersplenism and haemolysis. Haemolysis does not only involve the parasitized cells but also the non-parasitized cells which become opsonized.

According to Bray 1981[7], malaria does not seem to cause increased rate of abortion but the concentration of developing forms of P. falciparum in the placenta may cause intrauterine growth retardation and low birth weight. None of these fetal complications were observed in this case.

In the management of anaemia in pregnancy, the main objectives are assessment of the severity of the condition, identification of the cause or causes and the optimal treatment which depends on the length of gestation and the severity of the anaemia. The patient presented was found to have two possible aetiological factors namely; hookworm infestation and malarial parasitemia. Anaemia due to hookworm infestation depends on the size of body iron stores, the dietary intake of iron and the hookworm load. Gilles 1964[6] reported that the hookworm load sufficient to cause

anaemia varies from 1000 to 20,000 worms depending on the factors mentioned above. Lack of knowledge of these factors makes it difficult to establish a cause effect relationship of the finding of hookworm infection and anaemia in this case.

Haemoglobinopathies which can cause maternal anaemia include sickle cell disease, haemoglobin CC, homozygous, B-thalassaemia and heterozygotes where B-thalassaemia combines with haemoglobin E or haemoglobin C. The anaemia is chiefly haemolytic, but folate deficiency, the effects of repeated bacterial and protozoal infections and rarely iron deficiency may all play their part. Haemoglobin electrophoresis is not routinely done in Dar es Salaam as the incidence of haemoglobinopathies is low in the population living in Dar es Salaam.

Following blood transfusion, the haemoglobin rose promptly. However, in the presence of haemolysis or of an extrauterine pregnancy such a rise doesn't occur. In fact the haemoglobin concentration either fails to reach the expected level or continues to drop. The rise in the reticulocyte count after one week was a good sign of bone marrow activity in the manufacture of red blood cells.

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0.3 PLACENTA PRAEVIA : E.U.A. AND LOWER SEGMENT CAESAREAN SECTION:

Patient: Mrs. A.O. Gravida 5 para 4

A.N.C. Number: 4063

Age: 25 years

Address: Mabibo, Dar es Salaam

Date of admission: 2nd July 1984

Date of operation: 9th July 1984

Date of discharge: 17th July 1984.

SUMMARY:

Mrs. A.O. a 25 year old gravida 5 para 4 developed painless and causeless vaginal bleeding at 33 weeks of pregnancy. After one week of expectant management in the work, she developed two more bouts of severe vaginal bleeding which necessitated urgent E.U.A and delivery by Caesarean section. There were no morbid events post operatively and follow up was uneventful.

HISTORY OF THE PRESENT ILLNESS:

Mrs. A.O was admitted to the antenatal ward via the antenatal clinic on 2nd July 1984 on account of painless vaginal bleeding which had started spontaneously while she was in the toilet about 6 hours prior to admission.

She reported that the amount of blood loss soaked about 6 sanitary pads (about 100cc) and that her legs were not soaked. The blood was bright red and it was mixed with some clots. She denied any history of douching or coitus preceding the onset of the bleeding and she denied any history of post coital bleeding. She had never had any other episode of vaginal bleeding

in this pregnancy nor in the previous ones.

There were no associated symptoms of dizziness, palpitations or fainting attacks. She could stand up and walk. Fetal movements were felt and were normal. She attended Magomeni M.C.H clinic from where she was referred to Muhimbili Medical Centre for admission.

OBSTETRIC HISTORY:

She was gravida 5 para 4 with all the children alive. All her previous pregnancies were uncomplicated antenatally, intrapartum and their pueperia were normal.

For the index pregnancy, she booked at Magomeni M.C.H clinic at 28 weeks of gestation on 6/6/1984. There was nothing remarkable in this visit apart for a haemoglobin of 65% for which dietary advice was given and she was also treated with folic acid and ferrous sulphate tablets and given an appointment to attend the clinic again 4 weeks later.

GYNAECOLOGICAL HISTORY:

She had her menarche at 14 years. Her menses lasted for 4 days in a regular cycle of 28 days and the flow was normal. She had never used any method of contraception. Her last normal menstrual period was on the 12th November 1983 and her expected date of confinement was on 19th August 1984. She was about 33 weeks pregnant.

PAST MEDICAL AND SURGICAL HISTORY.

She denied history of serious morbid surgical or medical conditions in the past.

FAMILY AND SOCIAL HISTORY:

She was a housewife married to a laboratory technician. She neither smoked cigarattes nor drank alcohol. There was no

history of diabetes, hypertension or twins in her family.

PHYSICAL EXAMINATION.

She looked healthy. Neither her legs nor her clothes were blood stained. She was mildly pale, apyrexial and anicteric. There was no edema or generalized lymphadenopathy.

Her height and weight were 160cm and 63kg respectively.

Mouth and throat.

Apart from two filled right lower molar tooth stumps, oral hygiene was sstisfactory. There were no septic foci in the oro-pharynx.

Neck:

There was no thyroid enlargement and the cervical lymph-nodes were not palpable.

Breasts:

The breasts were symmetrical, engorged and were screting, There wase no lumps or tender areas and the nipples were well developed.

Respiratory system.

Nothing abnormal was detected.

Cardiovascular system.

The pulse was 84 beats per minute and it was regular and of full volume. The blood pressure was 110/70 mmHg.

There was no evidence of cardiomegaly clinically. The first and the second heart sounds were normal and there were no added sounds.

ABDOMINAL EXAMINATION.

The abdomen was symmetrically distended and it was moving with respiration. There were no surgical scars or therapeutic marks but there was a well marked linea gravidarum extending above and below the umbilicus and a few striae albicantes in

the flanks. There were no tender areas on light palpation. The liver and spleen were not palpable and the renal angles were non-tender.

The fundal height was 34 weeks and it corresponded to the menstrual age. The uterus was cystic and non-tender. The lie was longitudinal, cephalic presentation. The head was floating and displaced to the left side. The size of the fetus was estima ed to be about 1.7kg. There were no palpable contractions. The fetal heart was 142 beats per minute and it was regular.

INSPECTION OF THE PERINEUM AND SPECULUM EXAMINATION.

The vulva and the perineum were blood stained. There were no haemorrhoides. The urethra and vaginal introitus were normal and there was no bleeding noted.

A bivalve speculum was gently introduced. The cervix had a bluish tinge but there were no local lesions noted on its surface. There was some mucoid reddish blood tinge in the external cervical os but there was no active bleeding noted. On gently withdrawing the speculum, the vaginal mucosa was normal.

DIAGNOSIS:

Antepartum haemorrhage probably due to placenta praevia.

INVESTIGATIONS.

Haemoglobin: 8.2gm/dl. Blood group: B Rh D positive.

1000ml of blood were cross-matched and transfused the next day. The serum was reserved for cross-matching in case more blood would be required.

VDRL: Negative.

Mid-stream urine: Showed no proteinuria or glycosuria.

Sediment microscopy was normal and culture was sterile.

Ultrasonography: 3/7/1984

1.1 A Siemens ultison 400 Real time B scan with a 2.5 MH2 multi-element transducer was used.

1.2 Procedure and findings.

The patient was examined with a full bladder in order to delineate the lower pole of the uterus and its relationship to the presenting part.

She was placed in a supine position and couplant oil was applied to the abdominal skin for coupling ultrasonic rays to the patient.

The abdomen was scanned longitudinally and transversely at several sections. There was singleton baby in cephalic presentation. Fetal heart action was demonstrated by observing scatter echo alternating with specular echo in the fetal thorax. The biparietal diameter was estimated from the outside to the inner echo of the parietal eminences after identifying the midline echo. It was 8.8cm which corresponded to 34 weeks of gestation.

The placenta was identified by the speckled echoes with a sharp line echo of the chorionic plate in the anterior uterine wall. With the aid of the echo free full bladder, the cervix and the internal os were identified. This was found to be covered by the placenta. completely. These findings confirmed a diagnosis of major anterior placenta praevia. Whether this was type III or IV was not possible to tell since the internal os was closed and one would not be able to guess whether at full cervical dilatation it would be covering the os partially or completely.

MANAGEMENT:

Expectant management was decided upon since at such a gestation the baby was unrearable and the amount of bleeding did not threaten maternal life.

The patient was thus admitted to the antenatal ward and was strictly confined to bed rest. The following observations were made:

a) (i) Vaginal bleeding was checked 4 hourly. The patient was asked to keep soaked pads to be inspected for any evidence of vaginal bleeding.

(ii) The fetal heart and the blood pressure were monitored four hourly.

b) Blood transfusion (1000ml) was given on the day of admission.

c) Phenobarbitone 60mg given twice daily for sedation

d) Oral iron tablets 200mg three times daily and folic acid 5mg once daily were given.

PROGRESS:

The patient's condition remained normal in the next two days. On the third day, she had another episode of painless vaginal bleeding and this time she lost about 150ml. Blood transfusion 500ml were given. Post-transfusion her haemoglobin was 9gm/dl.

Thereafter, her condition remained stable again until the 7th day (on 9th July 1984) when she had a severe episode of bleeding per vaginum. Her pulse went to 110 beats per minute and her blood pressure to 90/50 mmHg. She looked pale. The abdominal findings were the same as before. Fetal heart was heard and it was 144 beats per minute and it was regular.

Blood transfusion 1000ml were transfused and thereafter she was to continue with a drip of normal saline while more blood was being traced.

In view of the severe episode of bleeding and deteriorating maternal condition, it was decided to prepare the patient urgently for examination under anaesthesia and to deliver the patient abdominally or vaginally depending on the findings.

PREPARATION FOR EXAMINATION UNDER ANAESTHESIA.

The abdominal operation site and the perineum were washed and shaved. The patient signed consent form for anaesthesia and or Caesarean section after been educated on the problem she was facing.

About 1000ml of blood were requested and obtained for the operation. Two separate trays were prepared; one for vaginal examination and another for Caesarean section. An assistant and a theatre nurses were scrubbed and gowned in readiness for emergency Caesarean section.

PRE-MEDICATION.

The patient was given 0.6mg atropine and 100mg pethidine as soon as she was in the theatre.

ANAESTHESIA.

Anaesthesia was induced with 250mg of freshly prepared sodium thiopentone intravenously. The patient was relaxed with 40mg suxamethonium bromide and intubated with a cuffed endotracheal tube. Anaesthesia was initially maintained with nitrous oxide and oxygen. Ether was instituted after the baby had been delivered.

PROCEDURES AND FINDINGS AT E.U.A.

The patient was kept in lithotomy position but with the legs held by two assistants instead of strapping them to lithotomy poles. This was done for fear of time which might have been wasted in changing the patient to dorsal position for an emergency Caesarean section.

The vulva, perineum and the surrounding area were swabbed with catavlon 1:200 solution. She was then drapped and carefully catheterized with a metal catheter. Gentle digital examination was done by inserting one finger into the introitus and then a second finger and first palpating the vaginal walls and later the four fornices. With the left hand, the head was pushed into the pelvis. The head was felt overlying a boggy mass in the posterior fornix, and the left lateral fornix. One finger was gently introduced into the cervical canal. The cervix was about 2cm dilated and there was a boggy mass felt overlying the os. Further examination was feared as there was some fresh bleeding which had already started. The patient was repositioned to the dorsal position. The impression was placenta praevia type III and the decision was to deliver her by Caesarean section. The surgeon immediately changed gown and gloves and proceeded with Caesarean section immediately.

PROCEDURE AND FINDINGS.

The operation site and surrounding area of the abdomen were painted with cetavlon and then a weak iodine solution special for skin sterilization. The excess amount of iodine was dried with a dry gauze. Sterile drapings were applied and a sterile suction rubber tube which was connected to a suction machine was fixed.

The abdomen was opened through a subumbilical midline incision in layers. The lower segment was well formed. The paracolic gutters were packed off from the operation site using two wet abdominal packs which were to be removed at the end of the operation. Using the round ligaments as guidelines, the uterus was placed centrally. The peritoneal reflection on the uterus was identified.

The bladder was pushed down by incising the loose utero-vesical peritoneal reflection and pushing the lower peritoneum and bladder down with blunt dissection and a gauze. A Doyen's retractor was inserted through the wound to hold the bladder down. The lower segment of the uterus was incised tranversely using a semi-circular incision care being taken to avoid the placenta. The tranverse incision was extended laterally in an upward direction with fingers after identifying the plane of dissection between placenta and uterus to the left. The bulging membranes to the right of the incision were ruptured and the baby was delivered without delay. The liquor was clear. The head was delivered by passing fingers between it and placenta and the lower segment of the uterus and lifting it, using the fingers as a lever. Fundal pressure was applied and traction on the fetal head completed the delivery. Ergometrine 0.25mg intravenously was given by the anaesthetist immediately. The cord was immediately clamped at two places with straight long artery forceps and divided in between.

Green-Armitage clamps were used to arrest bleeding from the cut edges of the uterus. The placenta was found localized in the lower segment on the left lateral aspect and extending posteriorly. At this time it had already separated and delivery

was easily achieved by gentle cord traction. The placenta and membranes were removed completely.

The uterine cavity was swabbed clean using abdominal mop. The cervix was dilated digitally from above to about 2cm. Repair of the uterus was started from the left corner of the incision using atraumatic chromic catgut number 1. These stitches were looked alternately. Care was taken to take bites from the myometrium only and to avoid the decidua. A second layer was applied and this was applied a such a way that it buried the first layer. Atraumatic chromised catgut number 1 was also used for this layer.

Hemostasis was achieved. The lower segment of the uterus was peritonized using chromic catgut number 2/0. The abdominal packs and clots of blood were removed from the peritoneal cavity. Both ovaries and tubes were normal. The peritoneal cavity was free of blood clots or meconium and the instrument and linen count was correct.

The abdomen was closed in 3 layers. Chromic catgut No. 0 was used for the peritoneum and number 2 for the rectus sheath and the skin was closed with interrupted silk sutures as detailed in the introduction.

The wound was dressed with dry gauze. The uterus was gently squeezed and pressed down to expel blood clots. Sterile gauze pieces on sponge holders were used to remove clots from the vagina. There was no bleeding per vaginum and the uterus was well contracted to about 20 weeks pregnant uterus.

Blood loss was estimated to be about 500ml. This excluded the amount lost pre-operatively and at examination under anaesthesia. At the end of the operation she had received 500ml

of blood and she had 1000ml mor blood to be given post-operatively. A sterile pad was applied in the vulva and the patient was wheeled to the recovery room. She was awake in 15 minutes' time and taken back to the ward in good condition.

The baby:

The baby was a female weighing 1.8kg and had an Apgar score of 9 at 1 minute (class A). She was crying well and she didn't have an obvious congenital malformations. She was sent to the neonatal unit for care.

POST-OPERATIVE CARE:

1. The blood pressure, pulse and respiration were checked half hourly for 6 hours then 4 hourly for the first 24 hours then twice daily. These remained normal.
2. Observation for vaginal bleeding were made one hourly and there was none detected.
3. The patient got blood transfussion 1000ml. and thereafter was continued with intravenous fluids Dextrose-saline 3 litres per 24 hours.
4. Fluid output and input chart was started.
5. Pain was relieved by Pethidine injection 100mg six hourly in the first 36 hours.
6. Injection Ampicillin 500mg intramuscularly 6 hourly were given for the next 48 hours prophylactically.

PROGRESS:

The patient had an uneventful and quick recovery. On the first post-operative day she started ambulation and the intravenous drip was discontinued. The abdomen was soft and bowel sounds were audible. Oral fluid sips were started.

On the third day her haemoglobin was 8.2gm/dl and her condition was good. She was started on oral ferrous sulphate 200mg three times a day. The baby was discharged from the neonatal unit to its mother who was now capable of caring for it from this day.

On the 8th day, all the stitches were removed. The wound had healed by first intention. She was discharged home in good general condition and to attend the postnatal clinic 4 weeks thereafter.

She was seen in the postnatal clinic on 15th August, 1984 she and her baby were well. Menstruation had not resumed. She was breast feeding and she was not on any contraceptive. Haemoglobin checked was 10.2gm/dl. No abnormal signs were found on abnormal and vaginal examination. The uterus was well involuted and freely mobile. She was advised on the importance of early attendance in antenatal clinic, should she conceive again and that delivery should be in a hospital because of the scar on her uterus. She was then discharged from the clinic.

COMMENTARY:

Antepartum haemorrhage is encountered in about 1% of all the deliveries in Muhimbili Medical Centre. Of these, 30% are due to placenta praevia[1].

The patient presented was initially managed expectantly on account of fetal interest as at 33 weeks under our conditions and even elsewhere, perinatal mortality due to prematurity is in the range of 40 - 75%[2]. However, two criticisms have been levelled against this mode of management namely: prolonged

hospital stay which is expensive and may also disrupt marital harmony and increased fetal jeopardy associated with secondary haemorrhages after the herald episode of bleeding. There is a consensus of opinion that patients with placenta praevia should be hospitalized no matter for how long owing to the potential maternal and fetal risks associated with the condition[2, 3, 4].

Expectant management was abandoned in this case owing to the severe vaginal bleeding which was a threat to the mother and the fetus. Other circumstances whereby active management should be undertaken include patients at term or when the fetus weighs more than 2500 grammes, centrally situated placenta and when the condition of the mother and the fetus are in jeopardy owing to for example severe pre-eclampsia, or excessive repetitive vaginal bleeding.

Ultrasonography was employed in the localization of the placenta in this case. This procedure has the advantage of being non-invasive, has an accuracy of about 95% and fetal maturity can be reasonably determined by serial biparietal diameters. The main disadvantages are that the machine is expensible and that it requires expertise and experience which may not be available in most centres developing countries. Expertise is mandatory in the localization of the chorionic plate echo without which placental localization is doubtful[5].

Other methods of placental localization have been employed in other centres. These include:

i) Radiological methods such as soft tissue placentography or placental arteriography.

ii) Isotope Scintillation scanning using radioactive iodine (I^{132}) or Technetium (T_c^{99m}). Although irradiation hazard

is insignificant in this method, this technique requires the expertise of a physicist.

iii) Infrared thermography. This is an obsolete method and in those centres where it was used it had no proof of efficacy.

Despite all these techniques, the only absolutely certain of placental localization is by digital examination under anaesthesia (E.U.A.) in theatre which has been prepared in readiness for Caesarean section. Nevertheless, this procedure is often not thoroughly done for the fear of provoking undue haemorrhage[2].

The decision to delivery the patient vaginally or abdominally is mainly based on the findings at E.U.A. In type I and II (anterior) placenta praevia, vaginal delivery is the method of choice whereas in type II (posterior), III and IV, delivery by Caesarean section is indicated. Caesarean section is indicated in type II posterior because such placental position impedes engagement of the presenting part and that the placenta may be compressed in the process of descent of the fetal head[6].

Speculum examination was done on admission in this case as the patient was not bleeding actively. Had there been an appreciable amount of bleeding it would not have been possible to visualize any bleeding local lesions in the genital tract without resorting to mopping which would have caused more bleeding. In patients admitted with active bleeding, Dewhurst 1981[3] and Donald 1979[4] recommend doing a speculum examination 4 - 5 days after the bleeding has ceased.

The problem of chosing whether a classical or a lower segment incision on the uterus did not arise in this case as the lower segment was well formed and there were no tortuous

vessels in the lower segment. The proponents of classical incision maintain that the placenta is in great part avoided and that there is less bleeding and the child can be more easily extracted. However, the classical incision can be bleed severely and there is the danger of scar rupture in subsquent deliveries.

In anteriorly situated placenta, a lower segment incision may results in the placenta presenting through the wound first to even incision of the placenta. Should this occur, it is advisable to avoid cutting or tearing it as doing so may reult in lose fetal exsanguination. It is advisable in this situation to reach round the placenta until the membranes are reached then ruptured and the fetus delivered quickly. Sometimes it may be advisable in this situation to deliver the placenta first and then deliver the fetus quikly.

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0.4 RUPTURED UTERUS REPAIR AND BILATERAL TUBAL LIGATION.

Patient Name: Mrs. A.M.

Age: 29 years

Address: Temeke, Taveta Street No. 2, Dar es Salaam

Gravidity: Gravida 6 para 4 + 1 abortion

Gestation by dates: Term

Date of admission: 9th April 1984

Date of operation: 9th April 1984

Date of discharge: 21st April 1984.

SUMMARY:

Mrs. A.M. was referred from one of the private hospital in Dar es Salaam on account of poor progress of labour. On admission she complained of generalized abdominal pains associated with bleeding per vaginum. She was found to be very pale with a generally tender abdomen which had irregular contours and there was no fetal heart. She was fast resuscitated with intravenous fluids and an emergency laparatomy was undertaken. Repair of the uterus and bilateral tubal ligation were done. Her post-operative course was unremarkable.

HISTORY OF THE PRESENT ILLNESS:

This patient was referred from one of the private hospital in town on account of poor progress of labour. On arrival in Muhimbili Medical Centre, she complained of generalised abdominal pains associated with bleeding per vaginum. These symptoms were of 6 hours duration. The pains were constant and dullaching in nature and were also felt on the tips of her shoulders when she lied down. She also felt that the baby was moving up rather than down. She had lost about a cupful of blood (100ml)

which consisted of some darkish blood and some clots.

Labour pains had started about 20 hours at home and within 1½ hours she was admitted to the private hospital in which after 22 hours of observation developed the above symptoms. Membranes ruptured spontaneously about 12 hours prior to admission.

She denied history of fevers but admitted that she was generally weak and was having palpitations. There was no history of swelling of the legs.

PAST MEDICAL HISTORY:

The patient had not had any serious illness before and neither had she undergone any operation. She had not been admitted to hospital for any illness.

OBSTETRIC HISTORY:

She was gravida 6 para 4 with one abortion for which she was evacuated in Muhimbili Medical Centre and discharged the next day in good general condition. The other four pregnancies were uncomplicated antenatally, intrapartum and postnatally. All her 4 children were alive and well and their deliveries were spaced at 3, 2½, 3 and 2 years.

For the current pregnancy, she booked at Dar es Salaam Group of Occupational Health Service MCH clinic when she was 7 months pregnant. She had no complications in her subsequent six visits. Her antenatal card was misplaced while being transferred to Muhimbili Medical Centre. On direct questioning, there was no history of swelling of legs or vaginal bleeding in this pregnancy. Her babies in the previous pregnancies weighed between 2.8kg to 3.2kg. Fetal movements were felt normally in this pregnancy till when she went into labour

for which she attended a private hospital.

GYNAECOLOGICAL HISTORY:

The patient did not know the age at which she had her menarche, but she said she had regular periods, with normal menses lasting four days. Her cycles were about 30 days. The last normal menstrual period started on 1st July 1983 and her expected date of confinement was on the 8th April 1984. She was therefore term by her dates. She denied history of using contraceptive at any time.

FAMILY HISTORY:

There was no family history of diabetes mellitus, hypertension or mental disease. She had no contact with a known cases of pulmonary tuberculosis. There was no history of twins in her family or that of her husband.

SOCIAL HISTORY:

She was married to an accountant working with Tanzania Cigaratte Company. She had primary education and was unemployed. She neither smoked cigarettes nor drank alcohol.

CLINICAL EXAMINATION:

The patient looked well nourished but sick. She was moderately pale and in pains. She was afebrile, anicteric and had no edema. She was not dehydrated.

Mouth and Throat: There was nothing abnormal detected.

Chest: The breasts were well developed and were active. There were no abnormal lumps or tender areas. The breath sounds were normal and there were no added sounds.

Cardiovascular system: The pulse rate was 108 beats per minute, regular but of small volume. The blood pressure was

80/50 mmHg. The jugular venous pressure was not elevated. There was no evidence of cardiomegaly clinically. The first and second heart sounds were normal and there were no added sounds.

Abdominal examination:

The abdomen appeared irregularly distended with a bulge in the hypogastric area. It was not moving with respiration. There were no scars.

It was generally tender to palpation and this was more marked in the hypogastric area. Fetal parts were easily palpable. There were no palpable contractions. The fundus corresponded to a 36 weeks pregnancy size. The lie was longitudinal and the presenting part was cephalic, one fifth of which was engaged. There was no fluid thrill but shifting dullness could not be elicited.

The liver and spleen could not be palpated. The renal angles were non-tender. There was no fetal heart.

Vaginal examination:

Inspection of the vulva and perineum revealed blood stains and clots but there was no active bleeding per vaginum witnessed. The liquour was meconium stained.

Speculum examination revelaed a normal vaginal mucosa and a healthy cervix. There was no bleeding from the cervical os at the time of examination.

On digital examination the cervix was soft, fully effaced and about 6cm dilated. The presenting part was cephalic in the right occipital anterior position at the level of about 1cm above the ischial spines. There was a marked caput and moulding (++) two pluses.

DIAGNOSIS.

A diagnosis of obstructed labour with uterine rupture was made on the basis of generalized abdominal pains and tenderness, intrapartum vaginal bleeding, cessation of uterine contraction and fetal death and signs of impending shock.

PLAN OF MANAGEMENT:

The plan of management of the patient was to resuscitate her urgently and prepare her for emergency laparatomy.

RESUSCITATION.

A fast running intravenous drip of Normal Saline was set up in one of the big veins in the left arm using size 14G plastic canula. Three litres were given in a span of half an hour and the blood pressure came up to 110/70 mmHg. The pulse was 94 beats per minute and it was of full volume.

Blood was taken for grouping and cross-matching and 3 units (1500ml) were requested for the operation. Catheter specimen of urine was examined for sugar, ketone bodies and culture was requested. The patient was informed of her problem and what was intended to be done at laparatomy and she signed a consent for the operation.

The patient was given Crystalline penicillin 5 M.U and Chloramphenicol 1gm intravenously and this was to be continued 6 hourly throughout the post-operative period.

INVESTIGATIONS:

Haemoglobin - 8.4gm/dl. Blood group - O Rh D positive. Urine - No albumin or sugar or ketone bodies. Sediment microscopy - No abnormality detected. Culture was sterile.

ANAESTHESIA:

The patient was premedicated with Pethidine 100mg and Atropine 0.6mg intravenously on arrival in the theatre.

Anaesthesia was induced with ketamine hydrochloride 100mg and Diazepam 10mg intravenously slowly. She was relaxed with 6mg of pancuronium bromide (pavulon) and intubated with a cuffed endotracheal tube number 8.5, The patient was ventilated with intermittent positive pressure and anaesthesia was maintained with a mixture of oxygen 2 L and Nitrous oxide 4 L. Good relaxation was maintained throughout anaesthesia and there was no vomiting.

CATHETERIZATION:

This was done aseptically as it has been described in the introduction. About 150ml of concentrated urine were obtained. The catheter was left in situ to drain in a bag.

PROCEDURE AND FINDINGS:

After cleaning the abdomen with cetrimide solution 1:30 and weak iodine solution, the patient was draped with sterile towels. A suction tube was secured in position.

The abdomen was then opened in layers through a midline sub-umbilical incision with a bladder scapel. After incising the skin, the blade was changed and another one was fixed. Incision of the subcutaneous tissue down to the rectus sheath was done. Active bleeders were secured with small artery forceps and tied with plain catgut number 2/0. A vertical incision was made on the anterior rectus sheath. The rectus sheath was then cut longitudinally with a Mayo's scissors and blunt dissection was done to separate the muscle from the underlying posterior leaf of the rectus sheath. The peritoneum was then picked and

opened, care being taken not to injure the intestines or the bladder.

There was mild haemoperitoneum with some clots and also some meconium in the peritoneal cavity. The fetal legs and half of the trunk were found floating in the peritoneal cavity. having been extruded through a longitudinal rent on the anterior aspect of uterus as if a classical caesarean section had been done. The rent measured about 10cm longth and its edges were slightly ragged. The bladder was intact.

Delivery of the fetus was effected through the line of rupture. Divis on of the cord after clamping it at two places was one. Ergometrine 0.25mg intravenously was administered. The placenta and membranes were delivered complete . The uterine cavity was swabbed clean using gauze on a sponge holding forceps.

The bleeding points on the edges of the rent were picked with 4 Green Armytage forceps and bleeding stopped. As the rent was not rugged and its extent was clearly defined, repair of the rent was feasible.

Repair of the rent was started from its uppermost point using chromic catgut number 2. A single, continuous layer, taking large bites through the myometrium but avoiding the decidua was applied to its lower most point. After closing the rent, good haemostasis was achieved. Inspection of the uterus revealed no other ruptured or torn areas.

Bilateral tubal ligation was done by Pomeroy's method using mumber 1 chromic catgut. This was achieved by first identifying the Fallopian tubes and picking a loop of the tube using Babcock's forceps. After identifying an area of the

mesosalpinx which was relatively free of blood vesels, a straight artery forceps was applied across the loop. A transfixation suture was applied beneath the transverse clamp through the blood less area of the mesosalpinx using chromic catgut number 1. Excision of the small loop which had been tied was done. The same procedure was repeated on the other side.

The peritoneal cavity was then cleaned of blood clots and meconium using a gauze on sponge holding forceps. Both ovaries, the liver, the spleen and the appendix were normal. Having certified correct instrument and linen count, the abdomen was closed in layers. The peritoneal layer was repaired with chromic catgut number 0 on a curved round body needle as a continuous layer. The rectus sheath was repaired using number 2 chromic catgut on a cutting needle round the skin was closed with number one silk interrupted stitches. The wound was then cleaned and squeezed dry. It was then covered with dry sterile gauze and adhesive plaster was applied.

The vagina was swabbed clean with a dry gauze on a sponge holding forceps. The uterus was well contracted and on squeezing it, there was no bleeding per vaginum. The urine was clear. A pad consisting of 4 dry gauzes was applied in the vulva. Blood loss at the end of operation was estimated to be about 400ml.

THE BABY:

The baby was a fresh stillbirth, a male baby weighing 3.5kg. The head had a small caput and moulding. There were no obvious congenital malformations noted.

POST-OPERATIVE CARE:

1. The patient's pulse, blood pressure and respiration were monitored half hourly for the next 12 hours and then four hourly. A four hourly temperature ahart was maintained. These vital signs remained normal.
2. She was given blood transfusion 1500ml after recovery from anaesthesia and she was to continue with intravenous fluids consisting of normal saline alternating with Dextrose 5% in the tune of about 3 litres per 24 hours.
3. Input and output of fluids was charted. The catheter was left in situ for 10 days as the patient had evidence of obstructed labour.
4. Chloramphenicol 500mg and Crystalline penicillin 5 M.U intravenously were continued six hourly for the next 2 days. Thereafter, Chloramphenicol was given orally in a dose of 500mg 6 hourly and penicillin in form of procaine penicillin fortified 1 • 2 M.U intramuscularly for 3 days more.
5. Pethidine 100mg intramuscularly was given whenever necessary to relieve pain.

PROGRESS:

Four hours post-operatively, the patient was awake from anaesthesia. Her vital signs were within normal range. She was afebrile. Her urine output in the next 20 hours was 1.2 litres compared to an input of 2 litres.

On the second post-operative day her general condition was good. She could sit up. She was afebrile and the blood pressure and pulse were normal. The drip was discontinued and she started oral fluid sips as the bowel sounds were then audible.

Her recovery thereafter was speedy and uncomplicated. On the fifth day her haemoglobin was checked and was found to be 9.6gm/dl. Oral olic acid 5mg daily and Ferrous sulphate 200mg three times daily were continued. On the 8th day, the wound had healed well and stitches were removed. The catheter was removed on the 10th day.

She was observed for 2 more days in the ward. She had no complications. She was then discharged on the 12th post-operative day in good general condition and instructed to attend the follow up postnatal clinic after 4 weeks.

FOLLOW UP.

She was seen again in the postnatal clinic on 16/8/1984 and she had no complaints. Clinically she was not anaemic and on systemic examination, there was nothing abnormal. The uterus was not palpable abdominally and there were no masses per abdomen. There was no vaginal discharge. On bimanual vaginal examination the uterus had involuted to the size of about 6 weeks pregnant uterus. It was non-tender and freely mobile. There were no adnexal masses or tenderness.

Her haemoglobin was 11.8gm/dl. She was then discharged from the clinic. She had the knowledge that she will not conceive again as she had been told that her tubes were ligated.

COMMENTARY:

Rupture of the gravid uterus is a well known serious obstetric emergency which is a threat to the life of the mother and the unborn child. In Muhimbili Medical Centre, the maternal and perinatal mortalities associated with uterine rupture are 8.6% and 74% respectively. Its incidence varies from place to

place depending on the quality of obstetric care available. It is highest in developing countries where maternal and child health services are limited. Bashumika 1978 reported an incidence of 1:868 deliveries in Muhimbili Medical Centre whereas two years later 1980, Rwamushaija reported an incidence of 1:1053[1, 2].

There are two possible predisposing factors to uterine rupture in this particular case. This patient had previously undergone curettage for retained products of conception. This procedure may be associated with weakness of the uterine wall[3]. Secondly, this patient had prolonged labour due to cephalopelvic disproportion as evidenced by the size of the baby and features of obstruction on pelvic examination. In disproportion causing obstructed labour, uterine rupture is favoured by ischemia due to pressure of the presenting and the tear in the uterus usually starts from the area of ischemia. Other predisposing factors to uterine rupture which were not found in this case include previous caesarean section or hysterotomy scar, obstetric manouvres such as version, breech extraction and instrumental deliveries. Myomectomy scars in the uterus are often quoted as causes of rupture but this is very rare[3, 4]. By far, the majority of cases of uterine rupture occur either as a result of a previous caesarean section scar giving way or in cases of obstructed labour in multigravid patients.

In the management of patients with uterine rupture, fluid and blood replacement, antibiotic therapy and immediate surgery are pre-requisites in the improvement of maternal morbidity and mortality. Health education on scientific midwifery,

improvement of the health facilities and a high index of suspicion among the health workers will help in reducing the incidence of uterine rupture.

In this patient, repair of the rupture and bilateral tubal ligation were done. This is in keeping with the recommendation of many authors[5, 6] who advocate doing the simplest and the quickest operation possible as these patients are seriously ill and are high operative risks.

However, other workers (Mokgokong and Marivate 1976, Skelly, Duthie and Philpott 1976[7, 8] have found that total abdominal hysterectomy gives much better results. This is so because usually in most cases of uterine rupture there is severe infection already present from prolonged rupture of the membranes. In addition, the uterine muscle may be bruised and oedematous and the rupture may have involved one or both uterine arteries. Thus, sparing the uterus may mean therefore leaving a pocket of infection or leaving an organ without good blood supply whose healing is poor and post-operative infection is a common complication.

Total abdominal hysterectomy is the treatment of choice especially for longitudinal lateral tears and in experienced hands this can be done just as fast as repair. Subtotal hysterectomy should be considered only if the patient is in poor condition and the tear does not extend into the paracolpium.

Bilateral tubal ligation was done because of the fear of rupture in a subsequent pregnancy particularly if labour becomes obstructed again. The importance of this was empha-

sized long ago in 1897 by Etienne Tarnier at the Paris Congress of Obstetrics who said "If a woman in a battle to reproduce her race has ruptured her uterus, she should be invalided from the service, for it is not with cripples that an army takes the field".

Continuous bladder drainage was necessary in this case, there had been prolonged pressure on the bladder by the presenting part. Other indications for this procedure include ruptures involving the bladder or the presence of haematuria at the end of the operation.

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0.5 CORD PROLAPSE IN LABOUR : CAESAREAN SECTION:

Name: Mrs. N.E.

Age: 23 years

Delivery No: 10496/M/84

Gravidity: Gravida 3 para 2

Date of admission: 24th October, 1984

Date of operation: 24th October, 1984

Date of discharge: 2nd November, 1984.

SUMMARY:

Mrs. N.E., a 23 year old gravida 3 para 2 had a normal antenatal period and was anticipating a normal delivery in Mwananyamala hospital. Unfortunately she had cord prolapse when the membranes ruptured spontaneously when she was 5cm dilated and she was immediately referred to Muhimbili Medical Centre. Emergency Caesarean section was done and her post-operative course was uneventful.

HISTORY OF THE PRESENT PGREGNANCY:

Mrs. N.E. was gravida 3 para 2 with 2 living children. She started attending antenatal clinic in Magomeni Maternal and Child Health Clinic when she was about 30 weeks pregnant On 12th August, 1984. She had no symptoms and she denied of any bleeding per vaginum ever since she conceived. Quickening started when she was 18 weeks amenorrhoeic.

PAST OBSTETRIC HISTORY:

She had delivered at term two times before. All of her pregnancies were uncomplicated antenatally, intrapartum and their pueperia were normal. Her two kids were alive and well and her last born was in March 1982.

GYNAECOLOGICAL HISTORY:

Details of her gynaecological history had not been recorded except her last normal menstrual period which was on 23rd January, 1984. She had been having regular menstrual periods lasting for 4 days in a cycle of 30 days and she had never been on pills. Her expected date of confinement was therefore on 30th October, 1984.

PAST MEDICAL HISTORY:

The patient had not had any serious or chronic disease in the past.

PAST SURGICAL HISTORY:

There was nothing worth of note.

FAMILY HISTORY:

There was no history of diabetes mellitus, hypertension or twins in the family.

SOCIAL HISTORY:

She was a clerk in a private firm and she had completed primary school education. She was married to a businessman and neither smoked cigarattes nor drank alcohol.

SUMMARY OF ANTENATAL CARE:

Examination at booking.

Her general condition was good and she was not pale or jaundiced. She had no edema or varicose veins. Her height and weight were 154cm and 52kg respectively.

Mouth, Throat and Neck: There was nothing worth of note.

Cardiovascular system:

The jugular venous pressure was not elevated. The pulse was 76 beats per minute, regular and of full volume. The

blood pressure was 110/70 mmHg. Heart size and sounds were normal and there were no murmurs.

Chest: The chest was symmetrical. The lung fields were clear. The breast were symmetrical with well developed ripples. There were no lumps or tender areas but they were active.

Abdominal examination:

The abdomen was symmetrically distended and it was moving with respiration. There were no scars or tortous veins. Liver and spleen were not palpable. The renal angles were non tender.

The fundus corresponded to 30 weeks pregnancy size. The fetus was in longitudinal lie in cephalic presentation. The presenting part was free. The fetal heart was heard at 142 beats per minute and it was regular.

Vaginal examination: Was not done.

Investigations:

a) Urine: No sugar or albumin. Sediment microscopy was normal and culture was sterile.

b) Blood: Haemoglobin: 10.2gm/dl.
Blood group: B Rh. D positive
V.D.R.L.: Negative.

SUBSQUENT VISITS:

Having been given prophylactic ferrous sulphate folic acid and weekly chloroquine tablets she was asked to come again after a fortnight.

In all her subsquent 4 visits on 26/8/86, 4/9/84, 18/9/84 and 15/10/84 she had no problems. Her haemoglobin

remained above 10gm/dl. and her blood pressure was within the booking level of blood pressure. She was booked to deliver in Mwananyamala hospital.

ONSET OF LABOUR, PROGRESS AND ITS MANAGEMENT:

Labour pains started at 8 a.m on 24/10/84 and within a period of two hours she was admitted in Mwananyamala hospital. The pains were mild coming once in about 10 minutes and were not associated with bleeding per vaginum or drainage of liquor. Three hours later she had spontaneous rupture of membranes and vaginal examination was done. The liquor was clear and the cord which was pulsating was felt in the vagina. The cervix was fully effaced and it was 5cm dilated. She was then immediately referred to Muhimbili Medical Centre in knee chest position.

CLINICAL EXAMINATION ON ADMISSION:

General examination.

She was in good general condition. She was not pale or jaundiced and she was not dehydrated. Her temperature was 36.7°C and she had no edema. Her height was 154cm and her weight was 56kg.

Head and Neck: Were normal.

Respiratory system: There was nothing worth of note.

Cardiovascular system: The pulse was 78 beats per minute. The blood pressure was 110/70 mmHg. The heart size and sounds were normal and there were no murmurs.

Abdominal examination: The abdomen was distended. There were no areas of tenderness. The liver and spleen were not palpable. The renal angles were no tender. The fundus

corresponded to 36 weeks pregnant uterus. The lie was longitudinal and the presenting part was cephalic but it was free. The size of the baby was about 3kg. Fetal heart tones were heared at 144 beats per minute and were regular.

VAGINAL EXAMINATION:

Using sterile technique, vaginal examination was performed as it has been detailed in the introduction.

The vulva and vagina were wet with clear liquor oozing from the introitus. There was no cord visualized in the vulva. On digital examination a loop of cord which was pulsating was felt in the vagina. The cervix was 5cm dilated and fully effaced. The presenting part was cephalic and at the level of the pelvic brim.

DIAGNOSIS:

A diagnosis of cord prolapse at 5cm cervical dilatation with a live fetus was made. The patient was urgently planned for Caesarean section.

PRE-OPERATIVE PREPARATION:

The patient was kept in an exaggerated Sim's position with the buttocks raised by two pillows. A firm vulval pad was applied after shaving the patient.

The patient was explained that the cord of the baby had prolapsed and the only way to save the child was by abdominal delivery. She consented to undergo the operation.

Blood was taken for grouping and cross-matching and an intravenous drip of 5% Dextrose was set up using a cannula. The patient was then wheeled to the theatre.

The patient was catheterized aseptically as has been described in the introduction. The fetal heart was checked and found to be normal before anaesthesia and dorsal position were allowed.

CAESAREAN SECTION:

Pre-medication.

The patient was premedicated with atropine 0.6mg intravenously.

Anaesthesia.

Anaesthesia was induced with freshly prepared sodium thiopentone 250mg intravenously slowly. She was then relaxed by suxamethonium bromide 40mg intravenous and immediately intubated with cuffed endotracheal tube. Anaesthesia was then maintained with nitrous oxide and oxygen and either was instituted after delivery of the baby.

Preparation of the operation site.

Before anaesthesia was commenced, the skin of the abdominal wall was thoroughly cleaned with savlon 1:200 solution and then followed by weak iodine solution for skin. The iodine was then washed off using flavin in spirit solution. Sterile drapings were applied and were secured in position by towel clips. A sucker was fixed in position.

Procedure and findings.

The abdomen was opened through a sub-umbilical midline incision as soon as the patient was anaesthetized. The details are as in the introduction. The paracolic gutters were packed off using two wet abdominal packs. The bladder was retracted down using a Doyen's retractor.

The lower segment was identified and the uterus was centrally positioned using the round ligaments as landmarks. The uterovesical peritoneum was picked and incised transvesely using a pair of Mayo's scissors with the concavity ot the scissors pointing upwards. The lower flap of the peritoneum was pushed downwards using a dry swab on a sponge holding forceps.

Using another bladded scalpel, the uterus was incised traversely by a Crescent shaped" incision. The incision was extended on both sides laterally using the index finger care being taken not to tear the uterine vessels. The head of the fetus was seen through the incision. The Doyen's retractor was then removed.

The right hand of the operator was carefully insinuated into the lower segment of the uterus so that the fingers passed below the fetal head. The head was found to be in left occipital transverse position. The head was gently pushed up through the uterine incision using gentle fundal pressure.

As soon as the head was delivered the anaesthetist gave 0.25mg ergometrine intravenously. The child's mouth, pharynx and nostrils were cleared of mucus and blood using mechanical suction apparatus and swab which were then removed from the operation site immediately. The posterior shoulder was delivered on raising the head gently and the anterior shoulder followed immediately and delivery was completed.

The cord pulsations were sluggish and the cord was immediately clamped at two placed and cut in between. The

cord was noted to be about 120cm long. The baby was already crying and passed urine was being handed over to an assistant.

There were some bleeding vessels on the uterine wound edges especially on the right side and these were picked by Green Armitage clamps. The placenta had already separated at this time and its delivery was effected by controlled cord traction. The placenta and membranes were delivered complete. The uterine cavity was swabbed with a swab on sponge holding forceps and there was no unde bleeding.

The uterus was then repaired using No. 2 atraumatic chromic catgut starting from the left corner. The first layer was haemostatic and it was sutured in a continuous suture in such a way that the myometrium only was included and the decidua avoided. Alternate stitches were locked. A second continuous layer was inserted to reinforce the first one. This was applied in such a way that the first layer was buried.

The uterovesical peritoneum was then closed using No. 0 chromic catgut. Traces of blood and liquour were mopped from the peritoneal cavity and the two abdominal packs were removed. Haemostatis was then achieved. Instrument and gauze swab count were correct.

The abdomen was closed in layers as has been detailed in the introduction. A dry gauze was applied on the wound and strapped with plaster. The uterus was squeezed to expell any blood clots which were then swabbed off from the vagina using a dry gauze on sponge holding forceps. The uterus was well contracted to about 20 weeks pregnancy size. The catheter which was passing clear urine was removed. There was

no bleeding per vaginum. Total blood loss was about 400 ml.

After the operation the mother was taken to the recovery room. Her general condition was good. Her pulse was 82 beats per minute, regular and of full volume. The blood pressure was 110/70 mmHg. She was mildly pale and blood transfusion one unit (500ml) was started. After 30 minutes she was awake from anaesthesia and was transferred to the postnatal ward for care. The baby was temporarily taken to ward 36 a neonatal care unit while the mother was convalescing from the operation.

THE BABY:

The baby was a male weighing 3kg. The Apgar score was 8 at 1 minute. He had no obvious congenital malformations.

SUMMARY OF LABOUR:

The labour lasted for about 6 hours 20 minutes. The placenta and membranes were delivered complete and weighed 450 grams.

POST-OPERATIVE MANAGEMENT:

1. Blood transfusion 100ml were to be continued. The patient had already started receiving 500ml while in the recovery room.
2. The blood pressure, pulse and respiration were to be monitored half hourly for 6 hours then 1 hourly for the first 24 hours then 4 hourly. Her temperature was to be taken 4 hourly. All these parameters remained with normal.
3. An input and output fluid chart was started. She was to get intravenous fluids consisting of Dextrose 5% 2 litres and Normal Saline 1 litre over 24 hours.

4. Injection Pethidine 100mg was given intramuscularly 6 hourly for the first 48 hours for relieving pain. She had a total of 4 doses only.
5. Prophylactic ampicillin cover 500mg intramuscularly 6 hourly was given for the first 48 hours then capsules ampicillin 500mg 6 hourly were continued for 3 more days.

POST-OPERATIVE PROGRESS:

About 6 hours post-operatively the patient's general condition was good. Her vital signs were within normal range and stable and she was well awake from anaesthesia. Pethidine injection first dose was given as she was complaining of pains.

On the first post-operative day she was again in good general condition with normal vital signs. She had passed about 1600ml of urine compared to an input of about 2000ml over 24 hours. Her temperature was 36.8°C and she was not pale.

The patient started ambulation after 34 hours post-operatively when the drip was discontinued. The bowel sounds were present. Oral fluid sips were encouraged. On the 3rd day the baby was discharged to the mother as she was now capable of taking care of him. There was nothing remarkable in the subsquent days as her recovery was fast and steady. Her haemoglobin checked on the 5th day post-operatively was 9.8gm/dl. The stitches were removed on the 7th day post-operatively. The wound had healed nicely. She was discharged on the 8th post-operatively with her baby both in good general condition and were to be seen again in the post-natal clinic after 6 weeks.

However, the patient had to travel to Moshi to stay with

her mother in law and she could not attend the post-natal clinic in Muhimbili Medical Centre. However, before discharge she was educated on the importance of early booking and hospital delivery in her future pregnancies because of the scar on the uterus.

COMMENTARY:

It has been reckoned that prolapse of the cord occurs in about 200 deliveries[1]. In Muhimbili Medical Centre the incidence is about 2 per 1000 deliveries[2].

Cord prolapse is encountered in association with anything which prevents the presenting part from fitting snugly into the lower segment. In this particular case the presenting part was high and the cord prolapsed when the membranes ruptured spontaneously. It is strongly recommended to do a vaginal examination as soon as the membranes rupture so as to exclude cord prolapse as it was done in the case.

It was noted that in this case the cord was unduly long (about 12cm) and probably this could be the reason why it prolapsed. However, cord prolapse occurs commonly in multiparae, hydramnios, twins, prematurity, disproportion and malpresentations. None of these complications were encountered in this case except multiparity.

When the cord prolapses it is important to position the patient in such a way that the cord is not compressed by the fetal head. This was accomplished in this case by keeping the patient in an exaggerated Sim's position with the foot of the stretcher raised. Alternatively, the patient could have been placed in knee-chest position. However, the knee-elbow position is very irksome for the patient and the former

position is preferrable. Other authors advocate pushing the presenting part out of the pelvis with the help of two fingers through the vagina[4], and filling the urinary bladder with Saline solution[5]. All of these methods, although helpful in reducing the pressure on the umbilical cord during labour, are not sufficient, as uterine contractions continue and push the head against the cord. Katz and co-workers 1982[4] describe a method which resolves these two problems namely - upward displacement of the fetal head and administration of tocolytic drugs such as ritodrine to decrease uterine contractions. However, these measures were not employed in this case as this was only a single report with a very small sample size.

Applying a firm vulval pad as was done in this case is important to prevent the cord from prolapsing outside the vagina. When the cord prolapse outside the vagina, it becomes exposed to cold and it undergoes spasm which may quickly extinguish its pulsations.

The rate of fetal wastage in cord prolapse has been noted to be disturbingly high in Muhimbili Medical Centre. Kaisi 1980[3] reported a case fatality rate of 74%. The high rate of fetal loss in cord prolapse is mainly due to late diagnosis due to poor intrapartum fetal monitoring. In addition to this there is delay between time of decision and the time of operative delivery when the cervix is not fully dilated. If the cervix is fully dilated when cord prolapse is detected assisted vaginal delivery by vacuum or forceps can be immediately conducted in cephalic presentation.

Absence of pulsations in the cord indicates fetal deaths but this must be confirmed by careful auscultation of the fetal heart before the diagnosis is confirmed.

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O. 6 BREECH PRESENTATION AT TERM : ASSISTED BREECH DELIVERY:

Name: Mrs. S.T.

Age: 26 years

Reg. No: 28087/M/84

Address: Kinondoni, Dar es Salaam.

Gravidity: Gravida 8 para 7

Date of admission: 31st October, 1984

Date of discharge: 1st November, 1984.

SUMMARY:

Mrs. S.T. was a grandmultiparous lady who was referred from Mwananyamala hospital in labour on account of breech presentation. She was term by dates and she had been attending the M.C.H. Clinic at Magomeni regularly. Assisted breech delivery was conducted uneventfully. The principles of management of breech presentation and the associated complications of breech deliveries are briefly discussed.

HISTORY OF THE PRESENT PREGNANCY:

Mrs. S.T. was gravida 8 para 7 with 5 living children. For the present pregnancy she booked in Magomeni MCH Clinic when she was 28 weeks pregnant. In her booking visit she had no obvious at risk factors - her blood pressure was 120/60 mmHg, haemoglobin 11.8gm/dl. and she had not had any history of bleeding in early pregnancy, urinary symptoms or any other significant illness.

PAST OBSTETRIC HISTORY:

She had had 7 full term normal vaginal deliveries and their confinements were uncomplicated. The birth weights of her babies ranged from 3kg to 3.6kg. Her last born was 1½ years old. However, two of her kids died of measles and gastroenteritis at the age of 1 year and 1½ years respectively.

GYNAECOLOGICAL HISTORY:

The patient did not know the age at which she had menarche. However, she had regular menstrual cycles recurring every 28 days and with normal menstrual periods lasting for 3 to 4 days. Her last normal menstrual period started on 20th January, 1984 and her expected date of confinement was on 27th October, 1984. She was therefore term by her dates. She had never used any form of contraception.

PAST MEDICAL AND SURGICAL HISTORY:

She had not had any serious or chronic illness in the past, and she had had no surgical operation either.

FAMILY HISTORY:

There was no family history of diabetes mellitus, hypertension or twins.

SOCIAL HISTORY:

She was married to a shopkeeper and she was a housewife. She neither smoked cigarattes nor drank any type of alcohol.

SUMMARY OF ANTENATAL CARE:

i) Booking visit: 10th August, 1984

At booking she was found to be healthy looking, afebrile and not pale. She had no oedema or varicose veins. The oral hygiene was satisfactory and apart from two lower molar teeth which were filled, her teeth were normal.

Her height was 158cm and her weight was 65kg. The breasts were engorged and the areolae were darkened with normal nipples. There were no lumps in the breasts or tenderness.

The pulse was 88 beats per minute and her blood pressure was 120/60 mmHg. The heart was normal size and both the first and second heart sounds were normal and there were no murmurs. The lung fields were clinically clear.

On abdominal examination, the abdomen was symmetrically distended with no scars or tortous vessels. There was a clear linea nigra extending from the suprapubic area to the umbilicus and extending above it. There were no areas of tenderness. The liver and spleen were not palpable and the renal angles were non-tender. The fundal height corresponded to 28 weeks pregnancy size. The presenting part was cephalic and the lie was longitudinal. Fetal heart tones were heard at 146 beats per minute and were regular. Vaginal examination was not done.

INVESTIGATIONS:

Urine: No albumin or sugar. Sediment microscopy was normal and culture was sterile.

Blood: Haemoglobin 11.8gm/dl. Blood group was O Rh positive.
V.D.R.L. - Negative.

TREATMENT:

She was given ferrous sulphate 200mg three times a day

and folic acid 5mg once daily for prophylaxis and instructed to report again to the clinic after 4 weeks. She was also also given chloroquine tabs. 300mg every week for prophylaxis against malaria.

SUBSQUENT VISITS:

She made four more visits to the clinic on 18/9/84, 1/10/84, 22/10/84 and 29/10/84 and she was well. Her blood pressure was within the booking range and she had no edema. Her weight gain was satisfactory. The presenting part was reported cephalic in all these visits.

ONSET, PROGRESS AND MANAGEMENT OF LABOUR:

The patient was admitted at Mwananyamala on 31/10/84 with labour pains which had started about 1½ hours prior to admission. The pains were mild and the membranes had not ruptured as yet. There was no history of bleeding per vaginum. She was examined at Mwananyamala and found to have two risk factors i.e. breech presentation and grand multiparity and for these two reasons she was referred to the high risk unit in Muhimbili for further care.

CLINICAL EXAMINATION ON ADMISSION:

The patient's general condition was good. She was not anaemic or febrile and had no edema or varicose veins. Her height was 158cm and weight 68kg.

The head and neck were normal and she had no goitre. The oropharynx had no septic foci but there were two filled lower molar teeth.

Chest: Lungs were clear.

Breasts: Normal.

CARDIOVASCULAR SYSTEM:

The pulse was 82 beats per minute, regular and of full volume. The blood pressure was 110/60 mmHg. There was no evidence of cardiomegaly clinically. The first and second heart sounds were normal and there were no murmurs.

ABDOMINAL EXAMINATION:

The abdomen was symmetrically distended without any scars or tortous vessels. It was moving with respiration.

The liver and spleen were not palpable. The renal angles were non tender. The uterine fundal height was equivalent to 36 weeks of pregnancy (dates 40 weeks). The lie was longitudinal and the presenting part was breech which was engaged. The head was felt at the fundus. The amount of liquour was moderate and the size of the baby was roughly estimated to be about 3.2kg. Moderate contractions were felt twice in every 10 minutes and these contractions lasted for about 40 seconds. The fetal heart was heard best just above the umbilicus at a rate of 144 beats per minute and it was regular.

VAGINAL EXAMINATION AND PELVIC ASSESSMENT: 31/10/84 2 p.m

Using sterile technique the above procedure was performed as has been detailed in the introduction.

The vulva and vagina were stained with show otherwise they were normal. The cervix was fully effaced, 6.cm. dilated and the membranes were intact. The presenting part was confirmed to be frank breech in the left sacral anterior position at the level of ischial spines. The sacral promontory could not be tipped (i.e. more than 11.5cm). The sacral curve was normal, ischial spines were not prominent and the outlet

could admit 4 Knuckles (more than 8cm). The subpubic angles was more than 90°.

PLAN OF MANAGEMENT:

Considering the good previous obstetric history, the size of the baby in this pregnancy and the bony pelvis assessment, the pelvis was reckoned adequate and thus vaginal delivery was planned.

INVESTIGATIONS:

Urine: No sugar, albumin or acetone.

Haemoglobin: 11.2gm/dl.

PROGRESS OF LABOUR:

The patient had good progress of labour. The vital signs (blood pressure, pulse, fetal heart rate) were closely monitored and charted in a partogram as has described in the introduction under intrapartum care. The parameters remained within normal range. At 6 p.m the membranes ruptured spontaneously and the liquour was meconium stained.

Soon after the membranes had ruptured, a vaginal examination was done to rule out cord prolapse and to assess the cervical dilatation. It was found that the cervix was fully dilated and there was no cord prolapse. The breech was felt below the ischial spines. The patient was then shifted to a high bed for assisted breech delivery.

ASSISTED BREECH DELIVERY:

a) Preparations:

A delivery tray was prepared. The contents have been detailed in the introduction. The attendant scrubbed with

soap and put on sterile rubber gloves. The patient was placed in lithotomy position so that the buttocks rested on the edge of the high bed. The vulva and vagina were cleaned with antiseptic solution. The patient was draped with one sterile towel under the buttocks and another one suprapubically and also covering the lower part of abdomen.

The perineum was then infiltrated with 10ml of 1% lignocaine because episiotomy was anticipated any time. The patient was encouraged to bear down with the uterine contractions.

b) <u>The procedure of Assisted Breech Delivery</u>.

As soon as the breech was seen distending the perineum making its characteristics "climb up the perineum" an episiotomy was performed as has been detailed in the introduction. Thereafter, the mother was encouraged to bear down and the breech delivered itself up to the level of the umbilicus. The extended legs were then disengaged and the stretched loop of the umbilical cord pulled down. With further bearing down, the rest of the trunk up to the level of the scapular was achieved. Delivery of the shoulders was achieved by holding the baby's thighs with both hands so that the thumbs were on the baby's back and then rotating the fetal trunk through 180° degrees in an anticlockwise direction. The posterior shoulder and arm easily came out beneath the pubic arch. The left shoulder and arm were born by rotating the trunk of the fetus in the opposite direction.

The fetus was then left to hand by its own weight from the vulva for a while. This encouraged flexion of the head

and its body was seen to descend slowly. This was aided by gentle pressure over the suprapubic area. As soon as the hair line was visualized, delivery of the head was effected by the Burns-Marshall technique. This was effected by holding the child's legs in the right hand while standing with the back to the patient's left leg and then by exerting a firm outward force, the child being drawn over the maternal pelvis thus delivering its head by flexion. The left hand was used to guard the perineum from tear t and at the same time prevent the heard from being born too quickly. The mouth and the nostrils of the baby were sucked free of mucus debris as soon as they were freed and full delivery of the head then effected. The mother was instructed not to bear down while the head was being delivered. Intravenous ergometrine 0.25mg was administered just after the delivery of the baby.

THE BABY:

The baby was a male weighing 3.3kg and had an Apgar score of 8 at 1 minute. There were no congenital malformations detected and he didn't have features of birth injury.

THIRD STAGE:

The placenta was delivered by Brandt-Andrew's manourve as has been detailed in the introduction. The placenta and membranes were delivered complete and weight 450 grams. The episiotomy was repaired in the manner described in the introduction. The patient lost about 180ml in total and there was no postpartum haemorrhage. The uterus was well contracted.

The mother and the baby remained in good general condition thereafter. The blood pressure of the mother twenty minutes post-delivery was 120/70 mmHg. She was not pale or febrile. The pulse was 78 beats per minute and it was regular and of full volume.

SUMMARY OF LABOUR:

The first stage lasted: 7 hours

The second stage lasted: 30 minutes

Third stage lasted about 4 minutes

Total blood loss: 180 nl.

THE PUEPERIUM:

The condition of the mother and the baby remained good in the first postpartal day. She was afebrile and not pale and the blood pressure and pulse remained within normal limits. There was no undue blood loss per vaginum. The baby was feeding well. B.C.G. was given on the second day post-delivery. Both the mother and the child were discharged on the second day post-delivery in good general condition.

On discharge the mother was given prophylactic iron tabs 200mg three times a day and folic acid 5mg once daily for the next six weeks. She was advised on tubal ligation and she said she will consult her husband first. She was given an appointment to attend the clinic after 6 weeks but she never turned up.

COMMENTARY:

Breech presentation occurs in about 3% of labours, but breech presentation is found more commonly than this

before term. It accounted for 4.9% of the total number of deliveries in Muhimbili Medical Centre in 1979/1980 whereas in Britain the incidence has been reported to be 2 - 3% (Donald 1979; Mtimavalye 1979/80). The higher incidence in Dar es Salaam could be attributed to the fact that lesser external cephalic versions are done and that there are higher incidence of premature deliveries and multiple pregnancies which are associated with breech presentations.

The fetal mortality and morbidity is higher in breech than in vertex deliveries even if complications such as contracted pelvis, placenta praevia, fetal abnormality or prematurity are excluded. Armon et.al 1978 in KCMC, Moshi reported a four fold increase in perinatal mortality rate in term breech deliveries compared to non-breech deliveries. The increased mortality in mature uncomplicated cases is caused mainly by birth trauma and anoxia. Several organs may be affected by birth trauma. The brain for example can sustain intracranial haemorrhage, tentorial tear; the liver and spleen can rupture, rib and limb fractures can occur and bleeding into the muscles can occur giving rise to features mimicking the "crush syndrome". Anoxia may occur as a result of interference with the placental circulation as a result of compression of the umbilical cord by the after coming head during delivery but also from uterine retraction which may separate the placenta before birth of the head. Also it may be a result of delay in the delivery of the head after the body is born. None of these complications were encountered in this case.

To diminish the high fetal loss associated with breech

deliveries, two approaches have been suggested. Patterson et.al 1967 recommended Caesarean section especially for all primigravidae with breech presentation. Other workers[4, 5] who favour vaginal delivery insist that an experienced obstetrician must be present at each breech delivery. Both these approaches have certain limitations in developing countries. Although Caesarean section is associated with diminished fetal loss, it is associated q with the risk of haemorrhage, sepsis and scar rupture in subsquent deliveries in developing countries[6]. On the other hand, skilled obstetricians are not available to attend to every breech deliveries owing to shortage of skilled manpower.

In this case, clinical pelvimetry was done. The adequacy of the pelvis was judged by the good previous obstetric performance, and the digital assessment of the bonny pelvis, and the assessment of the size of the baby. Pelvic assessment in breech births is extremely important because breech deliveries particularly dangerous in the presence of even slight disproportion between the bonny pelvis and the fetal head.

Plain abdominal X-ray is important antenatally in order to assess the attitude of the fetal head as deflexed head is associated with arrest of the aftercoming head[7]. Other advantages of X-ray in breech presentation are confirmation of the presenting part exclusion of gross fetal malformations such as anaecephaly and hydrocephalus.

In this case, breech presentation was first noted intrapartum. Had it been noted earlier, it is the policy of our unit to perform external cephalic version at 34 weeks. However, there are some doubts as to whether this reduces the

number of breech deliveries in those centres in which it is routinely performed as it is argued that in the cases in which it can be successfully accomplished, the breech will have turned to cephalic presentation spontaneously.

Delivery of the after coming was accomplished by the Burns-Marshall method. However, the use of forceps to accomplish this has been found to be more advantageous. Forceps are not commonly used in Muhimbili owing to lack of facilities for obstetric anaesthesia in the labour ward. Delivery of the aftercoming by the Mauriceau Smellic Veit manoeuvre is adventageous in flexing the head but this was unnecessary in this case as there was progressive descent of the head. Donald 1979 recommends that if at all it is used it is better to press the fingers on the facial maxillae than on the possibly limp jaw of the baby in order to increase flexion.

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0.7 SHORT PRIMIGRAVIDA : TRIAL OF LABOUR AND SUCCESSFUL VAGINAL DELIVERY:

Patient: Miss Z.I.

Tribe: Mwera

Reg. No: 4287/84

Address: Mtoni kwa Azizi Ali, Dar es Salaam

Gravidity: Primigravida. Term by dates.

Date of admission: 5th June, 1984

Date of discharge: 6th June, 1984.

SUMMARY:

A case of a short primigravida who had been a regular attendant to the high risk antenatal clinic in Muhimbili is presented. Trial of labour was conducted with successful normal vaginal delivery. Some aspects of trial of labour are discussed.

OBSTETRIC HISTORY:

Miss Z.I. was a primigravida, term by her dates who was admitted to the labour ward on account of labour pains which had started 5 hours prior to admission. She denied history of any other associated complications. The membranes had not ruptured and she admitted to having some mucoid discharge per vaginum.

HISTORY OF THE PRESENT PREGNANCY:

There were no pregnancy complications since her last normal menstrual period - no vaginal bleeding, or urinary symptoms or any other significant illness. She booked at Muhimbili Medical Centre in grade one antenatal clinic on

16th January, 1984 at 20 weeks gestation by dates having been referred from Mtoni M.C.H. clinic on account of short stature (146 cm).

GYNAECOLOGICAL HISTORY:

Menarche was at 15 years. She had been having regular normal menstrual periods lasting 3 - 4 days in a cycle of 28 days. The flow was moderate in amount and it was not associated with pains. There was no history of contraception. Her last normal menstrual period was 1st September, 1983 and her expected date of confinement was on 8th June, 1984 and so she was term by dates.

PAST MEDICAL AND SURGICAL HISTORY:

She had been in good health in the past and denied any history of serious illness in the past as for example renal disease, rheumatic fever or schistosomiasis. She had never underwent any surgical operations.

FAMILY HISTORY:

There was no history of diabetes mellitus, hypertension or mental disease in her family. There was no history of twins. None of her relatives had had tuberculosis.

SOCIAL HISTORY:

She was a house-wife who had completed her Primary School education two years back. She was single but she had a boy-friend who was a seaman. She was currently staying with her parents who were Primary School teahhers. She neither smoked cigarrates nor took any type of alcohol.

PHYSICAL EXAMINATION AT BOOKING: 16/1/1984

General:

She appeared to be a short but a well nourished young lady of medium build with no musculo-skeletal deformity. Her height 3 was 146cm and her weight was 54.0kg. She was not anaemic or jaundiced. She was afebrile with no edema, varicose veins or lymphadenopathy.

Head and Neck:

There was nothing abnormal detected. There was no goitre.

Chest:

The chest was symmetrical with a centrally placed trachea. Lung fields were clinically clear. The breasts were symmetrical with darkened areaolae and well developed nipples. The breasts were engorged with no tender areas or masses. Clear serous fluid could be expressed from the nipples.

Cardiovascular system:

The pulse rate was 78 beats per minute, regular and of full volume. Blood pressure was 120/70 mmHg. The heart size was normal and both the first and second sounds were heard and there were no murmurs.

Abdominal examination:

The abdomen was symmetrically distended with a well marked linea gravidarum and few striae gravidarum. The distension was more marked in the hypogastric area. There were no scars. It was moving with respiration.

There were no tender areas on superficial or deep

palpation. Fundal height corresponded to 20 weeks gestation. The lie or the presenting part were not easy to make out.

Vaginal examination:

The vulva and vagina were normal and there was no discharge or bleeding externally. The cervix was bluish, soft and healthy and the os was that of a nulliparous woman and it was closed.

Bimanual examination confirmed the uterine size of 20 weeks gestation. There were no adnexal masses or tenderness.

INVESTIGATIONS:

Urine: No protein or sugar or acetone

Blood: Haemoglobin 10.2 gm/dl. Blood group A, Rh D Positive
Serological test for syphilis (VDRL) negative.

Stool: No parasites seen.

TREATMENT AND ADVISE:

She was supplied with Ferrous sulphate tablets 200mg three times daily, Folic acid tablets 5mg once daily and Chloroquine two tablets weekly. The importance of taking the drugs was stressed to her. Advise was also given on nutrition, rest and hygiene and she was asked to report again in four weeks time.

SUBSQUENT ANTENATAL VISITS:

She made 8 more visits to the antenatal clinic. She remained symptom free. She had breech presentation at 30 weeks which later spontaneously turned to cephalic presentation at 32 weeks. She was given tetanus toxoid injection at 28, 32 and 36 weeks. The rest of the examination during these visits remained normal and it is summarized in the table below.

Date	Oedema	B.P in mmHg.	Fundal Height in weeks.	Weight	Fetal Heart	Pres. Part.	Urine for Protein	Remarks and Treatment
20/2/84	NIL	100/70	24	54.0	Heard	Cephalic	NEGATIVE	Iron tabs 200mg t.d.s. Folic acid 5mg o.d Chloroquine 2 tabs weekly
23/3/84	NIL	100/60	26	55.0	Heard	Cephalic	NOT DONE	Well. Hb 10.8gm/dl.
11/4/84	NIL	100/60	28	55.5	Heard	Breech	NEGATIVE	Well. 1st dose of tetanus to toxoid.
25/4/84	NIL	110/70	32	56.2	Heard	Cephalic	NEGATIVE	Well. Pink
09/5/84	NIL	110/70	34	57.0	Heard	Cephalic	NOT DONE	Well
15/5/84	NIL	120/70	34	57.6	Heard	Cephalic	NEGATIVE	2nd dose tetanus toxoid. Well
23/5/84	NIL	110/70	36	58.0	Heard	Cephalic	NOT DONE	Well. Hb 10.2gm/dl. 3rd dose tetanus toxoid
30/5/84	NIL	110/70	36	58.0	Heard	Cephalic	NEGATIVE	Pelvic assessment done. Pelvis borderline. Planned for Trial of Labour.

LABOUR AND ITS PROGRESS:

She was admitted to the labour ward on 5th June, 1984 at 8.00 a.m with labour pains which had started at home about 5 hours prior to admission. There was no history of vaginal bleeding or draining of liquour. The pains were strong, coming on intermittently and she could feel 3 contractions in about 10 minutes.

PHYSICAL EXAMINATION:

The general condition of the patient was good. Her height was 146cm. and her weight was 58.1kg. She was not anaemic or icteric. She had no edema. She was afebrile with a temperature of 36.4°C.

The pulse rate was 78 beats per minute, regular and of full volume. The blood pressure was 110/70 mmHg. The rest of the examination revealed nothing remarkable.

ABDOMINAL EXAMINATION.

The fundal height corresponded to 36 weeks gestation. The size of the baby was medium (roughly about 3kg) and the amount of liquor was moderate. The presenting part was cephalic of which four fifth was palpable above the pelvic brim.

Two contractions lasting about 30 seconds could be palpated over 10 minutes. The liver and spleen were not palpable and there were no other masses per abdomen. The renal angles were non tender.

The fetal heart was heard at 142 beats per minute and it was regular.

VAGINAL EXAMINATION:

Pelvic Assessment:

The vulva, vagina and perineum were all normal except that they were covered with some mucoid discharge (show.)

The cervix was soft, fully effaced and 4cm dilated. The presenting part was cephalic and the position was left occipito-anterior. There was no caput or moulding. The membranes were ruptured using a sterile pair of Kocher's forceps. The liquor was clear. Fetal heart was checked after amniotomy and it was regular at 144 beats per minute.

On pelvic assessment, the sacral promontory was just reached at about 11.5cm. Sacral curve was normal. The ischial spines were not prominent. The subpubic angle accommodated two fingers. The intertuberous distance could accommodate 3½ Knuckles. The subpubic angle was about 90°. A clinical impression of a borderline pelvis was made and the patient was planned for trial of labour.

INVESTIGATIONS:

Urine was tested for protein, sugar and acetone. They were all negative.

CONDUCT OF TRIAL OF LABOUR AND SUBSQUENT CARE:

The patient was prepared as if she was to have emergency abdominal delivery anytime. She was restricted taking anything orally and she was shaved in advance. An intravenous drip of Dextrose 5% was started.

The fetal heart rate, colour of the liquour descent of the fetal head, strength and frequency of the uterine contractions were recorded half to hourly. The pulse,

blood pressure, temperature, urine test for protein, acetone and cervical dilatation were done every 4 hourly. All these parameters were charted in a partogram and they all remained within normal limits as shown.

At 12 mid-day, another vaginal examination was done. The cervix was 7cm. dilated and the presenting part had descended so that only two fifths of the head was above the brim. There was no caput or moulding. She was having moderately strong contractions lasting 30 seconds and occurring 3 times per 10 minutes. One hour later, the patient was having strong contractions lasting 40 seconds and occuring 4 - 5 times every 10 minutes with the urge to pass stool.

At 4 p.m the patient was re-assessed. She was fully dilated. The head was visible in the introitus. There was no caput but moulding was plus one. She was still having strong contractions and the urge to bear down.

DELIVERY:

This was conducted with the patient in the dorsal position. The vulva was swabbed with Savlon solution. The patient was encouraged to bear down. As the head was pressing the perineum, there was a threat of perineal tear and a medial lateral episiotomy was done on the left aspect after infiltrating the perineum with 10ml. of lignocaine 1%.

Delivery of the head, shoulders trunk and the rest of the baby was effected without any problem. As soon as the anterior shoulder was delivered, an intravenous injection of 0.25mg ergometrine was given. The placenta and membranes were immediately delivered by controlled cord traction.

Apart from the episiotomy wound, the vulva, vagina and perineum were intact. The episiotomy was repaired with chromic catgut suture number 0 as has been described in the introduction. Blood loss was about 220ml. The placenta and membranes weighed 460gm.

THE MOTHER AFTER DELIVERY:

She was in good general condition. The pulse rate was 76 beats per minute, regular and full volume. Post-delivery blood pressure was 110/70 mmHg. The uterus was well contracted to the size of about 20 weeks. There was no undue vaginal bleeding. She was transferred to the postnatal ward.

THE BABY:

The baby delivered was a male with an Apgar score of 9 at 1 minute. The birth weight was 2.9kg. The only method of resuscitation employed was by suction. The baby was term with no abnormalities.

THE PUEPERIUM:

On the first post-partal day, the mother's condition remained good. She was ambulant. She had no fever. Her pulse was 76 beats per minute and it was regular and of good volume. The blood pressure was 110/70 mmHg. Lochia was reddish and there was no active bleeding per vaginum. The uterus was well contracted. The baby was breast feeding normal and he got B.C.G. vaccine on the same day.

The mother and baby were discharged on the same day. The mother was instructed to continue with weekly Chloroquine, daily iron tablets and folic acid during her post-natal period. She was asked to attend the post-natal clinic after 6 weeks.

POST-NATAL FOLLOW UP:

The mother and the baby were seen in the post-natal clinic on 21st July, 1984. There were no complaints. The mother was not anaemic or febrile. Pelvic examination was unremarkable. She had not yet started menstruating. Her haemoglobin was 10.0gm/dl.

The condition of the baby was good. The mother and the baby were discharged from the clinic and advised to attend the periphery underfives clinic.

COMMENTARY:

This was a case of suspected mild cephalopelvic dispropotion (CPD) in which trial of labour ended in a successful vaginal delivery of a normal baby. Trial of labour is not only limited to cases in which mild cephalopelvic dispropotion is suspected. Philpott 1981 recommends that in areas where cephalopelvic disproportion is common every primigravida should be regarded as having C.P.D until proved otherwise. This is supported by Donald 1979[5] who describes a primigravida as an "untried horse". Thus C.P.D in a primigravida is ruled out only in retrospect.

In this patient, a pelvic assessment was done at 36 weeks. The author is aware of its pitfalls and the fact that the best pelvimeter is the fetal head. However, Philpott 1982[1] recommends this as a useful screening test for those primigravidae who have small pelvises so that arrangements can be made for them to have a trial of labour in a high risk maternity unit. Height is also another screening parameter which is also used. Everett 1975[2] in Dar es Salaam found that

any primigravida with a height less than 146cm. to be at risk of C.P.D.

Almost similar to digital pelvic assessment at 36 weeks is the head fitting test of Munro Kerr. This is done by pushing the head into the pelvic brim with an abdominal hand while the descent is assessed by two fingers of the right hand in the vagina and the thumb above the symphysis pubis. This test is valuable if positive but when negative it may be due to other factors other than C.P.D such as poorly formed lower uterine segment. X-ray pelvimetry is also done in some centres but again it has the same pitfalls. The pitfalls of clinical and radiological assessment of C.P.D are supported by the practical observation that most cases labelled as C.P.D turn out to be due to inefficient uterine action[3].

Although trial of labour sounds as a casual wait-and-see policy, in practice it is not. There were three impprtant parameters which were vigilantly monitored in this patient namely: maternal and fetal well being and the progress of labour in terms of cervical dilatation and the descent of the presenting part. These parameters are depicted graphically on a partogram and should there be any abnormality immediate and appropriate action is taken. Thus trial of labour is actively monitored and stimulation of labour by artificial rupture of membranes followed by oxytocin infusion after an interval of about one hour if contractions are poor are important pre-requisites.

In the case presented, there was no need of augumenting

uterine contractions as the strength of the natural uterine contractions was strong enough.

(3, 4) stresses the importance of adequate strong uterine contractions before the diagnosis C.P.D is made. Early recourse to adequate uterine stimulation by oxytocin ensure good progress of labour and corrects inefficient uterine action. In fact, the functional capacity of a pelvis can be tested only by efficient labour and this often requires oxytocin.

The patient presented did not have complications which could have contraindicated the trial of labour. These are elderly primigravidity, malpresentations, pre-eclampsia, hypertension, cardiac or pulmonary diseases or any other relevant severe medical disease complicating pregnancy.

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RECORD OF LABOUR

NUMBER : 4287/M/84

Surname: Miss 21.

Other Names: —

Address: MTONI KWA AZIZI ALLI
DAR ES SALAAM.

Age 17 YRS.

Tribe MNDENGEREKO.

ADMISSION DATE 5/6/84. TIME 8 AM BY WHOM KOKA G.M.

ADMISSION (Reason of admission etc.) LABOUR PAINS WHICH HAD STARTED 5 HOURS PRIOR TO ADMISSION

FROM [HOME] HOSPITAL TRANSFER/ANTE NATAL WARD/CLINIC

SUMMARY OF ANTE NATAL WELL ATTENDED

ABNORMALITIES SHORT STATURE.

LMP 1/9/83 EDD: 8/6/84

OBSTETRIC HISTORY: Gravida: I Para 0 Living Children: —

YEAR	COMPLICATIONS	METHOD	WT	ALIVE	YEAR	COMPLICATIONS	METHOD	WT	ALIVE
	PRIMI GRAVIDA.								

EXAMINATION

General condition GOOD

Temperature 36.4 °C

Blood pressure 110/70mmHg.

Oedema NIL

Urine: Protein NIL Acetone NIL

Height 146 cm.

Hb.- estimation of present 10.2gm/dl.

last recorded A/N 30/5/84

BLOOD GROUP: A RhD POSITIVE

Fundal height 36/40.

Size of fetus MEDIUM ≈ 3kg

Lie LONGITUDINAL

Presentation CEPHALIC

Fetal heart 142/MINREG.

Liquor: Membranes (intact)
Clear
Meconium stained

If membranes ruptured: Date —
Time —

INITIAL VAGINAL EXAMINATION AND PELVIC ASSESSMENT

Date 5/6/86 Time 8.05Am.

Examiner KOKA G.M.

Cervix: State FULLY EFFACED

Dilatation 4 cm.

Presenting part CEPHALIC

Level 4/5

Position LOA

Moulding NIL

Caput NIL

Membranes / Liquor ARM. clear liquor ≈ 50cc. NO CORD. FOETAL HEART 144 bpm. AFTER AMNIOTOMY.

BONY PELVIS (cross out which does not apply)

Sacral promontory [Not] / Just / Easily reached

Sacral curve: Flat / [Normal]

Ischial spines: Prominent / [Normal]

Subpubic angle: Narrow / [Normal]

Sacral tuberosities: No. of knuckles 3½

Summary BORDERLINE PELVIS

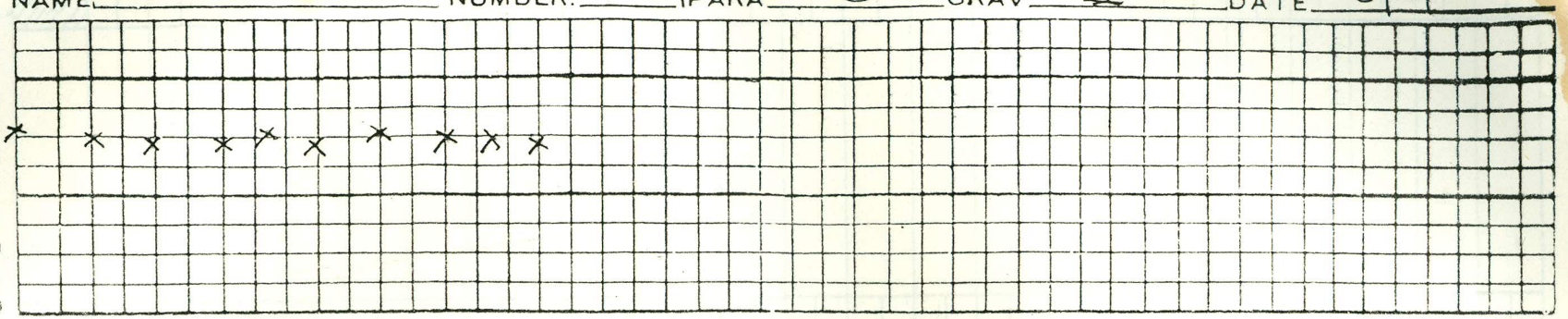
Consultant's / Registrar's opinion

RECORD OF LABOUR

SPECIAL INSTRUCTIONS

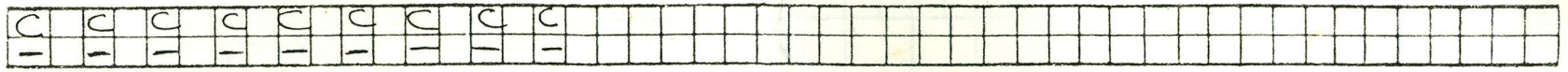
NAME Miss 21. NUMBER: 4287/M/84 PARA 0 GRAV I DATE 5/6/84

FETAL HEART RATE



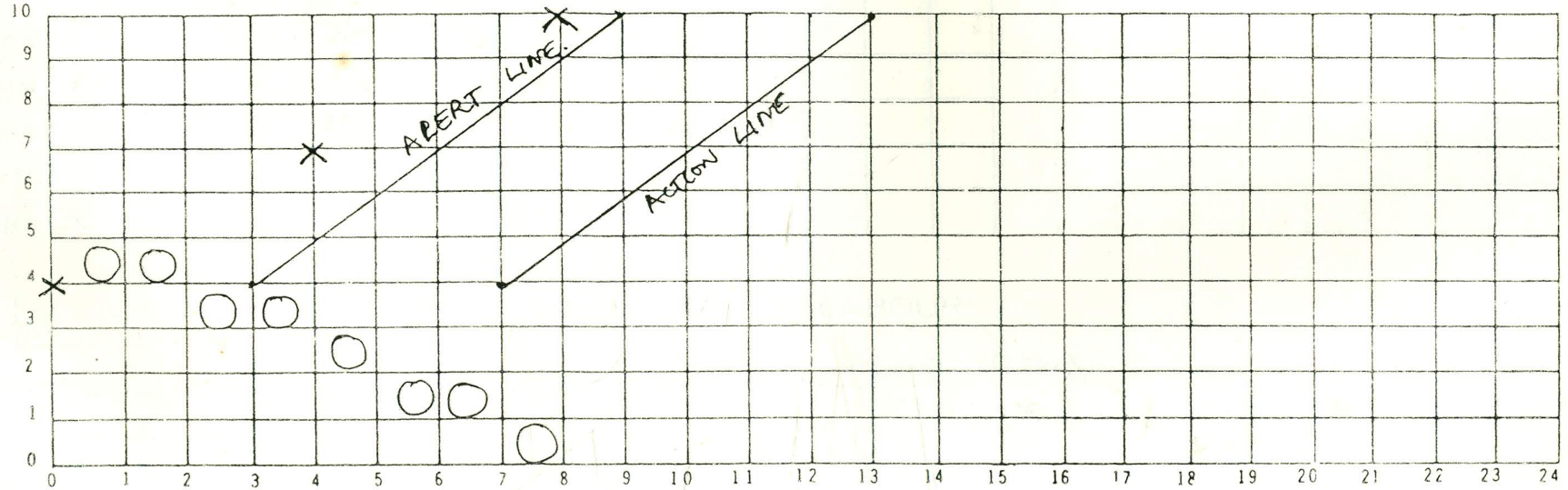
ON OF RUPTURE
ABRANES
Hrs.

LIQUOR (I, C, M)
MOULDING



CERVIX

DESCENT

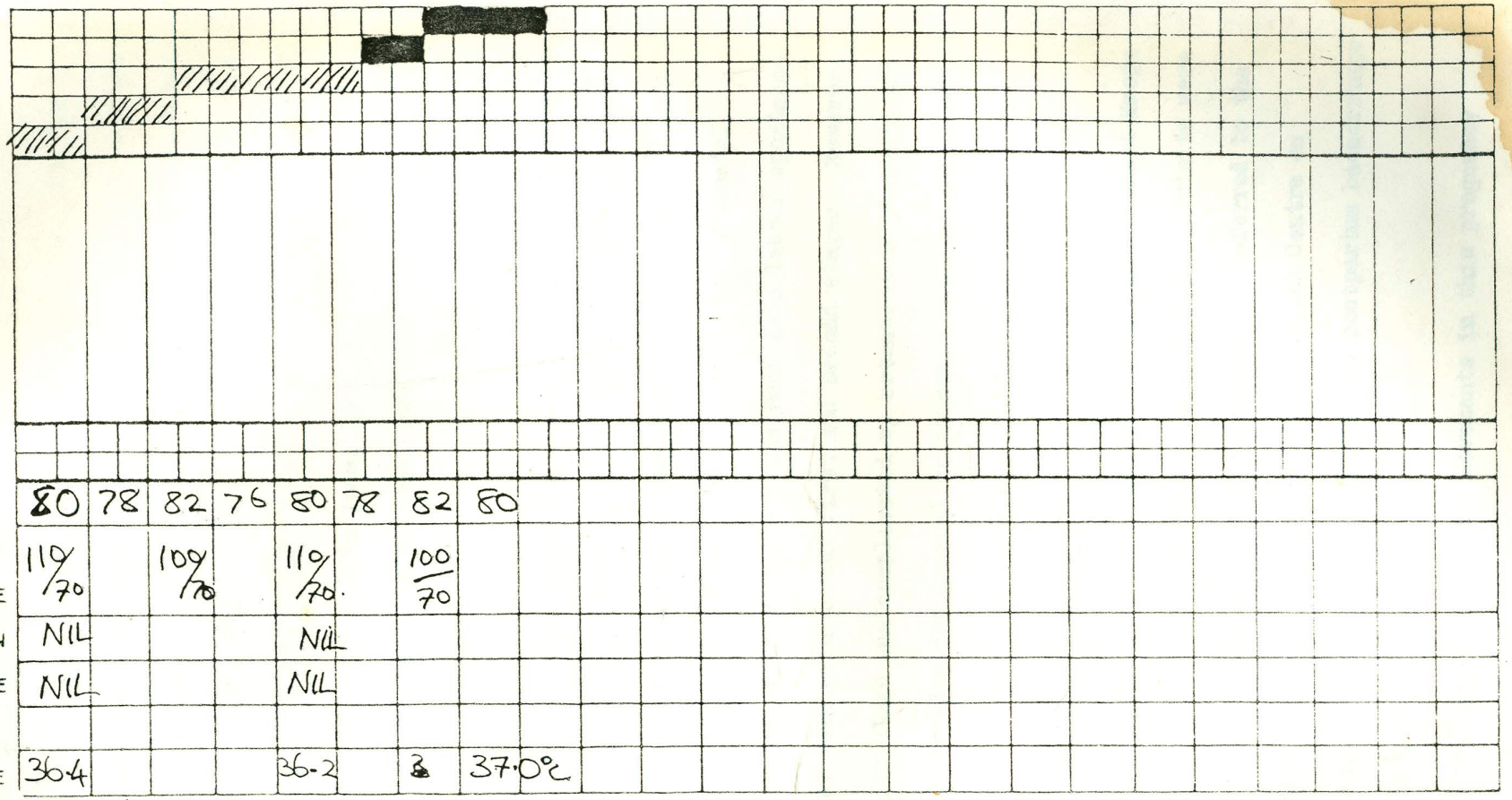


ON OF LABOUR
Hrs.

Hours

TIME





CHILD

Date of birth 5/6/86 Time of birth 4·30 pm.

METHOD OF DELIVERY SVD

Weight 2·9kg Sex: MALE APGAR 9

Method of Resuscitation SUCTION

SUMMARY OF LABOUR:

First Stage: Duration ABOUT 10 HOURS Second Stage: Duration 30 MINS.

Third Stage: Duration 10 MINUTES Placenta and Membranes COMPLETE 460gm

Blood Loss 220 ML Reasons for PPH —

Perineum EPISIOTOMY Repair by KOKA G.M.

Delivered by KOKA G.M. Supervision by —

0.8 RETAINED PLACENTA : MANUAL REMOVAL UNDER GENERAL ANAESTHESIA AND BLOOD TRANSFUSION:

Name: Mrs. C.T.

Age: 29 years

Address: Kariakoo, Dar es Salaam

Tribe: Nyamwezi

Reg. No: 0029/M/84

Delivery No: 5404

Date of admission: 16th June, 1984

Date of discharge: 18th June, 1984

SUMMARY:

Mrs. C.T. was a gravida 2 para 1 patient who was 38 weeks pregnant by dates. She was referred from Mnazi Mmoja M.C.H. on account of having had retained placenta and post-partum haemorrhage in her last delivery. Her antenatal progress was unremarkable and she went into labour spontaneously at term with normal first and second stages. However, the third stage was complicated by retention of placenta and manual removal under general anaesthesia was done and blood transfusion was given. Her pueperium was uncomplicated.

PRESENT OBSTETRIC HISTORY:

The patient had booked for antenatal care at Mnazi Mmoja when she was 30 weeks pregnant. The subsquent 3 visits were unremarkable and in her fourth visit she was referred to the high risk antenatal care in Muhimbili Medical Centre on account of having retained placenta and postpartum haemorrhage in her last delivery.

She started feeling fetal movements in this pregnancy

when she was 22 weeks pregnant. She had never had any vaginal bleeding or any other complication in this pregnancy.

PREVIOUS OBSTETRIC HISTORY:

She was gravida 2 para 1 with no abortions. She had no complications in her previous pregnancy which was in 1982 except for retained placenta and post-partum haemorrhage for which blood transfusion and manual removal under anaesthesia were done. She could not remember the birth weight of her baby.

GYNAECOLOGICAL HISTORY:

Her menarche was at 14 years. Her menstrual periods lasted 3 - 4 days in a regular cycle of 30 days. The flow was normal with no associated dysmenorrhoea. There was no history of post-coital bleeding or dyspareumia. Her last normal menstrual period was 11th September 1983 and her expected date of confinement was 18th June 1984. She was thus by dates 40 weeks pregnant. She had never used contraceptive pills.

PAST MEDICAL AND SURGICAL HISTORY:

She denied having suffered any major illness before. She had never been hospitalized for any illness besides her previous confinement. She had never undergone any operations.

FAMILY HISTORY:

There was no history of hypertension, diabetes mellitus, mental disease or twins in the family. None of her family members was suffering from tuberculosis.

SOCIAL HISTORY:

She was a typist with TANESCO who was married to a mechanic who was privately employed. She neither smoked nor drank any alcohol.

PHYSICAL EXAMINATION: 12/6/1984

She was a well nourished lady in good general condition. She was not anaemic or jaundiced. She had no edema or lymphadenopathy. Her height was 152cm and her weight was 60kg.

Head and Neck: There was nothing worth of note.

Chest: The chest was symmetrical and expanding with respiration. The lung fields were clear and there were no added sounds.

The Breasts: The breasts were engorged with darkened areolae. The nipples were well developed. There were no lumps or tender areas. Clear fluid could be expressed from the breasts.

Cardiovascular system: The pulse was 82 beats per minute, regular and fof full volume. The blood pressure was 120/60 mmHg. There was no evidence of cardiomegaly clinically. Both the first and second heart sounds were heard and there were no murmurs.

Abdominal examination:

The abdomen was symmetrically distended and it was moving with respiration. There were no scars or masses or areas of tenderness. The liver and spleen were not palpable. Renal angles were non-tender.

The fundal height corresponded to a 36 weeks pregnancy size which was consistent with the period of gestation. The lie was longitudinal and the presenting part was cephalic

with the head in the brim but free. The amount of liquor was moderate. The size of the fetus was estimated to be about 3.2kg.

On auscultation, the fetal heart was 142 beats per minute and it was regular.

VAGINAL EXAMINATION:

Vaginal examination was done in a sterile manner as was described in the introduction. The vulva and vagina were normal. The cervix was soft about 40% effaced and 2cm an dilated. Pelvic assessment was done and it was reckoned clinically that the pelvis was adequate for the baby.

INVESTIGATIONS:

Haemoglobin : 12gm/dl.

V.D.R.L. Negative

Blood group: Group A, Rh D positive

Urine: No protein, acetone or sugar.

Mid stream specimen for culture revealed no growth.

TREATMENT AND ADVICE:

The patient was booked for delivery in Muhimbili Medical Centre on the grounds of fear of recurrence of placental retention and post-partum haemorrhage in the index pregnancy. She was continued with iron tablets 200mg three times daily, 5mg folic acid once daily and chloroquine tabs. 300mg weekly for prophylaxis. A booster dose of tetanus toxoid was administered. She was given an appointment to attend the clinic after one week i.e. on 19/6/1984.

However, she went into labour spontaneously on the 16th June 1984 and she was admitted to the labour ward about four hours after the onset of the labour pains.

LABOUR:

On admission (16/6/1984 at 8.00 a.m), she was having strong uterine contractions. Membranes had not ruptured. Her general condition was good. She was afebrile and not pale. She had no edema. Her blood pressure was 120/70 mmHg. and the pulse was 78 beats per minute, regular and of full volume.

The abdomen was distended. The fundal height was 36 weeks of gestation and the lie was longitudinal. The presenting part was cephalic in the left occipital anterior position. Only 2/5 of the head could be felt above the pelvic brim.

Strong uterine contractions could be palpated per abdomen. These contractions occurred at a frequency of about 3 in 10 minutes and they lasted about 40 minutes.
The fetal heart was 140 beats per minute and it was regular.

VAGINAL EXAMINATION:

This was done under aseptic conditions as has been detailed in the introduction.

The cervix was 8cm dilated and fully effaced. The presenting part was at 2cm below the ischial spines. The position was right occipito anterior. There was no caput or moulding. The membranes were felt bulging and artificial rupture of membranes was done with a sterile pair of Kocher's forceps. The liquor was clear. The pelvis was adequate and spontaneous vertex delivery was anticipated.

Blood was taken for grouping and crossmatching and 3 units

(1500ml) were requested in case of need. The patient was kept on a drip of Dextrose Saline with a big canula (14G).

DELIVERY:

Within 1 hour, the patient was fully dilated and the head could be visualized in the introitus.

The patient was encouraged to bear down. Within 10 minutes she delivered a normal male baby weighing 2.8kg. of Apgar score 9 at 1 minute. Ergometrine 0.25mg was given intravenously with the birth of the anterior shoulder.

THIRD STAGE:

After delivery of the baby the uterus was seen to contract. Attempt to deliver the placenta by controlled cord traction (Brandt Andrew's) method failed.

This method was effected with the patient in dorsal position with an empty bladder. The ulner border of the left hand of the accoucheur was placed suprapubically displacing the fundus upwards towards the umbilicus. The right hand maintained traction on the cord but allowed it to retreat a little into the vagina. The abdominal hand was then relaxed and traction was increased on the cord. This was done in order to make the placenta descend into the lower segment where it could be delivered readily. However, there was no success and the patient was starting having some vaginal bleeding. The speed of the drip was increased.

The procedure was repeated after waiting for some time (5 minutes) but without success. Having failed to deliver the placenta this time, a vaginal examination under aseptic conditions was carried out after half an hour has elapsed.

The cord was followed with two fingers in the cervix which could only allow the 3 fingers with difficulty as there was no constriction ring at the junction of the upper and lower segment. The whole placenta was still in the upper segment.

As there was some bleeding per vaginum and the placenta had been retained for about 40 minutes it was decided to remove it manually in the theatre under general anaesthesia. The patient had been grouped and crossmatched and blood 1500ml were ready. An intravenous drip with a big cannula had been kept running as severe bleeding could occur any time. The patient had been shaved on arrival to the labour ward and she signed a consent form for anaesthesia and the operation.

ANAESTHESIA:

The patient was premedicated with atropine 0.6mg and Pethidine 100mg intravenously on arrival to the theatre.

Anaesthesia was induced with thiopentone sodium 250mg given slowly intravenously and it was maintained with a mixture of Nitrous oxide, and oxygen using a face mask. With this anaesthesia the patient was kept relaxed and there was no need of intubation.

PROCEDURE AND FINDINGS:

The patient was placed in lithotomy position and the vulva and perineum was washed with Savlon solution 1:200. She was then draped with sterile towels. Catheterization was done and about 50cc of urine were removed.

On examination under anaesthesia, the perineum, vulva and the vagina were normal and there were no lacerations detected.

The cervix admitted 3 fingers and the cord was felt hanging through the external os.

The cervix was gently dilated digitally so that is could admit four fingers. The four fingers of the right hand were passed into the uterine cavity along the cord and the edge of placenta was then identified. With the left hand applied on the fundus of the uterus, the four fingers in the uterus gently separated the attachment of the placenta from below upwards until the whole placenta was completely detached from the uterine wall. The detachment was fairly easy as the placenta had already partially separated. Ergometrine 0.25mg intravenously was given. The uterus was well contracted and there was no further bleeding per vaginum. Blood loss was about 300ml in total.

The placenta and membranes were complete and weighed 480gms. A vulval pad was applied and the anaesthesia was discontinued. The patient was wheeled to the recovery room and after recovery from anaesthesia she was transferred to the postnatal ward.

POST OPERATIVE CARE:

1. The patient's pulse, blood pressure and respiration were monitored half hourly. These remained within normal limits.
2. She was to continue with blood transfusion two more units (1000ml) which had already been reserved for her.
3. She was to watched for further vaginal bleeding. After the procedure there was no further bleeding.
4. Oral Ampicillin 500mg 6 hourly were to be given for 5 days as prophylaxis against infection.

PROGRESS:

The patient progressed well thereafter. On the first day she was afebrile and not pale and she looked well haemoglobinized. There was no further bleeding per vaginum.

On the second pueperal day her condition was unremarkable. Haemoglobin was checked and found to be 9.8gm/dl. She was discharged on the same day in good general condition. She was given haematinics for prophylaxis and she was to be seen again in the postnatal clinic after 6 weeks.

THE BABY:

The baby was a male weighing 2.8kg and had an Apgar score of 9 at 1 minute. He had no congenital malformations.

FOLLOW UP:

The mother and the baby were seen again in the postnatal clinic on the 28th July, 1984. They had no problems. There was no history of bleeding per vaginum and lochial discharge had stopped. The uterus was well involuted to the pre-pregnant size. The mother's haemoglobin was 11gm/dl.

The mother was then discharged from the clinic on prophylactic haematinics and chloroquine for three weeks. She was advised to deliver in hospital in her subsquent pregnancies as she was at risk of placental retention and postpartum haemorrhage.

COMMENTARY:

Retained placenta is an uncommon complication of the third stage encountered in Muhimbili Medical Centre.

Although its exact incidence is not known in Muhimbili, an incidence of 1 in every 1500 deliveries has been recorded in other areas (Llewellyn-Jones 1982).

In this case, although the placenta was retained for just over an half an hour immediate steps were taken to remove it as it was associated with some mild bleeding per vaginum. There is general agreement that the longer the placenta remains in utero, the greater is the risk to the mother of haemorrhage, shock (particularly if the placenta distends the cervix) and infection. In stressing the importance of early removal of a retained placenta, Donald 1979 described a woman with a retained placenta, after child-birth as a treacherous creature as the course of events which may take place is unpredictable.

With the active policy for the management of the third stage, there is no time limit needs to be exceeded before arriving at the diagnosis of retained placenta. Authorities vary in the time limit they set as to when to intervene. However, most of them (Donald 1979, Dewhurst 1982, Llewelyn-Jones 1982) take steps to deliver the placenta manually after one hour of waiting, although two hours can be taken as the sensible maximum. It has been noted that if the placenta does not separate within two hours of delivery of the child, the chances of a safe and spontaneous separation are very slim and therefore, there is no point of waiting further.

The possible cause of the retention of the placenta in this case was adhesion of the placental membranes to decidua.

Other causes of placental retention are uterine inertia, incarceration of a separated or a partially separated placenta above a constriction ring and morbid adhesion of the placenta with various degrees of decidual penetration.

In situations where the placenta has been caught by a 'retraction ring' at the junction of the upper and lower segment, it is advisable to wait for uterine relaxation if there is no bleeding. This complication occurs commonly with intravenous ergometrine injection. However, if there is excessive bleeding, the uterus must be relaxed with a general anaesthetic such as halothane and oxytocin must be administered at the same time while the placenta is being removed.

In this particular case, the placenta was retained wholly within the uterus and it had to be removed under general anaesthesia by digital separation through the spongy layer of the decidua basalis. It is important while performing this procedure to keep the other hand on the uterine fundus to maintain its position in the abdomen and to allow counter pressure to be exerted.

Vigorous fundal compression in an attempt to expel the placenta was not used as it may cause avulsion of the cord, severe pains and inversion of the uterus especially if combined with cord traction at the same time.

It is important to inspect the placenta after its removal for completeness as membrane pieces or placental cotyledon(s) may be left in utero. Although these retained products may not cause immediate vaginal bleeding, they may cause secondary postpartum haemorrhage or uterine infection. Exploration

and curettage are necessary in these circumstances. Ultrasound can be helpful in detecting the presence of retained products (Malvern et.al 1973).

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0.9 TWIN PREGNANCY : NORMAL VAGINAL DELIVERY.

Name: Mrs. F.S.

Age: 26 years

Tribe: Chagga

Address: Upanga, Mataka Street No. 678

Reg. No: 4553/M/84

Gravidity: Gravida 2 para 1

Date of admission: 2nd August, 1984

Date of discharge: 4th August, 1984.

SUMMARY:

Mrs. F.S., a 26 year old gravida 2 para 1 lady was referred at a gestational age of 30 weeks to the high risk antenatal clinic in Muhimbili Medical Centre on account of suspected twin pregnancy from one of the peripheral clinics.

Plain abdominal X-ray confirmed the diagnosis. She delivered vaginally and her pueperium was uncomplicated.

OBSTETRIC HISTORY:

The patient was gravida 2 para 1 with no abortions. Her first pregnancy in 1981 ended in a normal confinement with delivery of a female baby weighing 3kg. who was alive and well.

In this pregnancy she booked in Mnazi Mmoja Antenatal Clinic on 2/5/84 when she was 24 weeks pregnant. At booking she had complaints of nausea, vomiting and body weakness on and off. These complaints had started when she was 8 weeks pregnant but they were getting better. Her booking blood pressure was 100/60 mmHg and her haemoglobin was 70%. She

was given some Phenergan tablets and advised to rest at home. She attended the clinic again at 28 weeks and 30 weeks by dates on 30/5/84 and 15/6/84 respectively. In her last visit she complained of excessive fetal movements and she had noted that her tummy was becoming excessively large. The attending nurses noted a discrepancy between the size of the fundus and the dates and referred to Muhimbili on suspicion of having twin pregnancy on 15/6/84. There was no proteinuria or oedema noted in her booking or subsquent visits in the peripheral clinic and her blood pressure was maintained at 100/60 mmHg.

She denied having had vaginal discharge or bleeding or swelling of her legs or palpitations or dizziness or other major complications in this pregnancy. She started feeling fetal movements when she was 20 weeks pregnant and of late she had noted excessive fetal movements. Her micturition was normal. Apart from nausea and occasional vomiting her bowel habits were normal.

GYNAECOLOGICAL HISTORY:

Her menarche was at 12½ years. Her menstrual periods lasted for 5 days and her cycles were 30 days, regular with no pains. The menstrual flow was normal. She had no history of postcoital bleeding or dyspareumia. She had never been on hormonal contraceptives. The last menstrual period commenced on 12th November, 1983. Expected date of confinement was 19th August 1984. She was thus by dates about 30 weeks pregnant.

PAST MEDICAL AND SURGICAL HISTORY:

The patient had appendicectomy in 1976. Besides recurrent attacks of malaria, the patient has not suffered from any other serious illness. She had been on Chloroquine course for the malarial attacks and she was on prophylactic chloroquine tablets since she conceived.

FAMILY HISTORY:

There was no history of diabetes mellitus or hypertension or epilepsy or mental disease in the family. She had not had contact with a known case of pulmonary tuberculosis. Her sister had twins and so did her mother. There was no history of twins in her husband's family.

SOCIAL HISTORY:

She was a Laboratory Technician married to an administrative officer in a certain company. She was non-smoker and did not drink alcohol.

PHYSICAL EXAMINATION:

She was a well nourished lady in good general condition. She was not anaemic or jaundiced and she didn't have oedema or varicose veins. Her height was 158cm. and her weight was 64kg.

Mouth and Throat:

The gums and teeth were healthy and there were no septic foci in the oropharynx.

Neck:

The thyroid gland was not enlarged and there was no cervical lymphadenopathy.

Chest:

The chest was symmetrical. The breath sounds were versicular and there were no crepitations.

Breasts:

The breasts were well developed with normal nipples. The areolae were dark with Montgomery's tubercles. There were no lumps or tender areas felt palpated. Clear fluid could be expressed from the breasts.

Cardiovascular system:

The pulse rate was 82 beats per minute, regular and of full volume. The blood pressure was 110/70 mmHg. The first and second heart sounds were normal and there were no murmurs. There was no evidence of cardiomegaly clinically.

Abdominal examination:

The abdomen was distended and it was moving with respiration. There were striae gravidarum and a well marked linea nigra extending below and above the umbilicus but there were no masses or scars.

The fundal height corresponded to 34 weeks pregnancy size, 4 weeks bigger than the period of gestation. There were multiple fetal parts and fetal movements were palpable. Two fetal poles were palpable with some difficulty. The presenting part was cephalic but the head felt small for the size of the uterus. It was free.

The liver and spleen were not palpable. The renal angles were non-tender.

Fetal heart was heard at 144 beats per minute and it was regular.

DIAGNOSIS: Multiple pregnancy.

INVESTIGATIONS:

Haemoglobin: 10.6gm/dl.

V.D.R.L. Negative

Mid-stream urine: No protein, sugar or acetone.
Culture was sterile.

Stool: Negative for intestinal parasites.

Blood slide: Negative for malarial parasites.

Plain Abdominal X-ray : No. 31199 - Confirmed twin pregnancy.
The first twin was in cephalic presentation and the other was in breech presentation.
There were no gross skeletal malformations noted and the fetuses were well flexed.

TREATMENT AND ADVICE:

The patient was told that she possibly has twins. She was advised to rest at home and avoid all domestic work, and she was to be seen again in the clinic after two weeks.

She was given Ferrous sulphate 200mg three times daily, Folic acid 5mg daily and Chloroquine tabs. 300mg once weekly for prophylaxis.

SUBSQUENT ANTENATAL VISITS:

She was seen again at 32 weeks. The abdominal X-ray was now available and she was told that she had twins. She had no complaints clinically she was not febrile and she looked pink. She had no edema. Urine for albumin was negative.

She made three more visits at 34, 36 and 37 weeks by dates on 8/7/84, 22/7/84 and 29/7/84. There was nothing

worth of note in these three visits as she remained in good general condition. Her haemoglobin was 11gm/dl. in her last visit. Her blood pressure remained within the range of 110/70 to 120/80 mmHg. There was normal weight gain in the last 4 weeks of the average of 0.6kg/week.

LABOUR AND ITS OUTCOME:

The patient went into spontaneous labour at 5 a.m on 2nd August, 1984 and she was admitted to the labour ward at 8.00 a.m on the same day. She had not ruptured membranes. There was no history of bleeding per vaginum.

PHYSICAL EXAMINATION:

Her general condition was good except that she was in labour pains. She was not anaemic and she had no edema or lymphadenopathy. Her temperature was 36.4^{o}C. The pulse rate was 80 beats per minute, regular and of full volume. The blood pressure was 120/70 mmHg. There was nothing worth of note in the cardiovascular or respiratory system.

ABDOMINAL EXAMINATION:

The abodmen was distended. The fundal height was equivalent to term pregnancy. Multiple fetal parts could be felt and contractions could be palpated. Two contractions lasting for about 30 seconds were palpable within an interval of 10 minutes.

The first fetus was in a longitudinal lie with cephalic presentation. The presenting part was in the pelvic brim. The other fetus was also in longitudinal lie but the presenting part which was high was breech.

Fetal heart was heard at 142 beats per minute and it was regular.

INITIAL VAGINAL EXAMINATION: 8.00 a.m

The vulva and vagina were normal. There was show otherwise, there was no bleeding or abnormal discharge.

The cervix was soft fully effaced and dilated to 6cm. The presenting part which was cephalic was 1/5th in the pelvis. The membranes were intact but were ruptured in the course of the vaginal examination with a sterile pair of Kocher's forceps as described in the introduction. There was no prolapse of the cord. The liquor had some specks of vernix caseosa but otherwise it was clear. There was no caput or moulding. The position of the presenting part was right occipital anterior.

INVESTIGATIONS:

Haemoglobin checked intrapartum was 11.8gm/dl.

Urine test was negative for protein, acetone or sugar.

FURTHER COURSE AND MANAGEMENT OF LABOUR:

The patient was transferred to a high bed as difficult delivery was anticipated. Uterine contractions, descent of the presenting part, maternal pulse and blood pressure were monitored half hourly. Fetal heart was monitored every quater of an hour. An intravenous drip of 5% Dextrose was set up.

The patient progressed well. After 4 hours another vaginal examination was done and the patient was found to be fully dilated and the head was seen in the vulva. There was no caput or moulding. The fetal heart was regular at 140 beats per minute and at this time the patient was having strong contractions and a sensation to bear down.

DELIVERY:

i) First twin - 12.05 p.m

A delivery tray had been prepared. The surgeon scrubbed and put on rubber gloves. The patient was placed in lithotomy position with her buttocks near the edge of the high bed. The vulva, perineum and the surrounding skin were cleaned with Savlon 1:200 solution. An intravenous drip of D/Saline 1 litre was set up using a canula.

The patient was then encouraged to bear down with the contractions. In anticipation for an episiotomy the perineum was infiltrated with 5ml of 1% lignocaine. Episiotomy was done.

The head was delivered in a matter of 2 minuted and the shoulders and the trunk followed. A male baby with an Apgar score of 10 at 1 minute weighing 2.2kg was born. The cord was divided between two clamps and the baby was handed over to the first assistant for resuscitation. There were no congenital anomalies noted.

ii) Delivery of the second twin - 12.15 p.m

Another assistant a senior nurse midwife palpated the abdomen to a ascertain the lie and the presentation of the second twin. The lie was longitudinal and the presenting part was breech. The mother was having strong uterine contractions and the presenting part was now fixed in the pelvis. Artificial rupture of membranes was then done with a sterile pair of Kocher's forceps at the height of a uterine contraction. The liquor was clear. There was no cord prolapse. The mother was encouraged to bear down with each contraction.

Soon after amniotomy the presenting part had descended below the ischial spines and the breech was seen "climbing" the perineum. The legs were disengaged after the breech had come down. This was achieved by applying pressure into the popliteal fossae using two fingers which are placed parallel to the thighs. With splinting effect, the flexed limbs were then swept out laterally in turn.

The trunk was born without difficulty and a loop of cord came out on its own. Further descent of the trunk occured with succesive contractions and the lower tip of the anterior shoulder was visualized below the pubis. The fetal trunk was then twisted in an anticlockwise direction, so that the posterior shoulder and arm easily came out beneath the pubic arch. The fetus was then twisted in the opposite direction through 180 degrees and the anterior shoulder and arm came down.

The fetus was left to hand while gentle pressure over the suprapubic area increased flexion of the aftercoming head and aided its descent until the hair line was visualized. The legs of the baby were held by the right hand of the accoucheur and lifted towards the mothers abdomen while the left hand controlled descent of the head by preventing it from coming out too quickly. The mother had been instructed not to bear while the head was being delivered. Delivery of the face was easily effected and an assistant sucked the baby's mouth and nostrils. The head was then delivered and the baby cried immediately. The cord was doubly clamped and cut in between. Ergometrine 0.25mg was given intravenously to the mother.

The two cords were pulled straight and held with one clamp. The placenta was delivered easily by controlled cord traction. The uterus was well contracted thereafter and there was no post-partum haemorrhage. The perineum was intact.

The episiotomy was repaired as it has been described in the introduction.

THE BABIES:

The first twin was a male baby weighing 2.2kg with an Apgar score of 10 at 1 minute. He did not have any congenital malformations.

The second twin was a female weighing 2kg with an Apgar score of 8 at 1 minute. She didn't have any congenital malformations or evident of birth trauma.

PLACENTA AND MEMBRANES:

The placenta and membranes were delivered complete. It was a single placenta with two sacs separated by two layers of amnion. There were nothing remarkable about the umbilical vessels. The placenta weighed 602 gm.

SUMMARY OF LABOUR.

Duration of first stage: 8 hours 35 minutes.

Duration of second stage: 35 minutes

Time interval between delivery of first twin and second twin: 10 minutes

Duration of third stage: 5 minutes.

Blood loss about 400ml.

THE MOTHER AFTER DELIVERY:

She was in good general condition. Her post-delivery

pulse and blood pressure were 82 beats per minute, regular and 110/70 mmHg respectively. Her temperature was 36.5°C. There was undue vaginal bleeding and the uterus was well contracted.

After 12 hours of observation she was transferred to the post-natal ward. The babies were well and they could suck well.

THE PUEPERIUM:

The mother had uneventful pueperal period. Her general condition remained satisfactory. Her haemoglobin was checked on the second day and it was found to be 9.4gm/dl.

The babies received B.C.G. vaccination on the same day and the mother and the babies were discharged on the 3rd day in good general condition. They were to be seen again in the postnatal clinic after 6 weeks. The mother was discharged with prophylactic haematinics and chloroquine tablets weekly.

FOLLOW-UP:

They were seen again in the postnatal clinic on 7th September, 1984.

The mother had no complaints. She looked pink and she was afebrile. The episiotomy had healed well and the uterus had involuted to a non-pregnant uterus. There was no more lochia discharge. Her haemoglobin was 10.8gm/dl. Family planning advice was given and the mother chose to be put on the loop.

The babies were sucking well and their weights were increasing satisfactorily. They were then discharged from the clinic.

COMMENTARY:

The incidence of twin pregnancy in Dar es Salaam has been shown to be in the region of 1:64 deliveries. This is in contrast to that of 1:80 which has been reported in some European countries[1]. Several studies have demonstrated that the difference in twinning rates are almost entirely due to a heterogeneity in the prevalence of dizygotic births while the monozygotic rates vary little between races.

The most striking feature of multiple pregnancy is the increased fetal risk which is mainly due to prematurity. Bed rest has been found to improve fetal nutrition and fetal birth weight. However, although bed rest slightly improves perinatal mortality it does not have much influence on prematurity.

Marivate and Norman 1982[3] suggested several methods of reducing prematurity. These methods include early diagnosis of twin pregnancy, prophylactic administration of adrenergic drugs, cervical cerclage, prediction of preterm labour at the antenatal clinic and organization of special twin clinics. Each of these methods had disadvantages and advantages. For example, long term administration of B-sympathomimetics may depress surfactant production by the fetal lung. On the other hand, routine cervical cerclage could prove hazardous in communities where obstetric care is poor because of the danger of amniotic fluid infection and also the suture may cut through the cervix if the patient goes into labour and is not attended early enogh.

The diagnosis of twin pregnancy was fairly straight forward in this case. Apart from X-rays in the confirmation

of the diagnosis, ultrasound scan could have been used. The use of ultrasound is much safer than X-rays as it doesn't carry the risk of fetal growth interference or increased risk of mutation as X-rays do. However, one pitfall of ultrasound is that one may mistake a transverse section of a fetal thorax for a head. This can be eliminated by scanning in at least two different dimensions and so confirming the existence of both heads.

The complications which are known to be associated with twin pregnancy were looked for in this case but none were found. These included premature labour, pre-eclampsia, anaemia, antepartum haemorrhage, hyperemesis gravidarum with its attendant fluid and electrolyte derangement. The complications anticipated intrapartum were malpresentations, placental separation after delivery of the first twin and retention of the second twin. Postpartum haemorrhage was also anticipated in the third stage owing to uterine inertia, increased placental site and retention of the placenta.

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O. 10 ANTEPARTUM ECLAMPSIA: CONTROL OF FITS, INDUCTION OF LABOUR AND ASSISTED VAGINAL DELIVERY:

Name: Miss. M.H.

Age: 17 years.

Address: Mwananyamala, Dar es Salaam

Tribe: Mndengereko

Reg. No: 2435/84

Gravidity: Primigravida

Gestational age: 36 weeks

Date of admission: 29th April, 1984

Date of discharge: 6th May, 1984.

SUMMARY:

Miss. M.H. a primigravida aged 17 years at 36 weeks gestation presented with a history of having fitted at home prior to admission. On admission she fitted again. The fits were controlled and induction of labour was started. Within 8 hours of induction, vaginal delivery of a normal baby weighing 2kg was effected, with assistance of the second stage.

OBSTETRIC HISTORY:

Miss. M.H. was a primigravida who was 36 weeks pregnant who was admitted to a special care maternity ward (35) on account of having fitted once at home. Just on arrival to hospital she fitted again.

HISTORY OF PRESENT PREGNANCY:

She booked in Mwananyamala hospital when she was 24 weeks pregnant and everything was well with her. She made another

visit when she was 28 weeks of gestation when she had the first dose of tetanus toxoid. Her last visit was 2 weeks prior to admission when she had her second dose of tetanus toxoid.

She denied of history of swelling of the legs or the face associated with the pregnancy. She had no urinary symptoms. There was no history of headaches, fainting attacks dizziness or upper right sided abdominal pains or blurring of vision in this pregnancy.

GYNAECOLOGICAL HISTORY:

Her menarche was at 14 years. The menstrual periods lasted 3 days in a cycle of 28 days. She had slight dysmenorrhoea but otherwise her menstrual periods were regular and of normal flow with no clots. She had never used any contraceptives. Her last normal period was on 20th August, 1983. Her expected date of confinement was 27th May, 1984. She was thus about 36 weeks pregnant by dates.

PAST MEDICAL HISTORY:

She had never suffered any serious illness before. She had never been hospitalized. There was no history of operations.

FAMILY HISTORY:

There was no history of diabetes mellitus or hypertension or epilepsy in her family. There was no history of twin deliveries in her family or that of her boyfriend.

SOCIAL HISTORY:

She was a primary school leaver who was not officially

married. She was staying with her boyfriend who was an Accountant with TAZARA. She was unemployed and she neither smoked cigarrettes nor drank alcohol.

PHYSICAL EXAMINATION AT BOOKING : 22nd January, 1984

She appeared a healthy young lady of good nutritional status. She was of medium build. She was not anaemic or jaundiced or febrile. She had no oedema or lymphadenopathy. Her height was 152cm and her weight was 56kg.

Head and Neck:

There was no thyroid enlargment. She had no septic foci in the oro-pharynx.

Chest:

The chest was symmetrical. The lung fields were clear. The breasts had darkened areolae and were engorged. There were no lumps or tender areas. Clear serous fluid could be expressed from the nipples.

Cardiovascular system:

The pulse was 78 beats per minute and it was regular and of full volume. The jugular venous pressure was not elevated. The blood pressure was 110/60 mmHg. There was no praecordial or parasternal heave. The apex beat was in the 4th intercostal space in the mid-clavicular line. The heart sounds were normal and there were no murmurs.

Abdominal examination:

The abdomen was distended - more so in the hypogastric area. It was moving symmetrically with respiration. There were no scars or masses but few striae gravidarum. A well marked linea nigra extending above and below the umbilicus

was present.

It was generally soft with no tender areas. The fundal height corresponded to 24 weeks pregnancy size and fetal parts could be bullotable. Fetal heart could be just below the umbilicus heard at 144 beats per minute, regular.

The liver and spleen were not palpable, and the renal angles were not tender.

Vaginal examination:

The vulva, vagina and perineum were normal. There was a normal whitish vaginal discharge. The cervix was soft, bluish and looked healthy.

Bimanual palpation confirmed the uterine size of 24 weeks gestation. There were no adnexal masses or tenderness.

INVESTIGATIONS:

a) Blood: i) Haemoglobin: 11.2gm/dl.

ii) ABO and RhD grouping: Group O Rh D positive

iii) V.D.R.L. Negative.

b) Urine: No albumin or sugar, or acetone.

Sediment microscopy revealed nothing significant.

Culture was sterile.

c) Stools: There were no intestinal parasites.

The patient was given an appointment to attend the clinic again in 4 weeks time as all was well with her.

She was seen again on 24th February, 1984. She had no complaints. She denied of swelling of her legs or puffiness of her face. She had no headaches, palpitation or epigastric pains or blurred vision.

Her blood pressure was 100/60 mmHg. She had no edema. Urine checked for albuminuria was negative.

She was given the first dose of tetanus toxoid and prophylactic iron tablets Folic acid and weekly Chloroquine tablets and instructed to attend the clinic again in two weeks time, i.e. on 7th March, 1984.

However, she could not attend this time as she had to travel and she was seen again on 16th April, 1984 when she was 34 weeks pregnant. Apart from mild swelling of her legs, she had no other complaints. She was not pale. She had mild pitting edema of the ankles. Her blood pressure was 110/60 mmHg. Urine for albumin was negative.

She got a second dose of tetanus toxoid and advised to rest at home. She was advised to continue with oral iron, Folic acid and weekly chloroquine prophylactically and asked to report again after two weeks, i.e. on 30th April, 1984.

HISTORY OF PHYSICAL FINDINGS ON ADMISSION ON 29TH APRIL, 1984, AT 8.00 A.M.

HISTORY:

The patient was brought by relatives with a history of having fitted once at home some three hours prior to admission. Immediately on arrival to hospital and as she was being wheeled to the intensive care maternity unit - ward 35, she fitted again. The fit was a generalized grand mal type of a fit and it lasted for about 1 minute. She had no urinary incontinence. The fit was of abrupt onset without any preceeding warning signs.

It was not known whether the patient was having labour

pains or not. There was no history of vaginal bleeding or fevers. She was not an epileptic patient. There was no history of drug intoxication or starvation.

Examination of the patient was preceeded by administration of chloromethiazole 4gm in a drip which was run fast till the patient became well sedated and regulated at a slower rate thereafter.

PHYSICAL EXAMINATION:

She appeared a young lady who was drowsy with a puffy face. She was not anaemic or icteric. She had generalized pitting edema. The temperature was 37.2°C.

Head, Neck and Throat:

The tongue was bitten on the anterior aspect. Oral hygiene was satisfactory and there were no septic foci in the oropharynx.

Cardiovascular system:

The pulse rate was 92 beats per minute, synchronous with the fermoral pulse, regular and full volume. The jugular venous pressure was not elevated. The blood pressure was 160/105 mmHg. There was no evidence of cardiomegaly clinically. There were no palpable thrills or praecordial or parasternal heave. The first and second heart sounds were heard normally and there were no murmurs.

Chest:

The chest was symmetrical. The trachea was centrally placed. There were no dull areas to percussion. The lung fields were clear on auscultation.

Breasts:

Nothing worth of note was detected.

CENTRAL NERVOUS SYSTEM:

- She was drowsy but full conscious.
- There was no evidence of neurological deficit as the motor and sensory functions were intact. There was no clonus Babinski's sign was equivocal.
- The pupils were of equal size and reacted equally to light.
- The optic fundi revealed no evidence of papilloedema or haemorrhages but severe arteriolar vasocontriction.
- The neck was soft, Kernig's signs was negative. The reflexes were exaggerated especially the knee-jerk and the biceps.

ABDOMINAL EXAMINATION:

The abdomen was symmetrically distended and was moving with respiration. There were no scars or masses visible but few striae gravidarum and a well marked line nigra.

The fundal height and uterine contents corresponded to 36 weeks of gestation which was consistent with the dates. The lie was longitudinal and the presenting part was cephalic of which was one fifth had descended through the pelvic brim. The size of the baby was small and was estimated to be about 2.2kg. The amount of liquor was estimated clinically to be moderate.

There were no tender areas or palpable masses. Liver and spleen were not palpable. The renal angles were non-tender. There were no palpable contractions.

The fetal heart was 140 beats per minute and it was regular.

VAGINAL EXAMINATION:

The perineum and vulva were normal. The cervix was fully effaced and 3cm dilated. The membranes were intact. Pelvic assessment was done and the pelvis was adequate for the baby.

Artificial rupture of membranes was done using a sterile pair of Kocher's forceps. The liquor was clear.

DIAGNOSIS:

A diagnosis of antepartum eclampsia was arrived at.

MANAGEMENT:

1. The fits were controlled by setting up a chloromethiazole drip 4gm in a drip of Dextrose 5% which was intially run fast to sedate the patient and later maintained at a slower rate.
2. The patient was nursed on her side in a semiprone position and the air-way was kept in situ. A sucker was kept by the bed side in case of need for clearing secretions.
3. The blood pressure was controlled by an intravenous dose of 20mg hydralazine which was given slowly while the blood pressure was being taken serially. It dropped from 160/105 mmHg to 120/90 mmHg. Intermittent doses of Hydrallazine 5mg were given every half hourly to keep the diastolic blood pressure at around 90 mmHg.
4. An indwelling catheter was inserted under sterile conditions to monitored the urine output of the patient.
5. Having done amniotomy, contractions were stimulated by 5 I.U of oxytocin in a drip of 5% Dextrose 500ml and it

was titrated against uterine contractions at 15, 20, 30, 40, 50 and 60 drops per minute each for half an hour. The drip was set using size 16G canula and the corresponding doses of oxytocin were 10, 13.3, 20, 26.7, 33.3, 40 milli units.

6. The blood pressure, pulse, fetal heart and the condition of the patient were monitored half hourly.

7. Prophylactic Ampicillin 500mg 6 hourly intravenously was administered and was to be maintained for 5 days.

8. The following investigations were done:-

a) Blood: - Haemoglobin: 12gm/dl.
- Blood slide for malarial parasites - Negative.
- Platelet count 280,000 per cubic mm.
- Serum electrolytes: Sodium 142mEg/L
Potassium 4.2mEg/L
Chloride 108mEg/L
- Blood urea 18mg/dl.
- Serum creatinine: 1.5mg/dl.

b) Urine: (Catheter specimen) Albumin +++
No sugar or acetone.
Culture was sterile.

PROGRESS:

The patient remained well sedated and calm and within 1 hour she was having strong uterine contractions lasting 30 seconds and occurring on the average of 2 - 3 every 10 minutes.

The blood pressure was maintained at 120/90mmHg. The other vital signs were within normal limits. There were no

more fits reported.

At around 12 mid-day i.e. after 4 hours after induction she was reassessed. The fetal heart was 146 beats per minute. She was having strong contractions. About 3/5th of the head was palpable above the pelvic brim. On vaginal examination the cervix was 5cm. dilated. There was no caput or moulding. There was nothing remarkable in the next four hours. On reassessment at 4 p.m she was found to be having strong contractions and the cervix was fully dilated with no part of the head palpable above the pelvic brim. A decision was made to assist the second stage with vacuum. Her blood pressure was 120/85 mmHg.

VACUUM EXTRACTION AT 4.00 p.m

She was moved gently to high bed. She was put in lithotomy position. The vulva and perineum were swabbed with antiseptic solution and drapped with sterile towels. On vaginal examination the head was at 2 station and there was no caput or moulding. The position was right occipital anterior.

The perineum was infiltrated with 10ml of 1% lignocaine. The vacuum apparatus was tested for air tightness by applied the malstrom cup number 5 on the hand of the operator after lubricating 4 with obstetric hibitane cream. On applying negative pressure suction was noted.

The cup was then applied carefully on the fetal scalp care being taken not to include maternal tissue. A pressure of 0.2kg/square metre was created. A finger was swept around the scalp - cup junction to make sure that there was no

maternal tissue caught in the cup. More vacuum was created at a rate of 0.1kg/square metre per minute until a maximum of 0.6kg per square metre was achieved.

Traction was then applied synchronously with uterine contractions and at right angles to the plane of the cup. The thumb of the non-pulling hand was used to prevent the cup from slipping off. A generous medio-lateral "J" shaped episiotomy was made as soon as the head was distending the perineum. As soon as the delivery of the head was accomplished, the pressure was immediately reduced and the cup removed. The rest of the delivery was easy.

Placenta and membranes were delivered complete. The perineum was inspected for any tears or lacerations and none were found except for the episiotomy which repaired as it has been described in the introduction. The uterus was well contracted to about 18 - 20 weeks of gestation and there was no undue vaginal blood. The blood loss was about 150ml. The placenta and membranes weighed 320gm. The episiotomy was immediately repaired as it has been described in the introduction.

THE BABY:

The baby was a female with a small chignon. The Apgar score was 8 at 1 minute. Birth weight was 2.4kg. She had no congenital malformations. She was given injection Vitamin K_1 1mg intramuscularly and transferred to the neonatal unit for care.

THE MOTHER POST-DELIVERY:

She was still drowsy but otherwise her general condition

was good. Her pulse was 80 beats per minute and it was regular and of good volume. The blood pressure was 110/80 mmHg. The uterus was well contracted and there was no undue bleeding per vaginum.

DURATION OF LABOUR:

The first stage lasted 8 hours 5 minutes. The second stage lasted 20 minutes whereas the third stage lasted 5 minutes.

THE PUEPERIUM:

Post delivery the patient was kept in Ward 35. The blood pressure, pulse, respiration, temperature, urine for albumin, input and output of fluid were monitored regularly as before. Sedation and ampicillin were continued.

Her condition steadily improved after the first twenty four hours. Her blood pressure was constantly maintained at 120/80 mmHg. and there were no fits. Urine for albumin was only plus one. Her temperature was normal and the chest was clear. Urine output was about 1400ml. per 24 hours as compaired to an input of about 2.5 litres/24 hours.

On the second day post delivery, she was awake and no more sedation was administered except for Phenobarbitone 60mg twice daily. Her blood pressure was normal and she was afebrile. She could sit up. On the third, she was ambulant. Her blood pressure was normal and her urine output was good. The catheter was removed. She was then transferred to the general postnatal care (ward 37) for further observation. A 4 hourly blood pressure and pulse chart were kept and these remained within normal limits.

She was discharged on the 7th day post delivery in good general condition. Her blood pressure on discharge was 110/70 mmHg. She had no proteinuria. She was discharged on oral iron tablets and folic acid and chloroquine tablets for prophylaxis. The baby was also in good general condition. Her weight had increased to 2.5kg. They were given an appointment to attend the postnatal clinic after 6 weeks. The baby was given B.C.G. vaccination before discharge.

FOLLOW UP:

The mother and the baby were seen again in the postnatal clinic on 12th June, 1984. They had no complaints.

The mother's general condition was good. She was afebrile and not pale. The chest was clear. The blood pressure was 110/70 mmHg, and the pulse was 76 beats per minute. There was no tenderness in the renal angles and the uterus was well involuted. The episiotomy wound had healed well. Urine for protein was negative. Haemoglobin was 11.8gm/dl. The blood urea was 20mg/dl. and creatinine was 0.6mg/dl.

The baby was well. She was breast feeding well. Her weight had increased to 3.2kg. There was no abnormality detected.

They were then discharged from the clinic. She was advised on early booking in her next pregnancy.

COMMENTARY:

Eclampsia is a fairly common condition encountered in Muhimbili Medical Centre. Kairuki 1979/80 and 1981[1, 2] reported an incidence of about 3.3 per 1000 deliveries. It

is rare in developed countries where modern antenatal care is available to all pregnant women. The maternal and perinatal mortality associated with eclampsia is high. Hibbard and Rosen 1982[3] reported a perinatal mortality of 20 - 50% and it also a leading cause of maternal mortality in Muhimbili Medical Centre.

The occurrance of eclampsia in this patient without warning features of pre-eclampsia is striking. This may reflect some pitfalls in the diagnosis of pre-eclampsia in our antenatal clinics as these clinics are overwhelmed by a big patient load so that proper blood pressure recordings and urine examination are not done. With good antenatal care, pre-eclampsia is detected early and treated effectively so that the dangerous convulsive stage is not reached. To emphasize this point, Zuspan 1966 wisely stated, "Eclampsia does not come as a bolt of lightning (as the term suggests) but is insidious in onset and can be anticipated and prevented by the astute clinician".

There are certain high risk patients for which extra trouble must be taken to look for the condition. These include the young and elderly primigravidae, women with gross obesity, pre-existing hypertension, multiple pregnancy, diabetes mellitus, hydatidiform mole and those from low socio-economic groups. The patient presented was a primigravida who was fairly young and who belonged to the low socio-economic group.

The basic principles of management of established eclampsia were followed in this case i.e. maintainance of patient air-way, immediate control of fits, reduction of

the blood pressure if it is high and finally since the condition occured antepartum, immediate delivery.

Although chloromethiazole was used in the control of fits in this patient, there are several other drugs which could have been used such as the benzodiazepines, "lytic cocktail", paraldehyde and Magnesium sulphate. Chloromethiazole was was chosen because it is a hypnotic and an anti-convulsant which acts rapidly without respiratory depression and its dosage can be titrated against the patient's response. Although the benzodiazepines have a wide margin of safety, they can cause neonatal hypotonia, respiratory depression and impaired thermal regulation.

Assisted vaginal delivery was effected in this patient with a few hours. This was the case because it has been found that when eclampsia develops during or before labour, the outlook of both the mother and the baby worsen the longer delivery is delayed. Alternatively Caesarean section could have been done but it has been to carry a higher maternal mortality[2].

Lawson 1982[5] advises that whatever the method of delivery chosen, avoidance of haemorrhage and operative shock is of utmost importance. This is because of their pre-existing hypovolaemia and haemoconcentration. Therefore these patients are unable to cope with blood loss. It is recommended that any loss greater than 250ml should be replaced by transfusion immediately irrespective of the pre-operative haemoglobin level. This patient lost only 150ml and moreover, she was on an intravenous drip.

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LONG COMMENTARY IN OBSTETRICS.

BREECH DELIVERIES IN RELATION TO PERINATAL MORTALITY IN MUHIMBILI MEDICAL CENTRE (M.M.C.).

SUMMARY:

A 3 months' comparative study of 172 breech and 3876 non-breech deliveries in Muhimbili Medical Centre is presented. The perinatal mortality rate associated with breech deliveries was found to be 4.5 times higher than that associated with non-breech deliveries. Factors associated with the perinatal mortality and pitfalls in the management of breech deliveries in Muhimbili Medical Centre are discussed. Possible ways of improving fetal outcome in breech presentations and deliveries are suggested.

INTRODUCTION:

Breech presentation at term constitutes the commonest malpresentation and it accounts for about 3% of all the presentations at term[1]. Although in most instances breech presentation occur by chance, there are several probable factors which favour breech presentations. These include prematurity, multiple pregnancy, gross fetal abnormalities, placenta praevia, contracted pelvis, uterine abnormalities and multiparity. Other factors which have also been associated with breech presentation include hereditary tendency, uterine scars, maternal obesity, age and fetal growth retrardation[2].

Different views on the aetiology of breech presentation have been expressed by other authors. Braun 1975, Rooth and Brattley 1976[3, 4] noted a significant number of fetuses

with a wide range of morphological and functional damage more commonly presented by breech. This view if also shared by Cox, Kendall and Homers 1980[5] who noted a high rate of handicap in breech babies delivered by Caesarean section. This is suggestive of a pre-existing neurological damage disorder which disrupts normal muscular control which allows persistent extension of the legs and thereby preventing the assumption of the normal fetal attitude. This postulate awaits further proof.

Many workers report a high perinatal morbidity and mortality associated with breech deliveries [2, 6, 7]. Hytten 1982[8] described breech presentation as the most dangerous and damaging way of entering the world. Brenner and associates 1974[9] analysed the characteristics and perils of the fetus in breech presentation. They studied 1016 breech deliveries in which they found an overall mortality rate of 25.4% in breech deliveries as compared to that of 2.6% in the non-breech deliveries. Even after excluding premature breech deliveries which are associated with higher perinatal mortality associated with term breech deliveries has been reported to be 3 - 4 times higher than in cephalic deliveries[6, 10].

The major causes of perinatal morbidity and mortality in breech deliveries are attributed to birth trauma as a result of:

i) Intracranial haemorrhage which occurs as the head is made to traverse the birth canal rapidly without adequate time for moulding. Apart from this form of physical trauma, intracranial haemorrhage can also occur as a result of

hypoxia. Exactly how hypoxia causes haemorrhage is not known but hypotension[11], hypoxia venous congestion and capillary damage, venous stasis and infarction[13], coagulation disorders and changes in the cerebral blood flow have all been implicated[14].

ii) Asphyxia as a result of cord prolapse following delay of the aftercoming head.

iii) Mechanical injuries which include abdominal visceral rupture, fractured ribs or spine, nerve palsies and extravasation of blood into muscles. Ralis 1975[15] points out that the latter although a less obvious damage, may involve the muscles of the back and legs resulting in a crush-type syndrome.

Tank and associates 1971[6] examined the character of serious traumatic breech vaginal deliveries. The organs most frequently found to be injured were in the order of frequency - the brain, spinal cord, liver, adrenals and the spleen. It was noted with interest in the same study that in a retrospective analysis of idiopathic adrenal calcification, breech deliveries was an important associated factor. Other sites which were noted to be injured included the brachial plexus, the pharynx (in the form of tears or pseudo diverticula) from the obstetrician's finger in the mouth as part of the Mauriceau manoeuver. The bladder may also be ruptured if distended. Traction may also injure the sternocleidomastoid muscles which if not appropriately treated may lead to torticollis.

On the maternal side, morbidity is also increased in the process of breech deliveries. This is mainly attributed to

the increased need for vaginal manipulations resulting in sepsis, tears of the perineum, vagina and the uterus. There is also an increased need for emergency anaesthesia and operative delivery with their attendant complications.

In Muhimbili Medical Centre, breech deliveries accounted for about 4.9% of all deliveries in 1979/1980[16]. The contribution of breech deliveries to perinatal mortality in Muhimbili Medical Centre is not clearly known but it is probably associated with a higher perinatal mortality than cephalic deliveries. There has not been a comparative study comparing the neonatal outcome in breech and non-breech and deliveries. Armon 1978 in a retrospective analysis of 580 singleton breech deliveries in Moshi reported a corrected direct perinatal mortality of 48/1000, but also noted that if all deaths associated with low Apgar score at 5 minutes were included the mortality would have been much higher. However, in this study, the study and control groups were not well matched and moreover, it was a retrospective study.

Experience in Muhimbili Medical Centre labour ward reveales that the management of breech presentations and deliveries leaves much to be desired especially in the district hospitals and peripheral M.C.H. units. Occasionally, one sees patients with breech presentation admitted to the labour ward already with intrapartum fetal death due to cord prolapse or arrest of the aftercoming head. It has also been noted with great concern that some patients with breech presentations at term have no clear plan of the mode of delivery inscribed on their antenatal cards.

OBJECTIVES:

i) Broad Objectives:

This study was therefore undertaken to assess the magnitude of the problem of breech deliveries associated with maternal and fetal factors and suggest ways of dealing with the problem and its complications.

ii) Specific Objectives:

a) To find out the incidence of breech deliveries and the perinatal mortalities in breech and non-breech deliveries and compare them.

b) To study and compare factors associated with perinatal deaths in breech and non-breech deliveries such as fetal weight, mode of delivery gestational age, undiagnosed disproportion and cord prolapse.

c) To identify maternal and fetal factors associated with breech deliveries such as abruptio placenta, placenta praevia, cord prolapse, premature rupture of membranes and fetal distress.

MATERIALS AND METHODS:

i) The study population:

The study population consisted of all pregnant women above 28 weeks of gestation admitted to the labour ward in Muhimbili Medical Centre for delivery from 1st July 1984 to 30th September, 1984. The gestational ages were calculated from the last normal menstrual periods if the dates were certain. In cases where the dates were uncertain, extrapolation from the booking visit or quickening was done.

The total number of deliveries including fresh and

macerated still births occurring within the study period were included. Only infants weighing 1000gm and above were included in the study group. Breech first or second twin deliveries were excluded from the study group.

ii) METHODS:

A questionnaire was filled in for every delivery and the following information was included; age of the mother, delivery number, reason for referral, whether external cephalic version was done antenatally or not in breech presentations, associated maternal and fetal factors such as E.P.H gestosis, placenta praevia, premature rupture of membranes, modes of delivery and fetal distress. Fetal distress was roughly defined as fetal heart rate less than 100 beats per minute.

The state of the perineum whether an episiotomy made or not or whether there were tears or bruises was noted. Apgar scores of the newborns were recorded at 1 minute and at 5 minutes. A short refresher course on Apgar score was given to the midwives in the labour ward one day before the study was commenced.

Babies with good (7 - 10) i.e. class A babies who had no complications were discharged on the following day post-delivery. Those with Apgar scores of 6 and below after 5 minutes were transferred to the neonatal unit and were followed up by the author and the neonatalogist for the next 7 days. Any neonatal complications such as sepsis, jaundice, features of brain damage etc were noted. In cases of neonatal deaths, the most likely cause of death was arrived at after

discussion of other possible causes. Post-mortems were not done.

RESULTS:

During the study period there were 3876 deliveries of which 172 were breech. This gives an incidence of breech deliveries of 4.4% over the 3 month's period.

Table I: TOTAL NUMBER OF BREECH AND NON-BREECH DELIVERIES AND THEIR CORRESPONDING PERINATAL MORTALITIES.

	Breech deliveries		Non-breech deliveries		Total
Total number of of Still births	*FSB = 12 *MSB = 9	21	FSB = 32 MSB = 54	86	107
First week Neonatal deaths	14		55		69
Total number of deliveries	172		3704		3876
Perinatal Mortality rate per 1000	203.5		38.6		45.6

*FSB = Fresh still birth

*MSB = Macerated still births

The perinatal mortality rate associated with breech deliveries is 5.3 and 4.5 times higher than the perinatal mortalities associated with non-breech and the overall number of deliveries respectively.

Table II: FACTORS ASSOCIATED WITH INTRAPARTUM AND FIRST WEEK NEONATAL DEATHS IN BREECH AND NON-BREECH DELIVERIES:

Factor	BREECH			NON-BREECH		
	Stillbirth	First week Neonatal death	Total	Stillbirth	First week Neonatal death	Total
Prematurity	0	3	3	23	35	58
Undiagnosed disproportion	6	4	10	2	7	9
Pushing before full dilatation	3	2	5	0	1	1
Cord prolapse	2	5	7	6	11	17
Congenital malformation	1	0	1	1	1	2

There were 3 cases of congenital malformation - one on encephally, one with encephalocele and another with exomphalos which died in the neonatal period.

Although the figures are small, undiagnosed disproportion, cord prolapse and poor management of labour seen to account for the largest number of intrapartum and neonatal breech deaths whereas prematurity seem to be the main factor responsible in the non-breech deliveries.

Table III: DISTRIBUTION OF APGAR SCORES LESS THAN 6 AT 5 MINUTES AMONG BREECH AND NON$BREECH DELIVERIES ACCORDING TO GESTATIONAL AGES:

Gestational age (weeks)	BREECH			NON-BREECH		
	No.	Total	Percentage	No.	Total	Percentage
28 - 32	3	36	8.3	31	449	6.9
33 - 36	2	22	9.1	77	682	11.3
37 - 39	5	43	11.6	123	289	9.5
40+	9	40	22.5	132	1196	11.0
TOTAL	19	151	12.6	363	3616	10.0

Table III compares the numbers of infants with low Apgar scores in breech and non-breech deliveries born at various gestational ages. With the exception of a slightly higher proportion of infants with low Apgar scores born at 33 - 36 weeks in the non-breech group, this table shows that

relatively higher proportion of babies born with lower Apgar scores fall in the breech delivery group.

Table IV: COMPARISON OF LIVE BREECH AND NON-BREECH DELIVERIES WITH RESPECT TO MODE OF DELIVERY:

Mode of delivery	Breech	Non-breech
Caesarean section	5 (3.3%)	96 (2.7%)
Vaginal	146 (96.7%)	3520 (97.3%)
TOTAL	151 (100%)	3616 (100%)

Table IV compares the modes of deliveries in breech and non-breech presentations. The rates of Caesarean section in both groups are almost the same.

Table V: INTRAPARTUM AND FIRST WEEKS NEONATAL DEATHS RELATED TO THE BIRTH WEIGHTS OF THE INFANTS IN BREECH AND NON-BREECH DELIVERIES:

WEIGHT (gm)	BREECH			NON-BREECH		
	No.	Total	Perce-ntage	No.	Total	Perce-ntage
1000-1499	2	18	11.1	9	189	4.8
1500-1999	3	30	10.0	8	158	5.1
2000-2499	2	24	8.3	7	214	3.3
2500-2999	4	15	26.7	9	847	1.1
3000-3499	8	48	16.6	33	1667	2.0
3500+	7	16	43.8	21	541	3.9
TOTAL	26	151	17.2	87	3616	2.4

There is a higher proportion of intrapartum and neonatal deaths in breech deliveries weighing 3.5kg or above as compared to the non-breech deliveries.

Table VI: COMPARISON OF THE STATE OF PERINEUM IN BREECH AND NON-BREECH DELIVERIES.

State of Perineum	Breech	Non-breech
Intact	137 (79.6%)	3063 (88.4%)
Episiotomy	28 (16.3%)	545 (15.0%)
Tear	7 (4.1%)	96 (2.6%)
TOTAL	172 (100%)	3704 (100%)

Table VII: MATERNAL AND FETAL COMPLICATIONS RELATED TO BREECH AND NON-BREECH DELIVERIES.

COMPLICATION	Breech		Non-breech	
	No.	Percentage	No.	Percentage
Abruptio placenta	11	6.4	42	1.1
Placenta praevia	6	3.5	13	0.4
E.P.H. Gestosis	5	2.9	23	0.6
Cord prolapse	9	5.2	11	0.5
Premature rupture of membrane	4	2.3	19	0.5
Fetal distress	13	7.6	17	0.5
Other factors	124	72.1	3572	96.4
TOTAL	172	100	3704	100

There are higher incidence of abruptio placenta, placenta praevia, E.P.H. Gestosis, cord prolapse and fetal distress associated with breech deliveries as compared to non-breech ones.

DISCUSSION:

It has been found in this study that the perinatal mortality associated with breech deliveries is about 4.5 times higher than that associated with non-breech deliveries. A similar finding has been reported in K.C.M.C. by Armon et.al. 1978 and elsewhere[9, 17, 18, 19, 20].

Several factors are known to be contributory to perinatal deaths in breech deliveries. Increased rates of prematurity[21, 22] and congenital anomalies[3, 9] found in breech presentations account for much of this perinatal loss. However, even when these factors are excluded, the perinatal mortality has been noted to remain 3 - 4 times higher than that of in vertex presentations[10. 22, 23]. Other causes of perinatal mortality in vaginal breech deliveries are increased rates of umbilical cord accidents, traumatic birth injuries, asphyxia associated with undiagnosed cephalopelvic disproportion and unnecessary haste in accomplishing the delivery.

In this study, the factors associated with perinatal deaths are comparatively shown in tables II to VI. Table II shows that undiagnosed disproportion, cord prolapse and pushing before full cervical dilatation seemed to account for the largest number of intrapartum and first week neonatal

deaths in breech deliveries. On the other hand, prematurity seemed to be the main associated factor in perinatal deaths in the non-breech group. Comparing the proportions of babies born with low Apgar scores it is evident that the largest proportion fell in the breech delivered group. Although the figures were small, table V shows that a large proportion of intrapartum and neonatal deaths occuring in the breech group, occured in fetuses weighing 3500 gm and above. The proportion of patients who underwent episiotomies or Caesarean sections in breech and non-breech deliveries were almost the same.

To reduce the high fetal loss in breech deliveries, two approaches have been suggested. Delivery by Caesarean section of all breech presentations especially in primigravidae has been advocated by some authors[24]. Other authorities advocate vaginal deliveries but insist that an experienced obstetrician must be present at every vaginal breech delivery[25, 26].

However, there are drawbacks to each of these approaches. Vaginal delivery with a skilled obstetrician in attendance is not always possible because of shortage of skilled manpower especially in developing countries like Tanzania. Although delivery by Caesarean section diminishes fetal loss[24], there are high maternal morbidity and mortality associated with it in developing countries from haemorrhage, sepsis and anaesthetic complications. In addition to this, there is a possibility of scar rupture in a subsquent pregnancy[27]. Other operative risks in developing countries include high prevalence of anaemia, malnutrition and difficulty in

getting blood.

Delivery by Caesarean section was effected in 5 (3.3%) out of 172 breech deliveries of which breech presentation was primarily the indication in 4 cases. There was one neonatal death post Caesarean section delivery because of fetal distress. The fetal outcome in the four breech Caesarean section were good. The rate of Caesarean section in breech and non-breech presentations does not seem to be different. Probably more Caesarean sections should be done in breech presentations to improve fetal outcome. Armon 1978 suggested a figure of 20 - 25% abdominal breech deliveries as a reasonable compromise for better fetal outcome in breech deliveries. However, the risks of Caesarean sections must also be put into consideration. The main indication for Caesarean section in Muhimbili Medical Centre as far as breech deliveries are concerned when breech presentations are associated with other risk factors such as pre-eclampsia, previous Caesarean section scar, diabetes mellitus, hypertension and antepartum haemorrhage and in cases of suspected bigh baby i.e. fetus weighing more than 3500 gm.

The finding that episiotomies are done almost as frequently in breech and non-breech deliveries, clearly leaves much to be desired as far as the management of breech deliveries is concerned. Episiotomies must be done in all preech deliveries and even more so in breech pre-term deliveries. Milner 1975[34] advocates the use of forceps in the delivery of the aftercoming head so as to allow its gentle delivery. This was effected only in two cases in this series

and the fetal outcome was good. This technique should be more frequently utilized and interns, residents, registrars in the labour ward should be acquinted with the procedure.

It was noted in this study that undiagnosed disproportion and pushing before cervical dilatation was the factors accounting for perinatal breech deaths in 15 out of 26 cases. Cephalopelvic disproportion could have been detected by doing clinical pelvimetry before allowing vaginal delivery. Clinical assessment of the pelvis is based on history of previous normal vaginal deliveries, assessment of the size of the fetus and comparing it with the sizes of the fetuses in previous vaginal deliveries and doing a digital assessment of the bony palvis at 36 weeks of gestation. A plain abdominal X-ray at term is important in order to ascertain the type of the breech and even more important the attitude of the fetal head. A deflexed fetal head is unfavourable for vaginal delivery [32].

The question of deciding whether abdominal or vaginal delivery should be conducted in breech deliveries is an important one. Vaginal delivery is only allowed in healthy multigravida or primigravida who have no complicating factors. These patients should have normal pelvises as per clinical assessment and the estimated size of the fetus should be less than 3500 gm. These deliveries should take place in a hospital where the progress of labour in terms of descent of the presenting part, cervical dilatation as well as the maternal and fetal conditions are closely monitored. Vaginal examination should be done as soon as the membranes rupture

so as to exclude prolapse of the cord. Review of the decision of vaginal versus abdominal delivery is made in situations of fetal distress, poor progress of labour or in cord prolapse.

Zatuchni and Andros 1967[33] suggested an objective prognostic criteria which is useful in deciding which patient will safely deliver vaginally or not. The points which are scored in the assessment are parity, previous breech deliveries over 2500 gm, gestational age, estimated weight of the fetus, cervical dilatation and the station of the breech. Armon et.al. 1978[7] recommends that if this scoring system is to be applicable in developing countries like Tanzania, the weight factor should be modified as the average size of the babies in developing countries are smaller than those in developed countries.

The incidence of breech deliveries of 4.4% found in this study is higher than that of 2 - 3% reported in other areas[35]. There are several factors which could explain the high incidence namely; the high incidence of premature labour and other factors which are associated with breech presentation such as pre-eclampsia, abruptio placenta, placenta praevia in which labour may be induced prematurely. In addition to this, external cephalic version is not routinely done in our antenatal clinics. In fact only 6 out of the total of 172 had had external cephalic version done.

The value of external version in reducing the number of breech presentation is contraversial because in some places where it is routinely done, the incidence of breech presentations has not been noted to decrease. Other writers have

confirmed that this procedure diminishes the incidence of breech deliveries by up to 40%[36, 37]. There are several complications associated with the procedure such as premature labour, abruptio placenta, premature rupture of membranes and cord accidents. A primary mortality of 1 - 2% has been noted to be associated with the procedure by the same workers. Some authors[36, 37] state that in circumstances where the perinatal mortality of breech deliveries exceeds 2%, such a policy is justfied. It is the policy of the department of Obstetrics and Gynaeco,ogy in Muhimbili Medical Centre to perform external cephalic version at 34 weeks of pregnancy.

There is no point of attempting version before 34 weeks of gestation although it can be done from that time until term. Version is unnecessary in circumstances where abdominal delivery is already planned and is contra-indicated in the presence of antepartum haemorrhage, E.P.H. gestosis, scarred uterus, multiple pregnancy or in situations where there is a risk of fetal maternal isoimmunization.

The use of anaesthesia to facilitate version is contraversial. However, anaesthesia is known to increase maternal and fetal hazards[38]. There are some isolated reports advocating the efficacy of tocolytic drugs such as terbutamide at 37 to 39 weeks of gestation[39]. However, further studies, are awaited before these drugs are recommended for routine use while performing external cephalic version.

The preferred mode of delivery of low borth weight fetuses in breech presentation has been a subject of considerable contraversy[28]. Goldenburg et.al. 1977 and Peterson et.al.1967

advocate delivery by Caesarean section whereas Cruikshank 1978[28] pointed out that the evidence for better fetal outcome was not strong enough in adbominal breech deliveries. Definite proof of the superiority of Caesarean section in breech low birth fetuses is difficulty to obtain. This is supported by two recent prospective studies by Cox et.al. 1982 and Duenhoelter et.al. 1979[30, 31] which report conflicting results. Taking into consideration the risk of Caesarean section of haemorrhage, sepsis and poor standards of premature neonatal care, one would not consider routine Caesarean section of premature breech deliveries in Muhimbili Medical Centre.

In conclusion, breech presentations in Muhimbili Medical Centre challenges the obstetrician with unique problems and difficult decisions to make. It is associated with a high perinatal mortality and morbidity. The management of breech delivery should start in the antenatal clinic where factors associated with breech presentations are excluded. External cephalic version should be performed where there are no contraindications. Proper plan as to the mode of delivery is made under the care of experienced doctors. Close monitoring of the fetal and maternal conditions and the progress of labour are important in intrapartum care and decision of vaginal versus abdominal delivery should be reviewed on the basis of any abnormality of these parameters. Episiotomies should be routinely performed in all breech deliveries.

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G.1 MULTIPLE UTERINE FIBROIDS WITH MENORRHAGIA : TOTAL ABDOMINAL HYSTERECTOMY AND BILATERAL SALPINGO-OOPHRECTOMY.

Name: Mrs. A.H.

Age: 46 years, Para 2.

Hosp. admission No: 360488

Residence: Kisevule surbub, Dar es Salaam.

Date of admission: 20th December, 1983

Date of operation: 28th December, 1983

Date of discharge: 7th January, 1984.

SUMMARY:

A case of a 46 year old lady who presented with a long standing lower abdominal pains and heavy menstrual periods is presented. She was found to be moderately anaemic and she had to be transfused with blood. She had uterine fibroids. Endometrial curettage and cervical pap smear were done and were normal. Total abdominal hysterectomy and bilateral Salpingo-oophrectomy were done. Her post operative recovery and follow up were uneventful.

HISTORY OF THE PRESENT ILLNESS:

The patient presented at the gynaecological outpatient clinic with complaints of a lower abdominal mass and pains for one year and heavy menstrual periods for seven months.

Mrs. A.H. was well until about one year prior to admission when she noted a lump as big as her fist in the lower abdomen. The mass was painless initially but three months later it became painful especially during her menses.

She also noted that since then the mass had been increasing progressively in size but slowly.

Five months later her menstrual loss became heavy, sometimes prolonged and painful. Initially, she used to change pads 2 - 3 times daily but since her menstrual pattern changed she changed pads 5 - 6 times daily which were fully soaked and she noted also clots in the menstrual blood.

Her appetite was good and there were symptoms related to the urinary or gastrointestinal or respiratory systems. She had not noted any fainting attacks or dizziness or generalised body weakness or palpitations.

PAST MEDICAL HISTORY:

She denied of any serious morbid events in her life-time. She had not undergone any operations before. She denied of any history of gonorrhoea, schistosomiasis or tuberculosis.

GYAECOLOGICAL HISTORY:

She could not remember her age of menarche. Her menstrual periods used to be 3 - 4 days recurring every 28 days prior to her illness. For the seven months, she had been experiencing regular but prolonged and heavy menstrual periods lasting for 7 - 10 days with clots and severe dysmenorrhoea.

The last menstrual period started on 12th December, 1983. She had never been on any form of contraception.

OBSTETRIC HISTORY:

She was para 2 + 0 and all her children were alive and well. The first one was 16 years and the last born was 14 years. The pregnancies were uncomplicated antenatally, intrapartum and postnatally. The long period of involuntary infertility was not of concern to her.

FAMILY AND SOCIAL HISTORY:

She was an illiterate lady who was married to a peasant. She neither smoked cigarattes nor drank any type of alcohol. There was no family history of hypertension, cardiac disease or diabetes mellitus.

EXAMINATION:

General examination:

Physical examination revealed an old lady of about 50 years of moderate build and in good general condition. She was mildly pale, afebrile and not jaundiced. She had no lymphadenopathy or edema. There was no evidence of wasting.

Head and Neck: There were no abnormalities detected.

Breasts: The breasts were atrophic but were of equal size without any lumps or secretions or areas of tenderness.

Chest: The chest was symmetrical and the trachea was centrally placed. On palpation the chest expanded symmetrically with respiration and both sides were equally resonant to percussion. Breath sounds were normal, and there were no additional sounds.

Cardiovascular system:

The pulse was 80 beats per minute, regular and it was

of full volume. The jugular venous pressure was not elevated. The blood pressure was 120/80 mmHg.

There was no evidence of cardiomegaly. The apex beat was in the 5th left intercostal space midclavicular line. The first and second heart sounds were normal and there were no added sounds.

Abdominal examination.

The abdomen was distended in the hypogastrium but moving symmetrically with respiration. There were no tortuous veins or scars or therapeutic marks. There was a mass extending from the suprapubic area to just below the level of the umbilicus.

On palpation, the abdomen was non tender. The liver and spleen were not palpably enlarged. The renal angles were non tender.

There was an intra-abdominal pelvic abdominal mass which was of irregular surface, rubbery in consistency corresponding to a pregnancy of about 20 weeks. It was traversely mobile, non-tender and non pulsatile. It measured about 15cm. longitudinally and 10cm. across. There was no shifting dullness or fluid thrill. The mass was uniformly dull to percussion. Bowel sounds were normal and there was no bruit heard over the mass on auscultation. There were no hernia in the hernial orifices.

Vaginal examination:

The vulva and vagina were normal. There were no ulcers or any abnormal discharge.

The cervix was healthy with a parous os. There was no

discharge from the os cervis. A Papanicoulau smear was taken from the squams-columnar junction and posterior fornix by using an ordinary wooded spatula which had been split into two pieces.

On digital examination, the cervix was firm and of regular contour. The fornices were neither bulging nor tender. On bimanual palpation the pelvic-abdominal mass was confirmed to be in continuity with the cervix and the body of the uterus. The adnexae could not be delineated because of the pelvis-abdominal mass. The examining fingers were stained with whitish normal vaginal discharge.

DIAGNOSIS:

On the basis of the clinical features, a diagnosis of uterine fibromyomata was made. Other possible diagnoses also thought of were endometrial hyperplasia or polyps, submucus fibroids and endometrial carcinoma.

MANAGEMENT:

The patient was admitted for investigations, correction of the anaemia and planned for fractional curettage and depending on the results of the curettage she would then undergo hysterectomy.

INVESTIGATIONS:

Haemoglobin: 8.8gm/dl

Blood urea: 20mg/dl.

Creatinine: 0.8mg/dl.

Full blood count: W.B.C.: Total 6,500/mm^3

Differential: Neutrophils - 75%

Lymphocytes - 22%

Eosinophils - 3%

Basophils - 1%

Monocytes - 1%

E.S.R.: 4 mm in the first hour.

Peripheral blood film: Normocytic, normochromic film with adequate platelets.

Stool: No parasites detected

Urine: Microscopy - normal

Culture: No significant bacterial growth.

Pap smear: Grade one smear.

The patient was transfused with 3 units (1500ml) of blood on the 4th day of admission and later planned for examination under anaesthesia and fractional curettage on 21st December, 1983.

EXAMINATION UNDER ANAESTHESIA AND FRACTIONAL CURETTAGE.

Preparation:

After blood transfusion her haemoglobin was checked and found to be 10.2gm/dl. Shaving of the perineum was done the night before the procedure and patient's consent was obtained.

Procedure and Findings:

Anaesthesia was induced with sodium thiopentone 250mg slowly intravenously. The patient had also been given 0.6mg atropine intravenously on arrival to the theatre. She was maintained on a mixture of nitrous oxide and oxygen being given through a face mask.

The patient was then put in lithotomy position. The

perineum, vulva and vagina were cleaned with Savlon 1:200 solution and draped with sterile towels. Catheterization was not done as the patient had been instructed to pass urine on her own before anaesthesia was started.

An Auvard's speculum was introduced to retract the posterior vaginal wall. The cervix was then visualized. It was parous and had no lesion. The anterior lip of the cervix was grasped with a volsellum.

The endocervix was curetted using a small sharp curette. Scanty curetting mixed with some blood clots which appeared macroscopically normal were obtained and put in a histological bottle. The uterine cavity was then sounded. It measured about 10 cm.

The cervical canal was then gradually dilated up to Hegar's dilator number 8. The lower aspect of the uterine cavity and then the fundus were curetted in that order and the specimens were treated separately. These two sites yielded plenty of normal looking endometrial tissue.

Bimanual examination was done. There were firm multiple uterine masses corresponding to about 20 weeks pregnancy size. The uterus was of limited morbidity especially in the longitudinal axis. A sterile vulval pad was applied and the patient was wheeled to the recovery room and thereafter to the ward when she was awake.

Recovery from anaesthesia was unremarkable. There was no undue vaginal bleeding noted. Her vital signs remained within normal limits.

HISTOLOGY REPORT: HP 4746/83,4747/83, 4749/83.

Histology results of the endocervical curettings

revealed Columnar epithelium with tortuous glands. The other two specimens revealed small stromal cells with dense cytoplasm and occasional mitosis. These features were consistent with normal endometrium in the secretory phase.

PLAN OF MANAGEMENT:

Total abdominal hysterectomy and salpingo-oophrectomy was planned to be done electively on 28th December, 1983.

Preparation:

The type of operation which was intended to be done was discussed fully with the patient. The outcome of the operation in terms of fertility and menstrual function were clarified and the patient gave a written consent.

The abdominal operation site was shaved as usual including the perineum. Two units of blood (1000ml) were grouped and crossmatched and kept ready for the operation.

Premedication:

Pethidine 100mg and atropine sulphate 0.6mg were given intravenously on arrival to the theatre.

Anaesthesia.

General anaesthesia was induced by 250mg of freshly prepared sodium thiopentone given intravenously slowly. She was then relaxed with 80mg of suxamethnium chloride given intravenously. The patient was then intubated with a cuffed endotracheal tube. She was then paralysed with pancuronium bromide (puvulon) 4mg and maintained on a mixture of oxygen and halothane 1% with intermittent partial pressure ventilation. Anaesthesia was maintained smoothly throughout the operation and there was no vomiting. At the end of operation

she was reversed by Neostigmine 2.5mg intravenously and extubated in the usual way.

Procedure and findings.

The abdomen was opened through a subumbilical median incision extending just below the umbilicus to just above the symphysis pubis. The rectus shealth was then opened through a small nick and this was extended above and downwards with a Mayo's pair of scissors. The rectus muscle was retracted from the midline and the peritoneum was opened through by cutting it above two fingers holding it so as to visualize directly inside the peritoneal cavity in order to avoid injury to the bowel or bladder.

Findings.

i) There were adhesions tethering the omentum to the fundus of the uterus.

ii) There were multiple uterine fibroids some being subserous, others intramural. There were 2 submucuous fibroids which were later identified on sectioning the uterus after removing it.

iii) The bladder and appendix were normal.

iv) There were bilateral hydrosalpinges adherent to both ovaries which were buried in adhesions. Both ovaries had small multiloculated cysts.

Procedure:

Omental adhesionlysis was done so as to release the omentum from the fundus of the uterus. After releasing the adhesions and controlling their bleeding points, the bowel was packed off using two wet abdominal packs. The patient

was placed Trendelenburg position and a self retaining retractor was inserted and screwed in position.

A myomectomy screw was then screwed into the uterine fundus and this delivered the tumour out of the abdomen. The round ligaments on both sides were picked and doubly clamped with Kocher's forceps and the stumps transfixed with chromic catgut number 2 leaving a length of the catgut on the round ligaments. The uterovesical peritoneum was incised in between the two stumps of the round ligaments and the bladder was pushed away through a plane of cleavage in the uterovesical peritoneal reflection.

Both the infindubulo-pelvic ligaments were doubly clamped with Kocher's forceps and their stumps transfixed with chromic catgut number two at two places. The fascial plane of the broad ligament was separated by a finger dissection and anterior leaf was divided and dissected medially and downwards. This procedure pushed the bladder and ureters downwards . Both the uterosacral ligaments were then picked with Kocher's forceps, divided and transfixed with chromic catgut No. 2.

The uterine vessels were identified on the lateral borders of the uterus. They were doubly clamped with Kocher's forceps and divided between the clamps. The inferior stump on either side was doubly ligated with number 2 chromic catgut leaving good length of the stump.

The tip of the cervix was identified by blind palpation between fingers placed in the pouch of Douglas and the utero-vesical space. The vagina was opened anteriorly by a stab

incision and the tip of the cervix was held by Allis tissue forceps. The vagina was cut around close to the cervix with Mayo's scissors whose curvature pointed upwards so that the uterine fibroids together with the adherent tubo-ovarian masses were removed. As the mass and the cervix were being removed, the vaginal vault was held with Allis forceps and the vaginal angles were clamped carefully so as to ligate the paravaginal pleuxus of veins. A swab soaked in flavin in spirit was inserted through the vagina.

The vaginal vault was closed with "figure of 8" number 2 chromic catgut sutures. The uterine vessel stumps were enclosed in the lateral vaginal vault stitches so as to reinforce them. The field of operation was inspected. Blood was mopped up and any blood clots were removed. There were no bleeding points. Having ensured haemostasis, the pelvis was reperitonized with continuous suture number 0 chromic catgut. The pedicles of the round ligament, utero-sacral and infundibulo-pelvic ligaments on each side were buried in peritoneal covering. The abdominal packs and the self-retaining retractor were removed. Instrument and linen count was certified correct.

The abdomen was then closed in layers starting with the peritoneum using catgut No. 0. The rectus streath was closed with continuous suture of proline 2/0 on a cutting needle. The skin was closed with interrupted mattress sutures using silk number 1. The wound was mopped dry, dressed with dry gauze and strapped. The swab from the vagina was removed. There was no vault bleeding. Blood loss was about 400ml.

Macroscopic examination of the uterus:

The uterus was cut open. There were two submucus fibroids apart from sub-serous and intramural ones. The endometrium looked normal. The whole uterus and the tubo-ovarian masses were sent for histopathology.

POST-OPERATIVE MANAGEMENT.

Immediately after the operation, anaesthesia was discontinued, and the patient reversed as previously described. When spontaneous respiration resumed and the cough and swallowing reflexes returned to normal she was transferred to the recovery room where she was constantly observed until consciousness returned. She was then sent back to the ward for further management which included:

i) Monitoring of the pulse, blood pressure and respiration half hourly for the first 6 hours and thereafter 4 hourly for the next 48 hours. Temperature was recorded 4 hourly.

ii) Fluid input and output chart was started. She was to continue on intravenous fluids Dextrose 5% alterating with Normal Saline in the tone of 3 litres per 24 hours.

iii) She was to get blood transfusion 2 units 1000ml. as soon as she arrived in the ward.

iv) She was given Ampicillin injection 500mg 6 hourly intravenously for the next 48 hours then 500mg orally 6 hourly for three more days for prophylaxis.

v) Pethidine 100mg six hourly and whenever necessary was given to relieve pain.

PROGRESS:

About 6 hours post-operatively, the patient was well awake and she was well. Blood drip was going on. Her vital signs were normal.

On the first post-operative day she was afebrile and not pale. Her blood pressure was normal. Urine output was 2300ml compared to an input of 2800ml over the past 24 hours. She was set up and encouraged to sit up on her own.

From the second post-operative day, her post-operative course was uneventful. The catheter and intravenous fluids were stopped on the second day. She was encouraged to walk about. Oral fluids sips were started on the second day as she has passed flatus and the bowel sounds were present.

Haemoglobin was checked on the 5th day and it was 9.8 gm/dl. Stitches were removed on the 8th day. The wound healed by primary intention. She was discharged on the 10th post-operative day in good general condition and given an appointment to attend the gynaecological outpatient clinic after 4 weeks.

FOLLOW UP:

The patient was seen in the gynaecological clinic on Friday 27th January, 1984. She had no complaints. Abdominal scar and vaginal vault had healed well. She was then discharged from the clinic after taking note of the histology report.

HISTOPATHOLOGY REPORT OF THE SPECIMEN:

The report number HP 4762 revealed multiple uterine fibromyomata with no evidence of malignancy. The cervix showed evidence of chronic cervicitis. The ovaries revealed multiple benign serous cysts.

COMMENTARY:

Uterine fibroids are not only the commonest tumours found in the female genital tract but they are the commonest tumours in the human body. It is estimated that 20% of all women have one or more present in the uterus at death and that they probably occur in about 5% of all women (1, 2). In Muhimbili Medical Centre just like elsewhere, fibroids constitute the commonest indication for hysterectomy.

The clinical presentation of this patient was typical. However, the symptomatology in uterine fibroids depends to a great extent upon the size and the position of the myoma. Most small myomata and even large ones may be asymptomatic and may just be incidental findings discovered during routine examinations. These ones do not warrant treatment. The effect of large myomata depends on their position in relation to the menstrual cavity - the nearer to the cavity, the greater the likelihood of symptoms, usually menstrual disturbances.

Total abdominal hysterectomy was the treatment of choice in this case considering the age of the patient of 46 years, menorrhagia and multiple uterine fibroids. On the other hand, concomitant ovariectomy for what seemingly appeared benign ovarian cysts was based on the observation that about 45% of women above the age of 45 years are at risk of developing malignancy if the ovaries are left in situ[3]. In contrast to this observation, Funt et al.[4] 1977 reported that only 1.4% of postmenopausal women who had hysterectomy with

conservation of the ovaries undergo subsquent operation for adnexal pathology.

Myomectomy could have been considered in this case had the patient been less than 40 years, anxious to have more children and if she had no tubal or ovarian pathology. The size and the number of the fibroids per se is not a contraindication to the procedure but it is prudent to explain to the patient before hand to sign a consent for hysterectomy should the former procedure prove dangerous or impossible.

Hysterectomy has been reported to be a better procedure of dealing with fibroids as it is usually easier to perform[5] and it is free of recurrence of the fibroids. Myomectomy on the other hand is associated with more blood loss, more frequent occurrance of haematoma and intestinal obstruction due to bowel adherence to the myomectomy site. Coagulopathy as a result of release of plasminogen activators from submucuous fibroids has also been reported[6].

Cervical cytology and fractional curettage were carried out in this case in order to exclude endometrial malignancy which may or may not be associated with fibroids. Pap smear is useful as far as diagnosis of early cervical carcinoma is concerned but it inaccurate in the diagnosis of endometrial carcinoma. In fact, 25 - 67% false negative results have been reported in known cases of endometrial carcinoma[7]. A pap smear is only useful when it is positive. Curettage was strongly indicated in this case as the clinical features were suggestive of intrauterine malignant

disease. The author concurs with Jeffcoate[8] who discourages routine curettage in all cases of uterine fibroids without such features.

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G. 2 RUPTURED TUBAL PREGNANCY : SALPINGECTOMY AND AUTOTRANSFUSION.

Name: Mrs. H.L.

Parity: Gravida 2 para 1

Age: 27 years

Address: Mburahati area, Dar es Salaam

Date of admission: 2nd March, 1984

Date of operation: 2nd March, 1984

Date of discharge: 12th March, 1984.

SUMMARY:

The patient was admitted through the Casuality Department as an emergency with a history of seven weeks amenorrhoea, severe generalised abdominal pains and vaginal bleeding. She was in shock and after a short period of resuscitation laparatomy was undertaken at which a rupture right tubal accyesis with massive hemoperitoneum was found. Autotransfusion and right salpingectomy were done and her post operative course was uneventful.

HISTORY OF PRESENT ILLNESS:

Mrs. H.L. was admitted through the Casuality Department having been referred from Ilala Dispensary on account of: severe generalised lower abdominal pains, two episodes of fainting attacks and vaginal bleeding of about 12 hours prior to admission.

She was reported that she was otherwise well until about 12 hours prior to admission when she suddenly developed severe generalised constant abdominal pains which were

sharp in nature. The pains did not radiate to the tips of her shoulders. About two hours she fainted while she was trying to get up to go to the toilet. Some hours later she noted some scanty vaginal bleeding which hardly soaked one sanitary pad completely.

She was taken to Ilala hospital by her relatives and on the way she fainted again and vomited once. From the dispensary she was then rushed to Muhimbili.

There was no history of fever, frequency of micturition or dysuria. Apart from vomiting once, there was no history of abnormal bowel habits. She denied having symptoms of pregnancy such as nausea, morning sickness.

GYNAECOLOGICAL HISTORY:

Her menarche was at 14 years. Her menstrual flow lasted 4 days in a regular cycle of 30 days. Her last normal menstrual period started on 14th January, 1984. She was therefore 7 weeks amenorrhoeic. She had never used any form of contraceptives.

OBSTETRIC HISTORY:

She was para 1 + 0 and her child was 5 years old. This pregnancy was uncomplicated antenatally and intrapartum and the pueperium was normal up to the tenth day when she developed fever and lower abdominal pains for which she was hospitalized for 4 days and treated with penicillin and asprin. She improved tremendously and she was discharged to finish her penicillin course in Ilala dispensary thereafter.

PAST MEDICAL HISTORY:

Apart from the hospitalization following child birth, she had never been hospitalized before. There was no history of serious or chronic illness in the past. She had not had any surgical operation. She denied having had schistosomiasis or venereal disease in the past.

FAMILY HISTORY:

No body in her family had diabetes or hypertension or epilepsy. She had had no contact with a known case of tuberculosis.

SOCIAL HISTORY:

She was a primary school leaver who worked as a clerk with the Bank of Tanzania. She was married to an engineer. She neither smoked cigarettes nor drank alcohol.

CLINICAL EXAMINATION:

The patient appeared well nourished but looked apprehensive and in pain. She was moderately pale but afebrile with a temperature of 36.7°C. There was no pedal or sacral edema. She was not icteric.

Mouth and Throat and Neck.

There was nothing abnormal detected.

Chest:

The breasts were well developed. There were few Montgomery's tubercules noted and the areolae were dark. The nipples were normal and there 2as no discharge. There were no palpable masses or tender areas.

The chest was symmetrical. The breath sounds were normal and there were no added sounds.

Cardiovascular system:

The pulse rate was 120 beats per minute, regular but of small volume. The blood pressure was 80/50 mmHg. The jugular venous pressure was not elevated. There was no evidence of cardiomegally clinically. The first and second heart sounds were normal and there were no added sounds.

Abdominal examination:

The abdomen was distended more so in the hypogastrium. It was not moving with respiration. It was generally tender but more so in the lower abdomen with rebound tenderness. There was muscle guarding. There were no masses palpable. Shifting dullness and fluid thrill were positive. The liver and spleen were not palpable. The renal angles were non-tender.

Vaginal examination;

The external genitalia were stained with some old blood but otherwise were normal. On speculum examination, the vaginal mucosa was normal. The cervix looked healthy with a parous os. There was some brownish plug of blood in the os cervis. It was softish and the os was closed. The right fornix was very tender with an ill-defined mass in the right adnexum. The posterior fornix was tender and bulging. Uterine size was difficult to ascertain due to guarding and tenderness. The examining fingers were stained with brownish blood which was not foul smelling.

DIAGNOSIS:

A ruptured tubal pregnancy was diagnosed and the patient was urgently prepared for emergency laparatomy.

MANAGEMENT:

i) Blood was urgently taken for grouping and cross matching and 3 units (1500ml) of blood were requested. About ½ hour later the blood was ready.

ii) An intravenous drip of normal saline was set up with a size 14G cannula and it was run fast. This was to be changed to blood as soon as it was ready.

iii) Abdominal site preparation was done and consent given for anaesthesia and operation after explaining the diagnosis to the patient.

iv) She was premedicated with atropine 0.6mg and Pethidine 50mg intramuscularly just before she was wheeled to the theatre.

ANAESTHESIA:

Anaesthesia wasinduced with Ketamine hydrochloride 150mg and diazepam 10mg. She was then relaxed with scoline 300mg intravenously and intubated with a cuffed endotracheal tube. Anaesthesia was maintained smoothly throughout the operation with halothane 2% and oxygen. There was no vomiting.

PROCEDURE AND FINDINGS:

The bladder was catheterized aseptically as has been described in the introduction and about 100ml of clear urine were removed. The abdomen and thighs were cleaned with Savlon solution and then with weak iodine solution. The excess iodine was mopped with a dry swab. Sterile towels were appled. A suction tube was fixed and connected to an electric sucker.

The abdomen was opened through a midline sub-umbilical incision as described in the introduction. The perietal perineum was noted to be dark-brownish signifying haemoperitoneum. The peritoneal cavity was then opened. There was massive haemoperitoneum which was fresh. The blood was scouped out and filtered through a sterile gauze on a sterile funnel into a transfusion bottle containing 200ml sodium citrate solution per litre. A total of 1000ml were thus collected and autotransfused. A ruptured actopic pregnancy was found on the right isthmal portion of the tube and there was slight bleeding from the site. Two Kocher's forceps were applied across the mesosalpinx to arrest further haemorrhage. The whole tube was then excised betweeen the clamps and the mesosalpinx was transfixed and ligated with chromic catgut number 1. The whole specimen was taken for histopathology.

On inspecting the pelvic organs, both the ovaries were normal. The left tube was normal. The uterus was bulky and it corresponded to the size of six weeks pregnant uterus otherwise it was normal. The appendix was normal.

The peritoneal cavity was mopped of blood clots. The pouch of Douglas was free of clots. Having certified correct instrument and linen count, the abdomen was closed in layers as described in the introduction. Total blood loss was about 300ml excluding the amount for autotransfusion. At the end of the operation the pulse was 80beats per minute, regular and of full volume. The blood pressure was 130/80 mmHg.

POST OPERATIVE CARE:

The pulse, blood pressure and respiration were monitored one hourly for 24 hours. Another 1000ml of donor blood was available and transfused. Intravenous fluid therapy consisting of Dextrose saline was continued in the tune of 3 litres per 24 hours. Input and output chart was maintained. Pethidine 100mg intramuscularly 6 hourly were given for the first 48 hours to alleviate pain. She had four doses.

PROGRESS:.

About 4 hours post operatively, the patient was awake from anaesthesia. Her vital signs were stable. On the first post operative day, the pulse, blood pressure and temperature were all normal. Urine output was 2 litres over a 22 hour period compared to input of 2.5 litres. The chest was clear.

On the second day, the patient had passed flatus and she could sit up and walk about. The catheter was removed and the intravenous fluids were discontinued. She was started on oral fluid sips.

Her recovery was steady and fast thereafter. Her haemoglobin checked on the 4th day was 6.6gm@dl. and more blood was requested for her. She was also started on oral iron tablets 200mg three times a day and folic acid 5mg once daily. On the 8th post operative day the wound had healed well and stitches were removed. She got 500ml of blood on the 9th day and discharged home on the 10th day with a haemoglobin of 8.8gm/dl with oral iron and folic acid tablets for 4 weeks. She was given an appointment to attend the gynaecological outpatient clinic after 4 weeks.

FOLLOW UP:

She was seen again on 12th April, 1984 in the gynaecological clinic. She had no complaints. She was not pale. Her haemoglobin was 10.6gm/dl. The abdominal scar had healed with primary intention. She had not had her menses. Pelvic examination revealed a normal sized uterus. There were no adnexal masses or tenderness. She was advised to report to hospital early on account of missing a menstrual period.

HISTOLOGY REPORT:

HP number 2852/84: Ruptured fallopian tube with decidua and chorionic villi evident. These features are consistent with ruptured tubal pregnancy.

COMMENTARY:

Ruptured tubal ecyesis is one of the commonest gynaecological emergencies encountered in Muhimbili Medical Centre The incidence of this condition varies from place to place depending on the prevalence of the aetiological factors. In Muhimbili Medical Centre, an incidence of 1:200 deliveries was recorded in 1980 whereas Trussel 1969 reported a figure of 1 in 90 in Mulago Hospital in Uganda. The highest incidence ever reported was that of 1:28 in the West Indies by Douglas 1963[1, 4].

The diagnosis of the condition in this case was straight forward. De Cherney 1983[2] contends that the classical trial of abdominal pain, abnormal vaginal bleeding and adnexal mass occurs in less than half of the patients and that the

clinical findings of an early ectopic pregnancy are often non-discriminatory.

The acute presentation is associated with tubal rupture and massive intraperitoneal haemorrhage leading to abdominal pains and cardiovascular collapse. Occasionally the presentation can be subacute and this is usually associated with great diagnostic difficulties. In these cases, some clinical features such as shoulder pains or pains on raising the legs or the "bath room sign" or the feeling of pains in the perineum on sitting on a hard seat may be useful[3]. Laparascopic visualization is of great help in these circumstances. Other diagnostic aids are the endocrine detection of early pregnancy using the B sub-unit of the HCG, and SP or the Schwangershaft's protein. Ultrasound can also be employed. The B-h.C.G screen and the selective use of pelvic ultrasonography can diagnose actopic pregnancy before operation with nearly 100% accuracy in haemodynamically stable women in whom the condition is suspected. Thus unnecessary delay in treatment is avoided with this approach and morbidity and mortality are reduced[5].

The outcome of the patient described was good as the diagnosis was made early. Although the mortality associated with ruptured ectopic pregnancy has steadily declined over years it has been reported to account for 6.5% of all maternal deaths in the United States[2]. Blood transfusion, improved anaesthesia and aggressive treatment of hypovolamic shock are the principal factors in decreasing the mortality. Early diagnosis is also desirable to minimize tubal damage, preserve fertility so as to improve the reproductive outlook.

There are several factors associated with tubal pregnancy. These factors fall into two main categories Namely: factors which delay or prevent the passage of the fertilized ovum into the uterine cavity and factors inherent in the embryo itself such as embryonic mal development and gross chromosomal defects.

The first group embraces such conditions as chronic salpingitis, impaired migration or ciliary activity of the tube. Follicular salpingitis is especially believed to be a frequent cause because of the formation of blind gutters into which the fertilized ovum may stray. In the case presented, the patient had pueperal sepsis post-delivery with formation of adhesions and this could be the main factor which predisposed to the condition. In addition this patient had a long period of involuntary infertility which is also in keeping with the occurrance of tubal pregnancies.

The patient was advised to report early in hospital on account of conceiving again because of the increased risk of getting another ectopic pregnancy. Llewellyn-Jones 1982 reports a 10% risk in such patients as compared with 0.4% in women who have not had an ectopic pregnancy.

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G. 3 ENDOMETRIAL CARCINOMA : EXTENDED HYSTERECTOMY AND BILATERAL SALPINGO-OOPHRECTOMY FOLLOWED BY EXTERNAL PELVIC IRRADIATION.

Name: Mrs. C.M.

Age: 64 years

Parity: Para 2 lady

Inpatient number: 353376

Address: Dodoma

Date of admission: 4th October, 1983

Date of operation: 24th October, 1983

Date of discharge: 7th February, 1984.

SUMMARY:

A case of a 64 year old, para 2 lady who was 8 years post menopausal who presented with post menopausal vaginal bleeding is presented. She was found to have a moderately differentiated adenocarcinoma of the endometrium infiltrating the myometrium and serosa. Extended abdominal hysterectomy and bilateral salpingo-oophrectomy was done. Her post operative course was uneventful and she was subsquently treated with a full course of external pelvic irradiation.

HISTORY OF PRESENT ILLNESS:

Mrs. C.M. was referred from Dodoma Regional Hospital on account of post menopausal vaginal bleeding and lower abdominal pains of one year's duration.

She reported that her illness was of gradual onset but progressive. She first noted some lower abdominal pains

which were dull in nature and inconstant initially but which later on worsened after a period of about one month. The pains radiated to the lower back and there were no associated aggravating or relieving factors.

The onset of pains was associated with intermittent vaginal bleeding which was initially of small amount as she changed pads only 2 - 3 times daily but later on the bleeding became more severe with passage of clots. There was no history of vaginal contact bleeding or any associated abnormal vaginal discharge.

REVIEW OF SYSTEMS:

There was no history of loss of weight or fevers. She ate to her appetite and her micturition and bowel habits were normal. There was no history of cough or chest pains.

PAST MEDICAL HISTORY:

This was her second admission. She was previously admitted in Dodoma hospital because of the same illness and in the course of her one week's admission she underwent a Dilatation and curettage and sent with the specimen of endometrial curettings to Muhimbili Medical Centre.

She denied of any major illness before like Diabetes mellitus, hypertension, schistosomiasis, cardiac disease or tuberculosis.

GYNAECOLOGICAL HISTORY:

She couldn't remember the age of onset of her menses. Her menstrual periods used to last for 5 - 6 days repeating in a cycle every 28 days and it was regular up to six months prior to the cessation of her menses when it became

irregular and heavy with clots. She was 8 years post menopausal and she didn't remember her last normal menstrual period.

She had never used any pills or any hormonal supplements before.

OBSTETRIC HISTORY:

She was para 2 with no abortions. All her pregnancies were uncomplicated antenatally, intrapartum and postnatally. Her last born was 30 years old.

SOCIAL AND FAMILY HISTORY:

She was a widow as her husband died about 20 years ago of unknown illness. There was no history of diabetes mellitus, hypertension or cardiac disease in her family.

She neither smoked nor took any type of alcohol.

PHYSICAL EXAMINATION:

General examination.

On general examination she appeared a healthy looking old lady of medium build who was not pale or jaundiced. She was a afebrile and she didn't have any lymphadenopathy.

Ear, Nose and Throat:

There were no abnormalities detected.

Head and Neck:

Essentially normal and she didn't have any goitre.

Chest:

The breasts appeared atrophic but otherwise were normal as there were no areas or tenderness lumps or abnormal discharge.

The chest was symmetrical and the air entry was normal. There were no added sounds.

Cardiovascular system:

The pulse rate was 76 beats per minute of regular rhythm and it was of full volume.

Her blood pressure was 120/80 mmHg.

There was no evidence of cardiomegaly clinically. The apex beat was felt in the 5th intercostal space mid-clavicular line. Both the first and second heart sounds were normal and there were no additional sounds.

Abdominal examination:

The abdomen appeared normal on inspection without any masses or scars. It was moving with respiration.

There were no tender areas. Liver, spleen and the uterus were not palpable and there were no other palpable masses. The renal angles were non-tender. There were no herniae in the hernial orifices.

Vaginal examination:

The vulva and vagina were atrophic but otherwise normal. There was no discharge or bleeding noted externally. The urethral meatus was normal.

The cervix was parous with some small amount of fresh blood trickling from the external os. Otherwise the cervix was healthy in appearance and consistency.

On bimanual examination, the uterus was normal in size, mobile anteverted and non-tender. The fornices were normal. There were no adnexal masses or tenderness. The examining fingers were stained with some blood. The gloves were then changed.

Rectal examination:

The anal orifice was normal. The rectum was full of faeces but was normal. The uterosacral ligaments felt normal.

DIAGNOSIS:

The history of post menopausal bleeding with visualization of a normal cervix and bleeding from the uterine cavity highly spoke of endometrial carcinoma. Other possible diagnoses thought of were endometrial polyps or hyperplasia but the age of the patient was not in keeping with them.

MANAGEMENT:

Preliminary investigations which included full blood picture, mid-stream urine for microscopy, culture and sensitivity, chest X-ray and blood urea and creatinine were done. The patient was then planned for EUA and Fractional Curettage.

However, before fractional curettage was done, the histology report of the endometrial curettings taken in Dodoma was obtained. The report number H.P. 3547 revealed moderately differentiated adeno-carcinoma of the endometrium.

The patient was thus planned for extended abdominal hysterectomy and further adjuvant therapy (irradiation) to be dictated by evidence of myometrial involvement. Unfortunately, it was not stated whether cervical curettage was done in Dodoma, because if there was cervical involvement full course of radiotherapy would have been ideal.

INVESTIGATION RESULTS.

i) Haematological:

Haemoglobin: 12.1 gm/dl. Blood group: A Rh D positive.

White blood cell count total: 5,300/mm^3

Differential count was: Neutrophils 65%

Lymphocytes 34%

Eosinophils 1%

E.S.R. was 15 mm in the first hour (Westegren)

Peripheral blood film was normal.

ii) Mid stream specimen of urine:

Sugar:- Negative, Albumin: - Negative,

Microscopy: - Normal, Culture: No bacterial growth.

iii) Blood urea: 32mg/dl. Creatinine: 0.66mg/dl.

iv) Chest X-ray number 33776: Normal film.

PREPARATION FOR THE OPERATION:

The operation and the reason for it being done was explained to the patient and a written consent was obtained from the patient.

The patient was shaved the night before the operation and an enema was given. Nothing was allowed orally after 10 p.m on the night prior to the operation. In the theatre the patient was aseptically catheterized and the catheter was left in situ to drain in a rubber glove.

PREMEDICATION:

She was premedicated with Pethidine 100mg and Atropine 0.6mg I.V. about $\frac{1}{4}$ of hour before the commencement of general anaesthesia.

ANAESTHESIA:

Induction.

Anaesthesia was induced with sodium thiopentone 500mg given slowly intravenously. As soon as she was asleep a muscle relaxant scoline 90mg was given slowly through the drip. The patient was then intubated with a cuffed endo-tracheal tube. A mouth airway piece was placed in position.

Maintainance:

Anaesthesia was maintained with O_2 3L/min. and nitrous oxide 6L/min. and Halothane 1%. Pavulon 6mg intravenous was given for muscle paralysis the effect of which was reversed of the end of operation by neostigmine.

PROCEDURE OF EXTENDED ABDOMINAL HYSTERECTOMY AND BILATERAL SALPINGO-OOPHRECTOMY:

The anterior abdominal wall from the level of the breasts to the mid-thighs was cleaned with a solution of cetrimide 1 in 30. It was later on cleaned with 5% iodine solution.

The whole body was covered with sterile towels except for the field of operation. The towels were secured in place with towel clips.

The abdomen was opened through a midline sub-umbilical incision. Bleeders from the skin and subcutaneous tissue were picked and tied with number 2/0 catgut.

PROCEDURE AND FINDINGS:

There were few adhesions on the anterior aspect of the uterus to the bladder. The uterus and tubes were normal. The ovaries were atrophic but were otherwise normal. The

iliac and para-aortic lymphnodes were not enlarged. Liver and spleen were normal. The hysterectomy technique was much the same as the one described in Case No. 1 but there were few modifications.

Before handling the uterus, the ampullary ends of the Fallopian tubes were ligated. The round ligaments were picked with Kocher's forceps in turn and ligated with chromic catgut No. 2 as near as possible to the inguinal ring and the broad ligament was opened.

The bladder was dissected down so as to expose approximately the upper one third of the vagina. Both the infundibulopelvic ligaments were triply clamped with Kocher's forceps and transfixed with Number 2 chromic catgut. Both ureters were identified and had to be pushed down with the bladder. The uterosacral ligaments were clamped and transfixed so as to free the uterus posteriorly.

The uterine vessels were then clamped and divided and their stumps transfixed with number 2 chromic catgut. These stumps were dissected down carefully so as to expose about 3cm of the upper vagina. This was achieved by using straight Kocher's forceps.

The vagina was opened anteriorly and the upper part of it (about 3cm) was removed together with cervix. A swab soaked in antiseptic solution (Flavin and spirit) was inserted through the vaginal opening and was to be removed at the end of the operation.

The vaginal vault was closed with interruped figure of 8 number 1 chromic catgut sutures starting the corners.

Hemostasis was secured and later on peritonization was done. Finally, having certified correct instrument and linen count, the abdomen was closed in three layers with silk interrupted sutures to the skin. The swabs which had been inserted into the vagina was removed from below.

The specimen consisting of the whole uterus tubes and ovaries and a cuff of vagina was then examined. The vaginal portion and cervix appeared normal. On opening the uterus, the uterine cavity was found to have a friable mass with some solid areas on the fundus extending to the middle of the uterine cavity. The size of the uterine cavity was 7.5cm. The mass appeared to involve the inner half of the myometrium. The cervix was not involved. The whole specimen was forwarded for histopathology report. Clinically this was endometrial carcinoma stage IaG2.

POST OPERATIVE CARE:

The patient's blood pressure, pulse were monitored half hourly for the next 24 hours and thereafter 4 hourly. Her input and output of fluids was strictly monitored for the first 48 hours. She was given 2 units of blood (about 1 litre) and she was to continue with intravenous Dextrose saline drip in the tune of 2.5 to 3 litres per 24 hours. She was put on Ampicillin 500mg 6 hourly and given Pethidine injection 100mg intramuscularly whenever necessary to alleviate pain.

PROGRESS:

Six hours post operatively she was fully awake and her urine output was about 400ml clear urine.

On the first post-operative day she was afebrile and not pale. Her pulse was 76 beats per minute, regular and of full volume. Her blood pressure was normal. Urine output was 1.5L as compared to an input of about 2L per 24 hours.

On her second post-operative day she was up and about and she had passed flatus. Intravenous fluids were discontinued and the catheter was removed. She was allowed to take oral fluids sips.

Her condition steadily improved. Her haemoglobin checked on the 4th day was 10.8gm/dl. The stitches were removed on the 8th post operative day and wound had healed well. She denied any history of bleeding per vaginum.

Three weeks later, histopathology report on the specimen which was removed at operation was obtained. The report number HP 3991/83 revealed a moderately differentiated adenocarcinoma of the endometrium infiltrating the myometrium and the serosa.

She was then started on a course of external pelvic irradiation of 8000 rads which was given in doses of 250 rads daily. The treatment was well tolerated and by 6th February, 1984 she finished the course. She was asymptomatic to bleeding per vaginum and the vault had healed well. She was discharged home and instructed to come for follow up in the outpatient clinic after 3 months.

She was seen again on 7th May, 1984 and on enquiry she denied history of bleeding per vaginum or cough or loss of weight. On examination she was in good nutritional status

and she was not pale. The chest was clear and there were no abdominal masses. The vulva and vagina were atrophic but there were no lesions detected. The vaginal vault had healed well and there were no pelvic masses.

COMMENTARY:

The incidence of endometrial carcinoma is locally unknown but elsewhere, it ranks the second most common gynaecological neoplasm[1]. Its incidence has been noted to be on the increase in most Western communities[2].

In those centres where the incidence has been noted to be high, several cytological and histological diagnostic procedures have been developed in order to make early diagnosis of the condition. Of these procedures, the Papanicolaou smear though simple and acceptable to the patient, lacks specificity and sensitivity. Its accuracy has been reported to be in the range of 25 - 94%[2, 3]. To improve the diagnostic yield, certain instruments have been advanced and these include the Gravlee jet washer, Isaacs cell sampler vabra aspirator and rotating endometrial brushes. The patient presented was subjected to fractional endometrial curettage which although a blind procedure is more accurate than the others mentioned above. Recently, hysteroscopy and directed biopsy has been intruduced and this is the most accurate method in the diagnosis of endometrial cardinoma[2].

Of all patients with malignant gynaecologic lesions, those afflicted with endometrial carcinoma exhibit several

characteristic features. This patient was para 2 and she had a "stormy" pattern of menopause. Her complaints were post menopausal vaginal bleeding which is found in 90% of all cases and the remaining 10% present with vaginal discharge[3]. Other features which are typical of endometrial carcinoma but were not found in this case are obesity, diabetes mellitus, hypertension, dysfunctional uterine bleeding during reproductive years, delayed onset of menopause, unopposed oestiogen stimulation of the endometrium endometrial hyperplasia or polyps and uterine fibroids[4,5,6] Of these factors, the most important ones are change in child-bearing pattern and the increased use of oestiogen either for contraception &f or for hormonal replacement[2].

The patient presented, clinically had stage IAG2 disease and was managed by extended total abdominal hysterectomy coupled with adjunctive post operative external pelvic irradiation. The justification of this mode of treatment lies in the fact that with higher histologic grades (G2 and G3) there is greater incidence of lymphnode metastasis and myometrial invasion[1]. In fact this patient had a lesion which had penetrated more than one third of the myometrial thickness.

Whether radiotherapy should be given pre-operatively or post-operatively is not universally agreed upon[1, 5, 7]. However, the primary purposes of irradiation are to minimize or eradicate regional lymphnode metastases, to shrink the tumour mass and to devitalize cancer cells in order to prevent dissemination especially to the vaginal vault at

the time of operation. Pre-operative intrauterine and vaginal radium has proved useful in the reducing these complications[5,8].

If the lesion had extended to the cervix the treatment of choice would have been radical hysterectomy followed by external pelvic irradiation. If the lesion had extended to other viscera within the pelvis Stage III, IV an exenteration procedure would have been considered as there is risk of fistula formation if radiotherapy is given first. Some authors advocate whole pelvic and central radium therapy followed by total abdominal hysterectomy and bilateral salpingo-oophrectomy six weeks later. When there are distant metastases (Stage IV), palliative treatment only is possible with hormones or chemotherapy. Occassionally hysterectomy is necessary, but intracavitary irradiation may achieve the same objective. In stage IV disease, hormonal therapy is most valuable when the growth is slow growing, well differentiated and when there are pulmonary metastases.

At operation several measures were taken to prevent spillage of malignant cells into the peritoneal cavity or elsewhere[4]. These included ligation of the ampullary ends of the tubes before handling the uterus, avoiding using a myomectomy screw in mobilizing the uterus and division of the round ligaments as close to the internal ring as possible.

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G. 4 LEFT BARTHOLIN'S ABSCESS : MARSUPIALIZATION:

Name: Mrs. R.M.

Age: 28 years

Parity: Para 1, gravida 2

Inpatient number: 377837

Occupation: House wife

Date of admission: 16th May, 1984

Date of operation: 16th May, 1984

Date of discharge: 19th May, 1984.

SUMMARY:

Mrs. R.M. a 28 years old lady who was gravida 2 para 1 and currently 18 weeks amenorrhoeic. She was referred from Ilala dispensary on account of a painful welling on the left side of the vulva and inability to walk properly of 3 days duration. She was found to have a left Bartholin's abscess which was marsupialized on the same day under general anaesthesia. She had an uneventful recovery and follow up.

HISTORY OF PRESENT ILLNESS:

Mrs. R.M. was admitted to the gynaecological ward on 16th May, 1984 on account of a painful swelling on the left side of the vulva and inability to walk properly of 3 days duration.

She was well until 3 days prior to admission when she felt a painful progressive swelling on the left side of vulva. The swelling was of sudden onset. A day later she developed some low grade fever which subsided after taking

some asprin tablets at home. The swelling became more and more painful and on the third day she was unable to walk properly. She went for treatment at Ilala dispensary where she was referred to Muhimbili Medical Centre.

REVIEW OF SYMPTOMS:

There were no other associated symptoms. Her micturition and bowel habits were normal. There was history of associated vaginal discharge or bleeding but there was positive history of superficial dyspareunia.

GYNAECOLOGICAL HISTORY:

She had her menarche at 15 years of age. Her menses lasted 3 - 4 days and recurred every 30 days. The flow was normal without any dysmenorrhoea.

Her last normal menstrual period was on the 6th January, 1984. Thus she was about 18 weeks pregnant and she admitted to symptoms of pregnancy. She had never been on any form of contraception.

OBSTETRIC HISTORY:

She was gravida 2 para 1. Her first child was born in 1980 and she had no complications antenatally, intrapartum and postpartum.

PAST MEDICAL HISTORY:

She admitted to having had two similar attacks of left painful vulval swellings in 1982 and 1983. She was treated with some asprin tabs. and 2 - 3 injections in a peripheral dispensary and they subsided.

There was no history of major ailment before. She

denied history of dysuria or vaginal discharge or contact with tuberculosis. She denied history of surgical operations before.

SOCIAL AND FAMILY HISTORY:

She was a housewife who had completed her primary school education. She was married to a primary school teacher. She neither smoked cigarattes nor drank any type of alcohol. There was no history of diabetes mellitus or hypertension or cardiac fisease in her family.

PHYSICAL EXAMINATION:

General examination revealed a healthy looking young lady who was in pain but afebrile and not jaundiced. She could not sit up or walk properly.

Ear, Nose and Throat: Normal.

Head and Neck: Normal.

Chest:

The chest was symmetrical, moving with respiration and the air entry was normal without added sounds.

The breasts were symmetrical, engorged and had Montgomery's tubercles with secondary areolae. Clear fluid could be expressed from the nipples. There were no tender areas or lumps felt.

Cardiovascular system:

The pulse rate was 86 beats per minute, regular in rhythm and of full volume. Her blood pressure was 110/70 mmHg. The first and second heart sounds were normal and there were no added sounds.

Abdominal examination:

The abdomen was distended in the hypogastric areas. There were no scars or masses visible. There was a faint linea nigra extending from the upper border of the mons veneris to just below the umbilicus.

There were no tender areas and the liver and spleen were not palpable. The uterus was palpable abdominally and it corresponded to a pregnancy of 18 weeks.

Local examination:

There was a shinny swelling on the medial lower aspect of the left labia minora which measured about 4 x 3 cm. The swelling was fluctuant which was maximal in its middle where it was "pointing". It was extremely tender to palpation and there was a rise in local temperature. There was no discharge per urethrum or per vaginum.

The left inguinal lymphnodes were enlarged and a tender but were discrete. Further examination was not possible because of the intense tenderness and pain.

INVESTIGATIONS:

Blood: Haemoglobin - 11.2 gm/dl.

White blood count - 22,000/mm^3

Differential W.B.C. - Neutrophils 82%

- Lymphocytes 18%

E.S.R. - 10 mm in the first hour (Westergren)

Urine: There was no sugar or albuminuria.

Culture was sterile.

PRE-OPERATIVE PREPARATION:

The patient was told what was wrong with

her and that she was to undergo a minor operation under general anaesthesia. She gave a written consent for both the operation and anaesthesia. The perineum was shaved cleaned and the patient was taken to the theatre.

THE OPERATION: Marsupialization of a Bartholin's Abscess.

ANAESTHESIA: General anaesthesia as has been described in other cases.

POSITION OF THE PATIENT:

The patient was placed in lithotomy position and her buttocks were rested at the edge of the operating table.

The perineum was cleaned with 1% chlorhexidine solution and the patient was then draped with sterile leggings and towels. Catheterization was done aseptically as hea been described in the introduction.

The vagina was inspected by using a bivalve speculum and a swab was taken from the endocervix from Gram stain, culture and sensitivity.

A vertical incision was made along the muco-cutaneous junction of the abscess. The skin overlying the abscess cavity was dissected away with a pair of fine dissecting scissors. The abscess cavity was incised and some whitish pus gushed out. A swab of the pus was taken for gram stain and culture and sensitivity.

Fine tissue forceps were used to hold the edges of the abscess cavity. Care was taken as these were friable. All the loculi were broken from the abscess cavity by introducing the index finger and breaking them. The cavity was then washed with EUSOL.

The lining of the abscess cavity was stitched to the vaginal mucosa and labial skin with interrupted sutures of chromic catgut number 2/0. The cavity was left open for drainage and a pack of Eusol left in for 8 hours to control any oozing and to mop up any more pus left. A sterile pad was put over the vulva.

POST OPERATIVE CARE:

The patient vital signs (blood pressure and pulse and respiration) were monitored half hourly for the next 6 hours then 4 hourly. She was put on injection Procain Penicillin 1.2 mega units daily for 5 days. Pethidine 100mg in case of severe pains was prescribed of which only one dose was given.

The patient was instructed to have antiseptic Sitz baths twice daily and to wash her perineum everytime she passed urine or open her bowels.

On the second day post operatively the patient's general condition was good. She was not in pain and there was no undue bleeding or draining from the wound. The patient was then discharged and instructed to finish her course of treatment in a nearby dispensary. The swabs taken at operation were sterile on culture.

FOLLOW UP:

She was seen again in the Gynaecological outpatient clinic after three weeks. She had no cimplaints and the wound had healed well. At this time she was about 20 weeks pregnant and she was advised to start attending antenatal clinic.

COMMENTARY:

This patient had had two previous attacks of Bartholin's abscess which subsided on penicillin therapy. Although infection of the Bartholin's gland responds well with chemotherapy and even acute abscesses may undergo resolution without surgical intervention, there is a tendency for recurrence of the infection.

Bartholin's ducts and glands are common sites for gonococcal infection in the female lower genital tract. The disease may remain asymptomatic while ascending upwards along the genital tract. This is the rationale of taking a swab from the endocervix for culture and sensitivity.

Apart from N. gonorrhoeae, other organisms such as E. coli, Staphylococci, Streptococci, anaerobes may also be the cause of the abscess. The finding of no bacterial growth in the pus swab and vaginal swab in this patient may be attributed to previous antibiotic therapy or difficulty of culturing the organisms on ordinary media. Because of these constraints it is justifiable to start such patients on a combination of antibiotics before the culture and sensitivity results are obtained.

The usual treatment of a Bartholin's abscess is marsupialization. Alternative treatment are excision of the abscess as a whole or incision and drainage of the abscess. However, the later is inadequate because the glandular stroma tends to close up and reform the abscess or a chronic discharging sinus. The pitfall associated with excision is that it is difficult to excise the gland so recurrence is

likely to occur. This is contrary to what used to be done in the past as the conventional treatment was either excision or incision and drainage.

Howkin and Hudson (1977) compare the advantages and disadvantages of marcupialization and excision. The advantages of marcupialization are:

i) It is an extremely simple operation as compared to excision which is difficult, tedious and time consuming.

ii) Haemorrhage is minimal and bleeding is easily controlled whereas the reverse applies to excision which is also associated with a higher chance of haematoma formation.

iii) With marsupialization, some functional activity of the gland may be regenerated which thereby lubricates the vagina.

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G. 5 ACUTE PELVIC INFLAMMATORY DISEASE (P.I.D.) SECONDARY TO INFECTION OF AN INTRAUTERINE CONTRACEPTIVE DEVICE. : REMOVAL OF THE DEVICE AND ADMINISTRATION OF ANTIBIOTICS AND METRONIDAZOLE.

Name: Mrs. R.S.

Age: 37 years

Parity: 3 + 0

Reg. No: 378626

Occupation: Secretary

Date of admission: 20th May, 1984

Date of discharge: 25th May, 1984

SUMMARY:

A case of a 37 year old, para 3 lady who had a loop inserted immediately after her menses is presented. Following the insertion, the patient developed fevers, abdominal pains and cupious, purulent, foul smelling discharge per vaginum. The loop was removed and she was put on Ampicillin and Metronidazole to which she responded well.

HISTORY OF THE PRESENT ILLNESS:

Mrs. R.S. was referred from one of the private hospitals in town with a 3 day history of:

i) Fever,

ii) Lower abdominal pains,

iii) Purulent vaginal discharge.

She reported that she was apparently well until about 3 days prior to admission when she voluntarily went to seek

family planning advice in one of the private hospitals in town. Various methods were explained to her and she preferred the loop which was inserted on the same day. After a couple of hours she started having some vague lower abdominal pains and developed fever on the second day. She took some aspirin tablets hoping that the fever will subside. On the 3rd day she was very sick and the abdominal pains were more severe. There was associated cupious amounts of purulent vaginal discharge which was foul smelling. She went to the same hospital and she was referred to Muhimbili Medical Centre.

She admitted to feeling the loop threads in position. Her micturition and bowel habits were normal. There was no history of vomiting or coughing.

She denied having had any sexual intercourse since the loop was inserted as her husband was away.

GYNAECOLOGICAL HISTORY:

Her menarche was at 15 years. Her menstrual periods lasted for 3 days in a cycle of 28 days and were of normal flow without dysmenorrhoea.

Her last normal menstrual cycle was on the 16th May, 1984 and the loop was inserted on her last day of menstruation on the 18th May, 1984. She had never used any other type of contraceptive method.

OBSTETRIC HISTORY:

She was para 3. Her last born was 3 months old. All her pregnancies were uncomplicated antenatally, intrapartum and postnatally.

PAST MEDICAL HISTORY:

She had not suffered any major ailments in the past. She denied history of dysuria or vaginal discharge before. She had not been operated upon before and she had no history of contact with tuberculosis.

SOCIAL AND FAMILY HISTORY:

She was married to an accountant and she was employed as a secretary in a private company. She neither smoked cigarattes nor drunk any type of alcohol. There wa no family history of hypertension or diabetes mellitus.

PHYSICAL EXAMINATION:

General examination:

She appeared well nourished but looked sick. She was febrile with temperature of 39°C but not pale or jaundiced. or cyanosed. There was no lymphadenopathy.

Ear, Nose and Throat: Normal

Head and Neck: Normal

Chest:

She was not dyspnoeic or tachypnoeic. The chest was symmetrical and the air entry was normal. There were no added sounds.

Breasts:

Were engorged but there were no lumps or tender areas. Milk could be expressed from the nipples.

Cardiovascular system:

The pulse rate was 98 beats per minute, regular and full volume. The jugular venous pressure was not elevated.

Her blood pressure was 110/75 mmHg. Both the first and second heart sounds were normal and there were no murmurs or other added sounds.

Abdominal examination.

The abdomen was not distended and it was moving with respiration. There were no obvious masses or scars.

There was diffuse tenderness in the hypogastrium but otherwise the abdomen was generally soft. No rebound tenderness or guarding could be elicited. There was no fluid thrill or shifting dullness or palpable masses. Liver and spleen were not enlarged. Both renal angles were non-tender. There were no herniae in the hernial orifices.

Vaginal examination:

The vulva was stained with a foul smelling, rusty vaginal discharge. The urethral meatus was normal and no discharge could be expressed from it. The vaginal mucosa appeardd inflammed.

The threads of the loop could be clearly visualized protruding from the external cervical os. There was no some rusty/brownish discharge visible in the cervical os. The cervix otherwise appeared normal. A swab was taken from the endocervix for microscopy, culture (aerobic and anaerobic) and sensitivity.

On digital examination, the cervix felt normal. The fornices were tender but not bulging. Excitation test was positive. The uterus was tender but it appeared normal size. Both adnexae were tender but there were no adnexal masses. The examining fingers were stained with a brownish

foul smelling discharge.

DIAGNOSIS:

The development of abdominal pains, fever and purulent foul smelling discharge per vaginum after loop insertion were in keeping with Acute Pelvic Inflammatory Disease due to infection of the loop.

MANAGEMENT:

It was therefore decided to remove the loop and admit the patient start her on a combination of Ampicillin 500mg intravenously 6 hourly and Metronidazole 400mg 8 hourly orally. This treatment was to be changed according to the report of culture and sensitivity.

Blood was taken for aerobic and anaerobic culture and sensitivity. Also another specimen of blood was submitted for haematological investigation including Haemoglobin Total White blood cell count and differential and erythrocyte sedimentation rate. The loop was removed and it was a lippes loop with clear evidence of sepsis as it was stained with some purulent discharge which was foul smelling. Mid-stream urine was also taken for routine examination, culture and sensitivity.

RESULTS OF INVESTIGATIONS:

i) Haematological:

- Haemoglobin: 12.6 gm/dl.
- White blood cell count: Total 18,000/mm^3
- with a differential of Neutrophils 82% and 18% Lymphocytes.
- Erythrocyte sedimentation rate was 30 mm in the first

hour (Westegren method)

- Peripheral blood film showed malarial parasites with otherwise normal red blood cell and white blood cell morphology. Full course of oral chloroquine was instituted.

ii) Mid-stream specimen of urine:

- Albumin + sugar was negative
- Microscopy was normal
- Culture was sterile.

iii) Blood culture was sterile on both aerobic and anaerobic media.

iv) Endocervical swab.

Microscopy revealed many pus cells. There were no bacteria or Trichomonas vaginalis seen.

Aerobic culture: There was a heavy growth of Streptococci sensitive to Ampicillin and Chloramphenicol.

Anaerobic culture: Heavy growth of Bacteroides fragilis sensitive to Metronidazole.

PROGRESS:

The patient was continued on a combination of Ampicillin and Metronidazole orally after the first 24 hours when the culture report was available.

On the 3rd day she was much better. Her temperature was normal. Her pulse was 78 beats per minute, There was very little discharge per vaginum and abdominal tenderness had almost disappeared. There were no masses palpated per abdomen.

On the fifth day the patient had recovered completely. Vaginal examination revealed no more discharge per vaginum. There was no tenderness or masses felt in the adnexae . The uterus was normal size and freely mobile. She was discharged to continued with her treatment for two more days and she was instructed to come for follow up in the Gynaecological outpatient department after 4 weeks.

FOLLOW UP:

She was seen again in clinic on 13th June, 1984 and her condition was good. She didn't have any sign of pelvic abscess. Family planning was discussed with her and hshe preferred to be put on the pill.

COMMENTARY:

Acute pelvic inflammatory disease is a common disorder encountered in gynaecological practice in Muhimbili Medical Centre. After abortions it ranks second as a cause of admissions to the gynaecological wards.

The case presented illustrates one of the complications of intrauterine contraceptive devices (I.U.C.D.) which is infection. About 0.5 - 2% of women can be expected to develop pelvic inflammatory disease (P.I.D.) during the first year of use (Monk 1980, Kleinman 1977). Previously, it was thought that I.U.C.D.s increase the incidence of P.I.D. but recently, it has been found that the evidence to support this statement is not strong enough (Newton 1984).

In the first 24 hours following insertion of a loop, the normally sterile endometrial cavity becomes colonized with

bacteria. However, the natural defence mechanisms of the body destroy up to 80% of these organisms within 24 hours (Conell 1979). If infection occurs, it tends to be mild and only in about 25% of the cases it can become severe.

It is believed that most cases of infection among users represent either the re-activation of a chronic infection that existed at the time of insertion or else the result of recent sexually transmitted disease or septic abortion. The patient presented developed P.I.D. three days after insertion and she had not been exposed to sexual intercourse post insertion. This and the isolation of Bacteroids fragilis speaks in favour of exogenously introduced infection, most likely by contamination at the time of insertion. Lawson 1982 reported that P.I.D. associated with a recent pregnancy or a gynaecological procedure is usually due to anaerobic organisms and in particular B. fragilis is the common offender as it was found in this case. Actinomycosis has been described in patients with I.U.C.D. and Dische et.al. 1974 reports a 30% incidence of actinomyces - like organisms among wearers of inert I.U.C.D after two years.

Whether the insertion of the device or its presence, by itself, can cause P.I.D. remains unanswered. Some workers lubricate the tip of the inserted with an antiseptic or antibiotic cream as a routine to further reduce the possibility of infection. However, whether this practice is advantageous or not awaits further proof.

Other measures which can be taken to prevent infection in association with I.U.C.D. include the following: If

there is anyclinical suspicion of infection, cultures should be obtained and the I.U.C.D. should not be inserted until negative results are obtained. It is not advisable to insert I.U.C.D. into a patient who may have been recentlly infected with gonococcus as the insertion process will transport these pathogens into the upper genital tract. It does not appear cost-effective to administer systemic antibiotics routinely during the period of I.U.C.D. insertion, but the insertion technique should be performed as aseptically as possible.

The patient presented was treated with antibiotics and the loop was removed at the same time. However, the current tendency is not to remove the device but to treat the infection with antibiotics. Removal of the loop is advocated in patients with fulminating uterine infection and in those patients with persisting infection after a course of antibiotics.

Although the short-term outcome of this patient was good, she needs to be followed up for the possible long term sequelae of P.I.D. such as chronic pelvic pains, pelvic abscess or adhesions, infertility and ectopic gestation.

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G. 6 SEPTIC ABORTION : ANTIBIOTICS, BLOOD TRANSFUSION IMMEDIATE EVACUATION.

Name: Miss E.M.

Age: 24 years

Parity: 1 + 1

Reg. No: 378441

Address: Kibaha

Occupation: Teacher

Date of admission: 22nd May, 1984

Date of operation: 22nd May, 1984

Date of discharge: 27th May, 1984

SUMMARY:

Miss E.M. was referred from Kibaha hospital with a history of amenorrhoea of 8 weeks, fever, lower abdominal pains and purulent vaginal discharge of 2 days duration. She denied history of intentional intervention with her pregnancy but clinically there was evidence of intended interference to the pregnancy.

She was found to be moderately anaemic and febrile and she was transfused with blood and started on high doses of antibiotics. Evacuation was done within 4 hours of admission and her subsquent recovery was uneventful.

HISTORY OF PRESENT ILLNESS:

The patient was referred from Kibaha hospital on account of amenorrhoea of 8 weeks, lower abdominal pains, fever, dizziness and foul smelling vaginal discharge of

two days duration.

She reported that she was apparently well until two days back when she suddenly developed intermittent labour like lower abdominal pains. The pains were associated with mild bleeding per vaginum and on the next day she noted the passage of some products of conception which were foul smelling. Since the onset of the abdominal pains she had been running fevers on and off and she felt dizzy.

She admitted that she was pregnant but vehemently denied any history of intended interference to the pregnancy. On reviewing the systems she reported that her micturition and bowel habits were normal except that she was anorexic. There was no history of cough or abdominal distension or fainting attacks.

Previous Medical and Surgical History:

The patient had not had any serious or chronic disease in the past. She denied any past history of abnormal vaginal bleeding. She did not think she had ever had gonorrhoea or syphilis.

GYNAECOLOGICAL HISTORY:

Menarche was at $13\frac{1}{2}$ years. The menstrual flow was normal and lasted for 4 days in a cycle of 30 days. The last normal menstrual period started on 27th March 1984 and thus she was 8 weeks amenorrhoeic.

She used oral contraceptive pills in 1983 for 5 months but stopped them because her menstrual periods became rather heavy. Since then she has not been on any other

form of contraception except the safe period method.

OBSTETRIC HISTORY:

She was gravida 2 para 1 and her child was 3 years. Apart from an attack of malaria, her first pregnancy was uncomplicated during the antenatal period, confinement and pueperium.

FAMILY HISTORY:

There was no family history of diabetes mellitus or hypertension or epilepsy. The patient had no contact with a known case of pulmonary tuberculosis.

SOCIAL HISTORY:

She was a primary school teacher who was single, She was non-smoker and did not drink alcohol.

CLINICAL EXAMINATION:

She was a young, well nourished lady who was moderately pale. She was anicteric, and not dehydrated. She had no edema or lymphadenopathy. Her temperature was 39°C.

Mouth and Throat: Were normal

Neck: Nothing abnormal detected.

Chest:

The chest cage was symmetrical. The breath sounds were normal and there were no added sounds.

The breasts were well developed, symmetrical and engorged. There were no intrammary lumps or areas of tenderness. They were not active.

Cardiovascular system:

The pulse rate was 100 beats per minute, regular and

of full volume. The blood pressure was 100/60 mmHg. The jugular venous pressure was not elevated. The first and second heart sounds were normal and there were no abnormalities detected.

Abdominal examination:

The abdomen was not distended and it was moving with respiration. There were no scars or lumps visible on inspection.

There was tenderness on superficial and deep palpation which was mainly localized in the iliac fossae and suprapubic area but there were no palpable masses. Fluid thrill and shifting dullness tests were negative. There was slight guarding and rebound tenderness elicited in the tender areas.

The liver and spleen were not palpable. Both renal angles were non-tender. The hernial orifices were free of herniae. The bowel sounds were normal.

Vaginal examination:

The vulva had small bruises around the fourchetti and were smeared with some brownish discharge and blood clots. There was foul smelling brownish red discharge in the introitus which was mixed with clots.

Using a bivalve speculum the vaginal mucosa appeared healthy. The cervix had tenaculum marks on the anterior lip and a small tear at 6 o'clock position. Products of conception could be visualized protruding from the external cervical os. They were foul smelling. A bacteriological swab from the endocervix was taken and kept in Stewart transport medium and was immediately submitted for anaerobic and aerobic

culture of micro-organisms. The speculum was then gently removed.

On digital examination the cervix was softish, with irregularity on the anterior lip and on the lower lip at 6 o'clock. Products of conception and some blood clots were felt in the external cervical os. The internal cervical admitted one finger easily. On bimanual palpation, the fornices were tander but were not bulging. There were no masses felt in the adnexae. The uterus was bulky and it corresponded to a pregnancy of 6 weeks size. It was anteverted and freely mobile but tender. Cervical excitation test was positive. The examining fingers were stained with some dirty brownish foul smelling discharge.

Rectal examination:

There was no abnormality detected, and the findings at vaginal examination were collaborated.

DIAGNOSIS:

A diagnosis of a septic incomplete criminal abortion with anaemia was entertained from the history and physical findings. However, the history of criminal intervention was subdued.

MANAGEMENT:

The plan was to start the patient on high doses of combination antibiotic chemotherapy, correct the anaemia and evacuate her in the theatre as soon as possible. The following investigations were done in addition to the pus swab taken from the endocervix while examining the patient.

i) Haematological:

- Haemoglobin: 7.8 gm/dl.
- Blood grouping and cross-matching: 1000ml were requested. 500ml were transfused pre-operatively and the rest intra-operatively.
- White blood cell count: Total 26,000 cells/mm^3 with a differential of 80% Neutrophils, 19% Lymphocytes and 1% Eosinophils.
- Erythrocyte sedimentation rate 50mm in the first hour (Westegren method)

ii) Blood culture was sterile.

iii) Urine: There was neither sugar nor albumin.
Sediment - No abnormality detected.
Culture was sterile.

iv) Endocervical swab for microscopy:
(aerobic and anaerobic) culture and sensitivity: The specimen was taken in an sterile syringe with one end sealed so that air was not allowed in the syringe.
Microscopy: Many puss cells and red blood cells.
Anaerobic culture: Sterile
Aerobic culture: A heavy growth of *E. coli* sensitive to Chloramphenicol, Ampicillin and Gentamicin.

The patient was started on a drip of Dextrose saline to run slowly and blood was to be transfused as soon as available. She was started on 5 Million units of crystalline penicillin and chloramphenicol 500mg intravenously 6 hourly. A 4 hourly temperature, pulse and blood pressure chart was kept.

Within a period of 4 hours the patient had got about 500ml of blood and she was prepared for evacuation in the theatre.

PREPARATION FOR EVACUATION:

Shaving of the perineum was done. Consent for the operation and general anaesthesia was obtained.

PREMEDICATION:

The patient was premedicated with Pethidine 100mg and Atropine 0.6mg. intramuscularly on arrival to the theatre.

ANAESTHESIA:

Anaesthesia was induced with 250mg of freshly prepared thiopentone and it was maintained with a mixture of oxygen, nitrous oxide and other given through an face mask.

The patient was then placed in lithotomy position.

PROCEDURE AND FINDINGS:

The vulva, perineum and vagina and the skin around were cleaned with Hibitane 1% and sterile drapings were applied.

Catheterization was not necessary as the patient had been instructed to pass urine on her own immediately before the procedure.

Vaginal examination under anaesthesia was done and the findings were similar to those noted on initially.

With the help of an Auvard speculum for retraction of the posterior vaginal wall and a Sim's speculum for retraction of the anterior vaginal wall, the cervix was exposed and the anterior lip was held by means of a volsellum forceps.

Using a sponge holding forceps, the visible products of conception were grasped and gently pulled out. A finger was

gently introduced into the uterine cavity and by a gently sawing motion some more products were dislodged from the uterine cavity. Digital exploration around the uterine cavity was made to dislodge more products. A sharp broad curette was then introduced into the uterine cavity. The uterine cavity was then gently curetted serially from the right to the left side around the uterine cavity until no more products were obtained. At this point there was now fresh minimal bleeding with some air bubbles and a gratting sound was heard. The curettings were collected and submitted for histological examination in 10% formalin solution.

Ergometrine 0.5mg was given intravenously. The uterus was then well contracted and there was no further bleeding. Total blood loss was approximately 100ml.

The vagina was cleaned of blood and clots and the instruments were removed. A sterile pad was applied to the vulva and the patient returned to the ward after recovering from anaesthesia.

POST OPERATIVE CARE:

1. The blood pressure, pulse and respiration were monitored ½ hourly for 6 hours and then four hourly. A four hourly temperature chart was also kept.
2. The patient was to continue with the antibiotics which had been prescribed pending the culture report.
3. The input and output chart of fluids was also maintained.

4. Blood transfusion 500ml were to be given and the patient was to continue with an intravenous drip of Normal Saline alternating with 5% Dextrose about 2 litres per 24 hours.

PROGRESS:

Four hours post-operatively, the patient was well awake and she had finished the 500ml of blood. Her temperature was 38°C and the pulse was 90 beats per minute.

On the first post-operative day, the patient was afebrile and her pulse was 78 beats per minute, She was started on oral chloramphenicol 500mg 6 hourly for 5 days. The culture report revealed a growth of E. coli which was sensitive to Chloramphenicol and so Penicillin was then stopped.

The patient's condition improved fast during the following days and she was discharged on fifth day in good general condition. She was examined before being discharged and was found to be well haemoglobinized (Hb 11.2 gm/dl.) and non-icteric. She had no masses or tenderness per abdomen. On vaginal examination, the vulva and vagina were normal and there was some scanty whitish-brownish vaginal discharge. The cervix had some brownish mucoid plug in the external os and the small laceration on the lower lip had almost healed. The fornices were non-tender. Cervical excitation test was negative. The uterus was normal size and there were no adnexal masses or tenderness.

She was discharged on chloramphenicol capsules to finish her 7 day course and prophylactic oral iron tablets and folic acid and instructed to come again for follow up in the gynaecological outpatient clinic after 4 weeks.

FOLLOW UP:

She was seen again on 28th June 1984 in the clinic and she did not have any complaints. On examination she was not pale or jaundiced. There was nothing worth of note abdominally. On vaginal examination there was no discharge or bleeding externally. The cervix appeared healthy. The uterus was normal size and there were no adnexal masses or tenderness.

She had not had a menstrual period since she was discharged and she had abstained from coitus for all this time. Family planning was discussed with her and she requested to be put on the pill.

Histology reported of the curettings sent revealed products of conception and chronic villi.

COMMENTARY:

Abortion and its complications are the commonest cause of hospital admissions in Muhimbili Medical Centre, Gynaecological wards[1]. In Tanzania and in many other countries, deaths from abortion continue to be leading cause of maternal mortality[2, 3].

Sepsis is one of the feared complications of abortion. Any suspicion or evidence of sepsis in a case of abortion should be thoroughly investigated and antibiotic therapy instituted without delay. Delay in intituting the appropriate antibiotic therapy and removal of the nidus of infection allows infection to be established and septicemia or endotoxic shock may develop. In this particular case, institution of combined antibiotic chemotherapy and early evacuation

were done and the outcome was good.

Any abortion is liable to be associated with sepsis especially if incomplete and unattended or induced with poor asepsis. Spontaneous complete abortion in the second trimester carries minimal risk of sepsis whereas the criminally induced incomplete abortion of the first trimester with aseptic technique carried an extremely high risk. In fact, Santamarina 1970[4] reported that about 95% of septic abortions followed intentional interference as was the case in the patient presented. In the majority of cases, the history of intentional interference is commonly denied (Donald 1974[5], Dewhurst 1981[6]. This case is not an exception.

There are several factors why intentionally interferred pregnancies are potentially complicated by sepsis. Portions of chorioninc tissue are liable to be retained in the uterus especially with early abortions and these form an ideal focus for infection. Secondly, the instruments are unlikely to have been adequately sterilized and these may introduce infection exogenously or endogeneously as they are passed up the genital tract.

The isolation of E. coli in this case is in keeping with the common causative organisms namely: E. coli, Streptococci, Staphylococcus aureus, Clostridium welchii and tetani. Of these organisms E. coli is the commonest cause of endotoxic shock.

The principles of management of septic abortion include: immediate replacement of the normal circulatory volume, high

doses of broad spectrum antibiotics and prompt surgical removal of the source of infection. This patient was given blood transfusion and was immediately started on a combination of crystalline penicillin and chloramphenicol in high doses before the culture results were available. Evacuation was performed with 4 hours of admission. Preveiously, it was feared that immediate evacuation of the uterus when the infection was localized, the procedure could cause systemic spread of the infection. However, the current opinion is to evacuate the uterus after attaining good plasma levels of the antibiotic. This is supported by Remirez-Soto et.al. 1969[7] who recorded a lower mortality rate by evacuating the products of conception within 8 hours of initiation of treatment.

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G. 7 TWISTED RIGHT OVARIAN CYST IN PREGNANCY:

CYSTECTOMY DONE:

Name: Mrs. T.O

Age: 29 years

Parity: Para 6, gravida 7.

Occupation: Housewife

Address: Temeke Mikoroshoni, Dar es Salaam

Reg. No: 362052

Date of admission: 25th December, 1983

Date of operation: 26th December, 1983

Date of discharge: 3rd January, 1984.

SUMMARY:

Mrs. T.O was a 29 year old gravida 7 para 6 lady who was admitted to the gynaecological ward on account of right sided lower abdominal pains and a mass of three days duration. A tender, cystic mass of about 10 cm diameter was found and at laparatomy it was a twisted right ovarian dermoid cyst. Cystectomy was done. Her post-operative course was unremarkable.

HISTORY OF THE PRESENT ILLNESS:

Mrs. T.O was referred from Temeke hospital on account of 3 days history of:

1. Right sided lower abdominal pains
2. Constipation
3. Right sided lower abdominal mass.

She reported that she was about 18 weeks amenorrhoeic and she was apparently well until three days prior to

admission when the above symptoms developed gradually. She first noted dull aching, right sided lower abdominal pains which were constant in nature and radiating to the back.

There were no specific relieving or aggravating factors. She also noted a painful mass about the size of her fist on the right lower aspect of the abdomen on the same day. The mass had been progressively painful but the size has not been noted to increase. She had been relatively constipated for the past three days and she vomited 3 times on the day of admission.

She was treated at Temeke hospital with asprin with no relief and she was referred to Muhimbili Medical Centre for further management.

REVIEW OF SYSTEM:

She admitted that she was having symptoms of pregnancy. There was no history of fever or bleeding per vaginum or any discharge per vaginum. There was no history of frequency or urgency of micturition. Her appetite was poor.

PAST MEDICAL HISTORY:

The patient had not any surgical operation; nor had she suffered from any serious or chronic illness before.

GYNAECOLOGICAL HISTORY:

Her menarche was at 14 years. Her menstrual periods lasted for 3 days and recurred in a cycle of 28 to 30 days. The menstrual flow was normal and there was no

history of dysmenorrhoea. Her last period was on 15th August, 1983 and her expected date of confinement was 23rd May, 1984 and thus she was about 19 weeks pregnant. She had never been on any form of contraception.

OBSTETRIC HISTORY:

She was gravida 7 para 6 with 5 living children. Her first and second pregnancies were uncomplicated and she delivered normally at Ocean Road Hospital. However, in her 3rd pregnancy, she developed high blood pressure at a gestational age of about 24 weeks for which she was admitted till term and labour was induced. There was no associated swelling of her legs.

In her fourth and fifth pregnancies she also developed high blood pressure near term and was admitted for about one week and she delivered normally without any postnatal complications.

She developed high blood pressure in her sixth pregnancy at a gestational age of about 20 weeks for which she was admitted. However, at a gestational age of 32 weeks she ceased feeling fetal movements and one week later she delivered a macerated still birth.

For the current pregnancy she booked on 5th December, 1983 at Amtulbai M.C.H. clinic when she was about 16 weeks pregnant and there was nothing remarkable.

FAMILY HISTORY:

None in the patient's family had diabetes or hypertension or epilepsy or mental disease. As far as could be ascetained, the patient had not had contact with a case

of pulmonary tuberculosis. Neither her husband's nor her own relatives had multiple pregnancy.

SOCIAL HISTORY:

She was a primary school leaver and a housewife who was married to an army officer. She was a non-smoker and did not drink alcohol.

CLINICAL EXAMINATION:

General examination:

She was a well nourished young woman who appeared sick. She was not anaemic or jaundiced or dehydrated. Her temperature was 36.5°C. There was no lymphadenopathy.

Mouth and Throat:

The gums and teeth were healthy. There were no septic foci in the oropharynx.

Neck:

There was no thyroid enlargement or cervical lymphadenopathy.

Chest:

a) Breasts:

The breasts were symmetrical with well developed nipples. The areolae were dark with Montgomeroy's tubercules. There were no lumps felt and they were non-tender. Clear fluid could be expressed from the nipples.

b) Respiratory system:

The chest was symmetrical and the trachea was central. Breath sounds were vesicular and there were no crepitations.

Cardiovascular system:

The pulse rate was 108 beats per minute, regular and of full volume. The blood pressure was 130/70 mmHg. There was no evidence of cardiomegaly clinically. Both the first and second heart sounds were normal and there were no murmurs.

Abdominal examination:

The abdomen was uniformly distended and it was not moving with respiration. There were no obvious masses or scars visualized.

There was generalized tenderness on both superficial and deep palpation with rebound tenderness and slight guarding. There was no shifting dullness or fluid thrill. Liver and spleen were not palpable. The renal angles were non-tender.

There was a tender, cystic mass measuring 10 cm x 5 x 4 cm approximately which was located in the right lumbar area. The mass was slightly mobile longingitudinally and it appeared separate from the uterus. The uterine size corresponded to a pregnancy of 18 weeks (consistent with dates) and it was slightly tender on palpation. There were no palpable contractions. There were no hernia in the hernial orifices.

Vaginal examination:

The vulva and vagina were normal on inspection. There was no discharge or blood noted externally. On speculum examination, the vaginal mucosa was normal. The cervix was bluish, healthy with a parous, closed os. On digital

examination, the cervix felt normal and soft. Bimanually the uterine size was confirmed to be 18/40 and it was slightly mobile anteroposteriorly. Cervical excitation test was positive. The fornices were not bulging and were non-tender. It was impossible to palpate the adnexae because of tenderness. The examining fingers were stained with normal vaginal discharge.

Rectal examination:

The anal area was normal externally and the tone of the anal sphireter was good. The rectum was full with faces. There were no masses felt per rectum.

DIAGNOSIS:

The history of severe abdominal pains with relative constipation with a tender cystic mass and features suggestive of peritonitis gave an impression of a twisted or a ruptured ovarian cyst in pregnancy.

Other conditions also thought of were intestinal obstruction, appendicular abscess and unruptured tubal eccyesis co-existing with a normal pregnancy or a pedunculated fibroid.

MANAGEMENT:

As this patient was having an acute abdomen, emergency surgical intervention was planned. The following investigations were done:

a) Haematological:

- Haemoglobin: 12.2 gm/dl.
- Total white blood cell count: 10,200/mm with a differential of 78 Neutrophils, 20% Lymphocytes, 1% Eosinophils and 1% Monocytes.

- Erythrocytes sedimentation rate was 20 mm in the first hour (Westegren method)
- Grouping and cross-matching was done and 1000ml of blood were requested for the operation.

b) Mid-stream specimen of urine:

There was no albumin or sugar. Sediment microscopy was negative for casts or pus cells or red blood cells or bacteria. Culture was sterile.

PREPARATION FOR THE OPERATION:

The operation site and the surrounding area was cleansed with soap and shaved. A nasogastric tube was inserted. An intravenous drip of Normal Saline was set up with a size 14G cannula.

The patient was premedicated with atropine 0.6mg and pethidine 100mg intramuscularly on arrival to the theatre.

ANAESTHESIA:

General anaesthesia was used, Induction of anaesthesia was by 200mg of freshly prepared thiopentone sodium and the patient was paralysed with an intubated. Anaesthesia was maintained with a mixture of Oxygen and Halothane and intermittent positive pressure ventilation was used. Smooth anaesthesia was maintained throughout the procedure and there was no laryngospasm or vomiting.

PROCEDURE AND FINDINGS:

The operation site and the surrounding area including the area just below the nipples and just above the thighs was washed with Savlon 1:200 and then weak iodine. A dry

swab was used to dry off the iodine. She was then draped with sterile towels. Catheterization was not done as the patient had been instructed to pass urine on her own a few minutes before anaesthesia was started.

The abdomen was opened through a right lower paramedian incision in layers. Bleeding vessels in the subcutaneous tissue were ligated with cutgut number 2/0. After incising the rectus sheath, the rectus abdominis muscle was retracted from the midline. The peritoneum was then opened.

Dark brownish peritoneal fluid gushed out on opening the peritoneal cavity. There was a mobile darkish brown well encapsulated right ovarian dermoid cyst measuring about 10 x 8 cm.

This mass was pedunculated and the length of the pedicle was about 4cm. The mass had twisted over the pedicle in an anticlockwise direction. It was of different consistency being cystic in some areas and solid in other areas. The capsule was smooth with no tortous vessels or seedlings. The ometum was free from the mass and it was normal. There were no aortic lymphnode enlargement. The liver was normal and so was the spleen. The uterus was enlarged to the size of about 18 weeks pregnancy. Both the ovaries and tubes were normal.

The pedicle was held by two Kocher's forceps and the tumour mass excised in between the clamps. The stump was transfixed with No. 1 chromic catgut. Haemostasis was secured. The peritoneal cavity was sucked free of the

inflammatory exudate and the abdomen was closed in layers with silk to the skin as has been described in the introduction.

The tumour mass was incised and it was found to have suaceous grey material, hair and one formed tooth. The clinical impression was a benign dermoid cyst. The whole specimen was submitted for histopathological report which was consistent with the clinical impression.

POST OPERATIVE MANAGEMENT:

1. The patient's blood pressure, pulse and respiration were monitored half hourly for the next 6 hours then 4 hourly for the next 24 hours. A four hourly temperature chart was kept. These remained normal.
2. Input and output of fluid were monitored.
3. The patient was to get 1000ml of blood and to continue with intravenous fluids consisting of Normal Saline alternating with Dextrose 5% in the tone of 2.5L within 24 hours.
4. She was given injection Pethidine 100mg intramuscularly 6 hourly and pro-re-nata to alleviate pains.

PROGRESS:

On the first post-operative day the patient was afebrile and she was in fairly good general condition. The nasogastric tube was removed. The abdomen was soft and bowel sounds were audible. She was allowed to take some oral sips and encouraged to sit up. There was no bleeding per vaginum.

On the second day the patient was ambulant. Her condition improved steadily as days went by. Haemoglobin checked

on the 3rd day was 10.2gm/dl. She was discharged on the 8th post-operative day in good general condition after removing the stitches. The wound healed by first intention.

FOLLOW UP:

She was seen again in the Gynaecological outpatient department after two weeks. She had no complaints and she had started feeling fetal movements. On examination she was healthy. The fundal height was 24 weeks and then were no masses per abdomen. She was instructed to start her antenatal clinic attendance.

COMMENTARY:

About one pregnancy in 1500 is complicated by an ovarian tumour, usually a serous cyst adenoma or a benign teratoma. In societies in which the attendance for antenatal care is poor, these tumours are brought to light as a result of accidents occurring to them as was the case in this particular patient. However, although this patient had booked quite early the tumour was not detected. This is probably because of lack of proper examination of the abdomen and overlooking doing vaginal examination in the booking visit.

The treatment of ovarian tumours is surgical - an ovarian cystectomy being the preferred operation. The optimal time for operation is between the 14th and 18th week of pregnancy (Dewhurst 1981). Operating around this gestational age is advocated because there is less chance

of abortion and the uterus is not too large to limit accessibility. This time is also recommended to avoid possible disturbance of the corpus luterum which is important in early pregnancy before the formation of the placenta. If an ovarian tumour less than 5cm is detected prior to the 12th week of pregnancy, it may be a cystic corpus luteum and thus it is recommended to defer operation until after the 12th week when the patient is re-examined. Should the cyst be of the same size or has increased in size, laparatomy is indicated.

When ovarian tumours are first discovered in late pregnancy, it is better to defer operation until the pueperium. In the rare cases of obstructed labour operation must be undertaken as a matter of emergency and usually the uterus must be emptied by Caesarean section before the tumour can be removed from the pelvis.

The case presented reflects one of the commonest consequences of unattended ovarian tumours in pregnancy and that is torsion. Other complications of such tumours include rupture of haemorrhage into the cyst, infection, malignant change and intestinal obstruction. Jeffcoate (1974) contends that all innocent ovarian tumour can become malignant although not more than 5 - 10% have done so by the time they are treated. Romoso-Jalbuena et.al. (1967) noted complications to the cyst in 66% of cases of which torsion was the commonest and it occurred most often at 7 - 8 weeks of gestation.

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G. 8 SQUAMOUS CELL CARCINOMA OF THE CERVIX.

RADIOTHERAPY:

Name: Mrs. M.J.

Age: 43 years

Occupation: Housewife

Parity: Para 8

Reg. Number: 146638

Address: Mabokweni village, Tanga Region

Date of admission: 24th March, 1983

Date of commencement of Radiotherapy: 12th April, 1983

Date of completion of Radiotherapy: 16th July, 1983

Date of discharge: 17th Jlu, 1983.

SUMMARY:

A 43 year old lady who presented with a six months history of abnormal vaginal bleeding and cupions amount of foul smelling vaginal discharge is presented.
At examination under anaesthesia, she was found to have stage Ib Cervical cancer which was histologically confirmed.

She underwent a full course of external pelvic irradiation. Her recovery and follow up were unremarkable.

HISTORY OF THE PRESENT ILLNESS:

Mrs. M.J. was referred from St. Augustine Hospital in Magila, Tanga on 24th March, 1983 on account of a six months' history of:

i) Post coital vaginal bleeding

ii) Cupions, purulent vaginal discharge.

She reported that she was otherwise well until about

6 months ago when she noted the above symptoms which were of gradual onset.

The first symptom she noted was postcoital vaginal bleeding. Initially, the amount of blood lost was small but it progressively increased in amount after one month. Bleeding per vaginum was also noted on douching. Of late, the patient had been having recurrent episodes of bleeding per vaginum which was spontaneous in onset. Accompanied by the bleeding was purulent, cupious amount of watery vaginal discharge which was foul smelling. There was no itching per vaginum. The vaginal bleeding and discharge was at times so much so that she had to put on 2 - 3 pads per day.

She denied history of fevers or loss of weight. There was no history of chest pains or cough or backache. Her micturition and bowel habits were normal.

PAST MEDICAL HISTORY:

She gave no history of any major illness or operations before. She denied history of venereal diseases or schistosomiasis or tuberculosis.

GYNAECOLOGICAL HISTORY:

Her menarche was at 13 years. The menstrual periods lasted 3 - 4 days in a cycle of 30 days. They were regular, painless and normal in amount. Her last normal menstrual period was on 20th March, 1983.

She had her first sexual intercourse at the age age of 14 years.

OBSTETRIC HISTORY:

She was para 8 and she had had two abortions in her second and sixth pregnancies, which were of 4 and 5 months gestation and were preceded by fever. She was not evacuated after the abortions. Apart from these two abortions, all her pregnancies were uncomplicated antenatally, intrapartum and postpartum. Her last born was 6 years old.

She had not been on any form of contraception.

FAMILY AND SOCIAL HISTORY:

She got married at the age of 14 years. She was divorced from the first husband some 5 years later because of certain marital misunderstandings. She remarried 2 years later but her husband was involved in a motor accident 4 years later and died. She was currently staying with another husband to whom she was not officially married.

She was a housewife who has completed Primary School education. She neither smoked cigarattes nor drank any type of alcohol.

There was no history of diabetes or hypertension in her family.

EXAMINATION:

General examination:

She was a well nourished, healthy looking woman who was afebrile and not pale or jaundiced. She had no lymphadenopathy or edema.

Head and Neck:

There was no abnormality detected. Eyes, ears, nose and throat were all normal.

Cheast examination:

There was nothing significant. It was a normal chest with normal air entry bilaterally. There were no added dsounds.

Breasts:

The breasts were atrophic but were of equal size without any lumps or tender areas.

Cardiovascular system:

There was nothing significant. The pulse was 74 beats per minute, regular and of full volume. Blood pressure was 120/80 mmHg.

The heart sounds were normal and there were no murmurs.

Abdominal examination:

There was no abnormality detected. It was a soft, non-tender abdomen with no scars and it was moving with respiration. There were no palpable masses. The liver and spleen were not palpable. The renal angles were not tender.

Vaginal examination:

The vulva and vagina looked normal. On speculum examination there was a 1.5cm ulcerated lesion on the posterior cervical lip at about 5 o'clock. The anterior lip of the cervix was hyperemic. There was no bleeding noted except for some whitish normal vaginal discharge.

On digital examination, the cervix felt firm, and of irregular consistency. Bimannually the uterus was normal size, anteverted and mobile. There were no adnexal masses.

The examining fingers were stained with some blood.

Rectal examination:

The anal area was normal externally and the anal sphincter tone was good. Apart from some faces, there were no masses felt per rectum.

The uterossacral and cardial ligaments were not undurated and the parametria were free.

DIAGNOSIS:

The history of post-coital bleeding associated with cupious vaginal discharge in a patient who has had 3 consorts and who started coitus at an early age and the objective visualization of a lesion on the cervix highly spoke of cervical cancer.

Other possible conditions thought of, were chronic inflammatory lesions on the cervix such as T.B, Syphilis, Schistosomiasis or even non-specific chronic cervicitis.

MANAGEMENT:

The patient was planned for Examination Under Anaesthesia in order to biopsy and to stage the lesion.

The following investigations were done:

1. Blood: - Haemoglobin: 11.2 gm/dl.
   - White blood count total 8200 cells/cubic mm. with a differential count of 78% Neurophils, 21% Lymphocytes and 1% Eosinophil.
   - Blood urea and creatinine were 12mg/dl. and 0.94 mg/dl. respectively.
   - Blood group was group O, Rh D positive.
   - V.D.R.L. : Negative.

2. Cervical swab for microscopy, culture and sensitivity: Microscopy revealed plenty of pus cells. There were no Trichomonas vaginalis visualized. Culture was sterile.

3. Mid-stream urine: There was no abnormality detected in the routine or sediment microscopy examination. Urine culture was sterile.

4. Radiological: Chest X-ray and intravenous urogram were normal.

EXAMINATION UNDER ANAESTHESIA (EUA):

Preparation:

The perineum was washed with soap and shaved as for any other perineal operation the night before the procedure. The patient was starved from 10 p.m on the night prior to the procedure.

She was premedicated with atropine 0.6mg and pethidine 100mg intramuscularly about 15 minutes prior to the onset of the procedure.

ANAESTHESIA:

General anaesthesia was used. The details of this will be covered in the introduction.

PROCEDURE:

The patient was placed in lithotomy position. The perineum and introitus were cleaned with Savlon (cetavlon 1:200). Sterile drapings and leggings were applied. Good light source was directed to introitus. Catheterization was then done using a metal catheter using aseptic technique

as has been described in the introduction.

The urethra and the vulva were normal. Using a Sim's speculum and a sponge holding forceps the vagina and the cervix were exposed. The vagina was normal. There was an ulcerated lesion of about 1.5cm diameter on the posterior cervical lip at about 5 o'clock. The anterior lip of the cervix was hyperaemic but there was no obvious lesion on the cervix which bled easily on touch.

On digital examination, the cervix felt firm and of irregular contour. The fornices were free of masses. Bimanually, the uterus was of normal size, anteverted and mobile. The examining fingers were stained with some blood.

A biopsy of the ulcerated area including normal cervical tissue was taken and submitted for histopathological examination. There was no undue bleeding from the biopsy site. The gloves were then changed.

Rectal examination.

The anal was normal externally and the sphincter tone was good. The rectum was full of faces but the rectal mucosa felt normal and there were no masses palpated. The uterosacral and cardinal ligaments were not indurated and the parametria were free.

These findings confirmed the initial findings and an impression of Carcinoma of the cervix stage Ib was made.

POST OPERATIVE CARE:

The patients' general condition and vital signs were monitored half hourly post operatively. Observation for bleeding per vaginum was also made.

After 3 hours, the patient was fully awake. There was no bleeding per vaginum. Her blood pressure and pulse were 120/80 mmHg. and 80 beats per minute respectively. Thereafter her condition remained stable.

BIOPSY RESULTS.

After 12 days, histopathological report of the biopsy specimen was available. It revealed a well differentiated squamous cell of the cervix. It was therefore decided to treat the patient with radiotherapy.

EXTERNAL PELVIC IRRADIATION WITH COBALT 60.

The patients' condition was fit for radiotherapy as her haemoglobin was good and she had no signs of occult or overt infection anywhere.

The patient received 200 rads of external pelvic irradiation with Cobalt 60 every day for twenty days. The total dose given within this period of time was 4000 rads. The treatment was aimed at the cervix, parametria and pelvic lymphnodes. The treatment course was well tolerated as she had no marked skin reaction or diarrhoea or vomiting or urinary symptoms.

A second course of treatment was started again after 2 weeks and the same dose of 200 rads daily for 20 days was administered. The second course was again well tolerated.

During the treatment course, she had her haemoglobin checked every week which remained within normal range. There was no bleeding per vaginum and the vaginal discharge disappeared completely after 5 days of treatment.

EVALUATION OF TREATMENT:

The patient was discharged and instructed to come to the gynaecological outpatient clinic after two weeks for review which she did. She had no symptoms of bleeding or discharge per vaginum. Her micturition and bowel habits were normal. She was not anaemic.

On vaginal examination, apart from narrowing of the vagina, the vulva and vagina were normal. The cervix was free of any obvious lesion and the ulceration and hyperemia previously noted had completely disappeared. The uterus was small in size, anteverted but freely mobile. The cervix felt firm. There were no masses palpated in the fornices. The examining fingers were stained with some whitish normal vaginal discharge. On rectal examination, the rectal mucosa was smooth and mobile and there were no masses felt. The parametria were not indurated.

These findings indicated good clinical response and the patient was scheduled to attend the clinic again in six months' time.

She was seen again in January, 1984 and she was well. There were no remarkable findings. She was given another appointment in six months' time but unfortunately she didn't turn up again.

COMMENTARY:

After the breast, the cervix is the most notorious site for cancer in women and it is the most feared of all malignant tumours of the female genital tract. Carcinoma

of the cervix accounts for about 50 - 60% of all female pelvic malignancies and 6.5% of all female cancers (Dewhurst, 1981). This is in contrast to the incidence of 13.4% of all female cancers reported by Anderson in Tanzania.

The diagnosis of carcinoma of the cervix is relatively easy as the cervix is one of the most accessible internal organs to study. This is in contradistinction to cancer arising from the ovary which is inaccessible and thus tends to be diagnosed rather late. Thus, in terms of mortality, more women die each year from cancer of the ovary than from cancer of the cervix. However, carcinoma of the cervix is still an important cause of mortality in Tanzania because experience has shown that most patients present late when the disease is well advanced. The patient presented is an exception to this general statement.

The mortality and morbidity associated with carcinoma of the cervix can be reduced by health education of the female population on the early symptoms of the disease. These are abnormal vaginal bleeding usually following minor trauma to the cervix as during coitus, douching, micturition or defaecation. Vaginal discharge presents such less frequently and occurs at a later stage of development than bleeding as it indicates ulceration or infection of the tumour. The main symptoms in the patient presented were contact vaginal bleeding and purulent vaginal discharge.

Routine Papanicolaou smear on all patients who report to hospital for gynaecological probems and family planning is a another way of detecting early lesions. Simultaneous

use of cytology and colposcopy gives the gynaecologist greater accuracy in the detection of premalignant disease. Mass screening for premalignant lesions is not feasible in Tanzania at present because of the poor economic situation and the lack of personnel.

The treatment of carcinoma of the cervix is either by radiotherapy or surgery. For surgery to be successful it must be possible to remove the tumour and a surrounding margin of normal tissue. Singer et.al. 1978 report that the trend today is the occurrance of the premalignant lesions at an increased frequency in the young people. In view of this, surgery (hysterectomy and conization) is much less favourable and instead less aggressive measures such as irradiation, diathermy, carbon dioxide laser therapy and cryotherapy are much more popular.

Combined radiotherapy and surgery have been attempted in some centres. For example, Wertheim's hysterectomy for stage I and IIA followed by radiotherapy have been attempted but the results have not been shown to be better than radiotherapy alone. The case presented was treated by radiotherapy alone and the beam was directed to the cervix, parametrial tissue and the pelvic lymphnodes. This is because of the possibility of the lymphnode involvement which has been shown to occur in 15 - 20% in early stage of the disease such as stage I.

Different regimes of radiotherapy are available in different centres. Combined external pelvic irradiation and intracavitory regime is the one commonly used. However, intracavity irradiation was not given in this case owing to

shortage of intracavity radiaactive material (Radium) in our centre. Good response to irradiation depends on adequate oxygenation of the cancer cells. Anoxic or hypoxic cells respond poorly. Therefore good haemoglobin is mandatory as it was maintained in this case. In fact it has been shown that hyperbaric oxygen is useful in enhancing the tumour cells response to radiotherapy.

There are several complications which can arise as a result of radiotherapy. The skin site may become erythematons and sometimes may be ulcerated. Radiation sickness is common and it is due to enterocolitis and is associated with diarrhoea, nausea and a feeling of prostration. In the urinary tract, radiation cystitis, atrophy of the bladder mucosa and telangiectasia have been reported. Vaginal stenosis, fistula formation and pancytopenia can occur in some patients. Deaths have been reported in 1 - 2% of patients due to ureteric obstruction and uremia and excerbation of occult urinary tract infection. None of these complications were noted in this case presented.

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G. 9 PERSISTENT GESTATIONAL TROPHOBLASTIC DISEASE POST MOLAR ABORTION: FULL COURSE CHEMOTHERAPY AND FOLLOW UP.

Name: Mrs. M.K.

Age: 33 years

Parity: Para 6

Address: Tandika area, Dar es Salaam

Reg. No: 368373

Date of admission: 22nd February, 1984

Date of commencing chemotherapy: 9th May, 1984

Date of completion of chemotherapy: 27th June, 1984

Date of discharge: 6th July, 1984.

SUMMARY:

This is an account of a 33 year old para 6 lady who was admitted to the Gynaecological Ward on account of bleeding per vaginum on and off, lower abdominal pains and amenorrhoea of 4 months. She was found to have molar pregnancy and after correcting anaemia with blood transfusion abortion of the mole was induced.

Evacuation was done but had to be repeated three weeks afterwards owing to an episode of bleeding per vaginum. Following abortion, H.C.G. titres fell and plateaued to be lower level but rest again. Five courses of cytotoxic chemotherapy were administered. Recovery and follow up were uneventful.

HISTORY OF THE PRESENT ILLNESS:

Mrs. M.K was referred to Muhimbili Medical Centre from one of the peripheral dispensaries in Dar es Salaam

on account of:

i) Amenorrhoea - 4 months duration

ii) Vaginal bleeding on and off - of 2 weeks duration

iii) Lower abdominal pains - of 2 weeks duration.

She reported that she was about 4 weeks amenorrhoeic and that she was well until about two weeks when she started having intermittent dullaching, labour like abdominal pains.

The pains were associated with bleeding per vaginum. Initially she noted some darkish mucoid blood which later on became fresh blood. The bleeding came on and off and it was independent of the abdominal pains. She had had 5 episodes of bleeding prior to admission and the estimated amount of blood was about 400 cc. She denied having passed vesicles in the blood.

She felt that she was pregnant as her tummy had been increasing in size with the period of amenorrhoea and she admitted to morning sickness, nausea and ptyalism. Her breasts were also full. She refuted having felt any fetal movements.

REVIEW OF SYSTEMS:

She denied any history of cough, chest pains or dyspnoea. Apart from the nausea and early morning sickness she had no history of vomiting and she was not constipated. There was no history of fever, loin pains or frequency or urgency of micturition. She denied any history of numbness or weakness of her limbs. There was no history of headache.

GYNAECOLOGICAL HISTORY:

Menarche was at 12 years. Her menstrual periods lasted 3 days every 28 days and were normal flow and regular without dysmenorrhoea. Her last normal menstrual period was on 13th November, 1983. Thus she was about 14 weeks amenorrhoeic.

She had not been on any form of contraception even the natural method.

OBSTETRIC HISTORY:

She was Gravida 7 para 6 with 5 living children. Her previous 6 pregnancies were uncomplicated antenatally, intrapartum and postpartum. Her last child born in 1981 died at the age of 1 year because of gastroenteritis.

PAST MEDICAL HISTORY:

This was her second admission. She was admitted in Temeke hospital because of this same illness and she was treated with bed rest, asprin and iron tablets. She was told that her pregnancy was threatening to abort and she was discharged on the second day when she was slightly better.

She had not suferred any major illness before. She denied history of previous operations, schistosomiasis and tuberculosis.

SOCIAL AND FAMILY HISTORY:

She was a housewife who has not received any type of formal education. She was married to clerk in one private firm in Dar es Salaam. She neither smoked cigarattes no drank any type of alcohol.

There was no history of diabetes mellitus, hypertension in her family. None of her sisters, mothers or aunt had had multiple pregnancy.

EXAMINATION:

General examination:

She was a well nourished lady who was in good general condition. She was afebrile, mildly pale but not jaundiced. There was no evidence of lymphadenopathy or edema.

Head and Neck: There were no abnormalities detected.

Ear, Nose and Throat: Essentially normal.

Chest:

The chest was symmetrical and it expanded symmetrically with respiration. The trachea was centrally situated. Air entry into both lungs was normal. There were no adventitious sounds.

Breasts:

The breasts were well developed and of equal size. There were Montgomery's tubercules and both nipples were normal. Clear fluid could be expressed from them. There were no lumps or areas of tenderness.

Cardiovascular system:

The pulse was 76 beats per minute. It was regular rhythm and the volume was normal. The jugular venous pressure was not elevated. There was no evidence of cardiomegaly clinically. Both first and second heart sounds were audible and were normal. There were no murmurs.

Central nervous system: It was normal.

Abdominal examination:

The abdomen was symmetrically distended in the hypogastric area. It was moving with respiration. There were no scars or obvious protruberant masses.

There was a cystic mobile uterine mass which was smooth and non-tender. The mass corresponded to a pregnancy of 22 weeks (8 weeks bigger than dates) but there were no fetal parts palpable or ballotable.

The liver and spleen were no palpable. The renal angles were not tender. There was no evidence of free fluid in the abdomen. The hernial orifices were normal.

There was no fetal heart on auscultation.

Vaginal examination:

The vulva and vagina were normal. There was no bleeding evidenced per vaginum.

On speculum examination, the vagina mucosa was normal. The cervix was bluish with a parous os which had some brownish plug in the cervical os. There was no lesion on the cervix.

On digital examination the cervix was soft and of normal contour. The cervical os was closed. There were no masses palpable in the fornices. Bimannually the uterine size was confirmed to be corresponding to a pregnancy of 22 weeks. It was mobile, non-tender and there were no palpable contractions. There were no adnexal masses or tenderness. The examining fingers were stained with darkish brown discharge which had no vesicles and was not foul smelling.

Rectal examination: There was nothing remarkable.

DIAGNOSIS:

The diagnosis arrived at from the history and physical findings was an intact molar pregnancy.

Other possible diagnosis also thought of were:

i) Threatened abortion. The abscence of a ballotable fetus and the degree of bleeding spoke against this diagnosis.

ii) Ovarian cyst: The symptoms of pregnancy were not in keeping with this.

iii) Choriocarcinoma.

The features which were in keeping with a molar pregnancy was the on and off vaginal bleeding associated with a period of amenorrhoea which was less than the fundal height by palpation. The abscence of fetal parts and the cystic nature of the fundus were also additional supporting features.

INVESTIGATIONS:

a) Blood: - Blood group was O Rh D positive.
- Haemoglobin: 7.6 gm/dl.
- White blood cell count: 6,4000 cells/mm^3 with a differential of 74% Neutrophils, 24% Lymphocytes, 2% Eosinophils.
- Erythrocyte sedimentation rate 12 mm in the first hour (Westegren method).

b) Urine: For pregnancy test - Positive

24 hour urine for HCG titre - 125,000 I.U to 250,000 I.U./Litre.

Mid-stream urine for routine, microscopy, culture and sensitivity revealed nothing remarkable.

c) Echoscopy: There were no fetal parts or movements seen. There was no fetal heart. There was an equivocal "snow storm" appearance.

PLAN OF MANAGEMENT:

It was decided to correct the anaemia and repeat the urine for H.C.G. to see whether there was rise in titre and consider to induce abortion of the mole.

The patient obtained 2 units of Group ,O positive blood which is equivalent to 1000ml. Her haemoglobin rose to 9.3 gm/dl. She was also kept on oral tabs. 200mg three times a day and folic acid one tablet once daily.

On the 5th day the H.C.G. titres was 1,000,000 I.U/L. The haemoglobin was rechecked and was found to be 10gm/dl. In view of the sharp rise in titre, molar pregnancy was confirmed and induction of abortion was planned.

It was then decided to recross-match the patient and request 3 units of blood evuivalent to 1500ml and start induction of the molar abortion using Oxytocin by titration. The blood was to be used in case of severe bleeding or to be used while evacuating the mole.

A drip of oxytocin 10 I.U in 5% Dextrose 500ml was started to be run at 20, 30, 40, 50, 60 drops per minute and rate to be titrated against uterine contractions.

After 2 hours the patient started mild contractions. There was minimal bleeding per vaginum. Contractions were still mild till about 6 hours later when another drip

containing 20 units of Oxytocin was set up and titrated in the same manner.

In a span of 12 hours the patient aborted the mole.

The aborted mass was a vesicular haemorrhagic mass which was very friable. The mass was sent for histopathological report. Post abortal, the patient had moderate amount of vaginal bleeding and 500ml of blood were set up while the patient was being prepared for evacuation in the theatre. The drip containing oxytocin was kept running and the uterus had contracted to about 14 weeks pregnancy. Shaving was done and consent was obtained.

EVACUATION OF A MOLAR ABORTION.

Premedication:

The patient was given atropine 0.6mg and pethiding 100mg intramuscularly on arrival to the theatre.

Anaesthesia:

General anaesthesia was used as it has been detailed in the introduction.

Procedure:

The patient was placed in lithotomy position and the perineum, and vulva were cleaned with Savlon 1:20 solution. Sterile towels including leggings were applied and held in position with towel clips. The bladder was then catheterized using a metal catheter.

The cervix was visualized by retracting the posterior vaginal wall with s Sim's speculum. The cervix was bluish and there were parts of molar tissue protruding from the cervical os which was 3 cm dilated. These were removed

with a sponge holding forceps.

An intravenous drip consisting of 5% Dextrose into which 20 I.U of Oxytocin were added was started and it was runfast. With the index finger of the right hand and left hand on the fundus of the uterus, the uterine cavity was evacuated and as much of the molar tissue as possible was removed. Sharp broad curettage was serially done starting from the left side and going round to the anterior aspect of the uterus and then to the left side and finally the posterior aspect. Each time the curette was gently introduced and scrapping started from the fundus and it was drawn down to the lateral wall and finally through cervical tissue.

There was plenty of molar tissue obtained and these were submitted for histology report. The scrapping was repeated gently several times and the uterus appeared empty and the bleeding which had decreased considerably in amount was now fresh. The uterus was noted to have contracted well to that of about 10 weeks pregnancy. There was no undue bleeding and vaginal introitus was cleaned of molar tissue.

POST OPERATIVE MANAGEMENT:

1. The blood pressure, pulse and respiration were monitored half hourly for 6 hours then 4 hourly for the next 24 hours.
2. Blood transfusion 2 units - equivalent to 1000ml were given and the patient was continued on a drip of Normal Saline for the next 12 hours.

3. Vaginal bleeding was observed closely.
4. She was put on prophylactic Ampicillin 500mg orally 6 hours for 5 days.
5. 4 hourly temperature chart was kept.

POST OPERATIVE PROGRESS:

The patient had a fairly smooth post operative recovery except that she had mild bleeding per vaginum which persisted to the second day and stopped completely thereafter.

Haemoglobin checked on the 4th day was 8.4gm/dl. The patient was then started on injection Iron Dextran 2cc intramuscularly on alternate days for 10 doses. She was also given folic acid tablets 2.5mg once daily.

The condition of the patient remained stable until three weeks later when she developed a severe episode of bleeding per vaginum with clots. She lost about 300ml of blood. She was re-crossmatched again and 2 units (1000ml) of blood were requested. Re-evacuation was done.

The same procedure was followed for the second evacuation. This time, there was a small cystic mass of 2 cm diameter in the left adnexum.

The uterus was about 8 weeks pregnancy size. Minimal bleeding occurred at evacuation. Mainly blood clots and few endometrial curettings were obtained which were submitted for histology.

Post operative recovery was uneventful. She received 1000 ml of blood post operatively. After the second evacuation there was no more bleeding per vaginum.

HISTOLOGY REPORT:

Histopathological report number 2962/84 and 2963/84 of the aborted material and the evacuation products on the first and second evacuation revealed hydatidiform mole. There was no evidence of choriocarcinoma.

FOLLOW UP:

Throughout her stay in the ward, weekly HCG titres were done. Chest X-rays were taken every four weeks. Enquiry into sysmptoms of cough, chest pains, cough or haemoptysis, vaginal bleeding or weakness of the limbs was made. Regular examination for any lesions in the vulva, vagina, cervix or anywhere in the body was made physically. Haemoglobin was checked weekly and anaemia was corrected accordingly.

The patient remained symptom free after the second evacuation. However, after the initial fall of the HCG titre to 2,500 I.U./L there was another similar reading and thereafter spiked to 12,500 I.U./L. The patient had intermittent dark brownish discharge per vaginum on and off and the small left adnexal cystic mass.

owing to the fact that the patient had aborted a mole about six weeks ago and a fall and then a secondary rise of H.C.G. titre with intermittent dark brown discharge per vaginum and a luteal cyst, it was concluded that the patient had persistent trophoblastic tissue activity. The location of the active tissue was uncertain but most likely it was within the uterus. It was therefore decided to start the patient on cytotoxic chemotherapy consisting

of methotraxate 0.3mg/kg/day orally daily with weekly rest periods. The plan was to continue therapy until the HCG titres were negative and to give 3 more courses thereafter and follow up the patient.

Prior to the administration of the therapy, baseline chest X-ray, haematological indices consisting of haemoglobin, total white blood cell count and differential, platelet count and erythrocyte sedimentation rate (ESR) were done. Mid-stream specimen of urine for microscopy, culture and sensitivity was also done. These parameters were normal. The patient was thoroughly re-examined for any evidence of sepsis anywhere and none was found. Her weight was 40kg. and she was put on 15mg of methotraxate daily for 5 days and thereafter rest for 7 - 10 days and starte another course if all was well in terms of the patient's tolerance of the drug and normal liver, renal and haematological parameters. Five courses were given.

The side effects of the drug were closely monitored. In between the courses the patient's haematological, renal and liver function tests were done. All these were within normal. Pregnancy test was done in a 24 hour specimen of urine and if positive H.C.G. titres were done. The patient tolerated the treatment well and she had no side effects such as nausea, diarrhoea, vomiting, purpura or micturition symptoms. She had no jaundice. Her temperature chart throughout the therapy showed no spikes of fevers. H.C.G. titres were negative after the first course of therapy and remained so thereafter. The luteal cyst disappeared after the first course.

The follow up profile of the patient is summarized in the table below.

No.	Date	H.C.G. Titre I.U./L	P.V bleeding or dicharge	Remarks	CXray
1.	27/2/84	125,000 - 250,000	Slight bleeding	Mole in situ. No other Symptoms.	Normal
2.	1/3/84	1,000,000	Moderate P.V bleeding	Diagnosis of mole certain	-
3.	21/3/84	25,000 - 125,000	NIL	Induction of abortion and evacuation done on the 6th March 1984	-
4.	29/3/84	NEGATIVE	NIL	patient was well	-
5.	7/4/84	2,500 - 10,000	Slight to moderate P.V bleeding	Re-evacuation done 8th April 1984	Normal
6.	13/4/84	2,500	Darkbrown discharge	Left luteal cyst 2cm	-
7.	19/4/84	2,500	"	"	-
8.	3/5/84	12,500	On and off darkbrown discharge	Persistent Disease First course MTX started	Normal
9.	21/5/84	NEGATIVE	NIL	No luteal cyst after 1st course	-
10.	2/6/84	NEGATIVE	NIL	3rd course finished	-
11.	11/6/84	NEGATIVE	NIL	4th course finished	-
12.	23/6/84	NEGATIVE	NIL	5th course finished	-

The patient was discharged to the outpatient clinic for follow up after one month after being explained about the nature of the disease and its possible repercussions. She was also instructed on the importance of contraception for the following one year and she agreed to be put on the pill. The follow up plan drawn up for her was monthly visits for at least 6 months then every three months for 6 months and every 6 months for one year and thereafter she was to be seen at yearly intervals.

Unfortunately the case had to be written up before the patient could be seen in the outpatient clinic.

COMMENTARY:

Hydatidiform mole occurs with a frequency of the order of 1:2000 to 3000 pregnancies in Western countries and 1:200 or 300 in Asia. The incidence of the disease is unknown in Tanzania.

The case presented is a case of persistent trophoblastic activity detected six weeks post evacuation and full course cytotoxic chemotherapy was administered. There is now general agreement that if H.C.G. levels have not reverted to normal within 6 - 8 weeks of evacuation of a mole then full course of cytotoxic chemotherapy should be instituted (Brewe et.al 1968; Hammond et.al. 1967).

Usually after evacuation of amole, there is a rapid decline in the HCG levels and haemoagglutination inhibition titres become negative after 4 - 6 weeks whereas the more sensitive radioimmunoassy titres become negative after

9 - 12 weeks. The pattern exhibited in this case was a fall to a plateau at 2,5000 I.U./L. and then a spike to 12,500 I.U./L. Other abnormal patterns are persistentlly high a titres and a pattern whereby there is a fall to a lower level which is maintained without a secondary rise. Cytotoxic chemotherapy is therefore indicated when there are obvious metastases, rapidly rising H.C.G. titres after a plateau or persistently elevated H.C.G. titres at follow up checks.

The definitive diagnosis of choriocarcinoma rests on histological examination of the tissue involved. In this case as in many cases, this was not possible and the patient can be labelled as a case of clinical choriocarcinoma (Tow 1966) or clinical choriomatosis (Park 1967), based on HCG level patterns.

Cytotoxic chemotherapy was instituted early after noting the abnormal H.C.G. pattern in this case. This was done because of the well known fact that the longer the interval between the diagnosis of choriocarcinoma and the antecedent pregnancy, the worse the prognosis (Ratman et.al 1975; Bagshawe 1976). The role of prophylactic chemotherapy in hydatidiform mole is controversial. This is mainly because the risk of developing choriocarcinoma is in the region of 15 - 20% and subjecting all patients with molar pregnancy to cytotoxic chemotherapy to minimize this small risk has been associated considerable mortality and morbidity.

This patient fell in the low risk group as her age

was less than 39 years, the post evacuation HCG levels were relatively low (< 100,000 I.U./L); the preceding pregnancy was a mole and that the diagnosis - therapy interval was short (about 8 weeks). Morever, there was no evidence of metastatic disease in the central nervous system or the gastrointestinal tract clinically.

The danger of uterine perforation and severe bleeding at evacuation was minimized by evacuating gently and serially with a broad sharp curatte under oxytocin cover. However, vacuum e aspiration of the uterus would have been better. An additional advantage of suction evacuation is that it minimizes the risk of embolization of trophoblastic tissue.

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G. 10 OBSTETRIC VESICO-VAGINAL FISTULA :

SUCCESSFUL REPAIR.

Name: Miss. V.M.

Age: 17 years

Parity: Primipara

Reg, No: 292172

Address: Kilwa Kipatimu

Date of admission: 7th May, 1984

Date of operation: 18th May, 1984

Date of discharge: 13th June, 1984.

SUMMARY:

Miss. V.M., a 17 year old primipara was a referral patient from Kilwa hospital on account of a six months history of urinary incontinence which developed three days following prolonged labour. She was seen by one of the consultant gynaecologists from Muhimbili while on an out-reach visit who advised referral to Muhimbili.

Repair was done successfully on first attempt. Some factors which influence successful repair and prevention of genital fistulae are discussed.

HISTORY OF THE PRESENT ILLNESS:

Miss V.M. was first seen by one of the consultant gynaecologists from Muhimbili Medical Centre about 5 months prior to admission while on an outreach visit to Kilwa. He booked the patient for admission on 7th May, 1984.

On admission, the patient gave a history of urinary

incontinence for 8 months which started on the third day after delivery of a still-born baby weighing 3.5kg in Kilwa hospital. Labour pains started at home but owing to lack of transport to hospital she was not taken to hospital until the third day after having laboured for about 70 hours. On arrival to hospital, she was very weak and feverish. She was put on a drip and 6 hourly injections. After gaining some strength, she delivered spontaneously without instrumentation with an episiotomy which was immediately repaired. The baby was a fresh still birth whose weight was unknown to her. She denied having had an indwelling urinary catheter inserted post delivery.

Following delivery she became much better. The fever subsided on the second day. On the third day she noted leakage of urine per vaginum which has persisted to the present time. There was no desire to micturate as she was totally incontent.

REVIEW OF SYSTEM:

Apart from the total urinary incontinence, she had no other problems. She denied any history of fever of back-ache or cough. She had no desire to micturate.

PAST MEDICAL AND SURGICAL HISTORY:

There was nothing worth of note in her previous medical and surgical history. She denied history of schistosomiasis or tuberculosis.

PAST OBSTETRIC HISTORY:

She was a primipara. The pregnancy reached term. She

attended antenatal clinic only once and she had no complications. She made no more visits to the clinic as it was too far away for her to walk (it was about 15 miles).

GYNAECOLOGICAL HISTORY:

Menarche was at about 13 years of age, and the periods were regular with four to five days of menses in every 30 days. The flow was described as normal. She had not resumed menstruation since her fateful delivery about 8 months back. She had never had coitus since her problem started.

FAMILY HISTORY:

None of her relatives had diabetes mellitus or hypertension or mental illness. There was no history of contact with tuberculosis.

SOCIAL HISTORY:

She was a single girl who accidentally conceived while in her last year of primary school. She had to quit the school before completion and she was being cared by her parents. She neither drank alcohol nor smoked cigarattes.

CLINICAL EXAMINATION:

General examination:

She was a short, (Height 144 cm) plumpy girl in good nutritional status. She was not anaemic or jaundiced or febrile but she looked depressed. She had no edema or lymphadenopathy and she could walk without any difficulty.

Head, Mouth and Throat:

The gums and teeth were healthy. There were no

septic foci in the oropharynx.

Neck:

There was no thyroid gland enlargement or cervical lymphadenopathy.

Chest:

The breasts were symmetrical and well developed. There were no tender areas or lumps and they were not active.

She was not dyspnoeic. The chest was symmetrical with versicular breast sounds without adventitious sounds.

Cardiovascular system:

The pulse was 72 beats per minute, regular and of good volume. Her blood pressure was 110/65 mmHg. The heart was not enlarged. The first and second heart sounds were normal and there were no murmurs.

Abdominal examination:

The abdomen was not distended. There were no scars or masses visualized. It was soft and non-tender. Liver and spleen were not palpable and there were no masses felt. The renal angles were not tender, and there were no herniae in the hernial orifices.

Vaginal examination:

The vulva and perineum were wet. There was some fluid eggress from the introitus and there was a strong smell of urine. The skin around the vulva was darkened but looked healthy. There was a small scar on the right side of the perineum.

On digital examination there was no vaginal stenosis. There was a small defect of about $1\frac{1}{2}$ cm which was felt on the anterior vaginal wall high up near the vault of the vagina.

The uterus was normal size, anteverted and freely mobile. There was no adnexal tenderness or masses felt.

Speculum examination:

A speculum examination was done using a Sim's speculum with the patient on the left lateral position. The patient helped the examiner by holding her right buttock up with her right hand.

The cervix was healthy with a parous os. There was a high midline fistula of about 1.5cm in diameter, and urine could be seen coming from the fistula.

Rectal examination:

The external anal sphincter was intact and the sphincter tone was good. The rectal mucosa was normal and there were no masses felt. There was no recto-vaginal fistula.

DIAGNOSIS:

A diagnosis of an obstetric vesico-vaginal fistula was arrived at.

MANAGEMENT:

The plan of management was to investigate the patient and do an examination under anaesthesia and plan repair of the fistula.

INVESTIGATIONS:

- Haemoglobin was 11.8 gm/dl.

- White blood cell count was 7,600 per cubic millimeter with a normal differential. Erythrocyte sedimentation rate was 4mm in the first hour by Westegren method.
- Blood urea was 18gm/dl.
- Serum creatinine was 0.6mg/dl.
- Blood group AB positive.
- A pipette specimen of urine was taken and had no sugar or albumin. Sediment microscopy was normal and culture was sterile.
- Intravenous urogram was not done.

EXAMINATION UNDER ANAESTHESIA: 11th May, 1984

Preparation:

The patient's vulva and perineum was washed and shaved as in any other vaginal operation. She was instructed not to take oral feeds after 10 p.m on the night prior to operation.

She was premedicated with atropine 0.6mg and pethidine 100mg intramuscularly on arrival to the theatre. In intravenous drip of Dextrose Saline one litre was started to run slowly.

ANAESTHESIA:

Anaesthesia was induced with 250mg of freshly prepared thiopentone sodium and was maintained on a mixture of Oxygen, halothane and nitrous oxide through a mask.

PROCEDURE AND FINDINGS:

The patient was positioned in lithotomy position. The skin around the vulva and perineum was washed with 1% hibitane solution. Sterile drapings were applied.

A Sim's speculum was inserted. Inspection revealed a midline mid-vaginal fistula of about 1.5cm across. Communication between the urethra and fisulta was established by inserting a metal catheter through the external urethral meatus. Careful examination around the anterior vaginal wall using a probe revealed no other point of leakage. The posterior vaginal was intact.

There was no fibrosis around the fistula nor in the introitus. The uterus and its appendages were normal.

On rectal examination, there was no defect felt in the anterior rectal wall. After examination under anaesthesia it was decided to repair the fistula after one week in knee chest position.

The patient's recovery from anaesthesia was uneventful. She was very anxious to have the repair done as she had been in misery because of the urine leakage for a long time.

REPAIR OF VESICO-VAGINAL FISTULA:

Preparation:

Preparation of the perineum and vulva was done in the usual way. Nothing was allowed orally after 10 p.m. Two units of blood group AB positive were kept ready for the operation.

The patient was premedicated with atropine 0.6mg and pethidine 100mg intramuscularly on arrival to the theatre.

Anaesthesia:

Anaesthesia was induced with 250mg of freshly prepared thiopentone sodium. Thereafter the patient was relaxed

with suxamethonium bromide 40mg and intubated with a cuffed endotracheal tube. She was maintained on oxygen, helothane. Long acting muscle relaxant puvlon 4mg was used the effect of which was reversed at the end of the operation by 2.4mg of neostigmine. Anaesthesia was smooth throughout the operation. There was no vomiting.

POSITION OF THE PATIENT:

The patient was kept in knee-chest position. Soft pillows were kept under the chest. A cotton wool pad was kept under the symphysis pubis. The patient's legs were hang over the end of the table supported in stirrups suspended from lithotomy poles. About a 20° head-down tilt of the table was made.

PROCEDURE:

The field of operation was painted with hibitane 1% solution and then weak iodine solution and draped. A suction tube fixed to a suction machine was secured in position. The labia minora were held apart by silk sutures which were anchored to the thighs. The buttocks were also held apart by adhesive strappings appled to them and fixed to the bed of the patient.

The fistula was identified. There was no urine in the bladder on catheterization. The fistula edges were incised and the bladder was mobilized. This was achieved by dissecting vaginal skin away from the bladder with a scalpel which had a bistoury blade. The dissection was completed with a fine acutely curved scissors. Adequate mobility of the bladder was achieved.

The bladder was closed transversely with number 2/0 extrachromic catgut with 5 interrupted sutures which were loosely placed at first. They were then tied after making sure that there was no undue tension created. The suture line was covered with a second layer which was applied in a north to south direction again with 5 sutures which were later tied using the same suture material. The vagina was closed with No. 0 extrachromic catgut in a tranverse manner.

The bladder was catheterized using size 16 Nelaton catheter. About 50cc of blood stained were obtained. Water tightness test of the fistula was done by using 20cc of diluted methylene blue instilled to the bladder using a funnel connected to the catheter. There was no leakage detected.

A Nelaton catheter size 16 with a collar made from an old catheter threaded on to it to take the anchor stitch was then introduced into the bladder. This, catheter was anchored by a deep mattress stitch through the labia majora and the collar. A plastic urine bag was connected to the catheter for continuous bladder drainage. A pack of 2 gauzes tied together and soaked in an antiseptic solution was left in the vagina and was to be removed after 8 hours. A pad was applied to the vulva and the operation was completed. Blood loss was about 200ml.

POST OPERATIVE MANAGEMENT:

The bladder was to be drained continuously for 16

days and the patient was to be nursed in bed. The urine output was to be monitored 1 hourly and a high urine output (about 4 - 5 litres/24 hours) was aimed at.

She was to continue intravenous infusion of 2.5L normal saline and 1L Dextrose 5% over 24 hours for 2 days. From the first day post-operatively the patient was to take plenty of oral fluids.

Oral nitrofurantoin 100mg three times a day and metronidazole 400mg three times a day were given for 7 days. Injection Gentamicin 80mg intramuscularly three times a day were administered for 7 days. The idea was to guard against urinary tract infection. Catheter specimen of urine was to be sent to the laboratory for culture and sensitivity every other day.

Pethidine injection 100mg intramuscularly was given 8 hourly for 24 hours to alleviate pain. Blood pressure, pulse were to be monitored $\frac{1}{2}$ hourly for 6 hours than 4 hourly for 24 hours. A 4 hourly temperature chart was set up.

PROGRESS:

The patient made uneventful recovery. Her vital signs were normal about 2 hours after and continued to be so thereafter. Initially, there was a blood tinge in the urine but this cleared off after one day. The patient remained afebrile throughout the post-operative period. Catheter specimen urine culture grew no organisms. The drip was discontinued on the second day and was maintained on oral fluids. Her urine output daily was

in the region of 3.5L to 4L.

The catheter was removed on the 16th and the patient was instructed on how to re-train her bladder by passing urine frequently about every 2 hours for 2 days. She experienced no pains on micturition. There was no more leakage of urine. She had no history of urine leakage on straining.

She was kept in the ward for the next 10 days while travelling arrangement to Kilwa were being made. During this period, health education was given. She was instructed to avoid sexual intercourse for the next 3 months. She was also instructed to book early in the antenatal period in her subsquent deliveries and that abdominal delivery was mandatory as vaginal delivery would cause another fistula. A letter was written to the district medical officer in Kilwa containing all this information.

COMMENTARY:

The case presented reflects one of the serious complications of obstructed labour which is the development of a vesico-vaginal fistula. Unrelieved obstructed labour may cause severe damage to the lower genital tract. The fistula results from nacrosis of the soft tissues subjected to prolonged compression between the maternal pelvis and the presenting part of the fetus. In this case, there was evidence of ascending genital infection which might have worsened the situation by

increasing the area and depth of the slough which followed three days later.

The development of genital fistulae in the course of delivery defeats the purpose of obstetric practice which aims at getting a live and a healthy mother and a live and well baby in the end. This could be prevented by good antenatal and intrapartum care. In the antenatal period, patients of short stature as this one need to be screened for cephalopelvic disproportion and referred to a high risk unit. Phillipot 1982 recommends that midwives in the peripheral clinics should be trained to do a pelvic assessment at 36 weeks of gestation and refer any case of suspicious cephalopelvic disproportion to a high risk unit where trial of labour or operative delivery can be conducted. During labour, the use of a pargogram is mandatory to detect early signs of delay or obstruction and that each primigravida should be regarded as having a contracted pelvic until delivery is complete.

Other factors which contribute to obstetric genital fistula formation are lack of medical facilities, transport and ignorance on the part of the patient. In areas where transport is a problem, provision of simple mothers waiting area near to each clinic or hospital to ensure that patients coming from distant places receive complete intrapartum supervision right from early labour has been of great help. Health education on attending antenatal clinics regularly and provision adequate medical facilities and personnel are also important.

The repair of the fistula was successful on the first attempt. St. George 1969 reported a number of factors which contribute to successful repair of vesico-vaginal fistulae. In this particular case, there was little fibrosis around the fistula and therefore the blood supply was good. On the other hand, the size of the fistula of 1.5cm was relatively small and furthermore the tissues could be mobilized and the fistula closure achieved without tension. The site of the fistula was important in this respect as it has been found that mid-vaginal fistulae are easiest and most successful to treat.

The criteria used for assessing the cure of this patient was continence alone. However, Aimakhu et.al 1974 consider the satisfaction of six conditions for successful repair in view of the fact that the status of women in a society depends on their reproductive ability. These conditions which must be satisfied according to these workers are: absence of stress incontinence and dyspareumia, full continence with ability of the bladder to hold at least 170 ml. of urine, absence of amenorrhoea, ability to bear children and closure of the fistula.

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LONG COMMENTARY IN GYNAECOLOGY

CERVICAL CANCER IN MUHIMBILI MEDICAL CENTRE (M.M.C.)

A ONE YEAR REVIEW OF 208 CASES.

SUMMARY:

A one year review of the epidemiological and clinical features associated with cervical cancer in Muhimbili Medical Centre is presented. About 53% of the patients presented with stage III and IV disease. Early diagnosis by cytological screening and educating patients on the early presenting symptoms and other methods of improving the treatment outcome are discussed.

INTRODUCTION:

Carcinoma of the cervix uteri is common in Dar es Salaam where it has been shown by far the commonest female malignancy[1, 2]. The same observation has been made in other parts of Africa. Lawson et.al. 1964[3] in Nigeria found it to be the second only to Burkitt's tumour accounting for 10% of all the malignancies there and 55% of those involving the female genital tract. In Uganda and Kenya, an incidence of 6 - 9% was reported by Dodge and co-workers in 1963[4] whereas Anderson 1970[5] reported an incidence of 13.44% over a period of 16 months in Tanzania.

Carcinoma of the cervix is a disease which often attacks relatively young women at a time when they are still supporting their children. The peak incidence was shown to be in the 36 - 45 and 40 - 59 year groups by Adelusi in Nigeria and Everett in Dar es Salaam respectively [6, 1].

In developed countries, the morbidity and mortality associated with cervical cancer is on the decrease[7, 18]. This is partly due to the increased awareness of the disease in the female population from health education coupled with social and economic improvements as well as advances in the methods of early diagnosis and treatment modalities[18]. In developing countries on the other hand, where socio-economic, educational and medical resources are scarce, there is a relatively higher morbidity and mortality associated with cervical cancer[3]. In Dar es - Salaam for example, Mgaya 1982 reported that about 40% of the patients with cervical cancer presented in the advanced stages of the disease.

The number of patients with cervical cancer in Dar es Salaam seem to be on the increase since Everett 1975 reported 69 cases over a 21 month period - an incidence of 2%. Mgaya 1980 analysed 161 cases which accounted for about 3% of all the gynaecological admissions.

The studies which have been carried out in Dar es Salaam have so far on cervical cancer have been limited. Late presentation of patients with cervical cancer has caused some concern but it is not clearly known why patients report late for treatment. It is not known so far in Dar es Salaam what patients with cervical cancer know about their disease and what forms of therapy have they been subjected to before they report or are referred to Muhimbili Medical Centre.

This study was therefore conducted with the following

specific objectives:

i) To determine the incidence of cervical cancer over the 12 months study period i.e. from 1st December 1983 to 30th November, 1984.

ii) To study the pattern of distribution of the disease in terms of age and parity related to the stage of disease, the common presenting symptoms and their duration, tribal distribution and pre-treatment complications.

iii) To get a picture of what patients know, about their disease in terms of its aetiological factors, treatment and complications.

iv) To identify possible factors which may be related to late reporting such as ignorance, misdiagnosis or mismanagement in the peripheral health units (dispensaries and health centres).

MATERIALS AND METHODS:

The study group consisted of all the patients admitted to the gynaecological wards from 1st December 1983 to 30th November, 1984 with histologically proved cervical cancer. These patients originated from either within Dar es Salaam or were referred cases from other parts of Tanzania.

For each patient a questionnaire was filled in by the author. The information collected included the age of the patient, tribe, place of origin and referral, common presenting symptoms and their duration, parity, marital status, age at marriage and the patients' knowledge about

the disease as well as previous treatments the patient had undergone for the disease.

The patients were then individually examined by the author and any relevant physical findings were noted paying special attention to pre-treatment complications. With the exception of a few patients whose diagnosis had been confirmed and staging had been done, the rest of the patients were subjected to examination under anaesthesia (E.U.A.) for staging of the disease and biopsy.

Investigations which were done were haemoglobin estimation, urinalysis, culture and sensitivity, blood urea and creatinine. Other investigations such as cystoscopy, intravenous urograms (I.V.U) and liver function tests were not routinely done. Anaemia which warranted treatment was defined as a haemoglobin of less than (60%) 8.7 gm/dl. (Lawson 1970).

Once the diagnosis was confirmed patients with haemoglobin more than 60% were transferred to Ocean Road Tumour Centre for radiotherapy. Those with lower haemoglobins were given blood and haematinics and once their haemoglobins were high, they were then subjected radiotherapy.

Treatment with a high external pelvic irradiation was employed in three cases to control severe bleeding per vaginum otherwise fractionated external beam therapy was either given therapeutically or patiatively depending on the stage of the disease. The radioactive source

used throughout the study period was caesium 137. There were no facilities for intracavitary therapy during the period of study.

At Ocean Road Hospital, the treatment and follow up of the patients was mainly under the radiotherapist but the author saw the patients twice weekly until they were discharged to attend the follow up clinic after 3 - 6 months.

RESULTS:

Incidence of Carcinoma of the Cervix:

Over the 12 month's study period, there were 6,505 gynaecological admissions of which 208 (3.2%) were due to cervical cancer. During the same period of time, there were 509 cases of different types of cancer treated with radiotherapy in Ocean Road Hospital. Cervical cancer formed 42.8 of these cases and it constituted 84% of all the female cancers treated by irradiation.

Table I: AGE DISTRIBUTION OF THE PATIENTS RELATED TO THE STAGE OF THE DISEASE. N = 208

AGE IN YEARS	STAGE OF DISEASE				TOTAL
	I	II	III	IV	
<20	2(11.1%)	0	0	0	2(1%)
20-29	8(44.4%)	11(13.8%)	6(8.9%)	1 (2.3%)	26(12.0%)
30-39	2(11.1%)	35(43.8%)	11(16.4%)	3 (7.0%)	51(24.6%)
40-49	2(11.1%)	28(35.0%)	36(53.7%)	17(39.5%)	83(39.9%)
50-59	3(16.7%)	2(2.5%)	8(11.9%)	12(27.9%)	25(12.0%)
60-69	1(5.7%)	4(5.0%)	6(8.9%)	8(18.6%)	19(9.1%)
70+	0(0%)	0(0%)	0(0%)	2(4.7%)	2(1.0%)
TOTAL	18(100%)	80(100%)	67(100%)	43(100%)	208(100%)

The peak incidence is in the 40 - 49 year age group but owing to the fact that many patients did not know their exact age, it was not possible to calculate the mean age.

44.4% of the patients with stage I disease were of the age group 20 - 29. 110 out of the 208 patients (52.9%) presented with advanced stage of the disease.

Table II: PARITY DISTRIBUTION OF THE PATIENTS WITH CERVICAL CANCER RELATED TO THE STAGE OF THE DISEASE.

PARITY	STAGE OF THE DISEASE				TOTAL
	I	II	III	IV	
0 - 3	8(44.4%)	12(15.0%)	9(13.4%)	5(11.6%)	34(16.3%)
4 - 6	6(33.3%	28(35.0%)	22(32.8%)	18(41.9%)	74(35.6%)
7+	4(22.2%)	40(50.0%)	36(53.7%)	20(46.5%)	100(48.1%)
TOTAL	18(100%)	80(100%)	67(100%)	43(100%)	208(100%)

Nearly half of the patients (48.1%) were para 7 and above. The majority of the patients in the high parity group presented in the late stages of the disease.

Table III: TRIBAL DISTRIBUTION OF 208 PATIENTS WITH CERVICAL CANCER.

TRIBE	NUMBER	PERCENTAGE
Zaramo	24	11.5
Ndengereko	17	8.2
Chagga	16	7.8
Luguru	12	5.8
Sukuma	10	4.8
Nyakyusa	8	3.8
Yao	7	3.4
Hehe	5	2.4
Bena	3	1.4
Miscellaneous	106	51.0
TOTAL	208	100.0

Nearly all the tribes in Tanzania are affected as reflected in the miscellaneous group which accounted for more than half of the cases.

Although there is a slightly higher proportion of Zaramos and Ndengerekos, this does not mean that the disease is commoner in these tribes than in the rest. The higher representation could be accounted for by the fact that these two ethnic groups dwell mainly in Dar es Salaam and its vicinity and thus are more likely to come for treatment in Muhimbili Medical Centre than other women

from other parts of the country. Other factors which could affect this distribution are the accessibility to Dar es Salaam in terms of infrastructure and availability of transport and the referral system.

Table IV: MARITAL STATUS OF 208 WOMEN WITH CARCINOMA OF THE CERVIX IN DAR ES SALAAM.

Marital Status	No. of patients	Percentage
Single	0	0.0
Married	168	80.8
Separated	10	4.8
Divorced	22	10.6
Widowed	6	2.9
TOTAL	208	100.0

All the women with the disease were married at one time or the other. About 80% were still married at the time of the diagnosis whereas 10 (4.8%) were separated, 22 (10.6%) divorced and 6 (2.9%) were widows.

Table V: COMMON PRESENTING SYMPTOMS IN 208 PATIENTS WITH CERVICAL CANCER.

SYMPTOMS	NUMBER	PERCENTAGE
Abnormal vaginal bleeding	208	100.0
Vaginal discharge	135	65.0
Abdominal pains	129	62.0
Backache	39	18.8
Constipation	16	7.7
Urinary symptoms	9	4.3
Weight loss	5	2.4

The commonest presenting symptoms was abnormal vaginal bleeding which was present in all the patients. Vaginal discharge and abdominal pains featured second and third in the symptomatology respectively.

Table VI: AVERAGE DURATION OF SYMPTOMS AMONG 208 PATIENTS WITH CERVICAL CANCER.

DURATION OF SYMPTOMS IN MONTHS	NUMBER OF CASES	PERCENTAGE
0 - 3	24	11.5
4 - 7	26	12.5
8 - 12	44	21.1
More than 12	114	54.8
TOTAL	208	100.0

54.8% of the patients presented with symptoms of more than one years duration. This is in keeping with what was shown in table I that the majority of the patients presented with advanced stages of the disease.

Patients knowledge and attitude to the disease.

Out of the 208 patients 181(87.2%) had had no formal education and the remaining 27(13%) had received some formal education. However, none of them had gone beyond primary school level.

The answers given by the patients as to what causes the disease ranged from unknown causes 102 patients (49%) whitchcraft 23 (11.1%0, bad omen 15(7.2) and normal process of aging 3 (1.4%). Other miscellaneous answers were given by 65 patients (31.0%) and these ranged from

gonorrhoea, schistosomiasis, maggots in the genital tract, curse from ancesstors, having sexual relations while in menses.

Out of the 208 patients 32 (15.4%) had been to traditional healers for some form of therapy which mainly consisted of herbs and some scarifications on the lower part of the abdomen and a medicinal lace/belt around the waist.

71 out of the 208 (34.1%) patients had been to dispensaries and health centres and out of these 12(5.8%) were referred to district or regional hospitals after the initial visit to these health care units. The rest of the patients were either referred to district or regional hospitals after several visits to the dispensaries where tablets and sometimes injections were given without improvement. 28 (13.5%) by passed dispensary or health centre referral and went straight to the district or regional hospitals from where they were referred to Muhimbili Medical Centre.

Out of the 208 patients, 142 (68.3%) knew that the disease is fatal and they associated the fatality to chronic blood loss and chronic ill health.

Table VII: HISTOPATHOLOGICAL CLASSIFICATION OF 208 PATIENTS WITH CERVICAL CANCER.

HISTOLOGICAL TYPE	NUMBER OF CASES	PERCENTAGE
Squamous cell carcinoma	203	97.6
Adenocarcinoma	4	1.9
Adeno squamous carcinoma	1	0.5
TOTAL	208	100.0

Squamous cell carcinoma constituted 97.6% of the cases whereas adenocarcinoma and adenosquamous carcinoma accounted for 1.9% and 0.5% of the cases respectively. The patient with adeno squamous carcinoma which was clinically stage IIb died within 10 days of commencing radiotherapy.

There were no schistosomal ova reported in association with cervical cancer in any of the cases. One patient had both squamous cell carcinoma of the cervix stage IIa and melanoma of the right foot. She was treated with wide surgical excision of the melanoma as the regional lymph-nodes were not involved and the cervical lesion was subjected to radiotherapy with good outcome.

There was one case of carcinoma of the cervix in a 16 week pregnant woman who was treated with irradiation

following which she aborted and treatment was continued. There were 2 cases of cervical stump carcinoma following hysterectomy in district/regional hospital for abnormal vaginal bleeding whose course was unestablished. Radiotherapy was given but the treatment results were poor as these patients had persistent disease six months after radiotherapy course.

Pre-treatment complications, treatment modalities and outcome of the treatment.

Anaemia Hb 8.7 gm/dl was then commonest pre-treatment complication and it was noted in 72 (34.7%) cases. Two patients (1%) had genital fistulae already - one had a vesico-vaginal and the other a combination of vesico-vaginal fistula and a recto-vaginal fistula. There was one case of chronic renal failure due to ureteric obstruction with bilateral hydronephrosis and hydroureters. Cachexia was noted in 4 (1.9%) patients.

Table VIII: METHODS OF TREATMENT EMPLOYED IN 190 PATIENTS WITH CARCINOMA OF THE CERVIX.

MODE OF TREATMENT	NO: OF PATIENTS	PERCENTAGE
Radiotherapy along	186	97.9
Surgery alone	1	0.5
Radiotherapy and surgery	3	1.6

Of the 208 patients 12 (5.8% presented with too advanced a disease for palliative radiotherapy or surgery and so they were discharged on medical palliation near their home areas. Three patients absconded from treatment and three refused treatment and were discharged against medical advice.

Radical hysterectomy was done in one patient who had stage Ib cervical cancer and her condition clinically after 6 months was good. One patient was treated by extended hysterectomy and bilateral salpingo-oophrectomy because of persistent malignant disease eight months after radiotherapy. Two patients had undergone hysterectomy elsewhere on account of abnormal vaginal bleeding and they presented with cervical stump carcinoma and radiotherapy was given but with poor results.

The follow up of the patients after treatment was very poor as the majority of them were from far away where public transport was not easily available. Symptomatic

improvement with clinical regression of the growth was found in nearly all patients on completion of treatment. However, of the 24 patients seen about 6 months after treatment, 20 were free from disease whereas the remaining 4 had evidence of advanced disease which could not be treated surgically.

There was a total of 5 deaths which occurred within 3 months of admission either in Muhimbili Medical Centre or in Ocean Road Hospital. Of these, 3 were due to severe anaemia and two were due to chronic renal failure.

DISCUSSION:

This study clearly confirm the clinical and s epidemiological characteristics of cervical carcinoma which have been reported from other parts of Africa[3, 4, 5, 8].

The epidemiological characteristics of cervical cancer found in this study are also in keeping with those found by Everett about a decade ago except that the incidence of the disease seems to be on the increase. This may be atributed to relatively better methods of diagnosis and the availability of a radiotherapy unit in Ocean Road Hospital.

The finding that 52.9% of the patients presented were in the advanced stages of the disease tallies well with the observations that 87.2% of the patients had had no formal education and even the few who had received some primary education, none had gone beyond that level of education. Similarly, nearly half of the patients

did not know what the possible cause of the disease was and the answers given by the rest of the patients were based on superstitions beliefs on the aetiological factors of the disease. It was also found that 32 out of the 208 (15.4%) patients had been to traditional healers for some of form of therapy for the disease. On the other hand, 71 out of the 208 patients (34.1%) had been to dispensaries and health centres for treatment of the condition. Only 12 out of the 71 patients (16.9%) who had been to dispensaries were referred for treatment in a hospital on their first visit whereas the rest either by passed these units to attend the district or the regional hospital on their own after attending the rural health units several times. Other possible factors which contribute to delay in reporting to hospital is the easiness with which transport is available. A more detailed knowledge attitude and practice (K.A.P.) study would be very useful in this respect.

High parity was noted to be common among the patients as 48.1% of the patients were para 7 and above. Marriage and first coitus are known to take place early in the lives of mist Tanzanian women. However, this study does not show this feature. On the other hand, this study emphasizes the fact that marriage has an important bearing on cervical carcinoma as all the women with the disease were married, had been married or were married at one time or the other as seen in table IV. There is abundant evidence in the literature that

squamous cell carcinoma of the cervix always occurs in women who are sexually active[11, 12, 20]. The most important risk factors to cervical cancer are now generally known to be early age of marriage, time of first intercouse and multiple sexual partners. Sex is the denominator in all these factors. This study shows that multiparity and marriage are probably important risk factors but a controlled study needs to be done. Exactly now sex brings about the canceraous change is not known but it has been postulated that the sperm DNA plays a role in the causation of mutation in the squamo-columnar cellular junction[11, 20].

The peak incidence of the disease was found in the 40 - 49 year old group. This compares well with that reported by Everett 1975 and Mgaya 1980 in Dar es Salaam and Adelusi 1978 in Nigeria. The peak incidence of 40 - 49 years is earlier than that reported by Edington in Nigeria 1970 and Malphant 1947 in Britain.

Abnormal vaginal bleeding was found in all patients with the disease. This occurred as post-coital bleeding irregular menstrual loss or as post menopausal vaginal bleeding. As the disease has been shown to have a peak incidence in the 40 - 50 year age group and these women are still menstruating, one has to cautions in evaluating women with menstrual disorders and keep cervical cancer in the back of the mind as a possible cause. Similarly vaginal discharge usually mixed with blood must be investigated fully to exclude genital malignancy. In fact,

abnormal vaginal discharge was noted to be the second commonest symptom in this study (Table V).

The commonest method used for treatment was radiotherapy. Surgery alone was employed to treat one patient. Radiotherapy was well tolerated in all the cases. Opinions differ as to the place of radiotherapy in the treatment of young patients with cervical cancer as it was the general picture in this study. However, many authorities consider it to be the treatment of choice in patients with large volume or advanced disease (Shingleton 1983).

Combination of radiotherapy and surgery was used to treat 3 patients out of 190 patients. However, the role of combined radiotherapy and surgery in the treatment of cervical cancer remains controversial. There has been much speculation regarding the value of pre-operative irradiation in early stage tumours but the value of this awaits further proof[12]. There are two major areas where combined radiotherapy and surgery are advocated. These are in the treatment of barrel shaped endocervical lesions and pre-operative use of intracavitary radiation prior to a radical abdominal hysterectomy[7, 12].

It was ensured that good haemoglobin was maintained for all the patients undergoing radiotherapy because well oxytenated cells are more radiosensitive than hypoxic cells. Adjuvants to radiotherapy such as hyperbaric oxygen, radiosensitizers, hyporthermia and hychoxyurea have been used on a trial basic in some centres but with no major impact so far. The radiosensitizers which have

been commonly used are metronidazole, misonidazole and heavy particles such as neutrons and pi-mesons.

It was noted in this study that two patients had had hysterectomy in upcountry hospitals because of abnormal vaginal bleeding and were referred because of vault metastases. These patients were mismanaged because the diagnoses of the abnormal vaginal bleeding were unestablished and neither do they warrant hysterectomy always. The presence of the uterus in cervical cancer is important as it serves for intracavitary irradiation which is a very important component of radiotherapy in cervical cancer.

For any form of treatment of cancer to be successful, early diagnosis is mandatory. It was indicated earlier in table I that the majority of the patients (52.9%) presented with advanced stages of the disease. The problem of making early diagnosis of cervical cancer can be looked at three levels of responsibility namely: the patient and her surrounding community level, the medical personnel level and at the national level.

At the patients' level, health education on the common early presenting symptoms such as vaginal contact bleeding or any form of abnormal vaginal bleeding must be given. The health education must also emphasize the progress and outcome of the disease. Health education on this subject can be given in different places but the most important ones include family planning clinicsl post-natal or antenatal clinics, or to patients attending

dispensaries, health centres or hospitals for other ailments. Health information on cervical cancer can also be disseminated through the mass media units such as the radio and newspapers. Knowledge of early symptoms and risk factors to cervical cancer will make women "cancer conscious" so that they avail themselves early for medical examination and treatment.

At the community level, regular cervical cytologic screening is important for early diagnosis of cervical cancer. This procedure has stood the test of time since 1943 when Papanicolaou and Traut discovered this method of expoliating cells from the cervix and by using a special stain, pre-cancerous or frankly cancerous lesions at their very early stages can be discovered. There is evidence of cervical cancer[18]. Owing to financial and manpower constraints in developing countries such as Tanzania, cytological screening should be targeted to the high risk group is mainly to be found in the perinatal, venereal disease, family planning and gynaecological clinics (Mgaya 1982).

However, doubts have been expressed by some workers (15, 16, 17) on the value of intense screening programmes versus improvement of the socio-economic status and personal hygiene. The consensus of opinion is that these two features must run in parallel so as to detect cervical cancer in its early stages and also possibly prevent its development.

At the medical personnel level, a high index of

suspicion of cervical cancer must be maintained. This must be incalcated among all the health workers but more so among those who are working in the rural areas where most Tanzanians live. Experience has shown that to some of these workers, vaginal discharge means an injection of penicillin or administration of other antibiotics. Similarly abnormal vaginal bleeding to some may mean an injection of progesterone or the use of oral contraceptive pills. This habit is highly deplorable.

Health education and regular refresher courses in form of seminars should be given to health workers regularly. Efforts must be made for the experienced doctors and specialists from consultant hospitals to get in touch with the rural health workers in order to teach/guide them on the spot in order to improve their clinical judgement of patients suspected to cervical carcinoma.

At national level, a good policy of primary health care is important. Provision of well trained health cadres and improving health facilities at all levels of health is important. Campaigns to improve the socio-economic and hygienic condition must be conducted as they will pay dividends in the long run.

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ANAEMIA IN PREGNANCY IN SINGIDA.

SUMMARY:

A study of anaemia in pregnancy among 512 women within Singida town and its suburbs attending the antenatal clinic for the first time is reported. The prevalence was found to be considerably lower than that reported from other areas of Tanzania. The possible aetiological and associated factors are discussed. It is recommended that although the prevalence is low, anaemia in pregnancy may still constitute a health problem in the area as this was study done at one point of time. Thus keeping the area under surveillance is recommended.

INTRODUCTION:

Anaemia is extensive in the tropics[1, 2]. It is a common finding in patients attending hospitals and clinics in Tanzania[3, 4, 5] and a common complication of pregnancy in many tropical areas of the world[6]. Harrison[7] in 1982 reports that from 5 - 50% of all pregnant women attending antenatal clinics in the tropics are anaemic compared to less than 2% in the developed countries.

The high incidence of anaemia in the tropics is closely related to certain social and economic factors prevailing in these areas such as poverty, malnutrition and hookworm infestation. Lawson[8] contends that anaemia is commoner in these areas because of dietary deficiency of iron and folic acid. However, Mwanukuzi et.al.[9] reports that although folic acid is deficient in Tanzania, local foods contain much iron and attributes the problem

of iron deficiency to hookworm infestation, poor food intake in pregnancy and frequent ill-spaced pregnancies. There is also evidence that poverty is not the only factor in the causation of anaemia as unsatisfactory dietary habits may play a role in the causation of anaemia (10).

The commonest type of anaemia encountered in pregnancy is the iron deficiency type and this has been confirmed by many workers[11, 12, 13, 14]. Nhonoli found that this type of anaemia affected over 90% of the pregnant women in the East African coastal belt whereas Mtimavalye in 1978 in a prospective study by bone marrow examinations found that 83% of the anaemic patients were iron deficient and 43% had a megaloblastic picture responding well to folic acid therapy. Out of these, 38% were dimorphic in nature.

The role played by anaemia in pregnancy in the causation of morbidity and mortality has been extensively studied,[8, 15]. Mtimavalye et.al.[16] found that anaemic in pregnancy was the third commonest cause of maternal mortality in Muhimbili Medical Centre (MMC) in 1974 - 1977 accounting for 11.9% of all maternal deaths. The same author reported that it was the top cause of antenatal admissions in 1976 and 1978 accounting for 42% and 50% of all the admissions respectively. There is a general impression in the department of Obstetrics and Gynaecology in Muhimbili Medical Centre that the incidence of anaemia is on the increase because of the rising cost

of living and the poor economic situation prevailing in the country at the moment.

In the absence of effective treatment, anaemia develops progressively as the pregnancy advances so that in the end, the patient dies undelivered or in the first two weeks of pueperium. Recurrence in subsquent pregnancies is likely if the condition is not well corrected in the preceding pregnancy. The most dangerous complication is congestive cardiac failure due to lack of oxygen to cardiac muscle. This has a grave prognostic significance for both the mother and the foetus. Lawson (1967) noted in Ibadan that cardiac failure was only seen when the packed cell volume (P.C.V.) was below 14%. In his series, the overall mortality rate was 20% but the mortality complicated by cardiac failure was 55% .

Other morbid effects of anaemia include late abortions and premature labour. Tasker 1958 in Malaya reported a prematurity rate of 20% associated with anaemia in pregnancy compared to that of 7% in the non anaemic subjects. In his series, a perinatal mortality rate of 13% was reported in anaemic subjects as compared to that of 6% in non anaemic subjects. However, Mtimavalye and O'Dowo[17] found that babies born at term of anaemic mothers had the same mean birth weight as ones born of non anaemic mothers.

There is no doubt therefore that anaemia in pregnancy is a big health problem in the developing world as it accounts for considerable maternal and perinatal morbidity and mortality. The maintainance of high haemoglobin levels

has become one of the primary objectives of antenatal care. To achieve this, efforts of detecting anaemia by regular checking of the Hb levels and instituting early treatment are made. In addition, the causes of anaemia such as malaria, hookworm, schistosomiasis and blood loss must be looked into and appropriate treatment given. Family planning, dietary advice and administration of prophylactic iron, folic acid and antimalarials are given routinely and regularly to all pregnant women. How effective these measures have been in reducing the magnitude of the problem is questionable.

Most studies on anaemia in pregnancy which have been done so far in Tanzania have concentrated on the coastal belt of Tanzania and to a smaller extent in areas around the consultant hospitals in Mwanza and Moshi. In such a large country such as Tanzania, socio-economic and cultural factors are bound to differ. Similarly, the distribution and the determinants of disease may vary considerably from one area to another. Thus, the prevalence, severity and aetiological factors of anaemia in pregnancy are bound to differ from one area to another. So far, no study has been done to delineate the magnitude of the problem of anaemia in pregnancy, its management at the MCH clinic, the possible aetiological factors and the types of anaemia encountered in the central part of Tanzania in which the climate is dry with sandy soil and short rainfal intervals.

OBJECTIVES:

a) Broad Objectives:

This study was aimed at assessing the magnitude of the problem of anaemia in pregnancy, its related factors and management among pregnant women attending the antenatal clinic for the first time in Singida town.

b) Specific Objectives:

i) To determine the prevalence and the severity of anaemia among pregnant women attending the MCH clinic for the first time in Singida town.

ii) To compare the proportion of pregnant women attending the clinic for the first time who were anaemic by haemoglobin estimation in the laboratory, clinical assessment and by Taliquist method.

iii) To determine the possible aetiological factors by determining the proportion of anaemic patients who had poor food intake, or with high parity (i.e. more than para 6) or who had hookworm infestation or who had malarial attacks or blood loss.

iv) To determine the types of anaemia by RBC morphology.

MATERIALS AND METHODS:

i) Timing of the study:

The study was conducted in Singida MCH Clinic from 26th January, 1984 to 15th February, 1984 inclusive.

Singida was chosen because the author was aquinted with the area.

ii) Study population:

The study population consisted of all pregnant women from Singida town and its suburbs attending the antenatal clinic in Singida Hospital for the first time during the period of the study irrespective of their age, tribe, and parity. Patients who were referred from the peripheral clinics were also included. According to the 1978 population census the township had 29,258 inhabitants of whom 7,037 were women aged 15 - 44 years. Benett[18] reports that in a developing country at one point of time, approximately 20% of the women in the reproductive age will be pregnant, whereas 30% will be experiencing post-partum amenorrhoea associated with lactation and 50% will be menstruating. Thus, the expected number of pregnant women in the area will be 1,407. Records in the clinic revealed that about 25% of the clinic attenders were first attenders. The sample size was projected to be about 500 pregnant during the 3 weeks of the study.

iii) Methods:

The subjects were individually interrogated by the author in a separate room and information such as age, parity occupation, symptoms of anaemia, gestational age, income, etc. was obtained as shown in the questionnaire attached. After the interview,

the subjects were individually examined for pallor in the mucus membranes and nails and for jaundice in the sclerae. Abdominal palpation for the size of the fundus and spleen were done and recorded. Haemoglobin levels were estimated in the clinic by using a Talquist method and in the laboratory by a Spectrometric method based on the conversion of the haemoglobin pigment into cyanmethaemoglobin as described by Dacie and Lewis[19]. A peripheral blood film was also taken and stained with Leishman stain for RBC morphology and malarial parasites. The patients were provided with stool containers and instructed to bring their stool specimen the following day for examination of hookworm ova by a direct smear method. The study was preceeded by pre-testing the questionnaire and laboratory equipment. This was done on patients re-attending the clinic. Routine oral haematinics and weekly prophylactic chloroquine were given.

iv) Research instruments:

The instruments used to conduct the survey included:

i) Questionnaire:

For the first attenders in the MCH Clinic. The questions were asked in Swahili and where the patient didn't understand Swahili an interpreter was used.

ii) Stool containers for stool collection.

v) Reliability:

The main drawbacks in the study were:

a) Language barrier: The majority of the women understood Swahili but in situations where there was a communication barrier an interpretor had to be used.

b) Ascertainment of age: On two or three occassions the subjects did not know their age and so an estimate of the age was made using a local events calendar.

vi) Definitions of terms used:

a) The criterion for defining anaemia was a haemoglobin value below 10mg/dl.[7, 20, 21].

b) Minimal income was defined as an income of 9600 or less Tanzanian Shillings per anum. Other sources of income included: cattle, goats, business in addition to the main source of income.

RESULTS:

i) Prevalence and Severity of Anaemia.

During the study period, 512 pregnant women attended the clinic for first time of whom 54 (10.5%) were anaemic.

Table I: DISTRIBUTION OF THE HAEMOGLOBIN LEVELS

Hb Level in gm/dl.	No. of Cases	Percentage of Total
Less than 6	5	0.98
6 - 7	11	2.15
8 - 9	38	7.42
10	456	89.06
TOTAL	512	100.0

Table I illustrates the severity of the anaemia. Only about 1% of the first attenders were severely anaemic whereas the majority of the anaemic patients (38 out 54) had only mild anaemia.

Table II: COMPARISON OF THE PROPORTION OF ANAEMIC PATIENTS BY CLINICAL ASSESSMENT, TALIQUIST METHOD AND BY A SPECTRO METRIC METHOD.

Method	Number of anaemic patients	Number of non-anaemic patients	False negative	False positive	Percentage
Taliquist	62	450	0	8	14.8
Clinical assessment	48	464	6	0	11.1
Photometric method	54	458	0	0	100

Clinical assessment could pick up to 88.9%.of the anaemic patients whereas the Taliquist method overdiagnosed 14.8% as anaemic.

AETIOLOGICAL FACTORS OF ANAEMIA

a) Table III: RELATIONSHIP OF PARITY TO ANAEMIA

Parity	Number of anaemic patients	Total number of patients	Percentage of anaemic patients of total
0 - 3	12	383	4.24
4 - 6	24	172	13.95
7 - 9	10	34	29.41
10+	8	23	34.78
TOTAL	54	512	10.55

Table III shows the relationship between parity and anaemia. About 55% of the pregnant women were between para 0 and 3. There is a proportional increase of anaemic pregnant women with parity.

b) Table IV: DISTRIBUTION OF THE PATIENTS ACCORDING TO GESTATIONAL AGE:

Age of pregnancy in weeks	Number of anaemic patients	Total number of patients	Percentage of anaemic patients of total
Up to 14	0	0	0
15 - 28	22	253	8.70
29 to term +	32	259	12.36
TOTAL	54	512	10.55

None of the patients booked in the clinic while in the first trimester of pregnancy. The majority of the patients booked in the 3rd trimester of pregnancy. There is a proportional increase in the percentage of anaemic patients with advanced gestational age at booking.

c) Table V: RELATIONSHIP BETWEEN ANAEMIA AND EDUCATION

Level of education	Number of anaemic patients	Total Number of patients	Percentage of anaemic patients of total
Illitrate	18	189	9.52
Adult education or incomplete primary education	15	72	20.83
Completed Primary Education	12	172	6.98
More than Primary Education	9	79	11.39
TOTAL	54	512	10.55

36.9% of the pregnant women were illitrate. The highest percentage of anaemic patients is found in the group which has received some adult education or incomplete primary school education whereas the lowest is found in the group which has completed primary education.

d) Table VI: RELATIONSHIP BETWEEN INCOME AND ANAEMIA.

Approx. annual income	Total number of patients	Number of anaemic patients	Percentage of anaemic patients of total
Less than or equal to T. Shs. 9600/=	392	22	5.61
More than T. Shs. 9600/=	120	18	15.0
TOTAL	512	54	10.55

Although the majority of the patients (76.6%) belonged to the low income bracket only, 5.6% of them were anaemic whereas 15% of the patients with an income of more than the minimal wage per anum were anaemic.

e) Table VII: RELATIONSHIP BETWEEN THE AVERAGE INTERVAL BETWEEN PREGNANCIES AND ANAEMIA.

Average interval between preg. (Yrs)	Total number of patients	Number of anaemic patients	Percentage of anaemic patients of total
Less than or 1 year	33	6	18.18
1 - 3 years	430	44	10.23
3 years or more	49	4	8.16
TOTAL	512	54	10.55

The majority of the patients in the non-anaemic and anaemic groups had an average interval between pregnancies of 1 - 3 years. However, the proportion of anaemic patients decrease the longer the interval between the pregnancies.

Table VIII: PROBABLE CONTRIBUTING FACTORS IN THE CAUSATION OF ANAEMIC IN PREGNANCY.

Factor	ANAEMIC		NON ANAEMIC	
	Number of cases	Percentage	Number of cases	Perce-ntage
Inadequate dietary intake	4	7.41	11	2.4
Hookworm infestation	9	16.67	22	4.7
Blood loss	2	3.70	9	1.9
Malaria	3	5.56	15	3.2
Other Factors	36	66.67	411	87.8
TOTAL	54	100	468	100

Table IX: TYPES OF ANAEMIC BY PERPHERAL R.B.C. MORPHOLOGY.

RBC Morphology	Number of patients	Percentage
Microcytic hypochromic	42	77.78
Mixed picture	5	9.29
Megaloblastic	4	7.41
Normochromic normocytic	3	5.56
TOTAL	54	100

The commonest type of anaemia was iron deficiency type followed by dimorphic type constituting about 77.8 and 9.3% of the cases respectively.

DISCUSSION:

The maintainance of high haemoglobin levels has become one of the primary objectives of prenatal care because of the realization that even though anaemia may predate pregnancy, it may be worsened or even precipitated by pregnancy.

The prevalence of anaemia (by haemoglobin less than 10mg/dl) of 10.55% found in this study is considerably lower than that of 86% which was reported in a similar study in Dar es Salaam[9]. It is also lower than values obtained from similar studies in other parts of the world. 65.1% reported by Ojo[20] in Lagos, Nigeria(1965); 25.5% reported by Ong[22] in 1974 in Malaysia. Moreover, in this study only about 1% of the patients were severely anaemic whereas the majority of the anaemic patients had mily anaemia. The explanation to this could be the fact that in Singida, the staple foods are mainly millet and green vegetables "mlenda" which are rich in iron. Green vegetables are cultivated and consumed in large quantities in the rainy season but are dried and preserved for use in the dry season. Meat is also available at a relatively cheaper price than in other areas of Tanzania. Other factors could be the absence of food taboos in the area and lower incidence of malaria.

Comparison of the Taliquist method of detecting anaemia and clinical assessment, it is evident that the latter over diagnosed 14.8% as anaemic whereas the former missed about 11.1% of the patients. Both methods are useful and probably a combination of both methods could give better results than a single one.

Although the majority (44%) of the anaemic patients were between para 4 - 6 there is an increase in the proportion of the anaemic patients with parity. This is in keeping to what has been reported[8, 23], that with rising parity anaemia tends to increase owing to repeated drain on the maternal iron reserves. This is further supported by the results in table VII which indicate that the shorter the interval between pregnancies the higher the chance of becoming anaemic. However, Mwanukuzi et.al 1972 in Dar es Salaam found that the number of previous pregnancies did not influence the level of the haemoglobin. She suggested that following the experience and health education gained in the previous pregnancies the awareness of the value of good diet and the use of prophylactic drugs is increased.

More than half (59.3%) of the anaemic patients booked in the clinic after the 28th week of gestation and none of them booked in the first trimester. Thus, it is impossible to tell the number of patients who were anaemic in early pregnancy. The late booking is disadvantageous as anaemia may not be detected and corrected early enough.

Table V and VI show that there is no direct relationship between anaemia and the level of education or the income. Other factors may be related to these such as availability of food, the sizes of the families, food habits and even appetite. In addition, experience gained in the previous deliveries could also affect the chances of a women becoming anaemic in subsquent pregnancies.

The probable contributing factors in the causation

of anaemia are shown in table VII. In the anaemic group, possible causes were found only in 1/3 of the patients whereas in the non-anaemic group these factors were found in 12.2% of the cases. The finding of only 31 cases of hookworm could be due to the technique used as concentration method should have picked up more cases.

RECOMMENDATIONS:

Although the prevalence of anaemia in pregnancy in Singida was found to be lower than in other areas of Tanzania, it may still be problem which may warrant a health action.

The health workers should be made aware of the possibility of the problem existing in the area and to keenly look for it regularly and correct it early. Regular seminars should organised on the aetiological factors, prevention and the management of anaemia in pregnancy.

Dietary advice on eating and growing green vegetables and millet which thrive well in dry climate should be given. Preservation of dried green vegetables and fruits should be encouraged.

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