GYNAECOLOGIC AND OBSTETRICS CASES AND COMMENTARIES

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT FOR THE DEGREE OF MASTER OF MEDICINE (OBSTETRICS AND GYNAECOLOGY) OF DAR ES SALAAM - 1999.

BY

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DECLARATION

I DECLARE THAT TO THE BEST OF MY KNOWLEDGE THE WORK IN THIS DISSERATATION HAS NOT BEEN SUBMITTED BY ANYBODY AT ANY UNIVERSITY FOR THE AWARD OF ANY DEGREE.



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This is to certify that all the cases presented in this book were managed by Dr Shaffiq Hussein Mohamed under my direct or delegated supervsion.

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ACKNOWLEDGEMENT

I AM DEEPLY INDEBTED TO DR NASSORO HAMUDU, MY SUPERVISOR. HIS GENEROSITY, DEDICATED TEACHING, SUPERVISION AND UNDERSTANDING HAVE BEEN INSTRUMENTAL IN THE REALISATION OF THIS WORK.

I AM ASLO HEARTILY TOUCHED AND GRATEFUL TO PROFESSOR HANS MGAYA, FOR HIS TIRELESS EFFORTS TO PROVIDE ME WITH A VAST EXPOSURE OF SURGICAL KNOWLEDGE IN GYNAECOLOGY. THE BONDS DEVELOPED THEREFOF ARE HERE TO STAY.

I AM INDEBTED TO PROFESSOR MALISE KAISI, FOR ENCOURAGING AND GUIDING ME IN THE FIELD OF OBSTETRICS/GYNAECOLOGY. I CAN NOT GIVE ENOUGH THANKS FOR HIS GREAT TEACHING, GUIDANCE AND UNDERSTANDING. HE HAS BEEN LIKE A FATHER TO ME.

I WOULD ALSO LIKE TO TAKE THIS OPPORTUNITY IN THANKING PROFESSOR URASSA THE HEAD OF DEPARTMENT FOR HIS REGULAR ADVICE THROUGH OUT THE PREPARATION OF THIS WORK. MY SPECIAL THANKS ALSO GO TO DR S.N. MASSAWE FOR HER GUIDANCE AND CONSTRUCTIVE CRITICISM ESPECIALLY ON THE RESEARCH PART.

I CONVEY MY SINCERE GRATITUDES TO PROFESSOR AZIZ M.R., DR ZUL PREMJI AND DR KARIM MANJI FOR THEIR CONSTRUCTIVE CRITICISMS DURING THE WRITING OF THIS WORK.

I ALSO ESPECIALLY THANK MR MASANJA FOR THE DATA ANALYSIS.

MY SINCERE THANKS ALSO GO YO MR MEHDI KANJI (BABU UNCLE) FOR MAKING "MY GOING" SMOOTH AND COMFORTABLE.

TO MY PARENTS I SAY "THANK YOU" FOR KEEPING MY INSPIRATION AND SPIRIT IN ONE PIECE BY EVER CONSTANT SUPPORT, LOVE AND UNDERSTANDING.

I WISH TO THANK MY SISTER REESHMA ABDULLA WHO SACRIFICED A LOT OF HER TIME IN TYPING AND RETYPING THIS DISSERTATION.

I WOULD LIKE TO ACKNOWLEDGE THE PATIENCE, UNDERSTANDING AND SACRIFICES FROM MY WIFE SHAINOOR(JAAN), DURING MY TRAINING.

LASTLY BUT NOT THE LEAST MY THANKS GO TO ALL MY PATIENTS WHO HAPPENED TO BE ONE OF THE MOST FASCINATING "BOOK OF KNOWLEDGE" I HAVE EVER COME ACROSS.

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ABSTRACT

This dissertation has three parts. As shown in the contents both part one and two are each made up of 10 gynaecological and 10 obstetrical cases and commentaries respectively.

All these 20 case reports and commentaries were managed by the author himself. For each case a thorough history, examination, investigations and treatment have been narrated. Cases were managed according to standard laid down management protocols though investigations were at times not exhaustive because of limited facilities. After each case there is a commentary followed by relevant references.

A long obstetrical commentary is in part three(3). A prospective study on Maternal anthropometric measurements and gestational age in prediction of foetal weight in pregnant women at Muhimbili Medical Centre was done.

A total of 600 patients were included in the study. The study revealed that Maternal anthropometric measurements (symphysio- fundal height and abdominal girth) were good predictors by birth weight.

An equation of great predictive value utilizing these anthropometric measurements was derived and tested in another sample of hundred patients. It was found that sensitivity and specificity of detecting birth weight less than 2kg was 88.2% and 84.3% respectively. Sensitivity and specificity for detecting birth weight more than 3.8kg was 83.3% and 68.1% respectively.

Conclusively, it seems justified to investigate the value of equation of higher predictive value for use in antenatal care in developing countries.

ANTEPARTUM HAEMORRHAGE DUE TO CARCINOMA OF THE CERVIX
DELIVERY BY CAESAREAN SECTION.

NAME	:	MRS M.F.
AGE	:	31 YEARS
PARITY	:	PARA 5
ADDRESS	:	MAGOMENI
DATE OF ADMISSION	:	21/06/98
DATE OF DISCHARGE	:	27/9/98

SUMMARY:

Mrs M.F., a 31 year old, patient para 5, was referred to our high risk clinic at 26 weeks gestation due to painless vaginal bleeding.

Ultrasound ruled out placenta praevia. Speculum examination revealed a cervical lesion which bled easily on touch. Biopsy confirmed a diagnosis of squamous cell carcinoma stage IB disease. She stayed in the ward and was delivered by Caesarean section at 37 completed weeks. The neonate was a female weighing 2.5 kg, with good APGAR score. The post operative period was uneventful, she was transferred to Ocean Road hospital one week after operation for radiotherapy.

Response to radiotherapy treatment was good. Management of carcinoma of the cervix during pregnancy is discussed.

HISTORY OF PRESENTING ILLNESS.

Mrs M.F. booked at Mwananyamala clinic at 20 weeks of gestation. She was in good general condition. Her blood pressure was 110/70 mm Hg. and her weight was 56 kg. Her haemoglobin was 70%, albumin and sugar in urine were not checked. The fundal height was 20 weeks, corresponded to gestational age.

Two weeks after the first antenatal visit she had spontaneous, painless vaginal bleeding. The bleeding was not severe, fresh without clots and it was accompanied with abdominal pain. It subsided on its own on the same day.

At 24weeks of gestation she was seen again at Mwananyamala where she reported the bleeding episode which occurred two weeks previously. This was taken to be due to threatened abortion and nothing was done. Two weeks later she had another episode of vaginal bleeding which followed sexual intercourse. She reported this incidence to the antenatal clinic before her next appointment. She was referred to our high risk antenatal clinic where the history was noted.

She denied to have noted excessive fundal growth as compared to her past pregnancies and had no exaggerated symptoms in early pregnancy. R/o GTD

The fetal movements were felt normally. She had no history of fever or cough. R/o PID

OBSTETRIC HISTORY

She was para 5.

All five pregnancies were full term normal hospital deliveries without any complications. All five children were alive and well.

She denied history of vaginal bleeding during pregnancy in any of the five pregnancies.

MENSTRUAL HISTORY.

She attained menarche at 15 years, the year she married.

She had regular cycles of 28 days with periods lasting 4 days, with normal flow. She had no dysmenorrhoea or intermenstrual bleeding.

Her last normal menstrual period was 20.12.97 thus, was expecting on 27.09.98.

GYNAECOLOGICAL HISTORY

No history of any form of contraception used. She also denied history of post coital bleeding in her non pregnant state.

PAST MEDICAL HISTORY

Was unremarkable.

FAMILY AND SOCIAL HISTORY.

She got married and conceived at 15 years, just after menarche. She was with the same husband and denied extramarital affairs.

She had no formal education and was a house wife.

The husband was a peasant farmer.

She neither smoked cigarettes nor drank alcohol.

There was no family history of Diabetes mellitus, hypertension, multiple pregnancies, or bleeding disorders.

PHYSICAL EXAMINATION.

General - She was middle aged lady, with a fair nutritional status.

She was afebrile, pink, unicertic, and had no pedal or pretibial oedema, had no enlargement of lymph nodes and the thyroid gland was normal.

CARDIOVASCULAR SYSTEM.

The Pulse was 90 beats per minute, with normal volume and character and blood pressure was 120/80 mm Hg with a normal jugular venous pressure.

There was no thrill or parasternal heave.

The first and second heart sounds were audibly normal without murmurs.

RESPIRATORY SYSTEM.

The Respiratory rate was 20 per minute and the lungs were clear with normal vesicular breath sounds.

ABDOMEN.

The Abdomen was uniformly distended and moving symmetrical with respiration.

It was soft and there was no area of tenderness.

The liver, spleen were not palpably enlarged and renal angles were free of tenderness and mass.

The fundal height was equivalent to 30 weeks of gestation which did not correspond to gestational age.

The lie was longitudinal, with the head presenting. It was high.

Foetal heart beats were 140 per minute and regular.

VAGINAL EXAMINATION.

A sterile speculum examination was performed at the side room after she had voided urine.

In lithotomy position, the perineum was cleaned with savlon (1:20) solution.

The vulva was normal, there was no lesion.

A sterile bivalve speculum was gently introduced into the vagina. The blades, of the speculum were slowly separated bringing the cervix into view.

An irregular, exophytic friable lesion, involving anterior and posterior lips which was bleeding after being touched with the speculum. Vaginal walls were normal with no lesion. Digitally the cervix was soft, closed and irregular. The fornices felt normal.

The examining fingers were stained with blood.

Vaginal walls were normal.

A punch Biopsy was taken for Histology.

RECTAL EXAMINATION.

The rectal mucosa was normal and both parametria were free of tumor mass.

There was no rectal bleeding.

DIAGNOSIS.

Antepartum haemorrhage due to carcinoma of the cervix, stage IB.

MANAGEMENT.

1. Investigations
2. Delivery by Caesarean section at 37 completed weeks.
3. Radiotherapy

1. **INVESTIGATIONS**.

A. Haemoglobin - 8 g/dl.

B. white cell counts

Total	$9800/mm^3$	
Differentials	Neutrophils	65%
	Lymphocytes	32%
	Basophils	3%

C. Platelet count - 250,000/mm3.

D. Red blood cell morphology showed hypochromic microcytic cells.

E. Serum creatinine 52 umol/lt.

F. Midstream urine for culture - showed no bacterial growth.

G. Stool and urinalysis were normal.

H. Cervical swab for culture was negative.

I. Obstetric Ultrasound: A single live fetus, with biparietal diameter corresponding to 31 weeks of gestation. The placenta was fundal and posteriorly situated. There was no praevia. No fetal malformations were noted.

J. Chest Xray was normal.

K. Blood slide for malaria was negative.

L. Biopsy for histology revealed squamous cell carcinoma of large Keratinizing type.

PROGRESS.

Patient fared well in the antenatal ward, she did not bleed again.

She was started on Tablets ferrous sulphate 200 mg twice daily and Tablets folic acid 5 mg daily to correct anaemia.

Her haemoglobin at 36 weeks was 10 g/dl.

DELIVERY.

Delivery was done by Caesarean section at 37 completed weeks.

Caesarean section was performed as in obstetric case number 7.

She delivered a female baby 2.5 kg, APGAR score 9,10 at 1st and 5th minutes respectively.

Opportunity was taken to examine the patient under anaesthesia and restage her before she was taken back to the ward after delivery stage IB was confirmed.

PROGRESS AFTER DELIVERY

6 HRS POST OPERATIVE.

She was fully awake, afebrile and not pale.

The Pulse was 80 beat per minute, blood pressure was 110/70 mm Hg. The chest was clear.

Abdomen was soft, and dressings were dry.

Lochia was normal with no undue vaginal bleeding.

FIRST POSTOPERATIVE DAY.

She was in fair general condition, and remained afebrile, not pale, and the pulse and blood pressure were normal.

The abdomen was not disetended and soft.

The uterus was well contracted and bowel sounds were audible.

Urine output was adequate and clear.

SECOND TO SEVENTH POST OPERATIVE DAYS.

She had uneventful subsequent recovery.

Stitches were removed on seventh post operative day.

The wound had healed well, without sepsis.

Her haemoglobin was estimated to be 8.5 g/dl.

After councelling the patient about the nature of problem and proposed mode of management a written consent was obtained of radiotherapy.

She was taken to ocean road hospital where she was reviewed by the radio therapist and planned for radio therapy.

RADIATION TREATMENT.

Mrs M.F. was treated by both external beam radiation and intracavitary treatments.

She received 4000 cGy – by external radiation and 2400 cGy – by intracavitary route.

The radiation schedules were arranged as follows:-

1. External beam radiation (4000 centigrays). These were given in fractions of 200 centigrays per day via anterior and posterior 'portals' (treatment fields). She received treatments for 5 days a week for four weeks.

Cobalt 60 was used as a souce of radiations. After a total dose of 4000 centigrays, patient rested for 2 weeks.

Intracavitary treatment (2400 CGY)

Procedure: Patient was treated with 600 CGY once every week.
Patient was placed in Lithotomy positon, a speculum was inserted into the vagina to expose the cervix.

A tandem with pretested correct pelvic curvature was inserted into the uterus (without anaesthesia).
Two colpostats were placed in lateral vaginal fornices, and then secured in place with gauze packing.
Xrays were taken to ensure that the applicator was in satisfactory position.
The applicator was then connected to source of radiation with caesium (137).

Dosemetry:
A maximum dose of 600 CGY was delivered to point A in every treatment session. (Point A is a point 2cm lateral to axis of uterine canal and 2cm above the vaginal fornix).

RESPONSE.

After completing treatment, the patient rested for 2 weeks after which a final evaluation was done:

She was in fair condition.

She was moderately pale, afebrile and unicteric.

The cardiovascular and respiratory system were normal.

The abdomen was normal.

PELVIC EXAMINATION.

Revealed normal vulva and vagina.

The portio vaginalis looked healthy, without any residual disease.

The fornices were normal, with no mases.

Bimanual digital examination was normal.

RECTAL EXAMINATION.

Normal sphincter tone.

Rectal mucosa was normal and freely mobile.

Both parametria were free of tumor mass.

The clinical response was assessed to be 100%.

COMMENTARY.

Carcinoma of the cervix in pregnancy continues to be a challenge to obstetricians [1,2] This is because of uncommon synchronous occurrence of pregnancy and invasive cancer of the cervix[2,3].

The frequency quoted from different centre varies. A Finnish report records frequency of 0.7% including cervical intra-epithelial neoplasia; while in South Africa it is lower at 0.05% [2].

There are no studies reported from Tanzania on this condition, and therefore the frequencies remains unknown. However, isolated cases as Mrs M.F. are known to occur; and some cases perhaps pass unnoticed as there is no routine screening of pregnant mothers.

Despite this low incidence, carcinoma of the cervix is the commonest genital malignancy which complicates pregnancy [2,3].

Carcinoma of cervix tends to be diagnosed at an earlier stage among pregnant patients than non pregnant patients[2] and this has been linked to greater exposure of pregnant mothers to health services compared to the general population[4].

Mrs M.F. being pregnant, two episodes of vaginal bleeding initiated a series of investigations which led to establishment of the diagnosis. Such an episode in a non pregnant patient could have passed without serious action being taken. The majority of non pregnant patients would not have reported such episodes as Mrs M.F. did. A Slight delay however, has been noted to occur because of reluctance of health personnel to specifically examine patients with bleeding[2]. This was also the case with Mrs M.F., the first episode being passed off as threatened abortion.

As in non pregnant patients, squamous cell carcinoma is the commonest histological type during pregnancy [3,5].

Mrs M.F. had squamous cell carcinoma, large keratinized type which has the best prognosis[3]. Other histological types reported during pregnancy are : adenocarcinoma and adenosquamous carcinoma[2] which carry poorer prognosis[6].

The major concern in patients with carcinoma of the cervix during pregnancy has been timing and mode of delivery. Much fear has been expressed on the possibility of dystocia, sepsis, haemorrhage, and dissemination of tumor cell resulting from dilatation of the untreated malignant cervix if vaginal delivery is attempted[2,5].

Mrs M.F. was delivered abdominally to avoid these possible complications. Few authorities have allowed vaginal deliveries in patients with early disease[2].

The timing and modality of treatment of these patients has continued to be an area of heated discussion. It is generally agreed that the timing and treatment should be individualised[2,3]. Much will depend on the gestational age at diagnosis, stage of the disease and Histological type. Patients with carcinoma in situ who have satisfactory colposcopy results may be managed expectantly without definitive therapy until the pregnancy has been concluded[3].

Stage IA (pre-clinical) carcinoma conization should be performed for definitive diagnosis. If the cone has negative margins and the lesion invades less than 3mm deep patient may be allowed to completed her pregnancy[3].

If the disease has reached stage IB - to stage IIA, and the pregnancy is still in first or second trimester definitive treatment should be given.

The delay in treating to allow foetal maturity as in this case may result in an incurable disease [2,3]. However in advanced gestation age, it is believed these treatment may be delayed four to six weeks without adversely affecting the stage of the disease [2,5].

Mrs M.F. who was diagnosed to have stage IB disease at 32 weeks gestation was thus allowed to continue her pregnancy for five weeks to allow fetal maturity to occur.

Disease progression may be inhibited for sometime to allow fetal maturity to occur by using platinum chemotherapy. This has been shown to possess activity against cervical carcinoma yet is safe to the growing fetus[3,9].

The Modality of treatment will depend on the stage and Histological type[2,3].

Many authors advocate surgery in early disease noting that tissue planes in pregnant patients are easier to identify because of oedema [2,10,11]. However, complications as haemorrhage during surgery, prolonged operating time and increased risk of surgery induced fistula may make this mode of treatment less favourable[2]. Intraoperative haemorrhage may be diminished by performing where possible hysterectomy with fetus in situ[11,12]. In late pregnancy on the other hand, delivery of the infant improves exposure of pelvic viscera during surgery.

Mrs M.F. had an early disease could have undergone surgical treatment, but lack of expertise was a major setback. She had to undergo radiotherapy which has a similar outcome anyway.

The histological diagnosis was another strong factor in favour of this mode of treatment. Late stage disease should be treated by radiotherapy[2,3,13].

In the first trimester, radiotherapy can be instituted without regarding the fetus; abortion usually occurs [2,3].

In second and third trimester this effect is unpredictable and irradiation may fail to cause abortion, the neonate is severely damaged but viable[2]. hysterotomy should thus be performed prior to radiotherapy[7]. Pyometra which sometimes may complicate hysterotomy may be reduced by giving 10 days course of teletherapy before surgery[2].

Survival in patient with cervical carcinoma during pregnancy depends on stage and histological type as in non pregnant patient[3]. However, some studies have suggested a better prognosis among pregnant patients compared to non pregnant ones[8]. The early stage at which disease is diagnosed and immunological protective influence are believed to be behind this effect[2].

This commentary can be summarized as follows.

Routine speculum examination during antenatal visits will pick patients with carcinoma of cervix at earlier stage.

Associated pregnancy does not alter the existing treatment protocol for cervical carcinoma.

In late second and third trimester intervention may be delayed to allow foetal maturity without compromising maternal prognosis. Vaginal delivery in patient with cervical carcinoma is best avoided.

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CORD PROLAPSE EMERGENCY CAESAREAN SECTION

NAME	:	**MRS H.G**
AGE	:	**27 YEARS**
RESIDENCE	:	**MBURAHATI**
DATE OF ADMISSION	:	**15/3/98**
DATE OF OPERATION	:	**15/3/98**
DATE OF DISCHARGE	:	**21/3/98**

SUMMARY:

Mrs H.G., was admitted in labour ward from home with a history of labour pains. Spontaneous rupture of membranes occured just as she arrived at the hospital.

On vaginal examination the umbilical cord was felt in the vagina and it was pulsating. The cervix was 6 cm dilated. The patient was kept in knee-elbow postion. Emergency Caesarean section was done and she was delivered of two live babies. The postnatal period was uneventful and they were discharged in good condition.

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HISTORY OF THE PREGNANCY AND ANTENATAL CARE

Mrs H.G. was gravida 2. Her last normal menstrual period was 19/5/97, so the calculated date of delivery was 26/2/98. She first booked at 24 weeks of gestation at a peripheral clinic. Her height was 152 cm, her blood pressure at booking was 120/70mm Hg and the haemoglobin was 70%. She had no oedema and she weighed 61 kg. She subsequently made six visits to the antenatal clinic, the last one five days prior to this admission. Throughout the visits she remained normotensive had a total weight gain of 12kg and her last haemoglobin was 75% which was done five days prior to this admission. During the entire period of gestation the fundal height corresponded to gestational age. She had started labour pains 6 hours prior to admission. She was admitted in the labour ward on 15/3/98 at 7.00 am. The gestational age was 42 weeks. Membranes had ruptured spontaneously as she walked upstairs to the labour ward.

MENSTRUAL AND GYNAECOLOGICAL HISTORY.

Her menarche was at 14 years. The cycles were regular every 28 - 30 days and she menstruated for 3 - 5 days. The menstrual flow was normal. She had no dysmenorrhoea and she had never used any means of contraception.

PAST OBSTETRIC HISTORY:

She had full term normal delivery 3 years ago with no antepartum, intrapartum or postpartum complications. The baby is alive and well.

PAST MEDICAL HISTORY.

She had no major illness in the past.

SOCIAL AND FAMILY HISTORY.

She was married and was a housewife. She had no formal education. She never smoked cigarettes or took alcohol. There was a positive history of twins in the family. There was no history of diabetes mellitus, hypertension in the family.

PHYSICAL EXAMINATION.

Her general condition was good. She was not pale. She was afebrile. Her radial pulse rate was 86 beats per minute regular and of good volume. Her blood pressure was 130/80 mm Hg. She had slight pedal pitting oedema.

CARDIO RESPIRATORY SYSTEM.

The heart sounds were normally heard. There were no murmurs. The lung fields were clear and there were no added sounds.

ABDOMINAL EXAMINATION.

Her abdomen was distended uniformly. The fundal height was equivalent to 36 weeks pregnant uterus. The fetal lie was longitudinal with cephalic

presentation. Four fifth of the head was palpable above the pelvic brim. Three contractions were palpable every 10 minutes each lasting 40 seconds. The fetal heart rate was 120 beats per minute and regular. Multiple fetal poles were palpated and both were in cephalic presentation. The liver, spleen and kidneys were not palpably enlarged. The renal angles were non tender.

VAGINAL EXAMINATION.

The hands were scrubbed with soap and water. Sterile gloves were then put on. The vulva looked normal and liquor was seen to escape through the vagina in small amounts. The left hand swabbed the labia major anteroposteriorly using different sterile swabs soaked in savlon 1 : 20 for each side. The left thumb and index finger then parted the labia minora to expose the vestibule. The right hand holding a third sterile swab cleaned the vestibule starting on the urethral meatus to the introitus. The right index and middle finger were then introduced though the introitus and driven into the vagina. A loop of cord was palpated in the vagina and was felt to pulsate between the examining fingers during and between contractions. The cervix was fully effaced and 6 cm dilated. The vertex was at - 2 station and the position was left occipital anterior. There was no moulding or caput. The sacral- promontory was not reached.

MANAGEMENT.

A. IN THE LABOUR WARD.

1. Emergency Caesarean section was contemplated and the patient was explained about the plan.
2. She consented for anaesthesia and surgery.
3. Obstetric theatre staff were informed of the emergency.
4. Blood for grouping and cross match 2 units was taken.
5. Fetal heart rate was monitored and were found to be present and regular.
6. She was transferred to theatre in knee-elbow position to reduce the compression of umbilical cord by foetal skull. This position was maintained even when the surgeon scrubbed for operation.

B. IN THEATRE

1. The fetal heart sounds were checked for the last time just before cleaning of abdomen and found to be 120 beats per minute and regular.
2. catheterisation was done and 150 cc of urine obtained.
3. Anaesthesia. This was given as described in obstetric case no Obstetric case No. 7.
4. Operation:

   Lower segment caesarean section was done as described in obstetric case No.7.

A male baby weighing 2 .7 kg with APGAR score 6 at one minute and 8 at 5 minutes and a female baby weighing 2.1 kg with APGAR score 6 at one minute and 8 at 5 minutes were delivered. Suction of the nasal cavity and pharynx was done with a size 8 FG catheter. Placenta and membranes were delivered complete and uterus was repaired as described in obstetric case No.7. The abdomen was closed after correct swab and instruments count as described in obstetric case No.7 estimated blood loss was 400 ml. The length of both cords was later measured and was found to be 50 and 49 cm respectively for both the babies and therefore normal.

POST OPERATIVE CARE AND PROGRESS.

1. The blood pressure, pulse rate, respiration and temperature were monitored hourly for 12 hours then 3 hourly for 24 hours. They remained stable through out.
2. Intravenous dextrose saline 3 litres were given over a period of 24 hours.
3. The urine output was 1000 mls in 24 hours.
4. Injection pethidine 100 mg intramuscularly was given 8 hourly to relieve pain.
5. Injection chloramphenicol 500 mg was given 6 hourly for 48 hours then capsules chloramphenicol 500 mg 8 hourly for 5 days.
6. Injection Ampicillin 500mg was given intramuscularly eight hourly for 4 8 hours then capsules ampicillin 500 mg 8 hourly for 5 days.

She made uneventful recovery. Her vital signs remained stable. She began breast feeding her babies from second postoperative day. Her haemoglobin checked on fourth post operative day was 9 g/dl. The stitches were removed on the sixth post operative day and the wound had healed with primary intention. She was discharged home with her babies on the same day the stitches were removed. She was given iron and folic acid tablets on discharge. Her baby was started on immunization schedule before she was discharged.

FOLLOW UP AFTER 6 WEEKS.

Her puerperium was normal. She was not pale, her haemoglobin was 10g/dl. The wound had healed completely and she had no signs of pelvic infection. Her babies were in good health, had gained weight and were sucking well. She had no episode of fever. She was not pale or jaundiced, she was advised to continue immunization schedule for her babies.

She was counselled for family planning and opted for an Intrauterine contraceptive device (IUCD), which was inserted.

COMMENTARY.

Prolapse of the cord is a serious obstetric disorder because it is associated with high perinatal morbidity and moratlity[1]. It is the "falling down" of the cord infront of the presenting part after rupture of fetal membranes. Its occurrence is usually associated with conditions in which the presenting part is prevented from fitting closely into the lower segment of the uterus. Such conditions include multiparity, hydramnios, multiple pregnancy, malpresentations and occassionaly cephalo-pelvic disproportion[3]. Other factors that may predispose to cord prolapse are certain cord abnormalities like an abnormally long cord, and a low placental implantation with velamentous insertion of the cord. Certain operative manouvers, particularly amniotomy and manual rotation are prone to be complicated by cord prolapse.

The possible cause of prolapse of the cord in this patient is only speculative as it is difficult to point out a specific factor. However, the sudden gush of liquor amnii after rupture of membranes carrying with it the cord is a possibility. Further more, the rupture of membranes occurred while the patient was erect. The level of the presenting part was 4/5 after rupture of membranes and the chance that the presenting part was above the pelvic brim before rupture of membranes cannot be ruled out.

The degree to which cord prolapses varies. Sometimes only a small loop appears while at other times several centimeters may appear. A small loop may lie alongside the head forming an "occult" prolapse. It is easily replaced but more readily over looked and hence dangerous[2]

Early diagnosis of cord prolapse has been shown to rank high as a prognostic factor in fetal outcome[(1,3).]

This is in turn dependant on the awareness of the possible risk of cord prolapse following spontaneous rupture of membranes. An immediate vaginal examination is therefore indicated as soon as the patient reports rupture of membranes in order to detect such an accident. This was achieved in this patient as she ruptured the membranes as she was arriving into the labour ward and a prompt vaginal examination was done.

Treatment of cord prolapse is influenced by several circumstances which include the condition of the fetus, fetal maturity, the presentation of the fetus, the extent to which the cervix is dilated and the presence of any coexisting abnormality in the maternal pelvis. In situation where the fetus is proven dead beyond reasonable doubt, labour may be left to proceed normally if no other complication is present. If the fetus is still alive, Caesarean section must be carried out immediately unless vaginal delivery by forceps, vaccum delivery or breech extraction is likely to be straight forward. Vaginal delivery may only be allowed if the cervix is fully or nearly fully dilated and there is no obstacle to vaginal delivery.

The much freer resort to Caesarean section in recent years has greatly reduced the risk to the fetus[2,4]. Further more, with modern surgical technique and use of antibiotics the safety of Caesarean section has greatly increased and it is unreasonable to withhold this method of delivery, thereby, a living child can be obtained with a little risk to the mother.

Prompt delivery was accomplished in this patient. This is in accordance with the observation that there is significant poor fetal outcome when the interval between diagnosis or time of prolapse and delivery is long [1,2].

Abdominal delivery was chosen in this patient as it was regarded the safest method for both the fetus and the mother. The cervix was only partially dilated and the fetuses were mature and alive. While the definitive treatment

is underway, supportive treatment is also essential to sustain pulsation of the cord. This entails replacement of the cord into the vagina and postural treatment by positioning of the patient such that gravity will tend to prevent the presenting part from compressing the cord. The positions employed are genopectoral position, the Sims lateral position and the Trend- lenburg position. They all act in the same way to prevent cord compression. This patient was kept in knee elbow position.

Other methods used elsewhere to reduce cord compression include instillation of mothers bladder with normal saline via a Foley's catheter(500 - 750 mls may be required). And use of tocolytic drugs to arrest uterine contractions. An anaesthetic like halothane to abolish uterine contractions has been used[2]. The author has no experience with these methods and did not find it worth experimenting at this juncture. It is strongly emphasized that the fetal heart beats be auscultated immediately before operation in order not to expose the mother to the operative risk only to deliver for her a dead baby. This was done and the fetal well being was ensured before surgery was started.

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CERVICAL INCOMPETENCE - DELIVERED BY CAESAREAN SECTION

REGISTRATION NO : **73/97**

NAME : **MRS A.A**

PARITY : **GRAVIDA 4 PARA 0+3**

RESIDENCE : **BUGURUNI**

DATE OF ADMISSION : **15/10/97**

DATE OF DISCHARGE : **29/3/98**

SUMMARY:

Mrs A.A was admitted at a gestational age of 17 weeks. She had three consequtive midtrimester abortions previously and this time had a cervical cerclage and a prolonged hospital stay.

Spontaneous onset of labour did not happen after removal of cerclage at 37 weeks. She was then delivered by Caesarean section at 39 weeks of pregnancy. A male baby 2.8kg was delivered with good APGAR score. The mother and baby were discharged home a week later.

Her case is being presented with a short commentary on the diagnosis of cervical incompetence.

HISTORY OF PRESENT ILLNESS

Mrs A.A, was gravida 4 para 0+3, had her first and second pregnancies in 1994 and 1995 with both being aborted at five months of gestation. The abortions were spontaneous and were not preceded by any febrile illness, abdominal pains, diarrhoea, dysuria or vaginal bleeding. A sudden rupture of membranes which was shortly followed by expulsion of small live fetuses occurred in both pregnancies. Some abdominal pain and minimal blood loss followed before expulsion of placenta in both instances.

The third pregnancy was in 1997 and presented with similar events and was at 4 months gestation. In all these pregnancies she remembered that they were single fetuses and were not macerated. No external malformations were seen in all pregnancies. In none of the three pregnancies did she have an elevated blood pressure or generalized body swelling. No abnormalities were picked up at peripheral antenatal clinics in any of the pregnancies.

In the index pregnancy she had attended twice before being referred as a case of recurrent abortions. Her last normal menstrual period was on 21/6/97 and her expected date of delivery was on 29/3/98 and her gestational age was 17 weeks. She denied hsitory of liqour drainage, abnormal vaginal discharge or bleeding in this pregnancy.

MESNTRUAL HISTORY.

She had menarche at 13 years. Her menstrual periods were of 4-5 days duration occuring every 30 days and the flow was normal.

GYNAECOLOGICAL HISTORY.

There was no history of sexually transmitted diseases.

PAST MEDICAL AND SURGICAL HISTORY.

She had never suffered from hypertension, diabetes mellitus or syphilis. There was no history of cervical dilatation and curretage. There was no history of cervical surgery or trauma.

FAMILY AND SOCIAL HISTORY.

She was married and stayed with her husband. Both were peasants and they did not smoke cigarettes or drink alcohol.

GENERAL EXAMINATION.

She was healthy not pale afebrile and not icteric. The pulse was 80 beats per minute, regular with full volume and the blood pressure was 110/80 mm Hg.

CARDIO RESPIRATORY SYSTEM.

The respiratory rate was 22 per minute, and lung fields had good air entry without crepitations or rhonchi. Heart sounds were normal and without murmurs.

ABDOMINAL EXAMINATION.

The lower abdomen was distended to just below the umbilicus. There were no therapeutic marks. The fundal height was 18 weeks size corresponding with dates. The liver, spleen and kidneys were not palpably enlarged.

SPECULUM EXAMINATION.

Revealed a normal vulva and vagina. There was no abnormal vaginal discharge or bleeding. The cervix was bluish, with no structural abnormality and there were no visible membranes.

DIGITAL EXAMINATION:

Revealed a soft cervix about 1.5cm long, easily admitting an index finger. No membranes were felt.

DIAGNOSIS.

Recurrent Mid trimester abortions

? cervical incompetence

PLAN FOR MANAGEMENT

Base line investigations followed by cervical cerclage. This plan was communicated to the patient and it was acceptable to her.

INVESTIGATION AND RESULTS.

1. Haemoglobin 12 g/dl.
2. Midstream urine specimen was negative for protein and sugar. No bacterial growth was noticed after 24 hours of culture.
3. Serum creatinine was 71 u mol/lit.
4. VDRL for syphilis was negative.
5. High vaginal swab
   i. Microscopy
      - No trichomonas vaginalis seen
      - No gram positive or negative cocci or rods seen.

   ii. Culture;
      No bacterial growth.

6. Pelvic ultrasound

i. 25/11/97

Gravid uterus with a single live foetus. Biparietal diameter corresponds to 20 weeks of gestation.

liquor was adequate.

ii.9/3/98

Gravid uterus with singelton foetus in cephalic presentation. Biparietal diameter corresponded to 34 weeks.

Liquor was adequate.

No obvious congenital malformations seen.

No coning of the fetal membranes into the internal os was noted.

CERVICAL CERCLAGE.

The patient was anaesthetised as in obstetric case no 7 and was put in lithotomy position. The vulva and vagina were cleaned with antiseptics and sterile linen was used to cover the patient. Catheterisation was done and clear urine obtained.

Digital examination revealed a short cervix about 1.5cm with an internal os admitting a finger. An Auvard speculum was introduced into the vagina and the anterior cervical lip was grasped with a non serrated tissue forceps and gently pulled forwards. Using a round bodied needle with a double number 3 nylon stitch, four bites were taken from the substance of the cervix at 12,4,6 and 10 O'clock positions at the level of internal os. The two ends were tied posteriorly; and tightened just enough to provide a resistance to the passage of a number 6 hegars dilator. The knot was placed poseriorly to avoid irritation of the bladder. There was very slight bleeding during and after operation, and on inspection there was no draining of liquor. The patient was transferred to antenatal ward after recovery from anaesthesia.

POST OPERATIVE CARE.

1. Her blood pressure, pulse rate and respiratory rate were monitored hourly for 4 hours and then 2 hourly for 24 hours. They remained stable.
2. Salbutamol tablets 4 mg three times a day was started on the first day operatively.
3. Intramuscular pethidine 100 mg 6 hourly was given for 24 hours for analgesia.
4. She was under strict bed rest for 72 hours.
5. A perineal pad was put for 12 hours to observe bleeding or loss of amniotic fluid. It remained dry all the time.

She remained afebrile and without uterine contractions for five days postoperatively. Whilst in the ward she complained of labour like abdominal pain and vaginal discharge. A high vaginal swab was taken and the laboratory findings were as shown above. The cerclage was in place. Ultrasonic evaluation of the pregnancy confirmed an intact internal os and a viable singleton foetus.

In regard to the bad performance in the previous pregnancies, the author was ill at ease getting her discharged home. A consensus between the patient and the author was reached to keep her in hospital until delivery. She was put on strict bed rest with salbutamol 4 mg and Aspirin 600 mg thrice daily as tocolytics. Regular physical and ultasonographic examinations were done and apart from mild Braxton-hicks contractions, she remained stable with good fetal growth.

At 37 completed weeks the cerclage was removed but the cervix was found to be long, thick and closed. These findings persisted for two weeks despite her not being restricted to bed anymore. Spontaneous onset of labour was

not forthcoming as expected after removal of cerclage from an incompetent cervix at term.

OPERATIVE DELIVERY.

The pregnancy continued to the end of 38 weeks of gestation. On account of bad obstetric history, repeated poor Bishop's scores, and to optimize the outcome of that particular pregnancy an elective Caesarean delivery was planned. The patient was informed and she consented for it.

LOWER SEGMENT CAESAREAN SECTION.

This was done as in obstetric case no7.

A male baby with weight 2.8kg and APGAR score of 9,10 at 1st and 5th minutes respectively was delivered. The abdomen was closed as in obstetric case No 7 and anaesthesia reversed uneventfully. She was taken to recovery room.

POST OPERATIVE CARE.

1. Monitoring of blood pressure and pulse rate half hourly until stable, the 4 hourly for 24 hours.
2. Intravenous 5% Dextrose saline 2.5 litres in 24 hours.
3. Injection pethidine 100mg was given intramuscularly every 6 hours for the first 24 hours.
4. Injection ampicillin 500mg 8 hourly intravenously for 24 hours then to continue with tablets Ampicillin 500mg 8 hourly for 5 days.
5. Maintain an input/output chart.

Stitches were removed on the seventh day and the wound had healed by primary intention. She was discharged home with her baby and advised to come for review after six weeks.

POSTNATAL FOLLOW UP.

She was seen six weeks post operatively she had no complaints and the wound had healed well and uterine involution was complete. The baby was well and she had established lactation successfully. She was discharged from the postnatal clinic and was to continue with the MCH under five clinic for the baby's care.

COMMENTARY.

Cervical incompetency as a cause of recurrent midtrimester abortions and preterm delivery is not an uncommon problem. It has been estimated to be a cause of 20 percent midtrimester abortions[1].

The classical presentation of a patient with cervical incompetence is characterised by second trimester abortions. Usually there is painless dilation and or effacement of the cervix. The amniotic sac ruptures prior to any significant contractions and this is followed by a quick and relatively painless passage of the foetus; and often the gestational sac is expelled intact[5].

Antenatal diagnosis of cervical incompetence is made from history of recurrent second trimester abortions or premature deliveries and from the physical findings of a patulous cervix with an open internal os, sometimes with some degree of effacement. However physical findings of a dilated cervix without effacement does not indicate cervical incompetence or immediate delivery[3].

It has been suggested that the diagnosis of incompetence in the non pregnant cervix can be made by the passage of a number 8 or 9 hegars dilator through the cervix, by traction test with a filled foley catheter or by hysterography which would demostrate funneling of the uterine outline and hysteroscopic measurement of the internal os diameter. However none of these are considered to be an absolute indication of cervical incompetence[(2)].

Some corrective surgeries are done on the cervix on the basis of clinical suspicion and history rather than any mechanical diagnostic modalities.

Hence, there are no well controlled studies of significant number of patients to guide the clinicians in selecting the best methods in diagnosing cervical incompetence[3].

Mrs A.A. was diagnosed as having incompetence of the cervix after having had 3 midtrimester painless abortions. No mechanical diagnostic attempts were done because she had never presented to hospital in non-pregnant state. It has long been recognized that history alone is the best diagnostic aid of cervical incompetence[4] but there is little agreement regarding the diagnosis. The diagnosis is of exclusion that requires careful evaluation to rule out potential courses of mid trimester abortions[5]. An accurate prediction of whether or not a given cervix will be incompetent in a subsequent pregnancy is difficult[5].

The cervix may be functionally incompetent though, the structural defect may not be obvious [6].

In the management of cervical incompetence modalities of treatment have varied from bedrest, use of tocolytic drugs to use of Hodge pessary.

Currently the widely used modality is cervical cerclage.

Cervical cerclage was initially proposed by shirodkar in 1955 and later simplified by McDonald in 1957, and since then there have been many simplified modalities of the operation. It is thought that this cerclage works through interference with uterine polarity and preventing bulging of membrane which would initiate uterine contractions[7].

In typical incompetence of the cervix, removal of cerclage is often followed by the onset of labour and a relatively rapid delivery [5]. In A.A's case, labour did not follow removal of cerclage at 37 weeks, this poses several questions.

One, whether the diagnosis from a typical history is always correct. Second, whether cerclage produced some healing of an incompetent cervix such that subsequently she may not require cerclages. Third, whether together with cerclage, bed rest was the most effective treatment in her case [7]. These questions can not be easily answered because there are many middle trimester abortions which mimic incompetent cervix in presentation and are managed as such with a good outcome, but the correct diagnosis would be diffierent if case control studies were possible in this condition. Unfortunately women with cervical incompetence are usually so desperate such that no one would like to have some as "untreated controls" to determine whether bed rest alone would have worked.

Mrs A.A's case also poses some questions about the accuracy of diagnosis in that unlike most incompetent cervix who would go into labour easily after removal of cerclage, this did not happen in her case. Despite her being released from bed confinement, the weight of uterine contents did not initiate cervical dilatation. With these example it seems that what is diagnosed as cervical incompetence is not a single entity but a mixture of different conditions which result into silent cervical dilatation and abortion in the middle trimester and most of them benefit from cervical cercalge.

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ABRUPTIO PLACENTA – MANAGEMENT

REGISTRATION NO: **027/98**

NAME: **MRS M.M.**

AGE: **28 YEARS.**

PARITY: **G4, P3+0**

ADDRESS: **KUNDUCHI**

DATE OF ADMISSION: **28/9/98**

DATE OF DISCHARGE: **2/10/98**

DELIVERY NO: **12059**

SUMMARY:

Mrs M.M., a 28 years old gravida 4 para 3+0 was admitted into the labour ward with complains of abdominal pain and vaginal bleeding for 4 hours at 38 weeks gestation.

On examination, she was very pale and had a feeble pulse of 110 beats per minute and a blood Pressure of 140/90 mmHg. The uterus was tense and tender, the fetal parts were not easily palpable and the fetal heart was not heard by fetoscope. Abruptio placenta was diagnosed and labour was augmented by Amniotomy. Blood transfusion and other supportive

measures were instituted. She delivered a fresh still birth 4 hours later although she was 2 cm dilated at admission. She had un-eventful recovery. Her case is being presented plus a short commentary on the condition and its management.

HISTORY OF PRESENT ILLNESS.

At 38 weeks of gestation, she was apparently well till about 4 hours prior to her admission when she experienced sudden onset of constant abdominal pains which were first localized above the umbilical region but later became generalized. The intensity of abdominal pains increased progressively and there was an associated loss of fetal movements. About an hour from the onset of abdominal pain she bled vaginally and estimated to have lost 800mls of dark blood with no clots. She complained of dizziness, fainting, palpitations, headache and visual blurring. She denied history of abdominal trauma.

HISTORY OF PRESENT PREGNANCY.

She had her last normal menstrual period on 5/1/98 and her calculated date of confinement was 12/10/98. She was therefore 38 weeks by gestation. She booked antenatally at 24 weeks of gestation. Her booking blood pressure was 110/70 mmHg and the haemoglobin was 10.4g/dl. She had no oedema and the urine for protein was negative. She made 4 more visits after booking and no risk factor was diagnosed. Her weight gain was good and the fundus grew correspondingly to the length of gestation.

PAST OBSTETRIC HISTORY.

She was gravida 4 para 3+0. All three deliveries were full term normal hospital deliveries. All children were alive and well. No complications accompanied the previous pregnancies.

PAST MENSTRUAL AND GYNAECOLOGICAL HISTORY.

She attained menarche at 15 years and had normal menstrual flow of 5 days after 30 days. She had never used any form of contraception.

PAST MEDICAL HISTORY.

She had never been treated for hypertension in the past. There was no history suggestive of urinary tract infection or renal diseases in the past. She has never been admitted for medical or surgical illness in the past.

FAMILY AND SOCIAL HISTORY.

She was a third born in a family of five. There was no family history of hypertension, Diabetes mellitus or twinning. The husband was a petty businessman and she was unemployed.

PHYSICAL EXAMINATION.

General examination.

She was in pain. She was fully conscious, very pale, and afebrile. Her body temperature was 37°c. The pulse rate was 110 beats per minute, regular but of low volume. The blood pressure was 140/90mm Hg. She had +2 proteinuria but she had no oedema.

CARDIOPULMONARY SYSTEM.

The breasts were pendulous with no lumps. The apex beat was at the 5th left intercostal space along the mid clavicular line. The first and second heart sounds were normally heard with no murmurs. The lung fields were clinically clear, with vesicular breath sounds.

ABDOMINAL EXAMINATION.

She had a globularly distended abdomen. The Liver, spleen and Kidneys were not palpably enlarged. The fundal height was equivalent to 36 Weeks of gestation. The uterus was tense and tender. The fetal lie was longitudinal but the level of presenting part was difficult to discern. Fetal heart tones were absent.

A provisional diagnosis of abruptio placenta was made and vaginal examination was undertaken.

PELVIC FINDINGS.

The vulva was healthy, there was dark blood trickling from the introitus.

Digital examination revealed a moderately thick, soft cervix which was 50% effaced and 2cm dilated at the os.

Membranes were palpable above the internal os and amniotomy performed. Blood stained liquor egressed with some meconium stains.

The presentation was cephalic at level station 0 and the pelvis was adequate for the baby.

DIAGNOSIS.

1. Revealed abruptio placenta.

2. Intra-uterine fetal death.

MANAGEMENT PLAN.

1. Urgent blood grouping and cross matching was done and two litres of blood group A Rhesus positive was made available.
2. A wide bore cannula was inserted on one of the antecubital veins for resuscitative fluids and oxytocin infusion was set on a different intravenous line.

   1 litre of Ringer's lactate infusion was given fast, then another 1 litre was infused at 30 drops per minute however the speed was regulated according to the urine output per hour with an aim of 30mls of urine per hour.
3. A total of 2 litres of compatible blood group A Rh D positive was transfused to the patient.
4. Bedside clotting time was found to be 8 minutes and repeatedly revealed same time, except the final clotting time at delivery was 10 minutes.
5. An indwelling catheter was inserted for urine output monitoring 200ml of urine were obtained at initial catheterisation. Thereafter she produced approximately 50ml every hour.
6. Blood pressure and pulse rate were monitored every ½ hour. The pulse rate improved to 80 beats per minute after blood transfusion.
7. Monitoring for vaginal bleeding.

8. Injection pethidine 50mg intramuscularly was given for analgesia and sedation.

Vaginal examination was repeated after four hours the cervix was found to be fully effaced and fully dilated. She immediately delivered a fresh still born male baby weighing 2700grams. The placenta which weighed 500 grams followed immediately after delivery of the baby. On inspection, the maternal surface of the placenta was found to have an adherent clot which was dark and firm making a depression on the placental cotyledons. The clot was estimated to be equivalent to 400mls of blood. Third stage blood loss was 200mls. The uterus contracted effectively and there was no more fresh bleeding.

She was observed in labour ward for 12 hours and the blood pressure and pulse had stabilized at 130/70mm Hg and 80 beats per minute respectively when she was transferred to the postnatal ward.

She produced 1500mls of clear urine against 5 litres of infusions.

Postnatally the haemoglobin was 8.5g/dl and serum creatinine was 100umol/lit. Whilst in the ward she was advised to wear a tight fitting brassiere to supress lactation. She was discharged 4 days later in good health and was to be reviewed at the postnatal clinic 6 weeks later.

POSTNATAL FOLLOW-UP.

Six weeks postnatally she was found to be in good health. She had experienced painful breast engorgement at home which had waned spontaneously.

She had no symptoms and signs of anterior pituitary destruction or renal failure. The haemoglobin was 12.7g/dl and serum creatinine was 78umol/lit.

She was councelled for family planning and she settled for combined oral contraceptive pill which was supplied on discharge from postnatal clinic.

COMMENTARY

Abruptio placenta is one of the serious obstetric emergencies which is fatal and accompanied with high perinatal and maternal morbidity and mortality[1]. The incidence of abruptio placenta varies from 1 – 1.2%, while perinatal mortality varies from 20- 60% in milder forms and is almost 100% in severe cases [2,3]. At Muhimbili Medical Centre, abruptio placenta is the first commonest cause of fresh still birth as well as maternal mortality[7].

The aetiology of abruptio placenta is yet to be known although there are few unrelated conditions which eventually may lead to predelivery separation of the placenta with its attendant sequelae. Some of the conditions associated with abruptio placenta include hypertensive diseases, shortened umbilical cord and placental anomalies, external trauma to the abdomen, sudden intrauterine decompression, supine hypotensive syndrome, folic acid deficiency, suboptimal weight gain, poor nutrition, cigarette smoking and amniocentesis [1]. None among these produce abruptio placenta in all pregnancies at all times.

Preeclampsia in the patient described above was the only predisposing factor for abruptio placenta. She had a rise in blood pressure from initial 110/70mm Hg to blood pressure of 140/90mmHg with proteinuria ++. It has been reported that 10% of hypertensive pregnant women develop abruptio placenta, and about 25 – 60% of patients with abruptio placenta have a preceding hypertension[4].

The management of abruptio placenta depends on many factors; one is stability of the patient's haemodynamic status at diagnosis, fetal gestation, and viability in extrauterine life, haemostatic status and an estimate of the

time required to effect delivery[1]. This last factor has the most important bearing on patient management. If delivery cannot be effected within 8 hours of onset of abruptio, longer delays are potentially accompanied with serious hypofibrinogenemia [1,6].

In most cases the diagnosis is not difficult in classical cases. Sudden onset of lower abdominal pains, vaginal bleeding and loss of fetal movements are common symptoms and these should arise suspicion. The patient has pallor that is out of proportion with reported blood loss, pulse rate is usually high and blood pressure may be high because of vasoconstriction, low because of hypotension, or even normal. The uterus is tense and tender and fetal tones are absent. Most of these features were present in this patient and therefore the diagnosis was straight forward.

The management of abruptio placenta includes adequate resuscitation and expeditious delivery. Vaginal delivery is preferred unless other obstetric complications prevent vaginal delivery. Rupture of membranes as early as possible has long been championed in the management of this disorder, the rationale being that escape of amniotic fluid might decrease bleeding from the implantation site and reduce entry of thromboplastins into maternal circulation thus activating coagulation factors. There is no evidence that either is accomplished by amniotomy. It however initiates or accelerates labour.

Amniotomy was used to induce labour in this patient whose labour was not established on admission.

Abruptio placenta, seems to enhance the progress of labour in vaginal deliveries[2]. This obviates recourse to abdominal delivery in such patients who may not tolerate anaesthesia due to deranged haemodynamics. This is so examplified in Mrs M.M. case who was admitted with 2cm dilatation of the cervical os but 4 hours later she was fully dilated and delivered vaginally. This is a rate of about 2cm cervical dilation per hour. The reason for the rapid progress of labour in abruptio is not clear, but some of the reasons may be due to increased prostaglandin release from membrane stripping done by abruptio itself or because of the over distension of the uterus with haemorrhage hence resulting into reflex contraction of oversretched uterine muscle fibres.

Caesarean section has a place in the delivery of these patients if the fetus is alive and if there is exsanguinating haemorrhage despite adequate supportive therapy [2]. However, adequate blood for transfusion is a prerequisite and there must not be coagulation failure.

Blood transfusion is in most cases an important facet towards effective management of abruptio placenta. Depending on the state of patient it may be given before delivery or withheld until after delivery. It must be fresh blood as old blood is lacking platelets, factor III and factor VII and it may hasten consumption of these factors instead. Fresh frozen plasma is also useful. This patient received 2000mls of fresh blood during labour. Laboratory determination of prothrombin time, partial thromboplastin time, serum fibrinogen levels, platelet count, fibrinogen degradation products should be done to monitor coagulation profile of these patients. These were not available for logistic reasons and instead only the serial bedside whole blood clotting time was done in this patient. It is important to note that even if the above investigations were available, they are time consuming and the

coagulation profile of the patient may change significantly over a matter of minutes and the results may often give a very wrong impression of coagulation state of the patient.
For this reason the simple, easy serial blood clotting time was considered adequate in this set up.

Because of severe vasoconstriction and raised blood pressure which frequently occurs in abruptio placenta, blood pressure records are poor indicators of circulatory status of the patient and better monitored by central venous pressure records.

Alternatively, hourly measurements of urinary output reflects better on the renal perfusion and therefore on the general circulatory condition. The average urine output in this patient was adequate.
The chances of recurrence in subsequent pregnancy is high. In general, the recurrence rate is about 11%. This necessitates the attending obstetrician to be more vigilant in monitoring the patient closely and intervene promptly should signs of a recurrence appear.

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DIABETES MELLITUS IN PREGNANCY - DELIVERED BY CAESAREAN SECTION AT 36 WKS.

NAME	:	**MRS S.K.**
AGE	:	**27 YRS**
REG NO.	:	**032/97**
DELIVERY NO.	:	**360**
RESIDENCE	:	**KIGAMBONI**
DATE OF ADMISSION	:	**03/12/97**
DATE OF DISCHARGE	:	**16/1/98**

SUMMARY.

Mrs S.K., 27 years old, gravida 3 para 2 with 2 living children, was a known insulin dependent diabetic on regular insulin therapy for the past 3 years. She booked at the antenatal clinic early and had apparently no clinical complications of diabetes mellitus. The patient had good follow up with fairly good control of blood sugar levels and blood pressure. Caesarean section was done at 36 weeks because of objective reduction in foetal movements and a male baby weighing 4 kg and APGAR score 9,10 at 1 and 5 minutes respectively was delivered. Bilateral tubal ligation was also done after having councelled the couple.

Some aspects of diabetes mellitus in pregnancy rather characteristic in the African pregnant patient typified by this case are discussed.

PAST OBSTETRIC HISTORY.

The patient was gravida 3 para 2, a known insulin dependent diabetic (IDDM) for the past 3 years. Her first pregnancy was a full term normal delivery of a male baby 3 kg in 1990. No complications were reported and the baby is alive and well.

The second pregnancy was in 1992 was also a full term normal delivery of a female baby weighing 3.4 kg. No complications were reported and the baby is alive and well.

PRESENT OBSTETRIC HISTORY.

She booked at 16 weeks of gestation. Her last normal menstrual period was on 24/4/97 and expected date of delivery was calculated to be 1/2/98 as she had regular cycles of 28 days.

History of early vaginal bleeding in this pregnancy or plural pregnancy in family was denied at booking. Her weight was 70 Kg. The blood pressure was 110/60 mm Hg, (Haemoglobin 70%, urine albumin was negative and there was no oedema). The fundal height was 16/40 and did correspond with dates. Preliminary investigations were Blood group:

O +ve, VDRL Negative, Mid stream urine – culture no pathogens were isolated, and creatinine 70 u Mol/Litres.

She was on lente insulin 28 units once daily which was her pre-conception dose and so far she had reported no symptoms suggestive of hypoglycaemia or hyperglycaemia. However her initial blood glucose profiles revealed a tendency towards hyperglycaemia in the evenings. A combined twice daily dose of soluble and lente insulin of 8 and 10 units respectively was institued and euglycaemia was achieved with all blood sugar levels below 8.8 mmol/litres in all blood sugar profiles.

Ultrasonography done in the early 2nd trimester revealed no congenital malformations. She made seven visits on fortnightly basis and the diabetes seemed to be under good control though the blood pressure was 140/90 mm Hg with no proteinuria. By then she was weighing 72 kg. Her vision was normal, the skin was normal, there was no evidence of neuropathy, Vaginal candidiasis and no hydramnios. She was taking 6 meals per day with 3 major meals and three snacks inbetween.

She was admitted on 3/12/97 at 32 weeks with an aim to monitor closely blood glucose profiles, blood pressure and to ease foetal monitoring.

GYNAECOLOGICAL HISTORY.

There was no history of abnormal vaginal discharge or use of any form of contraceptives.

PAST MEDICAL HISTORY.

There was no history of admission in the past and history of tuberculosis or hypertension. She was a known Diabetic for the past three years on Insulin treatment with remission.

FAMILY AND SOCIAL HISTORY.

Mrs S.K. was a housewife who neither smoked nor drank alcohol. Her husband was a business man.

PHYSICAL EXAMINATION(GENERAL).

On admission general physical examination revealed a lady of medium frame, height 160 cm, weight 74 kg, was not pale, not jaundiced, and had no lymphadenopathy, or oedema. She had no dermatological problem and was afebrile.

RESPIRATORY SYSTEM.

The Respiratory rate was 22 per minute. The chest was clear with normal vesicular breath sounds .

BREASTS.

Were normal with no palpable lumps.

CARDIOVASCULAR SYSTEM.

The Pulse was 80 beats per minute regular, of normal volume, with no femoral pulse delay. Blood pressure was 140/90 mm/Hg with a normal jugular venous pressure. She had no parasternal heave or thrill, the apex beat was in the 5th left intercostal space, mid clavicular line. Heart sounds were audibly normal with no murmurs.

CENTRAL NERVOUS SYSTEM.

There was no muscle wasting, with normal tone and power. There was no loss of sensation to touch and pain noted.

ABDOMEN.

The Abdomen, Had no scars, moved regularly with respiration and was uniformly distended. Liver and spleen were not palpably enlarged and renal angles were not tender. The fundal height was equivalent to 36 weeks of gestation and corresponded with the gestational age. There were no features suggestive of hydramnios. The lie was longitudinal and the fetal heart beat was 140 beats per minute, regular.

PELVIC EXAMINATION.

Revealed no features suggestive of vaginal candidiasis and there was no other detectable pathology.

INVESTIGATIONS.

1. Haemoglobin 11g/dl.
2. Blood slide was negative for malaria parasites.
3. Urine - microscopy = sugar ++, ketones -ve, protein + , cells < 5 High power film
   - culture = no pathogens were isolated.
4. Serum creatinine = 117 umol/Lit, Blood urea Nitrogen 3.5 mmol/Litre.
5. Stool = revealed no intestinal parasites or ova.
6. Ultrasound done on 29/12/97 revealed singletone fetus live and BPD corresponding to 36 weeks, no polyhydramnios, placenta is posterior and not low lying, no congenital malformations seen.

7. Blood sugar profiles:

Fasting 3.6mmol/litres, one hour after breakfast 10.3 mmol/litres, one hour after lunch 12.3mml/litres, one hour after dinner 11.9 mmol/litres.

CONCLUSION

Poorly controlled insulin dependant diabetes mellitus in pregnancy with hypertension.

PLAN OF MANAGEMENT.

The patient was managed jointly with a diabetic physician and the plan was:

1. to admit the patient with the following objectives
   a. Maintain blood sugar levels below 8 mmol/Litre.
   b. Ensure maternal and fetal well being
2. Monitoring for maternal and fetal well being and fetal growth by checking the following:
   a. Maternal blood pressure 6 hourly daily.
   b. Blood sugar profiles once weekly.
   c. A diabetic chart where urine sugar, ketones and proteins were examined.
   d. weekly maternal weight chart.
   e. fortnightly ultrasonography for BPD charting.
   f. Foetal movement count.
3. Patient was counselled for tubal ligation.

Treatment.

1. Insulin dose was changed to: lente 12 and soluble 8 units twice daily ½ hour before meals. The late afternoon hyperglycaemia prompted this change.
2. Two tablets of chloroquine weekly.
3. Tabs Ferrous sulphate 200 mg twice daily and folic acid 5 mg once daily.
4. Tablets Aldomet 250mg thrice daily.

RESPONSE TO TREATMENT.

a. Maternal blood pressure: towards 34 weeks of gestation the blood pressure started rising to 160/100 – 170/110 mmHg despite treatment. There was no proteinuria. She had no premonitory signs of imminent eclampsia. Aldomet was stepped upto 500 mg thrice daily. This dosage maintained blood pressure at 140/90 mm Hg untill delivery.
b. Maternal Blood Glucose

By mid third trimester she started experiencing attacks of hypoglycaemia in the early morning hours and her fasting blood glucose kept on decreasing with urine sugar being strongly positive at times. The rest of the sugar profiles were averagely within a range of 8.2 – 8.5mmol/litres. These features were suggestive of the Somogyi phenomena. Notably towards term she responded well to lower doses of insulin – soluble 6 units and lente 8 units twice daily. It was interesting to note that she never showed a tendency to increased insulin demands with gesational age.

c. Maternal well being:

She remained in reasonable good health, and did not contract infections. On delivery she weighed 74 kg, Haemoglobin was 11 g/dl, and she had no oedema. Serial renal function tests were normal.

d. Foetal well being:

Serial fundal height assessment and ultrasonography revealed normal growth in correspondence with gestational age. There was no polyhydramnios. Fetal movement count initiated around 32 weeks revealed reduction of foetal movements at 36 weeks by 50% of the base line. She was then immediately planned for Caesarean section.

PRE OPERATIVE PREPARATIONS.

1. Consent for anaesthesia and surgery were sought and patient was shaved.
2. Nil per oral.
3. Two units of blood were cross matched and grouped ready for transfusion if need may arise.
4. Paediatrician was informed to be around for care in the neonatal ward after delivery.
5. Since, she had not taken her morning dose of Insulin and her fasting blood glucose revealed 5.2nnol/Lit, no Insulin was given and intravenous drip of 5% Dextrose was set to run at rate of 120mls/hour.

OPERATIVE PROCEDURE

Anaesthesia was induced by Atropine1 mg, Thiopentone 375 mg, given intravenously followed by intubation, and was maintained by halothane 0.5%, pavlon 4 mg intravenous and oxygen 6 litres/minute.

CAESAREAN SECTION

An indwelling urethral catheter was introduced and about 300 ml of clear urine obtained. The patient was kept in supine posture with left lateral tilt. The abdominal wall was cleaned with savlon 1:20, and then iodine and the patient was draped with sterile linen.

A subumbilical midline incision was made from the upper border of the pubis to a point 2.5 cm below the umbilicus. The Rectus sheath was incised, the Rectus muscle was pushed to one side. The parietal peritoneum was incised on the upper third and abdomen opened.

The uterovesicle peritoneum was opened laterally and the bladder was pushed down with a stick swab.

Using a knife the lower uterine segment was incised to the membranes and the opening was extended into a fish mouth incision by means of a curved scissors widely. Membranes ruptured spontaneously and clear amniotic fluid was sucked. The fetal head was then delivered followed by shoulders and the trunk. The cord was doubly clamped, cut and ligated. The baby was resuscitated quickly. It was a male weighing 4 kg with APGAR score 8 and 10 at 1 and 5 minutes respectively.

Immediately upon delivery of the anterior shoulder 5 units of oxytocin was added into the infusion and Green Armytage clamps were applied to the lower segment edge. The placenta and membranes were then delivered completely.

Uterine cavity was mopped clean. The uterine wall was repaired using size 1 chromic catgut and interlocking suture for the first layer and continuos suture for the second layer. Reperitonization was done using size 0 chromic catgut. Bilateral tubal ligation was then performed as in obstetric case no 7.

The abdominal packs were removed. Peritoneal cavity was mopped dry. uterus was well contracted and normal. Both ovaries were normal. The abdominal wall was closed as in obstetric case no.7.

Intrauterine clots were squeezed out, vulvoperineal toilet was done, and the catheter was removed. Anaesthesia was reversed by atropine 1 mg, neostigmine 2.5 mg intravenous, followed by suction and extubation. The estimated blood loss was 300 ml.

She recovered well form anaesthesia and was taken back to the ward. She continued with intravenous fluids, injection pethidine 100 mg intramusular 8 hrly for 24 hours, injection ampicillin 500 mg 6 hourly for 24 hours then orally for five days and vital signs monitoring.

THE BABY.

The baby was normal and had no external congenital malformation.

The baby was sent to the neonatal unit for observation and blood sugar monitoring and fared quite well.

The baby was discharged 48 hours after the delivery from the neonatal ward because of normal serial blood sugars.

6 HOURS POST OPERATIVE.

She was complaining of abdominal pain but had no bone pains. She was awake, conscious and well oriented. She was pink, non-icteric, with a temperature of 37°C, respiratory rate was 24 per minute, pulse 96 beats per minute, and blood pressure of 100/60 mmHg. Chest was clear and heart sounds were heard normally. The abdomen was moving with respiration, soft and the dressing was dry. Uterus was well contracted and vaginal

bleeding was within normal limits. Urine was clear and the output was 180 mls. She was doing fine hence post operative instructions were ordered to continue.

1ST POST OPERATIVE DAY.

She fared well, she was pink and had no jaundice. Temperature was 37°C, respiratory rate 22 per minute, pulse was 86 beats per minute and blood pressure was 100/60 mm Hg. The chest was clear and heart sounds were normal. The abdomen moved with respiration, was not distended, soft, with no organomegaly. Renal angles were non tender. Uterus was well contracted corresponding to 18 weeks size. Bowel sounds were heard. There was no undue vaginal bleeding. Micturition was normal and urinary albumin was trace. Haemoglobin was 10 g/dl. The intravenous line was stopped she was started on oral fluids and ambulated.

She fared well, and vital signs remained stable. The chest was clear and heart sounds were heard normally.

Fasting blood glucose levels were taken everyday once upto seventh post operative day and were found to range from 5.5 mmol/lit to 6.2 mmol/lit. The stitches were removed on seventh post operative day and she was discharged home.

POST PARTUM VISITS.

On all three occasions she was found to be fine with no features suggestive of hypoglycemia or hyperglycemia. The scar had healed well. Upon completion of 6 weeks she was discharged from the postnatal clinic to continue with Diabetic Clinic.

COMMENTARY.

Diabetes mellitus is a clinical syndrome characterized by hyperglycemia due to a deficiency or diminished effectiveness of insulin. It is a metabolic disturbance of multiple metabolic pathways rather than glucose metabolism alone, although the effects on carbohydrate metabolism are the most apparent[1]. In diabetes more so complicated by pregnancy a lot remains obscure. The aspects of diagnosis, contraception, antenatal care and obstetric management of a pregnant diabetic are still full of controversies. Despite this, hyperglycemia remains the sine qua non in diagnosis of diabetes.

Diabetes is rare in the African continent[3]. In Tanzania a prevalence of 0.9% has been reported [2] in the general population. It is rather difficult to estimate the true incidence of diabetes in pregnancy. With regards to worldwide data a range of 0.3 - 0.6%[6] has been reported. This is comparable to the Tanzanian figure of 0.3% [1,8]. Other african countries also report similar figures for example 0.25% for Nigeria[3]. The perinatal mortality rate remains high in most african series ranging from 12.9% - 32% [3,4,5]. This figure in Tanzania stands at 10%[1,8].

Accumulating evidence suggests a racial difference in insulin requirements in diabetic pregnancy. Study on african pregnant Insulin dependent diabetics, in Dar es Salaam show that, in a good proportion of them, insulin requirements were noted either to remain constant or even decrease progressively with advancing pregnancy. Lutale et al revealed that among their registrants 29% had their insulin requirements unchanged and 36% had a decrease in insulin requirements [1,8]. This data is consistent with that of kinnear et al [3] and Fraser et al [4]. It is interesting to note that Mrs S.K.

insulin requirements decreased with gestational age. This is in contrast to what is reported from european literature where by insulin requirements were found to increase with advancing gestation [9,10].

Available data suggests that glucose tolerance in the african pregnant woman is different from her european counterpart. The glucose tolerance responses in african pregnant women whether diabetic or non diabetic appears not to be significantly affected by pregnancy and may even improve in the course of pregnancy.

In order to obviate sudden intrauterine death in diabetic pregnancy, delivery has been advised to be effected at around 37 weeks. Currently there is a growing body of evidence suggesting that in well controlled uncomplicated diabetes, spontaneous onset of labour and delivery at term and even over 40 weeks is feasible[9]. Good fetal surveillance technology makes this a possibility. However, it is still not yet widely accepted although there is already a trend towards its adoption in european countries [10]. In view of our poor fetal surveillance technology the author fails to support the adoption of such a policy for our set up and still recommends delivery in the 37th week. In Mrs SK's case delivery was done at 36 weeks because of severe reduction in foetal movements.

An ideal contraceptive for diabetics is not available yet. Advise on contraception is an important part of the present day care of diabetic women during the reproductive years. Contraception is difficult in diabetics because of the adverse effects of certain methods on metabolic and circulating systems. Moreover diabetics may interfere with effectiveness of contraception[7]. All diabetics should be prepared to accept some limitation of family size. Sterilization is a matter of personal decision by the couple after the risks of pregnancy have been explained.

Mrs S.K., 27 year old, a para 3 diabetic for 3 years was strongly advised to opt for tubal ligation which she accepted.

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SICKLE CELL ANAEMIA IN PREGNANCY – NORMAL DELIVERY.

NAME: **MRS Z.M.**

AGE: **24 YEARS**

GRAVIDITY: **1**

PARA: **0**

DELIVERY NO: **12098**

REGISTRATION NO: **032/98**

DATE OF ADMISSION; **22/9/98**

DATE OF DISCHARGE: **29/9/98**

SUMMARY:

Mrs Z.M. a 24 years old primigravida was referred to Muhimbili Medical Centre because of severe anaemia in pregnancy. A peripherial blood smear revealed sickle-shaped red blood cells and a sodium metabisulphite test on a fresh blood specimen showed most of red blood cells sickled. Haemoglobin electrophoresis confirmed homozygous SS genotype. She was put under obstetrician and haemotologists care until 38 weeks of gestation when she went into spontaneous labour and delivered a female baby weighing 2.5kg with a good Apgar score. Her case is being presented with discussion on complications and modes of delivery among sickle cell gravidas.

PRESENT OBSTETRICS HISTORY;

Mrs Z.M. was referred to Muhimbili Medical Centre high risk antenatal clinic from periphery with a diagnosis of severe anaemia at 26 weeks of gestation. She had fared well in the early weeks of pregnancy but later on she developed what was described by the referring health centre as "resistant anaemia". She had booked at 20 weeks of gestation and generally felt weak and tired at rest. She had shortness of breath and could not lie flat comfortably. She denied having had pedal swelling, chest pain or chronic nonproductive cough. She had not experienced recurrent malarial attacks, urinary tract infections or any haemorrhagic events. Haemoglobin estimation at booking was recorded as 5.4g/dl and she was put on haematinic supplements and chloroquine prophylaxis. Her appetite remained good throughout early pregnancy and her diet was fairly balanced. Referral was made after two subsequent visits at the periphery where her haemoglobin was found to be 5.2g/dl despite haematinics.

Gynaecological history:

Menarche was at 15 years. Her menstrual cycles were regular occurring every after 30 days. Menstrual loss was not heavy and lasted 3 days. She had never been on any form of contraception.

Her last normal menstrual period was on 5/1/98, and the expected date of confinement was 12/10/98.

PAST MEDICAL HISTORY:

From early childhood she had been hospitalised many times for anaemia. She had received frequent blood transfusions from a regional hospital.

She was diagnosed to have sickle cell anaemia in childhood and had been put on folic acid tablets since then.

From the age of 10 years, she had not had any more blood transfusions after what she described as getting cured of sickle cell by a traditional healer.

She therefore never volunteered this diagnosis at antenatal booking.

FAMILY AND SOCIAL HISTORY:

She was the first born in a family of four siblings. All other siblings had the similar problem and had died in childhood from recurrent fevers and anaemia. Both herself and the husband were engaged in petty business.

There was no family history of diabetes, hypertension or twinning. She neither drank alcohol nor smoked.

PHYSICAL EXAMINATION:

She was aesthenic, not of typical sickle cell habits and had a normal gait. She was moderately pale with a tinge of jaundice. She was not cyanosed, had no lymphadenopathy, finger clubbing, koilonychia, or oedema. The temperature was 36°c, her height was 160cm.

RESPIRATORY SYSTEM:

The respiratory rate was 22 per minute. The chest was clear with normal vesicular breath sounds heard bilaterally.

CARDIOVASCULAR SYSTEM:

The pulse rate was 90 beats per minute, regular and good volume with no femoral delay. The blood pressure was 100/70mmHg. The heart sounds were audibly normal with no murmurs.

ABDOMINAL EXAMINATION:

There was a globular distension of the abdomen. The liver was palpable 2.5cm below the right subcostal margin. It was smooth and nontender its edges were sharp. The spleen was not palpably enlarged and the renal angles were free of tenderness and masses. The fundal height was corresponding to the gestational age of 26 weeks. Foetal heart tones were heard and they were normal.

DIAGNOSIS:

Sickle cell Anaemia in pregnancy.

MANAGEMENT PLAN:

Admit the patient for investigation to confirm previous reported findings and treatment of anaemia in pregnancy.

INVESTIGATIONS AND RESULTS:

1. Blood smear for malaria parasites was negative twice.
2. Stool for hookworm ova was negative.
3. Sickling test – positive.
4. Haemoglobin electrophoresis – HbSS.
5. Midstream urinalysis and culture
   i. urinalysis

      No pus cells or red blood cells.

      No granular casts.

   ii. Culture.

      No bacterial growth.

1. Serum creatinine 70umol/lit.
2. Blood analysis
   i. Haemoglobin ranged between 5.4g/dl and 8.g/dl.
   ii. Reticulocyte count 2%.
   iii. Peripheral blood film
- few sickle cells seen
- target cells present.
   iv. White blood cells. Total count 7600/mm^3.
- Normal differential count.
- No macropolycytes(giant polymorphs).

1. Serology for syphilis – (VDRL) – negative.
2. Blood group and Rhesus factor – ORh positive.
3. HIV screening – ELISA test – Negative.
4. Husbands haemoglobin electrophoresis – AS.

Final diagnosis:

Confirmed sickle cell disease in pregnancy.

Treatment plan:

1. Folic acid tablets 5mg thrice daily.
2. Chloroquine prophylaxis for malaria 300mg base weekly.
3. Blood transfusions to keep haemoglobin atleast 8g/dl.
4. Any fever to be urgently worked up and appropriately treated.
5. To watch for any sickle cell crisis and manage them expeditiously.

Antenatal Care:

After base line work-up and blood transfusions to improve her haemoglobin status, she was discharged home but continued to attend the antenatal clinic weekly. At discharge the haemoglobin had risen to 8g/dl and remained at 7.6g/dl until delivery at 38 weeks. No febrile illness or painful crisis

occurred during outpatient care. She continued to attend the hematologist's sickle cell clinic throughout the pregnancy.

The reticulocyte count did not rise to more than 2% with haematinics.

She was readmitted in the antenatal ward at gestational age of 37 weeks for induction of labour at 38 weeks.

DELIVERY:

At 38 completed weeks while in the antenatal ward she went into spontaneous labour. On examination the cervix was 6cm dilated and in the labour ward, artificial rupture of membranes was done revealing clear liqour and no cord prolapse. There was neither caput nor moulding and the position of the presenting part was left ocipito-anterior with vertex at +1 station.

Pelvis was asessed to be adequate for the baby.

CONDUCT AND PROGRESS OF LABOUR

1. Partogram was filled. Cervical dilatation was marked and was determined after 4 hours. Foetal heart rate and rhythm, frequency strength, and duration of contractions and head descent were assessed half hourly and were normal.
2. Intravenous 5% dextrose, a total of three litres were run.
3. She was delivered vaginally four hours later without an episiotomy.
4. Oxytocin was given and placenta was delivered by controlled cord traction. The placenta weighed 400 grams.

Summary of Labour:

First stage	4 hours
Second stage	15 minutes
Third stage	5 minutes
Total	4 hours 20 minutes

The Baby:

Female, APAGR score 9,10 at 1st and 5th minutes respectively.

Weight 2.5kg.

There were no external malformations.

Post Partum Progress:

She was kept in the ward for seven days. Post delivery blood pressure was 120/70mmHg and remained so until discharge. There was no episode of fever, jaundice, bony pains, loin pains or uterine tenderness. Urine was negative for pathogens. Haemoglobin was 7.4g/dl. She was discharged home on folic acid tablets 5mg daily and chloroquine 300mg weely. She was advised that without a screened spouse for sickle cell disease, the chance of getting an affected baby could not be predicted. It was suggested that she would be better off sterilised as effective contraceptives mainly the pill and intrauterine devices were unsuitable for her, the former because of increased chance of thromboembolism and the later because of infection.

POST NATAL FOLLOWUP:

Both the mother and baby were doing well. Her haemoglobin was 6.8g/dl lower than the discharge level. She had established lactation and was breast feeding. An intrauterine contraceptive device had been inserted at a peripheral family planning clinic despite her low haemoglobin level.

Haemoglobin electrophoresis from the baby's blood showed AS genotype and that of her husband was (AS) genotype. The mother was councelled on the 50% chance of having sickle cell disease (SS) children and 50% chance of AS.

She continued to attend the haematologists sicklers clinic thereafter.

COMMENTARY.

S-Homozygotes, SC hetrozygotes and S-beta thalassaemia hetrozygotes are the haemoglobinopathies which make up sickle cell disease[1].

Although their clinical features are similar, as regards complications during pregnancy, Hbs – beta-thallasaemia carries the best prognosis and S-homozygote is the most dangerous[2].

Pregnancy in sickle cell disease is characterised by an increase in complications, some of which are potentially lethal. They include severe anaemia, bacterial infections, painful crisis, bone marrow fat embolism and acute sequestration[3]. It is therefore no accident that even with good medical care in parts of tropical Africa, maternal and fetal mortality remain at-least five times as high as they are among the general population[4]. In the westIndies and in the Untied States, however, the outlook is better[4].

Painful crisis is the most common cause of morbidity and the most frequent reason for short term mobilisation. It may occur in any organ but it most often affects the bones and joints. The crisis are most frequently encountered during the last four weeks of pregnancy, in labour, and the first week of the puerperium[1,2]. The appearance of systolic hypertension and proteinuria in a bone pain crisis around the end of pregnancy (sometimes called pseudotoxaemia) is of grave prognostic significance. It is associated with pulmonary bone marrow fat embolism and in the absence of effective treatment the mortality from it is high.

The incidence and severity of anaemia also increases in sickle gravidas. Three mechanisms are usually responsible for this.

The first is referred to as acute sequestration crisis in which a large volume of blood suddenly pools in the spleen and sometimes in the liver[2].

The spleen becomes enormous, and the haemoglobin drops so precipitously that death from hypovolemic shock may follow. Acute sequestration crisis may be precipitated by hypoxia, acidosis, venous congestion, or infection[3]. Apart from acute sequestration, severe anemia also develops from serious folate deficiency and from temporary marrow hypoplasia[5]

The increased liability to develop bacterial infections, especially respiratory and urinary tract infections, is part of the natural history of sickle cell disease and in pregnancy these infection are of increased significance for atleast two reasons. They are more difficult to control particularly in the puerperium, and the associated fever and acidosis may accelerate sickling[4]. Another feature of bacterial infections in sickle cell disease is that they are most marked when severe anaemia is present with the haemoglobin and haematoirit levels below 7g/dl and 20% respectively[2].

About 50% of patients with sickle cell disease will have uncomplicated labours[6]. In the rest, some will be complicated by obstetric problems, and others by having some of the complications peculiar to sickle cell disease.

Vaginal delivery is the best mode of delivery but ~~should~~ if labour ~~be~~ is prolonged for 24 hours, there should be no hesitation in terminating it if necessary by Caesarean section[1]. This is because dehydration and acidosis which accompany prolonged labour may precipitate painful crises.

Elective Caesarean section has no special advantage unless there are other obstetric indications for it.

Together with idiopathic causes of crisis in sickle patients, hypoxia, dehydration, infections and acidosis are known to predispose sicklers to sickling crisis[2,4,6].

Therefore Caesarean delivery should be undertaken with great care, as the risk of hypoxia at induction of anaesthesia is great. It is not too early to

emphasize that sickle cell disease is rarely an indication for abdominal delivery.

Dehydration may occur in elective surgical patients who fast for more than six hours pre-operatively increases the risk triggering off a crisis at anaesthesia[5].

After an abdominal delivery, together with chronic anemia, the chances of puerperal sepsis are high. If this happens the prognosis of a sicker mother post operation becomes very poor. Some authorities have gone to an extent of giving prophylactic antibiotic cover even in vaginal deliveries.

Mrs Z.M. had smooth antenatal, intrapartum and puerperal periods. She had few blood transfusions and had no painful crisis during pregnancy. The disease had followed an indolent course from the age of 10 years and she had few blood transfusions and no painful crisis after this. The mild type of sickle cell anaemia is usually accompanied with elevated levels of fetal haemoglobin (Hbf) which persists from neonatal periods in those with haemolytic disease[3].

Haemoglobin A and F comigrate at electrophoresis and hence are not separable with this test[5]. Patients with homozygous SS as Mrs ZM succumb in early childhood when blood transfusion facilities are not advanced enough to take care of these. This is exemplified by all other siblings who died in early childhood.

It is apparent that in Mrs ZM case that the disease had followed a mild course from the age of 10 years. Also in the antenatal period she did not experience any painful crisis. The puerperium was uneventful.

The course of labour was smooth and this emphaizes the importance of reserving Casesarean delivery only to those with obstetric indications, taking into account the risks one is put under when anaesthesia is given.

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COMPLETE PLACENTA PRAEVIA: DELIVERY BY CAESAREAN SECTION

NAME: S.A.

AGE: 34 YEARS

GRAVIDITY: 5 PARA 4

REGISTRATION NO.: 023/98

DELIVERY NO: 12064

RESIDENCE: MBAGALA

DATE OF ADMISSION: 13/10/98

DATE OF DISCHARGE: 19/10/98

SUMMARY:

Mrs S.A. was admitted to the Labour ward from Antenatal Clinic with a history of painless vaginal bleeding that was unprovoked. She was at 37 weeks of gestation and fetus was alive. A diagnosis of placenta praevia was made from clinical findings and this was confirmed by ultrasonography. An emergency Caesarean section was done and a live female baby weighing 2.7kg and APGAR score of 9 at 1st minute and 10 at 5th minute was delivered. The postoperative period was uneventful. Both the mother and her baby were discharged 6 days later in good health. The diagnosis and management of placenta praevia is discussed.

History of presenting illness

Mrs S.A. was gravida 5 para 4+0 lady with four living children. She had her last normal menstural period on 19/1/98. She had booked at Muhimbili Medical Centre at a gestation age of 26 weeks. Her booking weight was 54 kg. She was normotensive and her haemoglobin was 75%. She had no oedema and urine was negative for proteins. The fundus was 26/40 corresponding to gestation age.

She made about five subsequent visits, her blood pressure remained normal ranging between 90-110/60-70mm Hg. She gained about 8 kilograms. Her haemoglobin fell slightly to 70% on about the fifth visit. There was no history of vaginal bleeding throughout her five visits.

On the date she made her last visit, at 37 weeks gestation she had painless, unprovoked vaginal bleeding which started a few hours after she left the antenatal clinic. The bleeding soaked her underpants and ran down her thighs and legs. She continued to feel fetal movements. She was soon taken in a taxi back to Muhimbili Medical Centre where she was received in a non shocked state. She denied history of draining liqour, fever, haematuria or headache.

PAST OBSTETRIC HISTORY.

She was gravida 5 para 4 with four full term normal hospital deliveries, with no complications. The last child birth was 3 years ago.

MENSTURAL HISTORY.

She attained menarche at 14 years and had regular periods with a duration of 4-5 days and occuring every 28 days. The flow was normal.

GYNAECOLOGICAL HISTORY.

She has never used any form of contraception, and there was no history of intermenstrual bleeding.

PAST MEDICAL HISTORY.

There was no history of any illness in the past.

FAMILY AND SOCIAL HISTORY.

She was married to a businessman. She had no formal education. She never took alcohol nor smoked cigarettes. There was no history of diabetes mellitus, twins or hypertension in the family. Familial bleeding disorders were also denied.

PHYSICAL EXAMINATON.

Mrs S.A. was healthy looking, had moderate pallor, was unicteric, afebrile and had no pedal oedema.

CARDIOVASCULAR SYSTEM.

The pulse rate was 102 beats per minute, regular and of normal character but rather feeble. The blood pressure was 100/60 mmHg, and Jugular venous pressure was normal. The heart sounds were audibly normal with no murmurs.

RESPIRATORY SYSTEM.

The Respiratory rate was 20 per minute, and lungs were clear with normal vesicular breath sounds.

ABDOMEN.

The abdomen was globularly distended, moved regularly with respiration. The uterus was soft, and non tender and the uterine fundal height, corresponded to 36 weeks gestation. The lie was longitudnal, with a cephalic presentation and a high head. The fetal heart sounds were audible and regular with a rate of 144 beats per minute.

PELVIC EXAMINATION (INSPECTION).

Patient was still bleeding slightly and there were some clots at the vaginal introitus.

DIAGNOSIS.

Antepartum haemorrhage, due to probably placenta praevia.

Plan of Management:

1. Resuscitation;
   Intravenous line with cannula size 18G was set and 2 litres of normal saline were run fast.
2. Blood grouping and cross matching was done. Her blood group was ORh positive and two units of compatible blood were reserved.
3. Emergency ultrasonography – it showed a singleton live fetus with a cephalic presentation which was consistent with gestational age of 37

weeks. The placenta was situated on the lower uterine segment entirely covering the internal cervical ostium and placed posteriorly.

4. Emergency Caesarean section.
5. Counsel for tubal ligation.
6. Consent for anaesthesia and surgery.

OPERATIVE DETAILS.

Anaesthesia:

She was induced with atropine 0.6mg, Ketamine 100mg and Suxamethonium hydrochoride 100mg, all administered intravenously. She was intubated with a 7mm cuffed endotracheal tube. Maintenance was done with halothane 1% and oxygen 6 litres per minute.

OPERATIVE DETAILS.

Patient was made to lie supine on the operating table. The urinary bladder was catheterised using aseptic precautions and the catheter was left in position untill the operation was completed. The abdomen was painted with Iodine solution followed by 70% alcohol and then drapped with sterile linen.

OPENING OF THE ABDOMEN

A Subumbilical midline incision was made from the upper border of the pubis symphysis to a point 2.5cm below the umbilicus. The rectus sheath was incised, the rectus muscle was pushed to one side and the parietal peritoneum was incised on the upper third and the abdomen opened.

LOWER SEGMENT CAESAREAN SECTION

Having opened the abdomen and visualised the lower uterine segment which was devoid of varicose veins. The lateral recesses of the wound were packed with large packs attached with artery forceps.

The utero vesicle peritoneum was lifted up with dissecting forceps and snipped with scissors and its division was aided by the assistant moving the abdominal retractor from side to side. The lower peritoneal flap thus formed was stripped downwards for about 5cm together with the incorporated bladder, using a swab on a stick, and a broad area of the lower uterine segment was exposed.

OPENING THE UTERUS.

This was done by making a small transverse incision in the uterine muscle and cutting down to the amniotic membrane and the incision was extended laterally by means of curved scissors using the forefinger of the left hand as an elevator.

EXTRACTION OF THE FETUS.

This was done by inserting the hand below the fetal head and scooping the head out of the pelvis. The upper part of the fetal trunk was then extracted by hooking the figner into the nearest axilla delivering the shoulder and arm; this was repeated on the other side. When the fetus was half born, 0.25 mg ergometrine was injected intravenously. The fetus was completely extracted, and the cord clamped and cut. A live, healthy female baby weighing 2.7kg, with an APGAR score of 9 and 10 at one and five minutes respectively was delivered.

The placenta and membranes were delivered next by controlled cord traction. There was slight haemorrhage from site of placental attachment.

Oxytocin 10 IU in a drip and Ergometrine injection 0.5mg as a bolus were given to achieve adequate uterine contraction. This controlled the haemorrhage.

STITCHING THE UTERUS.

This was done with No 1 chromic catgut on an atraumatic round bodied needle in two layers. The first layer was sutured by carefully avoiding the uterine decidua, with locked continous stitches.

The second layer of suturing was done in such a way that it shut out the inner row of sutures completely out of sight.

Reperitonization of the lower uterine segment was done with fine, continuous catgut suture, with moderate tension.

BILATERAL TUBAL LIGATION.

This was done using modified pomeroy's method as follows:

The right fallopian tube was identified and held up with dissecting forceps so that a bloodless area of the mesosalpinx could be found (about halfway along the length of the fallopian tube). A knuckle of the fallopian tube was clamped with curved artery forceps and ligated below the forceps, and excised above the level of the artery forceps. The procedure was repeated on the left side.

CLOSING OF THE ABDOMEN.

This was done after ensuring haemostasis. The parietal peritoneum was closed with continuous sutures using chromic catgut No 0, the Rectus sheath with a continous suture using vicryl No 1. It was ensured that the knots at both ends were firmly tied. The skin was closed with interrupted matress silk sutures.

The wound was cleaned and dressed with dry sterile gauze. The blood loss was approximately 450mls. Reversal from anaesthesia was uneventful, and she was sent back to the postnatal ward.

POST OPERATIVE ORDERS.

1. Monitoring of blood pressure and pulse rate half hourly until stable, then 4 hourly for 24 hours.
2. Intravenous 5% Dextrose saline 2.5 litres in 24hours.
3. Injection pethidine 100mg intramusculary 6 hourly for 24 hours.
4. Injection Ampicillin 500mg 8 hourly intravenously for 24 hours then to continue with tablets Ampicillin 500mg 8 hourly for 5 days.
5. Maintain an input/output chart.
6. Monitoring vaginal bleeding.

POST OPERATIVE PROGRESS.

She recovered smoothly from the anaesthesia. She remained afebrile, normontensive, the uterus involuted well, lochia was healthy, and the wound healed well. The silk suture was removed on the sixth postoperative day and she was discharged home in good condition with her baby, and advised to attend the postnatal clinic 6 weeks later for followup.

FOLLOW UP AT THE POSTNATAL CLINIC.

She came to the postnatal clinic 6 weeks later. She had no complains. The abdominal scar had healed well and the uterus had involuted. Her haemoglobin was 12g/dl. The baby was also fine. She was discharged from the clinic in good condition.

COMMENTARY

Placenta praevia, the commonest cause of antepartum haemorrhage is defined as implantation of the placenta in the lower uterine segment within the zone of effacement and dilatation of the cervix, thus consituting an obstruction to the descent of the presenting part[1]. There are various definitions of the lower uterine segment.

1. Physiologically the lower uterine segment is that part of the uterus which is passively stretched during the labour, and takes hardly any active contractile part in the expulsion of the fetus.
2. Anatomically the lower uterine segment is that part which lies below the level at which the peritoneum is loosely attached to the uterus.
3. By metric definition the lower uterine segment is that part which towards term lies within 7.5cm from the internal os.

Placenta praevia is encountered in approximatley 1:200 births, but only 20% are total (placenta over the entire internal cervical os). About 90% of the patients are parous[3].

Multiparity, advancing age, previous Caesarean delivery and induced abortion and curretage increase the risk of placenta praevia [1,3,4]. In these conditions poor vascularisation of the corpus is the common factor.

Mrs S.A. fell in the high parity group.

Four degrees or grades of placenta praevia have been recognized.

Grade I The placenta encroaches on the lower segment but does not reach as far as the internal os.

Grade II The placenta reached the internal os, but does not cover it.

Grade III The placenta covers the internal os but does not do so when the cervix dilates.

Grade IV The placenta covers the internal os even when the cerivx dilates fully.

When the placenta, is on the anterior uterine wall it is regarded as "A" and one on the posterior wall is "B". Mrs S.A. had grade IV B placenta praevia.

The essentials of diagnosis include spotting during the first and second trimester of pregnancy. The first episode of haemorrhage usually beings at some time after 28 weeks and is characteristically painless[3], but as in this case, it is rarely so profuse as to prove fatal[2,4] . The other clinical pointers are presence of abnormal or unstable lie in the last 6-8 weeks, or when the presenting part is not closely related to the pelvis eg in complete placenta praevia the presenting part is high.

The real time scanner is ideal for screening purposes because it is not invasive, the test is easily and rapidly performed with an accuracy rate in expert hands of over 95%, it is an excellent means of identifying those patients who clearly do not have placenta praevia and who can thereafter be examined vaginally[5]. Placental localisation was done in this patient by ultrasonography.

After the diagnosis has been made the patient should be admitted, blood taken for grouping and Rh typing and compatible blood is made available.

If bleeding stops, anaemia should be appropriately corrected during the patient's stay in the hospital. Should the bleeding not cease within a few hours of admission, or should it become more profuse with time, expectant

treatment is out of place[2]. If the praevia is of higher degree, three, four or two and posteriorly situated then Caesarean section should be performed without delay. In grade one and two anterior, labour should be induced if the cervix is favourable for that because engagement of the presenting part causes a tamponade effect on the placenta thus preventing further haemorrhage. However, in most cases the cerivx is so unfavourable that one has to resort to an abdominal delivery[1,3].

Caesarean section was performed in Mrs S.A. because it is the method of choice for delivery with complete placenta praevia. Since the patient was at term, this was done urgently, to avoid the risk of fatal bleeding.
The advantage that Caesarean delivery offers is that, through immediate delivery of the fetus and placenta, allowing the uterus to contract and stop the bleeding, and also forestalls the possibility of cervical lacerations, a serious potential complication of vaginal delivery in total placenta praevia[3].
In cases of uncontrollable haemorrhage during Caesarean section ligation of the uterine vessels is recommended; though most cases will respond to accurate suturing of the uterine incision and the use of ergometrine.
Occassionally hysterectomy will have to be resorted to [2].

At times Caesarean section is done even if the fetus is dead basically for the welfare of the mother[2].

The choice of operative technique is of importance because of the placental localisation and the development of the lower uterine segment. When the

placenta lies far enough posteriorly that the lower uterine segment can be incised transversely without encountering placenta, and when the fetus is cephalic, the transverse incision is preferred[4]. If, however, such an incision were to be made through the placenta, bleeding, both maternal and fetal, could be severe, and extension of the incision to involve one or both uterine arteries could occur with surprising ease. Therefore, with anterior placenta praevia, a vertical uterine incision is often safer. In this patient the placenta was posterior, so transverse incision in the lower segment was done safely. Puerperal infection and anaemia are the most likely postoperative complications. Thus patient was transfused 1000mls of cross matched blood to correct what was lost intraoperatively. Antibiotics were given in the anticipation of sepsis. This is said to be commoner due to the placental site being in the lower genital tract than usual which provides a portal of entry quickly reached by ascending infection[2].

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PLACENTA ACCRETA - MANAGED BY SUBTOTAL HYSTERECTOMY

NAME	:	**MRS A.F.**
AGE	:	**28 YRS**
DELIVERY NO.	:	**2155**
REGISTRATION NO.	:	**211/97**
DATE OF ADMISSION	:	**18/2/98**
DATE OF DISCHARGE	:	**26/2/98**

SUMMARY.

Mrs AF a 28 years old gravida2 para 1, was admitted to labour ward for an emergency Caesarean section on account of previous Caesarean section due to cephalopelvic disproportion.

At Caesarean section, the third stage was complicated by placenta accreta. She bled profusely intraoperatively and a subtotal hysterectomy was done. She received two units of blood transfusion intraoperatively and had an uneventful post operative period. She was discharged home on the seventh postoperative day after being councelled and adviced to attend the post natal clinic six weeks later for follow up.

The management and difficulties in diagnosis of placenta accreta prior to the third stage of labour are discussed.

HISTORY OF PRESENT PREGNANCY.

Mrs AF., a 28 year old gravida 2 para 1 was attending at peripheral antenatal clinic. She had a history of previous Caesarean section. Her last normal menstrual period was on 17/6/97 and her expected date of delivery was 24/3/98. She booked at 20 weeks gestation with a blood pressure of 120/76 mmhg and weight of 62 kg. Her uterine fundal height corresponded to her gestational age. She subsequently made six more visits and remained normotensive, gained eight kg through out her pregnancy and had no pedal oedema. On her last visit at 38 weeks of gestation, the baby's size was assessed to be big and the pelvis inadequate for vaginal delivery. Due to lack of operative facilities she was refered to Muhimbili for Caesarean section. At Muhimbili she was found to have strong contractions, and estimated size of baby was 3.2 kg. She was prepared for emergency Caesarean section.

OBSTETRIC HISTORY.

She was gravida 2 para 1. She had an emergency Caesarean section during her first pregnancy due to cephalopelvic disproportion three years ago. She delivered a male baby weighing 2.4 kg, she had uneventful postoperative period with no wound or puerperal sepsis and was discharged home on seventh post operative day. The child is alive and well till todate.

MENSTRUAL HISTORY.

She attained menarche at 13 yrs of age and had regular periods every 28 - 32 days lasting for 4 -5 days, with no dysmenorrhoea.

PREVIOUS MEDICAL HISTORY.

There was no history of any serious illnesses in the past and no history of hypertension after the first delivery.

PREVIOUS SURGICAL HISTORY.

She had never had any surgical gynaecological procedures like dilatation and curretage before.

FAMILY AND SOCIAL HISTORY.

She was a peasant farmer. The husband too was a peasant farmer. There was no family history of hypertension, diabetes mellitus or twins.

PHYSICAL EXAMINATION.

General Examination.

Her general condition was satisfactory, she was well nourished, was pink, not jaundiced, had no oedma, was afebrile and not dehydrated. She measured 146 cm in height.

CARDIOVASCULAR SYSTEM.

The pulse rate was 90 beats per minute regular and good volume, and blood pressure was 120/80 mm Hg.

Jugular venous pressure was not raised.

Heart sounds were audibly normal without murmurs.

RESPIRATORY SYSTEM.

The Respiratory rate was 22 per minute and lungs were clear with normal vesicular breath sounds.

ABDOMINAL EXAMINATION.

Her abdomen was uniformly distended and moved well with respiration. There was no organomegally and renal angles were non tender. The fundal height was corresponding to 36 weeks, the lie was longitudnal with cephalic presentation and the level was 5/5. Fetal heart beat was 144 per minute and was regular. Uterine contractions were 3 per 10 minutes lasting 20 seconds. Baby size was estimated at 3.2 – 3.3 kg.

PELVIC EXAMINATION.

The vulva and vagina were normal. The cervix was fully effaced, 5 cm dilated and felt very soft. The sacral promontory was easily felt at 10 cm, and the sacral curve was normal. The ischial spines were not prominent and subpubic angle was 90^{o}. The intertuberous distance was 3 knuckles.

DIAGNOSIS.

Previous Caesarean scar with a big baby.

PLAN OF MANAGEMENT.

1. For emergency Caesarean section.
2. Grouping and cross matching of 2 units of blood was done.
3. Haemoglobin was checked.
4. Consent for anaesthesia and surgery was obtained.

INVESTIGATIONS.

1. Haemoglobin 11 g/dl
2. Blood group O +ve.

OPERATION NOTES.

Anaesthesia.

She was given Atropine 1 mg, penothal 350 mg, and scoline 100 mg, all administered intravenously. She was intubated with a 7mm cuffed enodotracheal tube. Maintenance was done with Halothane 0.5% and oxygen 6 lit/min.

CAESAREAN SECTION.

Patient was made to be supine on the operating table. The urinary bladder was catheterized using aseptic precautions and the catheter was left in position until the operation was completed. The shaved abdomen was cleaned with savlon 1: 20 followed by iodine solution and then draped with sterile linen.

The old scar was excised and a subumbilical midline incision was made from the upper border of the pubis to a point 2.5 cm below the umbilicus. A small incision was made with the scalpel on the anterior recuts sheath and curved Mayo's scissors was used to extend it through the entire length of the abdominal incision, exposing the extra peritoneal fat and the peritoneum.

The peritoneum was picked up at a point in the upper half using two mouse-ttoth forceps placed 1-2cm apart. Caution was taken not to include

omentum or bowel in the bites. An incision was then made between the two forceps using scissors and it was extended throughout the length of the incision guided by two fingers of left hand and distally avoiding injury to the bladder. Few adhesions were seen.

The uterovesicle peritoneum was lifted up with dissecting forceps and striped with scissors and its division was aided by the assistant moving the abdominal retractor from side to side. the lower peritoneal flap thus formed was stripped downwards for about 5 cm together with theincorporated bladder, using a swab on a stick, and a broad area of the lower uterine segment was exposed.

OPENING THE UTERUS.

This was done by making a small transverse incision in the uterine muscle of lower segment and cutting down to the amniotic membrane and the incision was extended laterally by means of curved scissors using the fore finger of the left hand as an elevator.

EXTRACTION OF FETUS.

This was done by elevating and guiding the head of the baby into the uterine wound, using the right hand as a scoop. The umbilical cord was clamped and cut as soon as the fetus was completely extracted.

The baby was a male baby, weighing 3.4 kg and had APGAR score of 8 at one minute and 10 at five minutes. Injection Ergometrine 0.5 mg was administered intravenously by the anesthetist.

The left and right edges of the uterine incision which were bleeding were clamped with Green Armytage clamps to control the haemorrhage. Even by then, there were no obvious signs of placental separation, namely, the lengthening of umbilical cord or appearance of margins of the placenta at the uterine incision.

lengthening of umbilical cord or appearance of margins of the placenta at the uterine incision.

The right hand was inserted into the uterine cavity along the placental surface to the uterine wall and there was no cleavage felt between the two and an attempt to remove the placenta led to profuse bleeding. Thus, a diagnosis of placenta accreta was arrived at and a decision to perform a subtotal hysterectomy was made in order to save her life.

SUB TOTAL HYSTERECTOMY.

The round ligaments were first identified and clumped with kocher's forceps, cut and tied with chromic catgut no 1 in succession. The fallopian tubes and ovarian vessels were then divided and ligated and both ovaries were conserved. The anterior leaf of peritoneum on each side was incised further to link up with the Caesarean . The posterior leaf of the broad ligament peritoneum was then divided down towards the uterosacral folds secured with kocher's forceps close to the cervix, divided and ligated. The lower segment of the uterus was then cut across at the level of the uterine incision. The uterine stump was closed with a continuous stitch of chromic cat gut no 2. Haemostasis was achieved satisfactorily and peritonisation was done. Further suction was done and the peritoneal cavity was mopped dry. Swabs and instruments were counted correct. The abdominal incision was closed as described in obstetric case no. 7. Two units of whole blood were transfused intraoperatively in addition to 4 litres of normal saline. The estimated blood loss was 3 litres and the total operating time was 1 hour. Reversal from anaesthesia was uneventful. She was transferred to the postnatal ward from the recovery room with a blood pressure of 100/60 mm Hg and a pulse rate of 82 beats per minute.

POST OPERATIVE ORDERS.

The following were done.

1. She was infused with 3 litres of normal saline alternating with 5% dextrose over the first 24 hours.
2. Injection pethidine 100 mg intramuscularly was administered 6 hourly for 24 hours.
3. Injection ampicillin 500 mg 6 hourly intravenously for 24 hours then capsules ampicillin 500 mg 6 hourly for 4 days.
4. vital signs were monitored half hourly for 6 hours then hourly until 24 hours then twice daily.
5. An input/output chart was maintained.

POST OPERATIVE FOLLOW UP.

She fared well post operatively. Her vital signs remained stable and the urine output was adequate. She was ambulant from the second post operative day, but felt weak and was quite pale. She developed a low grade fever on the third post operative day, which responded well to antimalarial treatment. Her post operative haemoglobin on the third day was 4.2g/dl. She was treated with injection imferon 5 ml on each buttock daily for 3 days, with 5 mg of folic acid orally daily. Sutures were removed on the sixth post operative day.

She was informed about the extent of her surgery and her future menstruation and fertility status. She initially felt her very depressed, but later seemed to accept the situation. She was discharged home with her

baby on the seventh post operative day and advised to continue taking folic acid tablets and to return to the post natal clinic after 6 weeks. She was seen at the postnatal clinic as per her appointment and was found to be in good health and cheerful. Her haemoglobin had risen to 9.2g/dl and her baby was also doing well. Her scar had healed well. She was therefore discharged from the clinic.

COMMENTARY.

An abnormally adherent placenta, although an uncommon condition, assumes considerable significance clinically because of morbidity and at times mortality from severe hemorrhage, uterine perforation and infection [1].

The true frequency of placenta accreta is not known. Breen et al reviewed reports of published cases of this condition and the frequency varied from 1 in 540 deliveries to 1 in 7,000 [2]. Although no studies have been done here, placenta accreta is definitely not uncommon.

Placenta accreta may be total, when the whole placenta is abnormally adherent, or partial if only several cotyledons are involved. When only a single cotyledon is abnormally ahderent, it is referred to as focal placenta acreta.

Placenta accreta represents a specific abormality of placentation, in which the placenta villi attach directly to myometrium without intervening decidua [2,5].

Depending on the extent of myometrical penetration, it is further classified into placenta increta, when placenta villi penetrate into the myometrium and placenta percreta, when the villi penetrate through the myometrium to reach the serosal surface.

Placenta accreta arises because inplantation of the ovum occurred in an area of the uterus in which the endometrium was deficient or damaged[3]. Aetiological factors include previous Caesarean section, previous uterinecurettage, previous placenta previa, multiparity and previously

treatment for Asherman's syndrome[2]. Congenital uterine abnormalities, cornual pregnancy, hydatidiform mole, myomectomy and manual removal of the placenta have also been attributed as predisposing factors in the etiology of placenta accreta [4]. Mrs AF had a Caesarean section in her last delivery and this could have predisposed her to present condition.

Adverse effects from placenta accreta during pregnancy or during the course of labour and delivery are uncommon. Rarely, intraabdominal hemorrhage or placental invasion of adjacent organs prior to labour has occurred, with the diagnosis being made at laparotomy[2]. The diagnosis is usually not made until uterine rupture or complications occur in the third stage of labour[5], as occurred in Mrs AF's case. Ultrasound diagnosis of placenta increta and percreta is now possible following improvements in ultrasound equipment. An absence of decidual interface between the placenta and myometrium can be seen as a loss of the normal retroplacental hypo-echoic zone. This is however not a feature that would normally be sought at a routine ultrasound examination [6].

Subtotal hysterectomy was resorted to in our case because of the severe haemorrhage. Had the bleeding not been life threatening, and had there been a need to preserve her uterine function, in some case it has been possible to leave the placenta in situ and hope that complete autolysis will occur [2]. The other most common form of conservative management is manual removal of as much placenta as possible and then packing of the uterus. But this is associated with fulminating sepsis and exsanguinating haemorrhage. Conservative surgical management in placenta accreta is associated with a four fold increase in maternal mortality and hysterectomy

therefore remains the treatment of choice[6]. However it would appear that the only place for conservative management is in carefully selected cases of focal or partial placenta accreta, without severe haemorrhage.

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UTERINE RUPTURE – SUBTOTAL HYSTERECTOMY

NAME: **MRS J.K**

AGE: **33 YRS**

REGISTRATION NO.: **166/97**

ADDRESS: **KIJITONYAMA**

DATE OF ADMISSION: **5/12/97**

DATE OF DISCHARGE: **15/12/97**

SUMMARY:

Mrs J.K., a 35 year old lady, para 4 +0 with 4 living children had adequate care at one periphery clinic. She was admitted to labour ward as a referral from Kijitonyama hospital with a diagnosis of ruptured uterus.

Clinical evaluation was in agreement with the diagnosis. She underwent an emergency laparotomy where a subtotal hysterectomy was performed. She had uneventful recovery and was discharged in fair condition. The case is presented and different modalities of treatment reviewed.

ANTENATAL HISTORY

Mrs J.K gravida 5, para 4 booked at Kijitonyama MCH Clinic at 16 weeks gestation. Her booking blood pressure was 110/60 mm Hg, she weighed 70 kg and had a height of 160cm. She had no oedema and her haemoglobin was estimated to be 8.1 g/dl. She made a total of six subsequent visits. She remained normotensive throughout her antenatal visits and gained about 10 kg. Her haemoglobin rose to 11g/dl on third visit but fell to 9.7 g/dl on her last visit, about three days before she was admitted in our labour ward. The fundal height grew in correspondence with gestational age. She received two booster doses of tetanus toxoid. The fetus lie was longitudnal with the head presenting.

INTRAPARTUM HISTORY.

Mrs J.K. started labour pains on 5/12/97 at around 1.00AM. Four hours later she felt a sudden sharp pain on the left side of the abdomen. Following this pain she was unable to walk or even stand, and fainted. She denied history of taking any local labour inducing herbs. She was rushed to Kijitonyama hospital. While on the way she slowly felt some subjective improvement, though the pain persisted. Fetal movements however, stopped half hour later. In the hospital she was noted to be pale, and having cold

extremities, and was rather restless. Her blood pressure was 100/60 mm Hg. The Pulse was not recorded.

The abdomen was tender and fetal parts were easily palpable. A diagnosis of ruptured uterus was made. Intravenous fluids were started, and she received 2000 mls of Ringers lactate before she was transferred to Muhimbili Medical Centre. She was sedated with a 100 mg of Pethidine intramuscularly.

Mrs J.K. arrived in labour ward at 6.00AM. She was ill looking, afebrile, very pale and her extremities were cold. The Pulse was 102 beats per minute, and blood pressure was 90/60 mm Hg. The abdomen was distended, tender and there was some guarding. Fetal lie and presentation were difficult to ascertain but fetal parts were easily palpable. Fluid thrill and shifting dullness were positive. Fetal heart were not present.

OBSTETRIC HISTORY

She was gravida 5 para 4 para + 0, with 4 living children. All previous pregnancies were term deliveries without complications.

MENSTRUAL HISTORY.

She attained menarche at 14 years. Her cycles were regular with interval of 28 days and a flow of 4 -5 days without dysmenorrhoea.

GYNAECOLOGICAL HISTORY.

She gave no history of ever using any form of contraceptives.

PAST MEDICAL HISTORY.

This was unremarkable.

FAMILY & SOCIAL HISTORY.

She was married and worked as a clerk. She neither smoked nor took alcohol. Her husband was a primary school teacher. There was no family history of diabetes mellitus, hypertension or multiple pregnancy.

PHYSICAL EXAMINATION.

She was conscious, ill looking and in pain, she was very pale, with cold extremities, she was afebrile, not jaundiced, and not dyspnoic, and had no oedema or lymphadenopathy.

CARDIOVASCULAR SYSTEM.

Her Pulse was 110/per minute, feeble and the blood pressure 90/60 mm Hg with a normal jugular venous pressure.

She had no parasternal heave or thrill. Heart sounds were audibly normal with no murmurs. Tachycardia was noted.

Heart sounds were audibly normal without murmurs. Tachycardia was noted.

RESPIRATORY SYSTEM.

The Respiratory rate was 24/minute and the lungs were clear with vesicular breath sounds.

BREASTS.

Both breasts were normal, engorged with no lumps.

ABDOMEN.

The abdomen was distended, and tender with some guarding. It was difficult to note the fetal lie and presentation, as well as the state of the liver and spleen. Fetal parts however, were palpable. Uterine contractions were absent, and shifting dullness and fluid thrill were positive.

PELVIC EXAMINATION.

The vulva was normal, stained with blood. Vagina looked normal and there was no bleeding.

The cervix was soft, intermediated, uneffaced and two centimeters dialated.

The presenting part was not felt.

DIAGNOSIS.

Ruptured uterus with haemoperitoneum.

MANAGEMENT.

RESUSCITATION.

Intravenous fluid were continued after establishing a new line with a large bore cannula (gauge 16). She had already received 2 litres of Ringers lactate, and 2 litres of Normal saline were given fast.

Pulse fell to 98 per minute, and blood pressure rose to 110/70mmHg.

Blood was taken for grouping and four units were cross matched. Bedside clotting time was 5 minutes. Urgent haemoglobin was 7.5 g/dl.

She was started on injection crystalline penicillin 5mu and injection chlorampheicol 1gm both given intravenously. These were the only antibiotics available at that time.

COMMENTARY

Anencephaly is a neural tube defect (NTD) characterized by absence of the vault of the skull and cerebral hemispheres that are either rudimentary or absent. The absence of the cranial vault renders the face very prominent and somewhat extended, the eyes often bulge from their sockets and the tongue hangs from the mouth. About 70% of anencephalic fetuses are females[1].

The conditon is usually attended by polyhydramnios in more than 50% of cases. Prolonged pregnancy has been reported in a number of cases which is probably attributed to anomalous foetal brain pituitary adrenal function.

Anencephaly is a disorder "inherited" in a polygenic/multifactorial fashion and for idiopathic reasons has the highest incidences in Northern Ireland with a rate of 6-8/1000[1,2]. Nothing definite is known about the cause of anencephaly, but it appears that both genetic and environmental factors play a part in its causation. There could be a possible role of folic acid in the genesis of neural tube defects. A genetic factor is suggested by the high frequency with which this malformation recurs in subsequent pregnancies[1]. In general if a couple has had a child with such an anomaly the chances of getting another one are 2-5%. Siblings also run a greater risk of having affected children with the highest risk being in female offspring of sisters and the lowest in male offspring of brothers.

According to Mgone[5], in a ten months study at Muhimbili Medical Centre in 1983 on congenital malformations not a single case of anencephaly was reported.

Elevated levels of alpha-feto protein in serum and amniotic fluid are found in patients with neural tube defects. A collaborative study done in UK

revealed that 88% of fetuses with anencephaly can be diagnosed by elevated maternal serum levels of alpha – feto proteins though false positives are quite high. Conversely 12% of anencephaly pregnancies will not be detected[1,6].

The primary diagnostic test in pregnancies at risk for neural tube defects is analysis of amniotic alpha-fetoprotein concentration. According to Milunsky et al and data from UK collaborative study of 1979 the diagnostic yield was 98-98.2% respectively[1,6]. A gel electrophoresis assay of amniotic fluid acetyl cholinesterase has been developed and does provide a highly specific test for neural tube defects virtually eliminating the few false positives that occur with alpha feto protein testing. With increasing expertise in ultrasonography most neural tube defects are directly detected by this techinique more so in for anencephaly, whereby detection by ultrasound is comparable to maternal serum alphafeto proteins[3]. According to Sabbagha et al ultrasonography used extensively in this manner is economical and leads to detection of almost all cases of anencephaly by 14 - 15 weeks of gestation in time to offer the gravida the choice of safe termination[7].

Anencephaly is a rare condition in our set up, but the psychological stress the couple suffers upon delivery of such a fetus is quite enormous.

Early detection is imperative in patients at risk.

Unfortunately, our laboratories have less sophisticated technology with alpha feto protein determination still being done by double immunodiffusion technique hence there are no normal levels of alpha- feto proteins for our population in Tanzania. Thus it is virtually impossible at

this time to detect anencephaly early by sole reliance on laboratory. Moreover, the author strongly suggest that patients at risk be advised to

book early at high risk antenatal clinics for meticulous serial ultrasongography.

An enencephalic fetus is usually stillborn, and even when it is born alive, it cannot survive more than a few hours or days[3]. Once diagnosis and implications were explained to the patient, she insisted that the pregnancy be terminated as soon as possible. While this was acceded to, but the risks and difficulties were discussed with the patient. Rupture of membranes could have been followed by adruption, the placenta being sheared off by the sudden reduction in size of its implantation site.

Nevertheless, induction is likely to be difficult and labour ineffective unless the volume of the uterine contents is first reduced. Probably the safest method is to drain the amniotic sac by puncturing the hind waters with a Drew-Smythe catheter. Usually an escalating oxytocin completes the labour. In our case, since good uterine response was obtained to oxytocin alone, there was no need to drain the hind waters.

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ADENOCARCINOMA OF THE CERVIX - PALLIATIVE RADIOTHERAPY

NAME:	**MRS RM**
AGE:	**24 YEARS**
REGISTRATION NO:	**904321**
ADDRESS:	**TEMEKE**
DATE OF ADMISSION:	**10/8/98**
DATE OF DISCHARGE:	**17/8/98**

SUMMARY:

Mrs R.M, a 24 years old para 1, was referred from Itigi hospital, with a diagnosis of carcinoma of the cervix. Evaluation and biopsy done at Muhimbili Medical Centre confirmed the diagnosis of adenocarcinoma of the cervix stage III B.

She received palliative radiotherapy.

Her case is being presented with a short commentary on difficulties in diagnosis and radiotherapy in young women with carcinoma of cervix.

HISTORY OF PRESENTING ILLNESS:

Mrs R.M. was referred from Itigi hospital on account of suspected carcinoma of the cervix. She presented at Itigi with a six month history of recurrent postcoital vaginal bleeding.

This was later followed with foul smelling watery vaginal discharge. The discharge was not copius or itchy. She had no urinary symptoms and she felt no abdominal pains. She had no backache, but had right lower limb swelling. She was not coughing, had no palpitation or dizziness, she admitted to have lost significant weight and had generalised body weakness.

MENSTRUAL HISTORY:

She attained menarche at 14 years of age. Her cycles were regular every 30 days, with 4 days flow. She had no menstrual problems prior to onset of the presenting illness.

GYNAECOLOGICAL HISTORY:

She had no history of vulval warts, or sexually transmitted disease. She had never used oral contraceptives.

PAST MEDICAL HISTORY:

She had no previous serious illnesses.

FAMILY AND SOCIAL HISTORY:

Married at 18 years and her first sexual exposure was only after this marriage.she denied having had any other sexual contacts. The husband too had no other wives and denied extramarital sexual partners.

She was a peasant farmer and second born in a family of five siblings. None among siblings had any chronic disease.

PHYSICAL EXAMINATION:

She was a young lady with fair nutritional status. She was moderately pale, afebrile, not icteric, not dypnoic. She had a grossly swollen right lower limb with moderate pitting. She had bilateral inguinal lymphadenopathy.

CARDIOVASCULAR SYSTEM:

The pulse rate was 100 beats per minute regular with good volume. Her blood pressure was 110/60 mm Hg and the jugular venous pressure was not raised. The heart sound were audibly normal with no murmurs.

RESPIRATORY SYSTEM:

The chest movements were normal. Trachea was central. The respiratory rate was 20 per minute and the lung fields were clear of crepitations and good air entry noted on both sides.

ABDOMINAL EXAMINATION

The abdomen was not distended, moved with respiration and it was soft, non tender and no masses were palpable. The liver, spleen and kidneys were not palpably enlarged. She had no ascites and the uterus was not palpable.

MUSCULOSKELETAL SYSTEM:

Had pitting oedema of the right lower limb. The left lower limb was normal.

PELVIC EXAMINATION:

The vulva and vagina were normal in appearance. They were stained with dark red blood which was foul smelling and flowed freely from the vagina. The vaginal mucosa was pale.

SPECULUM EXAMINATION:

A huge cauliflower like growth was seen arising from the whole circumference of the portio vaginalis. No part of normal cervix could be visualised. The growth bled easily on contact and gave an offensive odour. The upper vaginal mucosa was involved with the new growth.

RECTAL EXAMINATION:

The rectal mucosa was normal, freely mobile. The parametria were infiltrated with tumor mass and on the right side was fixed to the pelvic walls.

DIAGNOSIS:

1. Carcinoma of the cervix stage IIIB.
2. Anaemia

MANAGEMENT PLAN:

1. Investigations.
2. Examination under anaesthesia (EUA) and Biopsy.
3. Radiotherapy.

1. INVESTIGATIONS AND RESULTS.

a. Haemoglobin 7.6g/dl.

b. Midstream urine specimen

   i. Microscopy - few pus cells.

   ii. bacteriological culture - No growth.

c. Serum creatinine - 100umol/litre.

d. Blood smear showed hypochromic and anisocytotic picture.

e. Biopsy of the cervical lesion:

   Tumor cells had abundant clear cytoplasm with mild anaplasia. Tumor cells formed nests and invaded the stroma. Histopathological diagnosis was: Adenocarcinoma of the cervix - clear cell.

f. Chest Xray - Normal.

g. Intravenous urogram- facilities were not available at the centre then.

h. Serology for HIV – Negative.

After councelling the patient about the nature of problem and proposed mode of management a written consent was obtained for examination under anaesthesia

2. EXAMINATION UNDER ANAESTHESIA:

Intravenous pethidine 100mg and Diazepam 20mg were given. The patient was positioned in Lithotomy, and perineum and vagina were cleaned with savlon 1:20, and drapped with sterile linen. The bladder was catheterised and 300mls of clear urine was obtained. A sims speculum was introduced into the vagina and previous findings confirmed (vide supra).

Digital examiantion also confirmed parametrial infiltration on both sides, but on the right was fixed to the pelvic bone. The uterus was normal sized and freely mobile.

Rectal examination was done and confirmed parametial fixation to the pelvic bones on both sides. No adenxal masses were palpated.

Cystoscopy and sigmoidoscopy were not done.

Clinical diagnosis: Carcinoma of the cervix stage IIIB.

3. **CORRECTION OF ANAEMIA**:

Blood transfusion amounting to 1000mls of group O Rh postive compatible to her was given.

RADIOTHERAPY:

She was reviewed by the radio therapists and was evaluated and planned for radiotherapy.

Mrs R.M. was given 24 Gy by external beam using cobalt 60 at daily dosage for 2 Gy. This was palliative teletherapy and the tumor mass shrunk significantly. Intracavitary radiotherapy was not done due to difficulties in introduction of tandems through the external os. Bleeding stopped by palliative radiotherapy.

Thereafter she was discharged home after councelling for terminal care.

COMMENTARY

Carcinoma of cervix is a disease which is attributed to some sexual behaviour of the patients. The sexual activities which predispose to the disease include early (pre - menarcheal) intercourse, multiple sexual partners, high coital frequencies like in prostitutes and human pappiloma virus(HPV) infection with serotype 16 and 18[1].

Advanced stage is still the usual presentation. Histologically squamous cell is the commonest type found, and account for more than 90% of all invasive cancers[2].

Adenocarcinoma is less common, though its incidence is said to be increasing [3,4]. It usually begins within the cervical canal, but initial lesion may appear at or near the external os, large vegetative growth presenting at the vaginal surface of the cervix are rare. Mrs R.M. thus presented with the rare variety of adenocarcinoma.

Majority of patients with adenocarcinoma of the cervix present with abnormal vaginal bleeding; although 15 -20% are asymptomatic[5,7,9].

In one third of the patient the cervix is grossly normal and the tumour expands endophytically [4,8,9]. In post menopausal patient, the vaginal fornices may be obliterated by atrophy, making the cervix appear unremarkable, and the tumour may be appreciated only on rectal examination where the cervix will be unusually firm. This makes rectovaginal examination mandatory in all perimenopausal or postmenopausal women in evaluation of endocervical carcinoma.

Adenocarcinoma is more dfificult to detect on cervical cytological smear than squamous cell carcinoma. In one large series 51% of patients with adenocarcinoma had normal cervical cytology[10]. Colposcopy may be misleading because early lesions may not be readily visible. In one series only 20% were suspected on basis of colposcopic findings[11].
In patients with an expanded cervix an endocervical curettage should be performed to pick up the occasional associated occult adenocarcinoma even if cytologic and colposcopy findings are negative[3,8].

Computed tomograph (CT) scan of the abdomen and pelvis often provides valuable information to complete staging of cervical adenocarcinoma and may replace intravenous pyelography (IVP) where contrast is necessary. Cystoscopy is recommended in patients with symptoms referable to the bladder, abnormal urinalysis or disease involving parametria. Proctosigmoidoscopy should be done in all cases because of the associated higher risk of colon cancer, and to detect spread to rectum[3].

Adenocarcinoma involving both endometrial cavity and endocervix can present a clinical dilema. Hysteroscopy and magentic resonance imaging (MRI) may be helpful in these cases[8].

Treatment success for adenocarcinoma of the cervix is difficult to compare from one centre to another and from one patient to another because of variations in staging criteria, treatment protocols, histologic criteria and subtypes. For many years radiotherapy was the treatment of choice for early

stage cervical carcinoma until 1930's where mortality and morbidity of radical surgery were reduced. It was assumed that adenocarcinoma is less radiosensitive than squamous cell carcinoma, but it has been found out that adenocarcinoma is equally sensitive[6]. For young women with early stage disease surgery has several advantages including the opportunity for accurate assessment of disease spread, avoidance of radiotherapy together with its resultant complications, ovarian function conservation and psychological boost knowing that all the disease has been removed.
In Mrs R.M. case, this chance was lost due to advanced nature of the disease.

For advanced cases (late stage IIb, to iv b) radiation therapy is the treatment of choice[3]. The prognosis is said to be poor than squamous cell carcinoma. Anderson series report only 28% surviour with stage III and no survivors with stage iv at five years[3,6].
Conclusively adenocarcinoma is more difficult to detect on its earlier stages. Most authors suggest a poorer prognosis for adenocarcinoma than squamous cell cancer of the cervix.

It is unclear, whether this could be due to late diagnosis or earlier spread of adenocarcinoma than squamous variety.
Prognosis of late stage is grave. Further progress awaits the development of method of earlier detection and of more effective chemotherapeutic agents for cervical adenocarcinoma.
The use of radiosentizers (such as hydroxyurea), 5 fluorouracil and cisplatin) which is currently under study may benefit these patients[8,12].

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size, which was bigger than the gestational age. It was soft and foetal parts could not be felt or balloted. She aborted a mole few hours after admission. Evacuation of uterus was done by suction curretage. Six weeks later pelvic ultrasound showed enlarged ovaries and her urine was still positive for pregnancy test.

This being a crude test of trophoblastic function, she was started on cytotoxic therapy.

She received 8 courses of methotrexate to which she responded well. She was followed up for one year without recurrence. Difficulties of managing trophoblastic diseases in third world are discussed.

HISTORY OF PRESENTING ILLNESS.

Mrs S.M. was admitted on 26/7/97 in our gynaecology ward with a history of vaginal bleeding that was rather heavy with clots for two days. She also noticed that with the clots she passed some materials looking like grapes. She had amenorrhoea of 20 weeks accompanied with exaggerated symptoms of pregnancy. She also gave a history that the abdomen in the current pregnancy was increasing rather too fast.

She also experienced lower abdominal pain, which was colicky in character after the onset of vaginal bleeding. She had no history of fever, vaginal discharge or urinary symptoms. She had not fainted. She denied to have interfered her pregnancy.

PAST MEDICAL HISTORY.

This was uneventful.

MENSTRUAL HISTORY

She attained menarche at 15 years and had regular menstrual periods occurring every 28 –30 days for 4 days. The flow was moderate with no dysmenorhoea. She had never used contraceptives.

OBSTETRIC HISTORY.

She was para 4 with 4 living children. All her deliveries were a full term normal hospital deliveries without any complications.

Her last born child was 5 years age.

Her last normal menstrual period was on 10/3/97.

FAMILY AND SOCIAL HISTORY.

She was a standard seven leaver married to a small-scale peasant farmer.

She did not drink alcohol nor smoke cigarettes.

There was no history of Diabetes mellitus, hypertension, or bleeding disorders in the family.

PHYSICAL EXAMINATION.

GENERAL

She was in fair condition, was moderately pale, unicteric, afebrile and not dyspnoic.

BREASTS

Both breasts were engorged, with prominent Montgomery's tubercles.

There were no palpable lumps.

RESPIRATORY SYSTEM.

The Respiratory rate was 24/minutes and the chest was clear with normal vesicular breath sounds.

CARDIOVASCULAR SYSTEM.

The Pulse rate was 98 beats per minute, regular with normal volume and blood pressure of 110/70mmHg. The jugular venous pressure was not raised.

The heart sounds were audibly normal with moderate Tachycardia. There were no murmurs.

ABDOMEN.

The abdomen was distended, moving with respiration. The uterus was enlarged at 24 weeks size greater than her gestational age and it was soft with a doughy feeling on palpation. The spleen and liver were not palpably enlarged and both renal angles were non-tender and had no palpable mass.

PELVIC EXAMINATION.

The vulva was stained with blood, it was anatomically normal.

The vagina was full of clotted blood and some vesicles were recovered from the vagina.

The cervix was 5 cm dilated and soft, cystic products of conception were felt. Membranes had ruptured.

DIAGNOSIS.

Inevitable molar abortion.

MANAGEMENT

The patient was started on Intravenous normal saline, after inserting a 18 gauge cannula. Blood was taken for investigations as follows:

a. Haemoglobin 8g/dl

b. Grouping and cross matching 2 units.

She was started on oxytocin 10 Iu in 1 lit of 5% dextrose. She aborted a mole one hour later. It was a bunch of grape like vesicles with no foetus. She was taken for evacuation in the theatre.

Preoperative preparations.

An intravenous drip of Dextrose/saline 1000mls was set up with a 20Iu of oxytocin and a written consent for general anaesthesia and operation was obtained from the patient.

EVACUATION:

Anaesthesia:

She was given injection ketamine hydrochloride 100mg and atropine 1 mg both given intravenously.

Curretage:

The patient was put in lithotomy position. The perineum, vulva and vagina were cleaned with savlon 1:20 and then drapped with sterile towels. The bladder was aseptically catheterized and 150mls of clear urine drained.

Bimanual examination was then done to ascertain the uterine position, angle and size and to estimate the dilatation of the cervix. The uterus had been reduced to 14 weeks size, and the cervix was about 1 – 5 cm dilated.

There were no adnexal masses.

A weighted speculum was inserted in the vagina to expose the cervix. The anterior lip of the cervix was held with a volsellum forceps and pulled slightly to straighten the cervical isthmic angle. Suction curette size 12 was passed into the uterine cavity till the tip of the curette touched the fundus. It was connected to suction machine and suction applied. The curette was rotated to 360° and brought down slowly till the internal os was reached.

A large blunt curette was then passed into the uterine cavity to ensure the uterus was empty.

Specimen was taken for histology.

Blood loss was slight, estimated to be 200mls. A repeat digital examination after the curettage was completed revealed a well-contracted uterus of the size of 10 weeks. No adnexal masses were palpated. Anaesthesia was reversed and the patient sent to the ward after waking up with a blood pressure of 110/60mmHg.

Progress:

Patient was returned and kept in the ward for observation. She did not bleed any more, pulse, blood pressure and respiratory rate remained stable and abdomen was soft.

Investigation:

After evacuation the following investigations were done;

1. haemoglobin 8.2g/dl
2. Chest xray – normal.
3. Pelvic ultrasound showed bilaterally enlarged cystic ovaries, measuring 5cm in greatest diameter. The uterus was normal size.
4. Serum beta HCG was not measured due to lack of reagents.

5. T3 and T4 levels were normal.

Patient was given Tablets ferrous sulphate 200mg thrice daily and Tablets folic acid 5mg daily to take at home. She was requested to report back weekly for follow-up and urine test.

Follow-up:

Mrs S.M. did not report back on the appointed dates but came to the clinic six weeks after evacuation. She was in fair condition, had no cough, chest pain or headache, and had gained weight. The chest was clear, and vulva and vagina were normal.

Investigations (6 weeks after evacuation):

1. Haemoglobin 10g/dl
2. White blood cell count – total count and differential count – all were normal.

Total count 8500/mm^3; Neutrophils 65%

Eosinophils 2%, Lymphocytes 33%

Blood film showed normo chromic normocytic picture.

3. Platelet count was normal 160,000/mm^3.

4. Chest Xray was normal.

5. Liver function tests

ALAT – 30 Iu/Litre

ASAT – 35Iu/Litre

Serum bilirubin 5umol/Litre

All within normal ranges.

1. Serum creatinine 70 umol/Lit.

2. Pelvic ultrasound – The uterus was slightly bulky measuring 10 x 6 cm. It was empty. Ovaries were still large and cystic measuring 7cm in greatest diameter.

3. Urine for pregnancy test was positive.

The patient was explained about the diagnosis and the necessity of a prolonged cytotoxic treatment and its side effects. She agreed to this and consented for the treatment.

<u>METHOTREXATE REGIMEN AND PROGRESS</u>.

After the above investigations, patient was scheduled to start cytoxic therapy with methotrexate.

Her body weight was taken, she weighed 54 kgs.

The dose was calculated by using the formula - methotrexate dosage per day = 0.5 mg/kg.

She was started on 7.5 mg three times a day.

The treatment was started on 15/9/97.

She tolerated the first course well and no side effects of the drug were seen. She rested for seven days during which white cells count, Haemoglobin, Platelet count, renal functions test were repeated. All these were normal. She received a total of 8 courses resting for 7 days after each course, and investigations repeated before starting another course. After six courses of cytotoxics, her urine tested negative.

Two courses were given afterwards as were considered necessary to ensure safety against disease recurrence. This was to clear any possible residual disease as urine for pregnancy test used to monitor progress is not a sensitive indicator of disease remission.

Patient was discharged on 6/2/98 in fair condition, her urine negative for pregnancy test. She was councelled for tubal ligation given her age and parity but she objected and was therefore put on Microgynon oral contraceptive pills.

FOLLOW UP:

Mrs S.M. was followed for a period of one year, weekly for four weeks then monthly for 3 months, then every 3 months for one year. In all visits her urine was tested for pregnancy test which remained negative.

She had no cough, chest pain or headche.

The vulva and vagina were inspected for possible metastatic lesion – none were present in all visits.

White cell count, total and differential count and haemoglobin all remained normal.

COMMENTARY

Gestational trophoblastic disease is not an uncommon condition in Tanzania. In 1992/93 16 cases were treated at MMC making up 0.6% of all gynaecological cases[1].

Persistent gestational trophoblastic diseases are among the rare tumors where chemotherapy has been very successful. Upto 100% cure rates have been reported [2,3]. However, good treatment and follow-up depends much on proper estimation of serum beta subunits of HCG [3,4].

Mrs S.M. has been presented here to show difficulties encountered in managing trophoblastic diseases in third world countries. Although the proper estimation of beta subunit of HCG by radioimmunoassay was described as early as 1972 [5], the treatment and follow-up of these patient has remained poor in many third world countries. Diagnosis, treatment and follow-up are made on clinical ground and crude estimation of HCG by pregnancy test. Sensitive pregnancy tests (newer monoclonal enzyme linked immunoassays) are usually positive in the range of 15 - 25 MIU/ML[6]. Mrs S.M. was diagnosed, treated and followed using crude pregnancy test only. The importance of equipping our laboratory with facilities for estimation of beta subunit of HCG estimation cannot be over emphasized.

With good laboratory support, histological tissue diagnosis of choriocarcinoma has become unnecessary. Even subclinical disease can be followed up and chemotherapy started at the earliest sign of disease by a persistent rise of beta HCG.

Cytotoxic chemotherapy in a patient with trophoblastic disease is indicated in the following situations. Evidence of metastatic disease, plateau or rising serum beta HCG level after evacuation of a hydatidform mole, beta HCG that has not returned to normal by 12 weeks after evacuation, elevated beta HCG level detected after attaining normal serum level and choriocarcinoma diagnosed by histology[3].

Mrs S.M. was started on chemotherapy after urine for pregnancy test was found to be positive, and the fact that the ovaries were still enlarged indicating continued active trophoblastic activity.

It was impossible to assess the trend of beta HCG, as the pregnancy test is only a qualitative test.

At this centre and others with laboratories that are not well equipped, prophylactic chemotherapy may be recommended in patients having certain risk factors. These risks include medical complications of molar pregnancy as pre- eclampsia, hyperthyroidism and trophoblastic deportation to lungs.

Other risk factors are theca lutein cysts more than six cm in diameter and uterine size larger than that expected for age by 4 weeks or greater gestational age [7]. Mrs S.M. had large theca lutein cysts, and was thus considered a candidate for cytotoxic therapy.

Treatment monitoring in this patient was equally difficult. Apart from failing to estimate serum beta HCG, the hospital was unable to perform even urine for pregnancy test, and the patient had to take the samples to private clinics. At times there was a delay in receiving the results because the patient had no money to pay for the test.

Fortunately this patient responded well to methotrexate.

A patient is said to be in remission after four consequtive weekly beta HCG levels are negative[3]. It is advisable to give additional course of chemotherapy after first negative serum beta HCG in patient with low risk, and two or more extra courses in patients with high risk metastatic disease[3]. Mrs S.M. received 2 further courses after a negative pregnancy test based on the same fact that this was a rough estimation of trophoblastic activity. Follow-up of Mrs S.M. after treatment was basically clinical. Detection of disease recurrence depended on physical examination and a urine test. It is

now generally believed that once remission has occurred follow-up for 6 months is enough.

Beyond this period the risk of developing persistent disease is almost zero[6]. Mrs S.M. was followed upfor a year because of poor sensitivity of the tests used to monitor trophoblastic activity. During follow-up period, the pateint was adviced to avoid conception as it is likely to interfere with HCG monitoring. Combined pills have the advantage that apart from being highly effective, they cause minimal menstrual abnormalities. Combined pills also are advocated in such patient, when free alphasubunits are used to monitor treatment and detection of persistent disease as they supress pituitary lutenizing hormones which has a similar alpha subunits of HCG[6].

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UTERINE PERFORATION FOLLOWING INDUCED ABORTION: SUBTOTAL HYSTERECTOMY

NAME:	**MRS H.M.**
AGE:	**28 YEARS**
GRAVIDITY:	**2 PARA 1**
REGISTRATION NO.:	**863421**
RESIDENCE:	**MAGOMENI**
DATE OF ADMISSION:	**16/11/98**
DATE OF DISCHARGE:	**24/12/98**

SUMMARY:

Mrs H.M., a 28 year old para 1 was admitted to the gynaecology ward with postabortal sepsis. This followed instrumental termination of a pregnancy of ten weeks by a medical assistant 3 days prior to admission. She was evacuated at a peripheral hospital 2 days later and was discharged home. Her condition deteriorated and she ultimately came to Muhimbili Medical Centre and had a subtotal abdominal hysterectomy for perforated uterus. She had a stormy postoperative period. She was discharged home after 5 weeks of hospital stay and advised to attend the gynaecological clinic six weeks later for follow-up.

HISTORY OF PRESENTING ILLNESS

Mrs H.M., a 28 year old para 1 was admitted with complaints of fever, vomiting, lower abdominal pain and offensive blood stained discharge per vaginum since 3 days. She readily volunteered that her husband had taken her to a private dispensary in the city for termination of a 10 weeks pregnancy by a medical assistant. The patient and her husband were desperate and decided to terminate the pregnancy because the patient was breast feeding her one year old infant. The termination had been performed using a sharp instrument, following which she bled heavily. No drugs were given before or after the procedure. She then went to a peripheral hospital 2 days later where she was evacuated and discharged home. Her condition deteriorated and she ultimately came to Muhimbili Medical Centre. There was no history of dysuria or frequency of micturition.

MENSTRUAL AND GYNAECOLOGICAL HISTORY.

She had her menarche at 15 years. Her cycles were 28 days, regular, and her periods usually lasted 3-4 days. The flow was normal and the periods were painless. She had her last normal menstrual period on 5/9/98.

There was no history suggestive of sexually transmitted diseases. She had never used any contraception.

OBSTETRIC HISTORY.

She was para 1+1 and delivered her baby by a normal spontaneous vaginal route one year ago. There was no antepartum, intrapartum or puerperal complications.

She was still breast feeding her baby when she had conceived for the second time.

PREVIOUS MEDICAL HISTORY.

There was no history of serious illnesses in the past.

FAMILY AND SOCIAL HISTORY.

She was married and a housewife. Her husband was a peasant farmer. She neither smoked nor took alcohol. There was no family history of diabetes mellitus or hypertension in her family.

PHYSICAL EXAMINATION.

General Examination.

She looked ill, in pain and was febrile with a temperature of 39^0c. She looked moderately pale, was icteric and slightly dehydrated.

RESPIRATORY SYSTEM.

She was tachypnoic with the respiratory rate of 42 per minute. The lung fields were clear. There were no added sounds.

CARDIOVASCULAR SYSTEM.

The pulse was 128/minute and her blood pressure was 100/60 mmHg. Jugular venous pressure was not raised. The heart sounds were audibly normal with no murmurs.

ABDOMINAL EXAMINATION.

The abdomen was uniformly distended with limited movements on respiration. It was very tender with rebound tenderness more marked on the suprapubic region and both iliac fossae. It was difficult to appreciate liver, and spleen due to tenderness.

Fluid thrill and shifting dullness was equivocal. Bowel sounds were not audible.

VAGINAL EXAMINATION.

There was an obvious offensive discharge oozing through the introitus. The vulva looked healthy but stained with reddish discharge. The vagina was healthy. The cervix looked healthy with the exception of a mark of trauma on the anterior lip of the cervix. There was a foul smelling blood stained discharge oozing through the open cervix. A pus swab was taken for microbiological studies. Uterus could not be appreciated due to severe tenderness. The fornices were normal and free of masses but the posterior fornix was very tender but not bulging.

DIAGNOSIS.

Pelvic peritonitis with possibility of uterine perforation.

PLAN OF MANAGEMENT.

She was started on intravenous fluids, prescribed antibiotics and planned for an exploratory laparotomy.

1. The diagnosis and the proposed mode of therapy were explained to the patient and she consented for surgery and anaesthesia.
2. Injection Ampicillin 1g intravenously stat was given.

3. Intravenous Metronidazole 500mg iv stat.
4. Intravenous normal saline 2000mls was given fast, and blood pressure rose to 110/70mmHg, and pulse rate dropped to 80 beats per minute, and there were no signs of dehydration.
5. Haemoglobin and urgent grouping and cross matching for 2 units of blood was done.
6. The vulva and abdomen were washed with savlon 1:20 and shaved clean.
7. She was catheterized and about 200mls of concentrated urine was obtained. The catheter was balloned.

OPERATION:

Anaesthesia.

Anaesthesia was induced with Atropine 0.6mg, Thiopentone 250mg, and suxamethonium 75mg all given intravenously. She was intubated with a 7mm cuffed endotracheal tube. Maintenance was done with Halothane 0.5% and oxygen 6 litres/minute.

PROCEDURE:

The patient was made to lie supine on the operating table. The urinary bladder was catheterized using aseptic precautions and the catheter was left in position until the operation was completed. The abdomen was painted with Iodine solution followed by 70% alcohol and then drapped with sterile linen.

Opening of the abdomen:

A subumbilical midline incision was made from the upper border of the pubis symphysis to a point 2.5cm below the umbilicus. The rectus sheath was incised, the rectus muscle was pushed to one side and the parietal peritoneum was incised on the upper third and the abdomen opened.

FINDINGS:

There was free pus in the peritoneal cavity amounting to approximately 500mls. There was a perforation, over the right lower anterior aspect of the uterus about 2cm from the internal cervical ostium. The right lower part of the uterus was necrosed and friable. The peritoneum over the perforated part of the uterus was undergoing necrosis. Both adnexa were normal; the bladder was normal and not injured. No bowel perforation was noted.

Subtotal Abdominal Hysterectomy:

1. Two strong clamps were placed at the junction of the round ligament and the uterus. The round ligament was then transected between the two clamps and was ligated using No. 1 chromic catgut.
2. A finger was then placed on the posterior leaf of the broad ligament identing the "clear space" between the tube and the uterus. The posterior leaf of the broad ligament was then opened with scissors.
3. Because ovarian preservation was indicated, two clamps were placed across the utero-ovarian ligament into the "clear space", out and ligated with No 1. Chromic catgut.
4. Strong upward traction was then exerted on the clamps which were placed on the round ligament and ovarian ligament, and the anterior

leaf of the broad ligament was dissected down and the bladder was mobilised downwards, off the cervix and towards the vagina by blunt dissection.

5. Kocher clamps were placed at the isthmus and the pedicle between the 2 clamps was sharply incised and sutured, assuring adequate haemostasis of the major branch of the uterine artery. The procedure was repeated on the opposite side.
6. The anterior aspect of the cervix and utilizing a scalpel, the cervix was incised in an angular fashion and the uterus was removed. The incision was carried out proximal to the ligated uterine arteries.
7. As the cervix was stabilized with Allis clamp, deep figure of light sutures of No. 1 chromic catgut were placed at the angles of the cervix. Additional figure of right sutures was placed between the two angles until adequate haemostasis achieved.
8. Reperitonizaion was done by continuos No. 0 chromic catgut suture from one side to the other.
9. Peritoneal lavage was done with warm normal saline.
10. Corrugated rubber drain was inserted in the pouch of Douglas out through the left iliac region.

Closing of the abdomen:

This was done after ensuring haemostasis. The parietal peritoneum was closed with continuos sutures using chromic catgut No. 0, the rectus sheath with a continuos suture using vicryl No. 1. It was ensured that the knots at both ends were firmly tied. The skin was closed with interrupted matress silk sutures.

The wound was cleaned and dressed with dry sterile gauze.

Reversal of anaesthesia:

Reversal was done by neostigmine 1.5mg and atropine 0.6mg given intravenously and oxygen followed by extubation.

She recovered well from anaesthesia and was later sent back to the ward.

POST OPERATIVE CARE.

1. The pulse rate, respiratory rate and blood pressure and temperature were recorded half hourly until stable then 4 hourly for 24 hours. They remained stable.
2. Intravenous 5% dextrose saline 3 litres in 24 hours were given.
3. Her urine output was 1200 mls in the first 24 hours against an input of 3000mls.
4. Injection Ampicillin 500mg 6 hourly intravenously for 48 hours then capsules Ampicillin 500mg 6 hourly for 5 days.
5. Injection Metronidazole 500mg 8 hourly intravenously for 48 hours then oral tablets 400mg 8 hourly for 5days.
6. Injection Gentamicin 80 mg 8 hourly intravenously for 48 hours, then intramuscularly for 5days.

POST OPERATIVE FOLLOWUP.

Her vital signs remained stable but she remained febrile for 24 hours before the temperature subsided to 37°c. She passed 1200 mls of clear urine in the first 24 hours and the catheter was removed.

The abdomen was soft, and not distended and the bowel sounds were heard. She was started on oral sips on the second postoperative day and the drain removed and she was ambulated. From the fourth postoperative day, the wound started oozing pus and the temperature rose again to 38^0c.

Affected stitches were removed to enhance drainage of pus and pus swab from the wound taken for culture.

The following investigations were done postoperatively.

1. Haemoglobin = 8.6g/dl on the second day.
2. Blood smear for a malarial parasite was negative.
3. Urine for culture and sensitivity – No significant bacterial growth was seen.
4. Endocervical swab for culture and sensitivity

Wet preparation:	No pus cells
	No yeast cells
	No Trichomonas vaginalis
Grain Stain:	No pus cells
	No yeast cells
	No gram negative diplococci.
Culture:	No Neisseria gonorrhea or candida albicans
	Were isolated.

5.Pus swab

Gram stain ++ gram negative rods

++ pus cells

Culture 1. Escherichia coli were isolated.

Sensitive to sulphonamides and Gentamicin and resistant to augmentin, chloramphenicol tetracycline.

2. Pseudomonas aeruginosa were isolated: sensitive to: gentamicin.

Blood culture and sensitivity: There was no bacterial growth. Tabs Metronidazole 400mg 8 hourly were continued for five days and tablets Cotrimoxazole 960mg twice daily for 5 days, with tablets

Chloroquine 4 daily for 2 days then 2 daily for 2 days despite a negative smear for malarial parasites.

The remaining sutures were removed on the seventh postoperative day. The wound was indurated and still oozing pus, and was by then dressed at least twice daily with hydrogen peroxide and eusol and thereafter it was dressed with honey. There was no wound dehiscence. After one week she started discharging pus from the vagina, but her general condition improved thereafter. She stayed in hospital until the wound was clean and no longer discharging pus, and the vaginal discharge and fever had subsided. She was discharged home after 5 weeks of hospital stay and advised to come to the gynaecological clinic 6 weeks later for followup.

Follow up:

She attended the clinic as per appointment. She looked healthier physically and had no complaints. She was very worried about her fertility status. She was councelled again and everything was patiently explained to her again. She went away grateful that she was still alive.

COMMENTARY.

An induced abortion is one in which there has been a deliberate interference with the pregnancy either by the woman herself or by someone else —with the aim of terminating it[1]. In Tanzania despite the law remaining restrictive, unsafe abortion has proved to be a serious public health problem[1].

Global trends have shown that whether abortion laws are liberal or restrictive, termination of pregnancy will always be sought whenever the need arises regardless of religious and ethical moral attitudes of a particular society. It is estimated that every year globally between 40 and 60 million women seek termination of an unwanted pregnancy[2]. In a study done in Dar es Salaam public hospitals, the proportion of women with induced abortions was 47% in a total of 953 patients who were admitted due to abortions[1].

Local studies have revealed that maternal mortality rate in Dar es Salaam is very high (578 per 100,000 live births) and abortions rank highest in the causes of maternal deaths[3]. They account for about 15 percent of maternal deaths and they are mainly due to complications from induced abortions. Morbidity rates complicating these abortions have not been documented but high figures are likely to prevail.

In the same study, 88 percent of women dying from abortions had unplanned pregnancies[3]. The current national contraceptive utility rates of modern and traditional family planning methods are 6-10%[4]. These figures point to the preventive nature of deaths caused by abortions and reflect upon the unmet needs for family planning in this vulnerable

group. Family planning is the singlemost effective way to reduce the incidence of unwanted pregnancy and the need for abortion.

Immediate complications of unsafe abortions include haemorrhage, sepsis and trauma. Long term complications include infertility, chronic pelvic inflammatory diseases, and cervical incompetence in subsequent pregnancies and even urinary or rectal fistulae in cases where the bladder or bowel had been injured.

The factors affecting the risk of complications from unsafe abortions are: the method used, the competence of the abortionist, the stage of pregnancy at which the operation is performed, the age and general health of pregnancy woman and the availability and quality of the medical care if anything goes wrong. In this patient the extensive damage to the uterus denotes the degree of incompetence of the abortionist. However, the availability and quality of the medical care provided to the patient saved her life.

The treatment modality depends on the age, parity, site and extent of the injury. If the uterus is salvageable, it should be left for future fertility and menstruation functions. In this case, the treatment was influenced by the condition of the uterus intraoperatively. Since it was severely infected and damaged, to minimize post operative morbidity subtotal hysterectomy was opted for. However, despite this and perioperative coverage with antibiotics, the post operative period was very stormy and she was fortunate to be alive.

In Mrs HM perforation of the uterus, as well as sepsis were serious complications of unsafe abortion on this patient. The fertility carrier in this patient has also been shut off completely. Fortunately she has one

living child, although this may not be considered enough in African culture. The costs to the health services for treating the complications of unsafe abortion are enormous. Repairing the damage of unsafe abortion often requires surgery, blood transfusion, antibiotics and a long stay in the hospital, as was the case in this patient.

Mpnagile et al [1](1992) in their study done in Dar es Salaam public hospitals found that the cost of treating one patient with unsafe abortion complications was US $ 7.5 per day while per capita expenditure for health during that year was US $ 1. The figures are probably higher now.

Because abortions and contraception are both methods by which women avoid unwanted births, it is frequently assumed that the way to eliminate altogether evils of unsafe abortion is to make contraceptives widely available.

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IMPERFORATE HYMEN WITH CRYPTOMENORRHOEA – HYMENECTOMY

NAME: MISS P.H.

AGE: 15 YEARS

PARITY: 0+0

RESIDENCE: MANZESE

DATE OF ADMISSION: 15/5/98

DATE OF DISCHARGE: 22/5/98

SUMMARY:

Miss P.H., a 15 years old, who had not attained menarche presented with symptoms and signs of acute abdomen which was associated with a fast growing pelvic mass. Clinical examination revealed a soft pelvic mass corresponding to 14 weeks of a gravid uterus and bulging imperforate hymen were found. Hymenectomy and drainage of retained blood was done. She had uneventful recovery and was discharged home seven days after operation.

HISTORY OF PRESENT ILLNESS:

Miss PH, presented with a history of gradual onset of lower abdominal pain which was colicky in nature and intermittent associated with abdominal swelling. Over the preceding five months, this type of pain was occurring in a regular pattern once every month. This time the pain increased in severity and radiated to the back and was associated with abdominal swelling whose rate of growth was described as fast. The increase in size of the swelling was proportional to the intensity of the abdominal pain. There was no history of fever, constipation, dysuria or loin pain. There was no history of headache, visual blurring or galactorrhoea. Her appetite was normal and denied history of weight loss.

PAST MEDICAL HISTORY:

She had never suffered from any major illness in the past. No history of abdominal or pelvic surgery in the past.

GYNAECOLOGICAL HISTORY:

She had no coital experience so far.

MENSTRUAL HISTORY:

She had not had menstruation.

FAMILY & SOCIAL HISTORY:

She was a school girl and was the second born in the family of five children. Her younger sister was 14 years old and had already started her menses. There was no history of delay in menarchial attainment by the mother.

PHYSICAL EXAMINATION:

General:

Miss PH was a young healthy girl, in pain. She was pink, not wasted, afebrile, not icteric, and with no lymphadenopathy. The thyroid gland was not enlarged. Her height was 149cm and weight 52kg. She had normal well developed breasts with well developed areola and nipples. She had a normal female anatomical body structure with a feminine voice. She had normal axillary and pubic hair. She was not hirsute and had no temporal baldness, webbing of the neck or wide carrying angle. There was no galactorrhoea.

RESPIRATORY SYSTEM:

The respiratory rate was 22 per minute and normal vesicular breath sounds were heard bilaterally with no crepitations.

CARDIOVASCULAR SYSTEM:

The pulse rate was 90 beats per minute, normal volume and character with no femoral delay. The blood pressure was 110/70mmHg and her jugular venous pressure was not raised and heart sounds were audibly normal with no murmurs.

THE ABDOMEN:

Was distended at hypogastrium and it moved regularly with respiration. There were no therapeutic scar marks seen.

A globular mass arising from the pelvis corresponding to 14 weeks of pregnant uterus was felt. The mass was non mobile, had smooth surface, and was rather firm and tender on palpation. The liver, spleen and kidneys were not palpably enlarged. Guarding, rebound tenderness, shifting dullness and fluid thrill were negative. Percussion over the mass revealed a dullnote.

PELVIC EXAMINATION:

Pubic hair of normal female pattern was seen. The vulva and vestibule were normal and clitoris was of normal size. The urethra was normally situated. The hymen was intact and bulging, cystic, with a bluish purplish hue. The inguinal canals had no swellings and no hernias were seen.

RECTAL EXAMINATION.

The perineum was normal and the anal sphincter tone was normal. A cystic bulging into the anterior rectal wall was palpated. It was slightly tender and the examining fingers could not go above it. The rectal mucosa was free and the gloved finger had normal coloured stool.

PROVISIONAL DIAGNOSIS:

Primary amenorrhoea due to imperforate hymen with haemotocolpos and haematometra.

Plan of Management:

A. Investigations:

1. Urgent pelvic ultrasonography revealed moderate amount of urine in the bladder. A huge cystic mass 96mm across was seen behind the bladder. Ahuge globular mass in continuity with the above mentioned mass with thick walls measuring 120mm across was seen. Its contents had echofree areas and areas of mixed echodensity. There was no free fluid in the abdomen. Findings were consistent with haematocolpos and haematometra.
2. Haemoglobin 12.5g/dl
3. Midstream urine

- Microscopically there were few epithelial cells
- Culture grew no pathogens
- Protein nil
- Sugar nil
- Acetone nil

Definitive diagnosis

Cryptomenorrhoea with haematocolpos and haematometra.

A. Preoperative preparation:

1. After having explained the problem and management plan, consent was obtained from the parent of the patient.
2. Blood grouping and cross matching of 2 units of blood was done.
3. Abdomen and perineum were shaved clean.

A. Operation:

Anaesthesia:

Induction was done by atropine 1mg and ketamine 100mg both given intravenously. She was maintained on oxygen 6 litres per minute and Halothane 1.5% under mask.

Procedure:

The patient was placed in lithotomy position and the vulva and perineum cleaned with savlon 1:20 and dressed with sterile gowns. Catheterisation of urinary bladder was done and about 150mls of clear urine was obtained. Inspection of the vulva was done closely and previous findings confirmed. The loose labia minora were stitched to the lateral sides of the labia majora using silk no 1 so as to expose the vaginal introitus. A cruciate incison was made in the middle of bulging hymenal membrane. Brownish coloured non-foul smelling fluid simulating altered blood drained about 750mls. No attempt was made to express the abdomen and no fingers were inserted. There was no active bleeding along the edges of the membrane. Finally to enhance further drainage and avoid recurrence, a diamond shaped hymenal flap was excised. No bleeding was noticed thus no haemostatic sutures were applied.

Post operative case:

1. Vital signs – pulse, blood pressure, temperature and respiration were monitored 1 hourly for the first 6 hours then 3 hourly for the rest of 24 hours.
2. She was nursed in the semi fowler position to encourage free drainage from the vagina and a sterile pad was placed.
3. Intravenous fluid of saline dextrose 1 litre in the first few hours of recovery then she was allowed to start oral feeds.
4. She was put on capsules ampicillin 500mg thrice daily for five days and tablets metronidazole 400mg thrice daily for five days.

Post operative progress:

8 hours post operatively, she had good general condition with stable vital signs. Pulse rate was 78 beats per minute regular with good volume. Blood pressure was 110/60mmHg. The respiratory rate was 22per minute and she was afebrile. Both lung fields were clear and there was slight abdominal tenderness with minimal dark blood stained vaginal discharge, which continued for three days. The abdominal swelling had regressed completely and there was no tenderness.

The discharge was non-offensive. She was discharged four days after operation and was advised to come at gynaecological clinic after six weeks for follow up.

Follow up:

The patient was reviewed six weeks post operatively. She had no complains. She had menstruated normally for a four day duration and the flow was normal. Pelvic examination revealed a normal vulva and vagina and patent hymenal opening and no abnormal discharge. The edges of the wound had healed nicely and digital examination could admit one finger though painful. The cervix was firm, smooth and with closed os.

The uterus was anteverted and normal sized, and no masses felt at the adnexaes.

Rectal examination revealed normal mucosa and no masses were palpable.

She and her mother were reassured and she was eventually discharged from follow-up clinic.

COMMENTARY.

The hymen consists of a perforated fold of mucus membrane between the lower end of the vagina and the vestibule. It is covered by stratified squamous epithelium on both its vaginal epithelium and vestibular surfaces. The actual germinal layer of origin of hymen is still highly debatable but most authorities think it is from the urogenital sinus and vaginal bulbs whose origin is gut endoderm [2,3]. The hymenal ring marks more or less the lowest extent of the Mullerian system where it communicates with the invagination of the urogenital sinus. An imperforate hymen is a congenital anomally due to incomplete canalization of the Mullerian ducts at the junction between the sinovaginal bulbs and the urogenital sinus. Sometimes it can also be acquired due to inflammatory process after birth[1]. Failure to have overt menstruation leads to accumulation of menstrual blood into the vagina commonly producing haematocolpos. Sometimes this accumulation occurs in the uterine cavity producing haematometra as was found in this patient. Sometimes, this accumulation occurs in the fallopian tubes producing haematosalpinx.

Though, this condition is rare [4,5], the diagnosis poses no difficulty. A typical presentation is of a girl with primary amenorrhoea with normal secondary sexual characteristics presenting with a pelvic mass. A common phenomena is a history of cyclical or a acyclical lower abdominal pain for a few preceding months or years. It may also present with increased frequency of micturition, dysuria, and difficulty in passing stools and occasionally urinary retention.

Nevertheless an imperforate hymen may be confused with a cribriform hymen, imperforate vagina due to transverse septum or occlusive labia minora adhesions[1,4,5].

In this patient, suspicion of imperforate hymen was based on the fact that she was an adolescent with cyclic abdominal pain five months prior to admission associated with a cystic mass arising from the pelvis and absence of menarche, but with fully developed secondary sexual characteristics. Such presentation is typical in most cases.

It is also important to consider gynaetresia among the differential diagnosis since its treatment is not only difficult but also much more complex, as it might require an abdominal approach to drain the haematometra and later vaginal plasty. However, both vaginal and rectal examination excluded the possibility of this condition in the described patient.

The hallmark of management of imperforate hymen is excision of the hymen allowing free drainage of the old menstrum without inserting drainage tubes or performing digital examination. Application of abdominal pressure to enhance drainage should be avoided as this can foster back flow leading to peritonism and endometriosis. Some authors recommend sterile suction of menstrum and needle electrocautery of hymen bleeding sites but a few stitches may suffice[3]. Asepsis is highly recommended on grounds that the vaginal epithelium lacks normal flora more so the Doderleins bacillus which impart a protective acidic medium in the vaginal milieu. Doderleins bacilli are aerobic lactus bacilli, which appear in the vagina soon after birth but persists for only a few weeks to reappear at puberty in large numbers[6]. In such patients the vaginal epithelium is still very thin and has no glycogen for Doderleins bacillus to work on to produce the protective acidic environment.

This maldevelopment of vaginal epithelium, sterility of the vagina, and the good culture media of old menstrum render such patients easily prone to ascending infection. To obviate fulminant postoperative pelvic infection strict asepsis during operative procedure should be strictly adhered to. As in this patient the above precautions were taken and antibiotics were prescribed preoperative to prevent sepsis.

Several complications can follow; these include fimbrial occlusion following aseptic inflammation by altered blood, endometriosis, if fimbrial ends remain open, and if infection sets in pyocolpos and peritonitis may occur. The future fertility and subsequent menstrual patterns in these patients who have been successfully treated is not significantly different from that of normal women[7].

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RUPTURED LEFT TUBAL ECTOPIC GESTATION – LEFT SALPINGECTOMY.

REGISTRATION NO	:	**919510**
NAME	:	**MRS M.S**
RESIDENCE	:	**KIJITONYAMA**
PARITY	:	**ONE**
AGE	:	**20 YEARS**
DATE OF ADMISSION	:	**5/2/98**
DATE OF DISCHARGE	:	**11/2/98**

SUMMARY:

Mrs M.S a 20 years old para 1 was admitted with a history of sudden onset of lower abdominal pain, following amenorrhoea of 8 weeks associated with pregnancy symptoms.

On physical examination she was found to have severe pallor, rapid weak pulse, hypotension, tender abdomen and features suggestive of free peritoneal fluid.

A diagnosis of ruptured ectopic gestation made pelvic examination revealed a soft blue cervix. After initial resuscitation Laparotomy was done and left sided ruptured ampullary ectopic gestation was found. Left total salpingectomy was done. She was transfused 1000 mls of blood,

recovered well post operatively and was discharged six days later in good condition.

Some aspects of diagnosis and management of ectopic pregnancy are discussed.

HISTORY OF PRESENT ILLNESS.

Mrs M.S was a 20years old para1 lady, with one living child who was delivered normally. Her last born was 4 years ago.

She was admitted with a history of sudden onset of abdominal pain while washing clothes. She felt a sharp cutting pain on the left side of the lower abdomen which was followed with a period of fainting. When she regained consciousness the abdominal pain had become worse, was radiating to the back and to the right shoulder tip.

She gave a history of amenorhoea of eight weeks which was associated with pregnancy symptoms.

She denied a history of fever, vomiting, vaginal bleeding or discharge. Just prior to admission she had started feeling thirsty, weak and inability to walk.

MENSTRUAL HISTORY.

She had a regular menstrual cycles of 28 days with periods lasting 4 days accompanied with mild dysmenorrhoea. Her last menstrual period was on 11/12/97.

There was no history of use of contraceptives.

OBSTETRIC HISTORY .

She had a full term normal hospital delivery and the puer perium was uneventful. The baby is alive and well.

GYNAECOLOGICAL HISTORY.

She gave a history suggestive of pelvic inflammatory disease in the past.

PAST MEDICAL HISTORY.

Her medical history was not contributory. She denied history of Tuberculosis.

FAMILY AND SOCIAL HISTORY.

There was no family history of diabetes mellitus, renal diseases or hypertension. She was married and a house wife. She neither smoked cigarettes nor took alcohol. There was no history of tuberculosis, diabetes mellitus or hypetension in the family.

PHYSICAL EXAMINATION.

Examination revealed a young lady in severe pain. She had marked pallor with cold clammy skin and sweat on the forehead.

CARDIOVASCULAR SYSTEM.

The Pulse rate was 120 beats per minute, feeble, regular and normal character blood pressure was 60/40mm Hg. Heart sounds were audibly normal with no murmurs.

RESPIRATORY SYSTEM.

The respiratory rate was 22per minute and both lungs had normal bilateral vesicular breath sounds with no crepitations.

BREASTS.

Both breasts were normal, with no palpable lumps.

ABDOMEN.

The abdomen was distended but moved with respiration. There was diffuse guarding and tenderness. Rebound tenderness was positive. Shifting dullness and fluid thrill were all positive. Liver, spleen and kidneys were not easily palpable due to tenderness.

PELVIC EXAMINATION.

Vulva and vagina were normal with no discharge or bleeding.

SPECULUM:

Cervix was healthy, bluish with no bleeding or discharge.

DIGITAL

The cervix was soft, with a closed external os.

Adnexa and uterus were difficult to appreciate due to marked tenderness.

Pouch of Douglas was bulging and tender.

DIAGNOSIS.

Ruptured ectopic pregnancy.

MANAGEMENT

1. RESUSCITATION.

The patient was placed in a head down position by lifting foot end of bed. A 16 size intravenous cannula was inserted and three litres of normal saline was given fast to restore blood volume. The blood pressure rose to 100/60mmHg and pulse rate was 100 beats per minute.

2. INVESTIGATIONS.

Blood was taken for grouping and cross matching. Two units of blood group O Rh positive was made available.

3. EMERGENCY LAPAROTOMY

Preparation

The Patient was explained about the diagnosis, and an informed consent for anaesthesia and laparotomy obtained. She was shaved and catheterised.

ANAESTHESIA.

INDUCTION

She was induced with 100 mg ketamine hydrochloride intravenously, followed by Atropine 0.8mg and suxamethonium 100mg both given intravenously.

Intubation was then done for Inhlational anaesthesia and was maintained with oxygen 6 litres per minute and halothane 2%.

PROCEDURE.

Abdomen was painted with iodine and then spirit 70%. A subumbilical incision was made and abdominal cavity opened as in Gynae case no 3.

There was about 1.5 litres of dark blood with clots on the peritoneal cavity. The blood was not suitable for autotransfusion therefore it was sucked out and clots removed.

A left sided ruptured ampullary ectopic pregnancy was seen.

The right tube appeared normal. Both the ovaries were normal in size and appearance. The uterus was about 10 weeks in size. Using Kochers forceps, serial clamps were applied to the left tube. The tube was subsequently excised. Each stump was ligated using no 1 chromic catgut and complete haemostasis achieved.

The Peritoneal cavity was sucked and mopped dry. The Abdomen was closed, after satisfactory haemostasis and ensuring correct swab count. Nylon no 1 was put to rectus and silk no 0 to skin. She recovered well from anaesthesia and was returned to the ward.

√Post operative care:

1. IV Fluids 5% dextrose 1000ml alternating with normal saline 1000ml, four litres were given in 24 hours.
2. Intramuscular injection of pethidine 100mg six hourly for 24 hours.
3. 1000mls of fresh blood was given.
4. Her vital signs were monitored half hourly for 6 hours than 1 hourly for 4 hours.
5. Fluid balance chart was kept and she produced 1000ml clear urine in 24 hours.

PROGRESS: (6 HRS POST OPERATIVE)

Pulse remained stable at 100 beats per minute, respiratory rate was 22 per minute, temperature 36.7°c and blood pressure raised to 100/60mmHg and stabilsed.

Her urine output was 250 mls in 6 hrs and it was clear.

FIRST DAY POST OPERATIVE.

She made good progressive recovery, with pulse

blood pressure and Respiratory rate remaining normal.

Her urine output was 1200 ml and was clear.

The drip was stopped, catheter removed, and oral sips were begun and pateint ambulated.

SECOND TO SIX DAY POST OPERATIVELY.

Light diet was allowed on third day.

She had no complains.

Her Haemoglobin was checked on 3rd day and it was 7.5 g/dl. She was started on oral Haematinics(fesolate 200 mg Tds, and folic acid 5 mg continued for 1 month).

Stitches were removed on sixth day post operative. The wound healed well without sepsis.

FOURTH WEEK POST OPERATIVE.

She was seen in gynaecologic clinic. She was in fair condition, afebrile and pink. Her Haemoglobin was 10.5 g/dl. The scar had healed well with good integrity. Pelvic examination revealed no abnormality. She was councelled

for family planning methods and agreed to use pills. She was told to report early on missing her periods. She was discharged from the gynaecology outpatient department to the MCH clinic.

COMMENTARY.

Ectopic pregnancy is an unmitigated disaster of reproduction[1]. It occurs when implantation of fertilised ovum occurs on any tissue other than the mucus membrane lining the uterine cavity[2]. The reproductive loss associated with this failure of proper nidation has increased steadily worldwide[1]. Studies have shown 2-3 fold rise in incidence of ectopic pregnancy world wide[2].

The incidence varies from place to place even in the same country. However it is reported to be about 0.5 – 1% of all pregnancies[2]. At our centre, there is at least one ectopic pregnancy on each admission day thereby comprising one of the most common surgical emergency. The overwhelming majority of the ectopic pregnancy (97.5%) involve the implantation of the ovum in the fallopian tubes[2].

Risk factors for ectopic pregnancy include a history of pelvic inflammatory disease or pelvic operations especially tubal surgery and the current use of an intrauterine contraceptive device[(3,4)]. There may be a link between smoking and ectopic pregnancy[5], but a previous legal termination of pregnancy increased the risk only slightly, if at all [(3,4,6)]. Antibodies to chlamydia trachomatis have been found in 76-78% of women with ectopic

pregnancies compared with 13-38% of healthy pregnant women, and therefore implicated as an important factor. In Mrs M.S. the suspicion of an ectopic pregnancy arose from her history of infertility and pelvic inflammatory disease.

The diagnosis of a ruptured ectopic pregnancy is usually done on clinical grounds. Typically, the patient may present with history of amenorhoea, acute lower abdominal pain, sensation of fainting and findings consistent with intraabdominal haemorrhage. Mrs M.S. did not pose problems in diagnosis as she had typical presentation of a ruptured ectopic pregnancy. The diagnosis of an unruptured ectopic pregnancy can be very difficult and poses a diagnostic challenge to the attending physician.

Trans abdominal ultrasound cannot reliably diagnose ectopic pregnancy[7], though trans-vaginal approach has proved to be superior. It can identify diagnostic signs of ectopic pregnancy such as 'tubal ring', a non specific adnexal mass, or particulate fluid in the peritoneal cavity.

Urinary pregnancy tests are less sensitive as the most sensitive test today can measure human chorionic Gonadotrophins in the range of 15-25mIu/ml[7]. In ectopic pregnancy the HCG levels are much lower, compared to normal pregnancy and additionally the pregnancy test may not

be useful in differentiating an ectopic pregnancy from an intrauterine pregnancy.

To compensate for these low values a concept of doubling time (DT) was developed[7]. Normal DT for an early gestation in the first trimester is 2 days. DT is said to be longer in an ectopic pregnancy. However, some studies have shown few patients with ectopic have normal doubling time[5]. Thus it is also not always reliable.

Surgical management depends on various factors like, age, reproductive history, wishes of future fertility and state of tubes, uterus and pelvis.

The traditional method of treatment of ectopic pregnancy is removing the affected fallopian tube[8] but with advances in diagnostic facilities conservative surgical therapy is possible.

If the contralateral tube has been removed or damaged to the point that it can not function any more, and the patient wishes to retain fertility then more vigorous attempt should be made to conserve the tube with ectopic pregnancy[7].

Techniques for the conservative management of an ectopic pregnancy includes linear salpingostomy; partial salpingectomy, fimbrial expression or segmental resection and anastomosis[7].

Mrs M.S. as many other patients at our centre was managed by salpingectomy. Many factors contribute to persistence of this type of treatment including lack of equipment, time and patients general condition. The aim as in Mrs S.M. being to control haemorrhage as soon as possible. The ovary on the ruptured side may be removed if the mesosalpingeal vessels are involved. In this case it was conserved as it looked healthy and the blood supply was intact.

In some cases surgery may not be necessary. Expectant treatment has been used when the tubal diameter is less than 2cm, and there is a high incidence of spontaneous resolution when the serum concentration of human chorionic gonadotrophins at diagnosis is less than 1000Iu/Litre. Nevertheless, an operation may be required and chronic ectopic pregnancy may lead to formation of dense adhesions[9]. Methotrexate has been given to women with unruptured ectopic pregnancy less than 3cm diameter. In two small reported studies resolution took an average of 12 – 30 days and about 5 –20% of patients still required laparotomy[9,10].

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RECURRENT BARTHOLINS ABSCESS - MARSUPIALISATION DONE.

REGISTRATION NO	:	**917970**
NAME	:	**MISS G.M.**
AGE	:	**28 YRS**
PARITY	:	**PARA 0+0**
DATE OF ADMISSION	:	**15/1/98**
DATE OF DISCHARGE	:	**16/1/98**

SUMMARY:

Miss G.M., was a 28 year old para 0+0 lady who presented with a history of a painful left labial swelling and fever for 2 days. This was a second episode. On examination a fluctuant tender left labial mass was noted. A diagnosis of left Bartholins abscess was made and marsupialisation was done. She recovered uneventfully and was discharged on the second day postoperative. Her case is presented plus a commentary on management of the condition.

HISTORY OF PRESENTING ILLNESS:

Miss G.M., was admitted in gynecological ward with history of progressively enlarging left labial swelling of two days duration. She also complained of associated fever and had difficulty in walking on account of pain. She gave history of a similar swelling on the same side a year ago which bursted spontaneously without being treated. She had no history of lower abdominal pain, painful micturition or abnormal vaginal discharge. She had no history of perineal trauma.

GYNECOLOGICAL AND OBSTRETIC HISTORY.

She was para 0+0.

She was sexually active with multiple partners, and had never practiced any form of contraception.

MENSTRUAL HISTORY.

She attained menarche at 15 years of age.

She had regular menses for 3-4 days, and a cycle of 28 days. She had her normal periods on 28.12.97. There was no pain during menses.

PAST MEDICAL HISTORY

This was her first admission to hospital. She denied history of suffering from Diabetes Mellitus.

FAMILY AND SOCIAL HISTORY

Had completed form iv, and was working as a secretary.

She was staying with her sister who was working as a bank clerk.

PHYSICAL EXAMINATION.

She was in pain and anxious. Her temperature was 38oC, she was not pale and not icteric. There was no generalised lymphadenopathy.

CARDIOVASCULAR SYSTEM.

Her Pulse was 100 beats per minute, regular, with normal volume and the blood pressure was 120/80 mmHg.

The Jugular venous pressure was not raised. Heart sounds were audibly normal without murmurs.

RESPIRATORY SYSTEM

The Respiratory rate was 26 per minute. The lungs were clear with vesicular breath sounds.

ABDOMINAL EXAMINATION

The abdomen was flat, mobile and nontender. The liver spleen and kidneys were not palpably enlarged. There were no hypogastric or iliac fossa masses.

VAGINAL EXAMINATION

There was a swelling of about 3 cm in diameter beneath the left labium majos. The overlying skin was shiny and red. The swelling was tender and fluctuant. The contralateral labia was normal.

The cervix looked healthy and nulliparous. There was no abnormal vaginal discharge. The uterus was normal sized, anteverted and mobile. The adnexaes were free of masses and there was no pelvic tenderness noted. The urethra was milked but there was no pus noted and therefore no swab was taken form the urethral meatus.

DIAGNOSIS

Left Bartholins abscess. The patient was planned for marsupialisation.

MANAGEMENT PLAN.

The following investigations were requested.

1. Haemoglobin 10 grams/dl
2. Blood slide for malarial parasites - Negative.
3. WBC count was 13,000/mm^3 with a neutrophilia of 8,000/mm^3.
4. Midstream urine for urinalysis and culture and sensitivity – Negative.
5. Pus swab taken from endocervix was negative. The pus swab taken from the abscess revealed mixed coliform growth.
6. VDRL was Negative.

PREOPERATIVE PREPARATIONS.

1. The diagnosis was explained to the patient and her signed informed consent obtained.
2. The vulva was cleaned with savlon 1:20 and shaved.
3. Injection Pethidine 100 mg and Injection Atropine 0.6mg were given intramuscularly and she was taken to theatre.

OPERATION.

ANESTHESIA

INDUCTION

She was induced by Halothane 2%.

Maintenance:

She was maintained on a mixture of oxygen and Halothane with an open mask.

TECHNIQUE

The patient was placed in Lithotomy position. Examination under anaesthesia was done and previous findings confirmed. The vulva and vagina were cleaned with savlon 1:20 and 1% iodine in 70% Alcohol. Sterile linen were then applied and the patient catheterized.

A 3 cm elliptical incision was made on the swelling of the vaginal side of the hymen ring. The cavity was opened and about 15ml of thick fowl smelling pus was drained and with an index finger, all loculi were broken. Pus swab for aerobic and anaerobic culture was taken. The abscess wall was sewn to vaginal skin by chromic catgut no 1 leaving an aperture of 1 cm in diameter for drainage.

The operation site was cleaned and the abscess cavity packed with a gauze soaked in normal saline.

The anesthesia was reversed uneventfully the patient recovered quickly from anesthesia and after a brief observation in the recovery room she was transferred to gynecology ward.

POST OPERATIVE CARE.

Her blood pressure, pulse and respiration were monitored hourly until she was well awake. They remained stable.

The dextrose drip was stopped after six hours and she was started on oral fluids.

She was given pethidine injection 100mg intramuscularly start and then eight hourly for 24 hours.

She had antiseptic vulval wash twice for a day she was in hospital.

She recovered fast and she was able to walk much better on first post operative day. Fever had settled down. On the first day post operative day in the evening the vulva was inspected. The inflammation had subsided and there was minimal discharge. The blood slide revealed no malarial parasites. Urinalysis was reported normal and no bacterial growth was cultured. She was discharged home the second day on

Asprin tablets 600 mg three times daily and Tablets Ampicillin 500mg three times daily for 5 days.

Follow up:

She was seen in clinic after six weeks. She had recovered fully. The stoma was still present no locullations were noted, and pelvic examination was normal. She was given health education on the probable cause of her condition, other possibilities and how to avoid them. She was then discharged from the clinic.

COMMENTARY

Abscess of the Bartholins gland, although a minor condition, cause significant pain, discomfort and disability[1].

It is a fairly common gynaecological problem seen at Muhimbili Medical Centre as it is in other centres in third world countries. In 1996, 4% of the gynaecological admissions at this centre were due to Bartholins abscess,

Its incidence is believed by some people to be an index of sexual promiscuity in the respective society[2].

A number of organisms have been implicated in the actiology of this condition [1,2,3,6] some authors believe that Gonococcal infection is the primary infection causing duct obstruction and the other bacteria are superinfections. However, inspissated mucus, congenital narrowing of the duct and division of duct during a misplaced episiotomy are other causes of duct obstruction causing poor drainage, accumulation of secretions creating a favourable environment for bacterial multiplication. Other organisms isolated from Bartholins abscess include streptococci, staphylococci and coliforms [1,2,3,6]. In 1980, the commonest isolated organism at Muhimbili Medical Centre was streptococcus fecalis[7]. But the picture could be different now.

The patients are mostly young and sexually active. Usually the patient presents with a painful labial swelling which may make walking and sitting difficult. In the acute gonococcal infection there may be dysuria, dyspareunia, pelvic pain and purulent vaginal discharge[2]. The skin overlying the gland is usually reddened and oedematous. Constitutional disturbance is rare. Relevant investigation include examination of urine, pus swabs from the endocervix, secretions of the Skene's glands and from the contents of abscess. It is not surprising to isolate a different organisms from each site hence making identification of the real actiologial agent difficult[3]. In this patient, bacterial culture from pus showed a mixed coliform growth. It seems, however, that poor management during the first attack was the cause of recurrence in this patient.

The standard management of this condition is marsupialisation[5]. If no surgery is done the abscess usually bursts and heals but recurrence is common as seen in this patient. Spontaneous resolution may occur but this is believed to cause chronic infection of the gland and cause what is called by some authors as Bartholins adenitis[3].

Simple incision and drainage is not effective as no alternative stoma is created and recurrences are common[2]. Marsupialisation is a fairly simple procedure, creating a new stoma, preserves the function of gland thus

preventing dry dyspareuria[5]. An alternative surgical approach to marsupialization is to insert a word catheter (a short inflatable bulb tipped catheter) through a stab incision, into the abscess and leave it in place for 4-6 weeks during which period a tract of epithelum will form[1]. Hospital stay rarely exceeds 24 hours. On the other hand excision of the gland is a formidable operation with significant blood loss, requires experience and has the disadvantage of causing dry dyspareunia[4].

Excision of the gland should only be undertaken if there is a deep seated recurrent infection of the lobulated gland or if a neoplasm is suspected[6]. Marsupialisation is a satisfactory operation and when properly done recurrences are rare[2].

Analgesics should be given for pain and vulval hygiene with antiseptic baths are also helpful. The role of antibiotics is controversial[1]. Some authors believe that broad spectrum antibiotics should be given to these patients. Others believe that antibiotics should only be given if there is considerable inflammation of the underlying area. The author sides with the latter group because there is no single antibiotic which can cover all the organisms which have been isolated from these abscesses and in the absence of strong evidence for existing gonorrhea treating the patient for a presumed diagnosis without treating her partner would be a useless procedure.

Antibiotics were given to this patient due to considerable inflammation of the labia.

Finally these patients, should be educated on the possible causes of this disorder and the dangers of sterility and of acquiring Acquired Immuno Deficiency Syndrome(AIDS) in case they contract a venereal disease.

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SEXUAL ASSAULT – VAGINAL TEAR.

NAME: **MISS A.H.**

AGE: **16 YEARS**

REGISTRATION NO: **944219**

ADDRESS: **MWANANYAMALA**

DATE OF ADMISSION: **18/12/98**

DATE OF DISCHARGE: **18/12/98**

Summary:

Miss A.H. a 16 years old school girl, was brought to hospital after being assaulted and sexually abused by a neighbour. Examination in presence of policewoman revealed a young terrified girl with minor bruises on the left cheek and a fresh vaginal tear and laccerations which were not bleeding and did not need any stitching.

Motile sperms were recovered from the posterior fornix. PF3 form was filled and the case was in court for prosecution.

Management of sexually assaulted woman and its legal implication is discussed.

HISTORY OF PRESENTING ILLNESS:

Miss A.H. was brought at 6.00pm by her mother accompanied by a policeman after being referred from a periphery hospital on account of sexual abuse. She first reported the incidence to the police. Where a PF3 was issued. The victim reported that around 3.30pm when she was coming from the school one of the neighbours known to her, stopped her and instructed to follow him to his room. The victim refused and wanted to run home, but the assailant used force and took her to his room.

When she started screaming for help the assailant threatened her with a knife.

He tore her underpants and forcefully introduced his penis into her vagina. She felt severe pain during the forced intercourse. She denied anything being introduced in her rectum. She started to bleed per vaginum, but the bleeding was not profuse only her underpants were stained with blood.

After the ugly incident she reported to her parents who took the trouble to contact the police, and brought the child to hospital for examination.

MENSTRUAL HISTORY:

Miss A.H. had her menarche at 14 years of age, and had just finished her menses when the incident occurred. Her cycles were still irregular but the period last for 3-4 days and were accompanied by dysmenorrhoea. Her last period was on 14/12/98 . She reported to have had sexual intercourse previously and the last one was three weeks prior to the alleged rape.

PAST MEDICAL HISTORY:

This was unremarkable.

FAMILY AND SOCIAL HISTORY:

Miss A.H. was a form one student. She neither smoked nor drank alcohol. She was the second born in the family of three siblings. Her father was a businessman while the mother was a secretary with a private firm in the town. The mother reported that her daughter was a well-behaved girl who concentrated on studies.

PHYSICAL EXAMINATION:

In the presence of a nurse and the accompanying policewoman

Miss A.H.was examined at 6.30pm after the event.

GENERAL:

She was generally healthy, but looked worried and terrified. She was pink, afebrile and not dyspnoic. She was fully conscious. Her secondary sexual characteristics were well developed. Her dressings were not torn but looked untidy, her underpants were torn and stained with blood. She had some bruises on the left cheek, and around the neck. She was not intoxicated.

CARDIOVASCULAR SYSTEM.

The pulse rate was 92 beats per minute, regular and of good volume. Her blood pressure was 110/60 mmHg and jugular venous pressure was not raised. The first and second heart sounds were audibly normal with no murmurs.

RESPIRATORY SYSTEM.

The respiratory rate was 22 per minute, and vesicular breath sounds were heard bilaterally with no added sounds.

ABDOMEN:

Was not distended, moving with respiration. It was soft with no tenderness. Liver and spleen were not palpably enlarged. The renal angles were non-tender and free of mass.

PERINEAL AND VAGINAL EXAMINATION:

The vulva was normal but soiled with dust and sand. There was a small fresh superficial tear and some lacerations on the fourchette which were slightly oozing blood. The anus looked normal. No foreign body was seen.

The patient was asked to empty her bladder and a vaginal examination was done after explaining to the patient the importance of the examination. She understood and consented. A cusco's speculum was moistened with water and introduced into the vagina. A white thick fluid was seen in the posterior fornix. The cervix and vaginal walls looked normal with no bleeding.

A specimen was taken from the posterior fornix using a cotton tipped swab and mounted on two slides, one, which had a saline drop for wet preparation. The other was fixed for papanicolaou staining.

Another swab was introduced into the Endocervix and smear obtained was kept in stuart's transport medium for culture.

On bimanual examination the uterus was found to be normal sized, firm anteverted, mobile and non-tender. There were no adnexal masses or tenderness.

DIAGNOSIS:

Vaginal tear due to sexual assault.

Management:

1. Investigations;

a. Swab from posterior fornix for:

   i. wet preparation – showed motile sperms.

   ii. Papstaining – showed sperms.

a. Endocervical swab for culture – revealed no organisms.

b. VDRL – negative.

c. ELISA for HIV screening was negative at admission and three months later.

d. Urine for pregnancy test (after 3 months was negative).

e. Urine culture – No bacterial growth.

1. **Councelling**:

After collecting the specimen for above investigations opportunity was taken to discuss the nature of the problem to the mother and the patient. Fear of pregnancy was alleviated by explaining the remote possibility as she had just finished her menses. The possibility of infection was contemplated and the victim was started on antibiotics. The mother was worried of HIV infection, and samples were taken for screening on admission and three months later.

The phychological and emotional disturbance experienced by the victim was discussed. Parents were advised to give emotional support to the child and to avoid unnecessary blaming which could increase psychological stress.

2. **Treatment**:

Due to possibility of mixed infection especially gonorrhea and chlamydia, patient was started on high dose of cotrimoxazole (Trimethoprime/ sulphamethoxazole) (560/2400) 7 tablets once daily for 5 days.

Antiseptic douch daily.

Since the patient had no other complaints, she was discharged to be seen after one week.

REVIEW AFTER I WEEK:

The patient accompanied by her mother returned back for review and to get results of investigations. Her mood had improved. They were informed of results, and a PF3 was filled as it was needed for evidence in the court.

Advice was given to return back for a repeat of HIV screening as seroconversion takes longer to occur and the initial negative result served as a baseline only.

AFTER 3 MONTHS:

Scrology for HIV was taken and it was negative.

VDRL and urine for pregnancy test was repeated and it was negative.

She was again reassured of her status and discharged.

COMMENTARY

Sexual assault commonly occurs between 15 and 24 years though no age is immune. Most victims of rape are young, single girls because they are more easily accessible. In most cases the victim and assailant are known to each other. The patient described fits well in this category.

Serious complications like tears of the perineum, vaginal wall, bladder and rectum or tearing of a large vessel in the vagina with resultant profuse bleeding can occur. But these are more likely to occur in young virgins and in old women with atrophied tisssues[2].

Coital rupture of the vaginal vault is seen particularly after total hysterectomy and can include the pelvic peritoneum to cause prolapse of intestines and peritonitis. However, in most cases the injuries are not associated with significant bleeding and mostly involve the external genitalia. Single and multiple superficial laccerations at the six o'clock position on the fourchette and on the perineum are common. This is thought to be due to the fact that this is the site of fixation of the perineal body and consequently the tissues are at the greatest stress in this location when forceful stretching occurs as in rape[5]. The patient described here, sustained a tear and laccerations at the fourchette. However, laccerations or tears can occur even after consentual intercourse and are due to improper coital technique. The presence of laccerations does not implicate the penis as the inflicting agent because fingers, tampons, and foreign objects also cause these.

Other complications arising form sexual violence that can affect the patient include the infections as gonorrhea, syphilis, urethritis, non gonococcal

urethritis, HIV and herpes. The victim may become pregnant and there is a strong psychological upset likely to be inflicted.

Gonorrhoea is reported to occur in 3-4 percent rape victims and syphilis in about 1%[4]. But these may be present before rape. A victim of rape should, therefore, be treated as though she had gonorrhoea. In this patient urine for pregnancy test was negative.

Miss A.H. was prescribed high doses of cotrimoxazole, which has been observed, to be effective both for chlamydia and gonorrhea, including penicillinase producing agents[7].

Serology for syphilis was negative in this case thus no treatment was given. Should they become positive, low dose penicillin for two weeks or a single dose of the long acting penicillin (2.4 mu of benzathine penicillin) is still the treatment of choice. Erythromycin can be given to penicillin sensitive individuals[8].

For those victims of rape who are at risk for pregnancy and have not been on adequate contraception, high does of oestrogens administered within 72 hours of assault will prevent implantation of the ovum by altering the endometrial lining. However a thorough examination to rule out pregnancy should be done and a pregnancy test should be performed. Pregnancy was also ruled out from her menstrual history. Since she had just finished her menses when this incident occurred. Vaginal examination was done to assess the size and consistency of the uterus. The uterus was of normal size and firm in consistency. Another complication of rape which is often more serious is the psychological aspect of it.

Rape is a serious sexual violation of a person with resultant profound and frequently prolonged psychologic and emotional trauma. Many rape victims may suffer from a posttraumatic distress disorders[1,3,6]. The rape victim is particularly vulnerable to manifesting this disorder because of the following characteristics of rape:

1. It is sudden and the victim is unable to adequately defend herself.
2. It makes the victim feel trapped and unable to fight back.
3. It often involves physical injury.

As such rape victims may develop fear, nightmares, sleep disturbances, disturbed sexual relationships and psychosomatic complaints. Some fear retaliation from their assailants (especially if the case was reported) and develop ritualistic behaviours as a defence. Some may believe their bodies to be permanently damaged and live in fear of death.

Parents also react in different ways. Some of them will be angry and blame the victim and some will be guilt-ridden. They may exhibit reactions ranging from helpless despair to extreme agitation. Rape is not only a victim's affair. It is a social problem – Both the rape victim and parents need prolonged psychological councelling. If the rape victim develops psychosomatic behaviour a psychiatrist must be consulted.

Legal aspect of rape involves a detailed systematic history, physical examination, and proper documentation of the findings as well as the meticulous collection and preservations of all laboratory specimens is necessary so that the rights of both the victim and the accused may be protected under law.

In the presented case an aspirate from the posterior fornix revealed motile sperms, indicating that coitus took place a few hours back.

Generally motile sperms can be identified in vaginal wet preparation upto 3-4 hours after coitus, but they can be identified from the endocervical canal several days after[9].

Miss A.H. was seen two and half hours after the incidence; vaginal smear was taken about 3 hours after the event.

When interpreting data it should be remembered that about 10% of adult male, have azospermia or oligospemia[7]. About one third of rapist are also said to experience sexual dysfunction resulting into failure of ejaculation[8].

Sperms will also be absent if the assailant had undergone vasectomy, used a condom or if the victim has a douch before presenting for examination.

If sperms are negative other steps should be taken to confirm or negate the occurrence of rape. These will include assaying for acid phosphatase, searching for foreign antigens, and evaluation of pubic hairs and foreign materials found on the victim or her clothing's.

Vaginal acid phosphatase (ACP) activity of over 300Iu/Lit strongly suggests the presence of semen, probably deposited with the past 72 hours[9].

Antigens as ABH blood group antigens are secreted by certain individuals and have been found in 18 –34% of cases reported for sexual assault [9,10].

Identification of these antigens in a victim gives evidence of sperm and also gives the blood type of the assailant.

Although exchange of pubic hair rarely occurs during consenting coitus, if foreign hair are obtained in the victim may provide useful information.

Characteristics of root shaft may allow identification of its source[11].

Fingernail scrapping may contain foreign materials such as blood or skin that may be important evidence.

Many of the tests discussed above require sophisticated laboratory for proper identification.

The author therefore strongly advises the promotion of wet preparation method for all patients who report early to hospital and without douching. This can be done even in a health centre and gives results almost immediately. Other test should be taken only to improve the reliability of the results or when motile sperm have not been identified in the vagina or endocervix.

A comprehensive care for a rape victim should include attendance to physical injuries, prevention of pregnancy, proper medical legal evaluation and documentation and efforts towards alleviation of psychological trauma and prevention of permanent psychological damage.

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COMPLETE WOUND DEHISCENCE COMPLICATING MYOMECTOMY: REPAIR WITH TENSION SUTURES

NAME: MRS A.H

AGE: 30 YEARS

ADDRESS: MBAGALA

PARITY: ONE

DATE OF ADMISSION: 21/10/98

DATE OF REPAIR : 28/10/98

DATE OF DISCHARGE: 11/11/98

SUMMARY:

Mrs AH a 30 years old lady developed complete wound dehiscence on the seventh day postoperatively following myomectomy. Resuture of the wound was done under general anaesthesia by the technique of single layer mass closure deep to the skin using non absorbable monofilament sutures with deep tension sutures.

She made good recovery and the tension sutures were removed two weeks later. At follow-up six weeks later, the wound had healed well with no evidence of incisional hernia.

HISTORY OF PRESENTING ILLNESS:

Mrs AH had been admitted in gynaecology ward from clinic with a history of heavy and prolonged periods for the past one year. The periods were associated with clots and were painful.

She denied history of abnormal vaginal discharge, or lower backache.

She did not give history of intermenstrual bleeding, postcoital bleeding or contact vaginal bleeding. She denied history of painful micturiton or frequency. Her bowel habits were normal.

Clinical examination revealed young lady, not pale, afebrile with stable vital signs.

Vaginal examination revealed normal and healthy cervix with bulky uterus corresponding to uterus size of 10 weeks gestation.

Ultrasonography revealed features suggestive of uterine fibroids.

Given her parity and a wish to conceive she was planned for elective myomectomy.

Myomectomy was done and a layered closure of the abdomen was done using chromic catgut No 2 for the rectus and No 0 for the peritoneum. Blood loss was estimated to be 500mls.

Post operatively recovery was uneventful without febrile morbidity or abdominal distension due to ileus. She however had a mild non productive cough during the first two post operative days.

Healing of the wound was apparently satisfactory on inspection. On the seventh postoperative day, although a slight wetness and serious discharge from the wound was noted. There was no overt signs of wound sepsis. The skin sutures were removed on seventh day and she suddenly felt something

giving way and loops of bowels were seen prolapsing at the wound after its complete disruption.

PREVIOUS MENSTRUAL AND GYNAECOLOGICAL HISTORY:

She had menarche at 14 years of age. Her last normal menstrual period was on 25/9/98. Her periods lasted 3-4days every 28 days, until one year ago. She had never used any form of contraception.

PAST OBSTETRIC HISTORY:

She was para 1 The last child born was 6 years ago. It was a full term normal hospital delivery with no antenatal, natal or puerperal complications.

PAST MEDICAL HISTORY:

There was no history of serious illnesses in the past.

FAMILY AND SOCIAL HISTORY:

She was married to a peasant farmer. She was a housewife. She did not smoke or took alcohol. There was no personal or family history of hypertension, diabetes melitus or tuberculosis.

PHYSICAL EXAMINATION:

GENERAL:

She was in good condition, but anxious and worried.

She was afebrile, not pale, icteric and not dehydrated.

RESPIRATORY SYSTEM:

The respiratory rate was 20/minute, and the lung fields were clear with normal vesicular breath sounds and no crepitations.

CARDIOVASCULR SYSTEM:

The pulse was 100 beats per minute and her blood pressure was 110/70mmHg. Jugular venous pressure was not raised. The heart sounds were audibly normal with no murmurs.

ABDOMINAL EXAMINATION:

Loops of bowel now covered with sterile moistened gauze were seen over the lower median incisional wound which had gapped wholly. The abdomen was not distended and moved with respiration. It was soft and non tender. The liver and spleen were not palpably enlarged and both renal angles were free of mass and tenderness.

The wound was inspected and the whole length of the incison was found to be disrupted completely. There was no evidence of wound infection, or active bleeding.

Diagnosis:

Complete wound dehiscence.

MANAGEMENT:

Exploration of the wound in theatre under general anaesthesia and repair.

PREOPERATIVE PREPARATION:

1. Explanation was made to the patient about the problem and she was reassured. Planned management was explained to her and a written consent for anaesthesia and operation obtained.
2. Blood for grouping and cross matching was obtained and two units of blood requested.
3. An intravenous infusion of normal saline was set up using a cannula of size 18 and 1 litre of normal saline given fast.
4. A nasogastric tube was passed and suction instituted.
5. The prolapsed bowel were covered with fresh moistened sterile gauze.

The patient was thereafter taken to theatre.

Operation: Repair of burst abdomen.

Anaesthesia: Anaesthesia was induced with atropine 1mg, thiopentone 250mg and suxamethonium 100mg all given intravenously. After endotracheal intubation with a cuffed endotracheal tube, anaesthesia was maintained on Halothane 1.5% and oxygen 6 litres per minute.

Procedure:

The patient was made to lie supine, the gapped wound dressings were removed by the theatre nurse and the abdomen was cleaned with povidone iodine carefully avoiding spillage into the peritoneal cavity. Sterile dressings were then applied.

The wound was explored and it was noted that the continuos catgut stitch No.2 on the rectus sheath had broken in the centre with two knots intact at

each end of the incision. The continuos catgut No 0 on the peritoneum had given way at one end with a bit of catgut hanging on the other end.

There was no evidence of infection. The uterine scar of myomectomy was intact with no evidence of sepsis. The peritoneal cavity was normal, after careful and systematic exploration.

The prolapsed loops of small bowel were cleansed with warm saline solution and gently returned into the peritoneal cavity. Next peritoneal lavage with warm saline was done.

The abdominal wall margins of the wound including the peritoneum were refreshened by triming off the edge leaving the raw edge. The wound edges were raised using tissue forceps applied to both ends of the wound. Three through and through monofilament nylon sutures no 2 were passed, at 2cm intervals.

These were placed about 1.5cm from the wound margin and included skin, rectus and peritoneum. Plastic tunings were threaded through each of them but the sutures were not tied as yet, but were held in artery forceps.

The peritoneum and rectus sheath were then repaired in a single layer, using large bites deep to the skin of interupted monofilament nylon No. 1, care being to avoid including bowel or omentum. There were placed at approximate interval of 1cm from each other. Having thus repaired the abdominal wall, the skin was approximated with silk sutres. Finally, the deep tension sutures were tied over the plastic tubings, to avoid the thick nylon cutting into the skin.

REVERSAL OF ANAESTHESIA:

Anaesthesia was reversed by neostigmine 2.5mg and atropine 1mg both given intravenously. The immediate postoperative Blood pressure was

100/60mmHg and pulse was 90 beats per minute. After a brief observation in the recovery room the patient was transferred back to the ward.

POST OPERATIVE MANAGEMENT:

1. Blood pressure, pulse, respiration and temperature were monitored 1 hourly for 6 hours then 3 hourly for 18 hours. The vital signs remained stable throughout.
2. Intravenous drip of 5% dextrose 2 litres to alternate with 1 litre of Dextrose saline for 24 hours.
3. Intramuscular pethidine injection 100mg was given 6 hourly for 24 hours.
4. She was put on injection ampicillin 500mg 6hourly for 24 hours then to continue with capsules ampicillin 500mg thrice for 5 Days.
5. Input and output chart was kept.

PROGRESS:

She recovered uneventfully from anaesthesia and the vital signs remained normal over the first 24 hours. Thus on the first day postoperative, she was afebrile. Minimal fluid was obtained from the nasogastric tube. The abdomen was soft, not distended and the wound dressing dry. The bowel sounds were present but diminished. The nasogastric tube was removed. The patient was ambulated and oral sips of fluids started.

On the third day haemoglobin was checked it was found to be 10.2g/dl. She made good progress while in the ward and skin sutures were removed on 7th post operative day. The tension sutures were however left in insitu. They were removed on the 14th post repair day. The wound had healed well and

she was discharged home in good condition. She was asked to come back after six weeks for check up.

Followup:

At followup, she was in good condition. The wound had healed well with no incisonal hernia. She was then discharged from the clinic.

COMMENTARY

Surgical wound dehiscence is not an uncommon complication of abdominal operations. It has been found to complicate 0.5% - 5% of all major abdominal operations [2,3,8]. Although no study has been done in our centre, it is not infrequently encountered following major gynaecologic or obstetric operations. It is a serious postoperative complication associated with serious morbidity with long stay in hospital and an average mortality rate of 20%.

The aetiology of wound dehiscence is multifactorial. Predisposing factors include nutritional factors, anaemia, chronic metabolic disorders, obesity, malignancy, pulmonary disease and irradiation[8]. Intraoperative factors predisposing to dehiscence relate to type of incision technique of closure and choice of suture material[1,8]. Others factors may operate post operatively by increasing tension on the suture line as may occur with ileus with abdominal distension, intestinal obstruction, vomiting and excessive coughing. Finally, wound sepsis is an important predisposing factor to dehiscence.

The most important factor in wound dehiscence appears to be the technique employed in the closure of the abdominal wound[2,8].

Wound breakdown in this patient could be attributed to the suture material (chromic catgut no.2) used to close the rectus sheath. It was too weak to withstand sudden tension and more likely there was no enough lax sutures left in the wound for later wound expansion. The evidence found during

wound exploration is the breakdown of the chromic catgut suture at the centre while both knots were intact. There was also a knot slippage on one end of the catgut suture which was applied on the peritoneum.

A combination of the usage of weak suture and improper tying of knots resulted into burst abdomen following a sudden cough after stitch removal.

Chromic catgut is the commonest suture material used in obstetric and gynaecologic surgery in most centers. In this patient, the abdomen was closed with catgut suture in two separate layers for peritoneum and rectus sheath. This has been the traditional closure technique[3].

The choice of technique and suture material must be guided by two important facts namely: that the function of the sutures is to hold the tissues in apposition and to provide it with sufficient tensile strength during its critical healing period until healing has endowed the wound with sufficient strength to withstand stress without mechanical support[6,7]. This critical healing period usually spons the first 7-10days. The rectus sheath is the most important tissue in wound strength and it requires complete mechanical support for the first five days and substantial support for additional 3-7days[4]. The second fact to be considered is that catgut rapidly losses its tensile strength during the first 5-7days. It is no wonder therefore, that catgut is is associated with the highest frequency of wound dehiscence[1,8]. It also explains partly the fact that dehiscence commonly occurs between 5-12 postoperative day, as indeed was the case in our patient.

For these reasons, it has been recommended that nonabsorable monofilament suture materials be used for rectus sheath closure[2,8].

Recently, absorable synthetic sutures with good tensile strength have been used for abdominal closure. These sutures polyglycolic acid(Dexon) and polygalactic 910(Vicryl), have been found to maintain their tensile strength during the critical healing period far greater than that for catgut[4,6].

Two weeks postoperatively, they have lost about 50% of their tensile strength but still as strong as silk[6]. Further, they are uniformly absorbed between 60-90 days after placement. They thus offer the advantages of absorbable suture as well as the strength of a non absorbable material. They are now being increasingly used in wound closure[4].

Non absorbable suture like nylon lose 16% of their strength by 70 days[4] is also a commonly used material to repair rectus sheath.

Wound dehiscence is a surgical emergency which requires re-suturing of the whole incision even if some parts of it appear secure.

Mass closure technique was employed in this patient using non absorbable sutures. The choice of using this technique is guided by one important fact namely that the strength of the wound is dependent on the strength of the tissues sutured[1]. The disruptive forces applied to the wound in the early stages are expended on the tissue -suture interphase, such that the tendency to cut out is inversely proportional to the size of both the suture material and thickness of bite taken[2]. Mass closure of the abdomen as against layered closure affords the opportunity to prevent suture material tearing through weakened tissues and is associated with a very much reduced incidence of dehiscence [2,5,8].

The morbidity in this particular patient could have been avoided by using sutures which are well tolerated with adequate tensile strength.

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THIRD DEGREE UTERO-VAGINAL PROLAPSE WITH CYSTOCOELE.
VAGINAL HYSTERECTOMY AND ANTERIOR COLPORRHAPHY

REGISTRATION NO	:	**916127**
NAME	:	**MRS F.N**
AGE	:	**59 YRS**
PARITY	:	**8 + 0**
RESIDENCE	:	**KIGOGO, DAR ES SALAAM**
DATE OF ADMISSION	:	**19/3/1998**
DATE OF DISCHARGE	:	**25/4/1998**

SUMMARY.

Mrs F.N., 59 years old para 8+0, presented with a history of heaviness in the pelvis associated with low backache for 8 years and an irreducible mass protruding at the vaginal introitus for 4 years. On examination she was found to have a third degree genital prolapse, with cystocele. Vaginal hysterectomy, anterior colporrhaphy was performed. She recovered uneventfully. Her case is presented plus a short commentary on the management of genital prolapse.

HISTORY OF PRESENTING ILLNESS

Mrs F.N. was apparently well till about 8 years prior to her presentation when she developed low backache and a heaviness in the pelvis. She also had a history of lower abdominal discomfort for the last four years and she noted a mass protruding at the introitus. Coughing, laughing and straining were noted to worsen the descent of the mass. On lying flat the mass initially used to reduce completely. With time the mass progressively descended to its present size and spontaneous reduction no longer occurred. It was however easily manually reducible. She denied history of stress incontinence, pain during voiding or strainning to pass urine. She however admitted a history of frequency. There was no history of chronic constipation, chronic cough or obstetric difficulties.

She used a number of local herbs for her condition with no relief. She had no other complaints.

PAST OBSTETRIC HISTORY.

She conceived 8 times in her life time and on all the occassions had full term normal deliveries in the hospital. All her children were alive and well and the last born was 20 years.

MENSTRUAL HISTORY.

She attained menarche at 14 years. She was now about 15 years post menopause. Prior to the menopause her periods had been regular lasting 5 – 6 days after every 28 to 30 days and the flow had been normal.

PAST MEDICAL HISTORY:

There was no history of significant disease in the past.

FAMILY AND SOCIAL HISTORY.

She was married and a peasant by occupation. She denied smoking tobacco or drinking alcohol.

There was no history of a similar illness among her female relatives. There was no family history of Tuberculosis, Hypertension or Diabetes Mellitus.

PHYSICAL EXAMINATION.

General Examination

She was found to be a well nourished elderly woman in good general condition, she was afebile and not pale. There was no lymphadenopathy.

CARDIO RESPIRATORY SYSTEM.

The chest was clear. The pulse rate was 80 per minute and the blood pressure was 140/90 mm Hg. The apex beat was in the 5^{th} intercostal space along the left mid clavicular line and was normal. The heart sounds were audibly normal and there were no murmurs.

ABDOMINAL EXAMINATION.

The abdomen was scaphoid and moving with respiration. It was soft and non tender. The spleen, kidneys and the liver were not palpably enlarged. Renal angles were not tender. Hernial sites were free of masses.

VAGINAL EXAMINATION

The vulva looked atrophic but otherwise normal. There was a whitish shiny mass of about 8 x 8 cm hanging at the introitus. There was a healthy cervix at the end of the mass. No abnormal discharge was noted.

An obvious bulging of anterior vaginal wall was seen.

Using SIMS speculum:

A long parous cervix protruding out of the introitus. The uterus was at the introitus. There was a big bulge of anterior vaginal wall on strainning.

DIGITAL EXAMINATION;

Uterus was atrophic and mobile. There was no adnexal mass. PAP smear was taken. With one finger in the vagina and other in rectum cough impulse was not felt from the pouch of Douglas. Suggesting absence of enterocele.

RECTAL EXAMINATION.

Rectal examination revealed no rectal mass or stricture. No stress incontinence was demonstrated on coughing both during lying and standing. Palpation with the prolapse reduced revealed moderate pelvic tenderness with no other mass felt. Posterior vaginal wall was not laxed and there was no rectocele..

DIAGNOSIS. Third degree uterovaginal prolapse with a cystocoele.

A. INVESTIGATIONS

1. Blood

haemoglobin 14.8g/dl

Normocytic normochromic red blood cells.

White cell count 4800 per cu mm and the differential count was normal.

2. Serum creatinine – 44umol/lt
3. Midstream urinalysis.

Specific gravity 1020

No sugar or Albumin

Microscopy – Negative

Culture – No bacterial growth.

4. Stool – No hookworm ova seen
5. Chest X-Ray – normal
6. Electrocardiogram(ECG) – Normal tracing.
7. Cervical cytology was normal.
8. Intravenous urogram – was not done due to unavailability of Urografin.

A. **TREATMENT**.

She was planned for Vaginal hysterectomy and anterior colporrhaphy.

She was then admitted for the operation.

PRE OPERATIVE PREPARATIONS.

1. The patient was informed of the diagnosis and the proposed mode of treatment. She consented for anaesthesia and operation.
2. An enema was given and the vulva shaved in the evening before operation.
3. Blood grouping and cross matching was done and 1 litre of compatible HIV negative blood obtained.
4. She was pre medicated with 0.6mg atropine and 100 mg pethidine before she was taken to theatre.

OPERATION.

Anaesthesia.

Anaesthesia was given as in gynaecology case No.3.

THE PROCEDURE.

The patient was placed in Lithotomy position and the vagina and vulva were disinfected using 1% iodine followed by 70% alcohol. Sterile dressings were then applied. Catheterisation was then done and 150 ml of clear urine removed.

A semi circumferential incision was made on the portio vaginalis about 1 cm from the tip of cervix. A mid line perpendicular incision was made starting about 1 cm from the external urethral meatus and extended to meet the first incision. The vaginal flaps were dissected from the bladder as much as possible using McIndoe scissors.

The vesico cervical ligament was next divided with mayo's scissors and the bladder stripped gently from the cervix until the utero vesicle peritoneum was seen.

The semi circumferntial incision was then completed posteriorly and a mid line vertical incision was made and the vaginal wall dissected from the cervix until the peritoneum of the pouch of Douglas exposed. The longitudinal vaginal incision was extended to the peritoneum.

The peritoneum of the pouch of Douglas was next opened and the incision extended laterally to meet the utero-sacral ligaments. The utero- sacral ligaments were identified, double clamped, divided and transfixed using chromic catgut no. 1. The cardinal ligaments and uterine pedicles were simultaneously double clamped, transfixed and divided on both sides.

The uterovesicle peritoneal reflection was then opened and the incision extended laterally. A finger was introduced into the peritoneal cavity and the uterus delivered though the pouch of Douglas. The ovaries were inspected and found normal. The round ligaments were double clamped, divided and transfixed using chromic catgut no. 1 suture. The suspensary ligaments were similarly treated. The uterus, tubes and ovaries were thus removed.

The posterior cut edge of the peritoneum of the pouch of Douglas was picked up and carefully dissected as far as the rectum and excised. This removed the hernial sac. The peritoneum was then repaired by a purse string suture placed inside the pedicles on the peritoneal side. One of the pair of the long ligatures of cardinal ligament and uterosacral ligaments were tied to their fellow from the other side. The second ligature was threaded through an empty needle and brought through the adjacent vaginal wall to be tied later. Additional sutures were applied to oppose the utero-sacral ligaments.

The pubovesicle fascia of the two side were next sutured together using a series of catgut no. 1 sutures which were tied in the midline and in so doing elevated the bladder base. The redundant vaginal tissue was excised and the vaginal wall was repaired using a series of catgut no. 1 sutures. The stitches which had been threaded though the vaginal wall were now tied. The vagina was found accommodating two fingers comfortably. Haemostasis was ascertained and an indwelling urethral catheter was inserted and connected to a plastic urine bag. A normal saline soaked gauze was inserted into the vagina. Total blood loss was estimated about 300 ml.

POST OPERATIVE CASE.

1. The blood pressure, pulse rate and respiration were monitored ½ hourly for 4 hours, 1 hourly and 4 hours and then 4 hourly. They remained stable.
2. She received 3 litres of 5% dextrose in 24 hours after which intravenous fluids were s topped and a soft diet begun.
3. Injection pethidine 100 mg intramuscularly was given 6 hourly for 24 hours.
4. She made 1300 ml of clear urine on the first post – operative day. The catheter was removed after 5days.
5. The vaginal pack was removed after 24 hours.
6. Metronidazole tabs 400 mgs thrice daily for five days.

Her subsequent recovery was uneventful. No fever occurred. On the seventh post operative day a sterile pus swab was passed though the vagina to break any synechiae forming between the walls. She was discharged home on the eighth post operative day and advised to come back for review after 6 weeks.

POST OPERATIVE VISIT.

She was seen again 6 weeks later. She had no new problems. She was voiding and defaecating normally. The vault had healed well. The histology report was unremarkable. She was advised to avoid sexual intercourse for three months and then discharged from the clinic.

COMMENTARY.

Uterovaginal prolapse is the main indication for vaginal-hysterectomy. However in younger patient Manchester operation may be preferred to vaginal hysterectomy.

Utero vaginal prolapse is a multifactorial disease. A familial tendency which is sometimes seen in these patients suggests a genetic predisposition. Birth injuries and menopausal atrophy when superimposed on a genetically predisposed individual are very likely to result in genital prolapse. Prolapse occurring in infancy and in nulliparous women further point to congenital weakness of the endopelvic fascia and its thickening which are the main supports of the uterus and vagina ([1,4].

Electro myographical and histochemical studies have shown that parturition results in partial denervation of the levator ani muscles and the visceral sphincters. Urethral closure pressures have also shown to be lower after vaginal delivery than after abdominal delivery. Partial denervation of levator ani muscles results in the weakening of the pelvic floor and weakness of the sphincters results in urinary and stool control problems. The vaginal delivery in addition causes stretching of pelvic ligaments and can result in irreversible damage. The higher incidence of genital prolapse and genuine stress incontinence in multiparous women compared to nulliparous women further serves to strengthen the aetiological significance of vaginal delivery in the causation of these disorders[(4)].

Estrogen withdrawal following menopause results in atrophy of the smooth muscles element in the pelvic ligaments.

Since the muscle element is the strongest component of these ligaments there is weakness of uterine support and hence prolapse[1,4].

The patient under discussion had no family history of genital prolapse but was multiparous and had presented with utero-vaginal prolapse many years after menopause. Although genetic predisposition cannot be excluded it seems that birth injuries plus menopausal atrophy were probably the main causes. She had no other predisposing conditions like chronic cough, constipation, obesity or pelvic tumors.

The management of utero-vaginal prolapse depends on the age of the patient, her parity, her health status for operation and whether there is any other abdominal or pelvic pathology. In young patients amputation of the cervix and strengthening of the uterine supports as is done in Manchester operation may suffice. However cervical amputation may result in cervical incompetence[1,2,4].

Patients with serious medical diseases who are considered surgical risks may be treated by use of polyvinyl ring pessaries changed every three months to prevent vaginal ulceration and infection. Pessaries may also be used in menopausal women with cervical decubitus ulcers to encourage healing before operation.

Utero-vaginal prolapse is usually associated with some degree of urethral, bladder and rectal prolapse. A hernia of pouch of Douglas may be present as well which can be managed by excision of the peritoneal sac after reducing the small intestines.

This patient had a cystocele. The hysterectomy therefore must be accompanied with repair aimed at strengthening the pelvic ligaments and pelvic floor.

In this patient vaginal hysterectomy and repair of cystocele was done.

It is believed that a generous epistiotomy at the delivery minimises perineal floor and perineal damage and may prevent some cases of genital prolapse. Post natal exercises are also believed to restore the tone of the levator ani muscles and hence are probably preventive. The use of estrogens in menopausal women may prevent atrophy of pelvic ligaments and probably prevents genital prolapse but is fraught with a risk of endometrial cancer. Systemic or vaginal estrogens should thus be reserved for the treatment of post menopausal women with prolapse associated with atrophic vaginitis especially pre-operatively [1,2,4].

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UTERINE FIBROIDS WITH MENORRHAGIA: TOTAL ABDOMINAL HYSTERECTOMY AND BILATERAL SALPINGO OPHORECTOMY

NAME:	**MRS A.V.**
AGE:	**48 YEARS**
GRAVIDITY:	**PARA 1**
REGISTRATION NO.:	**932445**
RESIDENCE:	**KIJITONYAMA**
DATE OF ADMISSION:	**26/10/98**
DATE OF DISCHARGE:	**4/11/98**

Summary:

Mrs AV; a 48 year old para one lady had complaints of heavy, and prolonged menstruation with an abdominal mass of one year duration. Clinical evaluation showed that she was anaemic and had an enlarged, firm, mobile uterus corresponding to a 20 weeks pregnant uterus. Dilatation and curretage was done and endometrial malignancy was excluded. Anaemia was corrected and total abdominal hysterectomy and bilateral salpingo oophorectomy was done. The postoperative recovery was uneventful and the patient was discharged on the seventh postoperative day in good condition.

HISTORY OF PRESENTING ILLNESS:

The patient presented to the gynaecology clinic with a history of heavy and prolonged menstrual flow for a duration of one year. The bleeding was associated with clots in the first 3 to 4 days of menstrual flow and was prolonged to 10 days and occasionally upto 14 days. She used to have periods lasting 3 to 4 days with normal flow every 28 days prior to her current problems. She also complained of painful menstruation that was experienced throughout the menstrual flow but worse during the onset of menstrual bleeding. She never used to experience painful periods before. She denied history of associated fever or ~~abdominal~~ abnormal vaginal discharge or lower backache. She did not give history of intermenstrual bleeding, post coital bleeding or contact vaginal bleeding. She denied history of painful micturition or frequency. Her bowel habits were normal and there was no history of rectal bleeding. She complained of palpitations, dizziness and headache. These symptoms were becoming worse with time. She however denied history of exertional dyspnoea or paroxysmal nocturnal dyspnoea.

PREVIOUS MENSTRUAL AND GYNAECOLOGICAL HISTORY.

She had her menarche at 14 years. Her last normal menstrual period was on 21.9.98. her periods lasted 3 –4 days every 28 days, until one year ago. She had never used any contraceptives.

OBSTETRIC HISTORY.

She was para 1. The last child born was 20 years ago. It was a full term normal hospital delivery with no antenatal, natal or puerperal complications.

PAST MEDICAL HISTORY.

There was no history of serious illnesses in the past.

FAMILY/SOCIAL HISTORY.

She was married to a businessman. She was a housewife. She did not smoke nor took alcohol. There was no personal or family history of hypertension, diabetes mellitus or tuberculosis.

PHYSICAL EXAMINATION.

General examination.

Her general condition was satisfactory. She had moderate pallor, was afebrile and not jaundiced. She had no cervical or axillary lymphadenopathy.

RESPIRATORY SYSTEM.

The respiratory rate was 20 beats per minute and the lung fields were clear with normal vesicular breath sounds heard.

CARDIOVASCULAR SYSTEM.

The pulse was 100 beats per minute and her blood pressure was 110/70 mmHg. Jugular venous pressure was not raised. The heart sounds were audibly normal with no murmurs.

ABDOMINAL EXAMINATION.

The abdomen was uniformly distended upto the level of umbilicus. There were no areas of tenderness. The liver and spleen were not palpably enlarged and the renal angles were non-tender and free of mass.

There was a mass arising from the pelvis corresponding to a uterus size of 20 weeks gestation. The mass was firm, had irregular surface, was non-tender, and was mobile.

PELVIC EXAMINATION.

The vulva and vagina were normal. The vagina was stained with light blood. The vaginal mucosa was moderately pale. The cervix looked healthy and slight blood oozing could be seen through the external os. The cervix felt firm and closed. The uterus was bulky, firm with irregular surface, mobile and was equivalent to 20 weeks pregnant uterus. The fornices were free of masses and tenderness.

RECTAL EXAMINATION.

There was no rectal bleeding or evidence of external hemorrhoids. The anal sphincteric tone was normal. The rectal mucosa moved freely. The parametria were non-tender and free of masses.

DIAGNOSIS.

Uterine fibroids with menorrhagia.

INVESTIGATIONS.

1. Haemoglobin – 8.8g/dl.
2. Blood group and cross matching of 2 units of O Rh positive blood.
3. Urinalysis

   Microscopy – No cells or ova seen.

   Biochemical – Urine was negative for sugar and proteins.

   Culture – there was no significant bacterial growth.
4. Stool was negative for ova.
5. Platelet count – 170,000/mm^3.
6. WBC count – Total 11,000/mm^3.

   Differential – Neutrophills 69%

   Lymphocytes 28%

   Eosinophils 3%
7. Serum creatinine 72umol/litre.
8. IVU – not done, due to technical problems.
9. Endometrial biopsy showed proliferative endometrium. No malignant cells seen.

Plan of Management.

1. Raise Haemoglobin.
2. Total abdominal hysterectomy.

The anaemia was corrected with oral iron for 2 months and the haemoglobin raised to 11.2g/dl.

PREOPERATIVE PREPARATIONS.

She was admitted in the gynaecological ward a day prior to the day of surgery. Enema was given and she was fasted from midnight of the day prior to admission. She was shaved in the morning of the day of surgery. She gave a written consent for surgery and general anaesthesia.

Anaesthesia:

This was induced and maintained as described in the gynaecological case number 3.

Procedure:

The vulva was swabbed with savlon and then catheterization was done and about 200 mls of clear urine was obtained. Preparation of the operating site and opening the abdomen was done as described in gynaecological case number 3.

A self-retaining retractor was introduced into the wound to aid in visualization. The intestines were packed away using two wet tailed abdominal packs each tagged to a small artery forceps. The uterus was equivalent to 20 weeks pregnant uterus with multiple intramural fibroids. There were no adhesions. Both ovaries and the fallopian tubes were normal. Inspection of the abdomen showed normal abdominal organs.

A stay suture using silk No 2 was placed on the fundus of the uterus and held with a small artery forceps to aid traction and the uterus was delivered easily through the surgical wound. The right round ligament was identified and doubly clamped with Kochers forceps and then divided between clamps with Mayo's scissors. Both stumps were ligated with chromic catgut No. 1

long ties was left with the lateral stump and held by a small artery forceps. The fascial plane of the left broad ligament was separated by blunt dissection. The posterior leaf of the broad ligament was dissected towards the infundibulo pelvic ligament. The ureter was identified as it crossed the iliac vessels towards the cervix. Index finger was then pushed to perforate the posterior leaf of the applied on the infundibulopelvic ligament.

The ligament was divided between the middle and distal clamps. The lateral clamp was doubly ligated with chromic catgut no. 2. The right salpingo ophorectomy was thus achieved. The anterior leaf was dissected downwards then medially to the uterine lower segment. The same procedure was repeated on the left side. The bladder was pushed down with a swabbed finger to the cervical vaginal junction thus keeping the bladder and the ureter out of danger. Mayo's scissors on both sides completed further dissection of the posterior leaf of the broad ligament. The uterine vessels were palpated on the lateral sides of the uterus at the junction of the body of uterus and the cervix. The right uterine vessels were triply clamped using hysterectomy clamps near the junction of the cervix and the uterus. They were divided between the upper most and the middle hysterectomy clamps. The lateral stumps were doubly transfixed with chromic catgut no 1. The same procedure was repeated on the left side. The tip of the cervix was identified by bimanual palpation. The cardinal ligaments were clamped divided and transfixed with chromic catgut No 1 on either side of the cervix. The ureters were safe. The uteroscaral ligaments were bilaterally clamped, divided and transfixed using chromic catgut No 1. The uterus was pulled upwards and the tip of the cervix was palpated through the vaginal fornices. A stab incission was made on the anterior vaginal wall to open the vagina

just below the cervix. Working close to the attachment of the cervix to the vagina, the uterus with its cervix was amputated as the vaginal cuff was cut round close to the cervix while held by allis forceps. The lateral edges of the vagina were held with long straight artery forceps. The uterus was thus removed with its tubes and the ovaries. The vagina was disinfected using tincture of iodine on gauze, which was pushed into the vagina and removed from below at the end of the operation. The tissues enclosed by the clamps on the lateral edges of the vagina were ligated and the long suture held by small artery forceps. The vagina was closed by interrupted chromic catgut No 1 sutures. Good homeostasis having been achieved the round ligament stumps were tied to the vaginal angles bilaterally to anchor the vaginal vault thus preventing vault prolapse.

Pelvic peritonization was done using chromic catgut No 0.

The abdominal packs and retractors were removed. The swabs and instrument count was declared correct.

The abdomen was closed as described in gynaecological case No. 3 The patient was reversed from anaesthesia as described in gynaecologic case No. 3 The estimated blood loss was 600mls.

The uterus was cut opened vertically and there were few submucous and several intramural fibroids. The endometrium and the cervix looked normal. The specimen was sent for histology.

POST OPERATIVE MANAGEMENT.

1. Intravenous fluids: 1 litre of dextrose saline 8 hourly for 24 hours was given.
2. Injection pethidine 100mg intramuscularly 8 hourly for 24 hours was given to relieve pain.

3. Input and output were recorded with indwelling catheter insitu. A total of 2300 mls of clear urine were produced against an input of 3000mls in the first 24 hours.
4. Blood pressure, pulse, respiration and temperature were monitored and remained stable.
5. Injection Ampicillin 500mg 8 hourly for 24 hours, then to continue with capsules Ampicillin 500mg thrice daily for 4 days.
6. The catheter was removed after 24 hours and the patient could void well.

POST OPERATIVE PROGRESS.

There was no vaginal bleeding. Intravenous fluids were stopped after 24 hours. She had also passed flatus and bowel sounds were audible. She was started on oral fluids and was allowed to ambulate. Haemoglobin check on second day postoperatively was 10g/dl. The skin stitches were removed on the sixth day post operatively and the wound had healed by primary intention.

Postoperative vaginal examination revealed an intact vaginal vault and there was no haematoma. The patient was discharged on seventh day postoperative in good health and was advised to attend at the gynaecology clinic for follow-up after 6 weeks.

Follow-up:

She was seen at the clinic. She had no complaints. Her scar had healed well, and a speculum examination revealed a healthy vaginal vault. There was no evidence of pelvic haematoma. Her haemoglobin was 11g/dl. She was advised to avoid sexual intercourse for 3 months to allow adequate time for tissue healing. She was discharged from the clinic.

COMMENTARY.

Leiomyomas or uterine fibroids, are the commonest benign tumors of the uterus, estimated to occur in about 20-25% of all women in the reproductive age group[1]. They are commoner in blacks[1,2]. Fibroids are the commonest indication of hysterectomy at Muhimbili Medical Centre.

Fibroids are a well-recognized cause of menorrhagia and anaemia[3]. Although they may be associated with dysmenorrhoea they are usually painless, unless they undergo torsion or degeneration. Self-detected mass is another common reason for presentation.

Several mechanisms have been proposed to explain the occurrence of excessive and prolonged menses, though none is fully accepted. Increased surface area, venous congestion, mechanical alteration of the endometrum and endometrial hyperplasia all have been incriminated[2,3].

Menorrhagia occurs in about 30% of patients with myoma[2].

Mrs AV sought medical attention chiefly because of menorrhagia that had resulted into anaemia. She also had dysmenorrhoea and abdominal mass.

Uterine leiomyomas are readily, diagnosed by palpation on gynaecologic examination, and often clinically substantiated by ultrasonography. In 22% of patients the sonogram may remain normal when leiomyoma is present[4]. Magnetic resonance imaging (MRI) can more accurately assess the number, size and location of leiomyomas, as well as the presence and extent of tumor degeneration[5].

The treatment of uterine leiomyomas has traditionally ranged from careful observations, to myomectomy or hysterectomy, depending on the size and

location of the tumors, the age of patient and the reproductive plans of the patient[1].

Newer techniques, which are less invasive, have also been advocated namely:

1. Gonadotrophin releasing hormone agonists (Gn rh –a) have been shown to reduce the size of uterine fibroids by 40 – 60% and this is coupled with decrease in blood loss[6]. These act by suppressing gonadotrophin secretion and inhibit gonadal activity thereby inducing medical menopause.
2. Transcervical resection of endometrium (TCRE) whereby the fibroid especially submucus fibroid is resected partially or in total resulting in decreased bleeding in some patients[8].
3. The endometrium may be selectively destroyed (selective endometrial ablation) by Nd – YAG lasser, conserving the healthy tissue around[2,7].

Until these new methods become universally accepted, hysterectomy will remain the definitive treatment of symptomatic uterine fibroids.

Routine prehysterectomy curretage for a presumed benign disease to exclude endometrial or other malignancy is still debatable. It has been claimed to be a low yield procedure with a high false negative rate[9,10] and causes additional hospital costs. It is further attested that women with uterine fibroids have a low risk of endometrial malignancy, probably below 0.7%[9]. Despite the strong points against prehysterectomy curretage, the author thinks that it was necessary in Mrs A.V. who was in perimenopausal

period, and had a low parity. It is also indicated if the patient has abnormal uterine bleeding above 40 years of age[11].

Mrs AV was treated by hysterectomy plus bilateral oophorectomy as definitive treatment. Her age had fairly advanced and the menorrhagia had been such a serious problem that the best treatment was to do away with her uterus. Moreover she had completed her family. It was also necessary to perform bilateral oophorectomy as a prophylactic measure against ovarian malignancy whose incidence increases with the advance in age especially after the age of 40 years.

This has been the practice in many patients similar to Mrs A.V. at our centre basing on the fact that about 12% of women might avoid future development of ovarian cancer with such practice[5]. However, some authority argue against the benefit of this practice. They believe that removing the normal ovary does not reduce the risk of subsequent malignancy. This idea is supported by the fact that the epithelium covering the ovary has similar embryological origin as the peritoneum. The oophorectomy just removes the small part of the tissue liable to malignant transformation.

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OBSTETRICAL LONG COMMENTARY

TITLE: **MATERNAL ANTHROPOMETRIC MEASUREMENTS AND GESTATIONAL AGE IN PREDICTION OF FOETAL WEIGHT IN PREGNANT WOMEN AT MUHIMBILI MEDICAL CENTRE.**

CONTENTS

1. Abstract.
2. Introduction and Review of Literature.
3. Study rationale and study hypothesis.
4. Broad and specific objectives.
5. Methodology.
6. Data Analysis.
7. Table of results.
8. Discussion.
9. Recommendations.
10. References.
11. Questionaire.

ABSTRACT

A prospective study was done at Muhimbili Medical Centre from 1st September to 31st December 1998 to compare the value of different pre-delivery maternal anthropometric measurements and gestational age for prediction of foetal weight in-utero and development of equation of great predictive value using these measures.

The study population consisted of 600 pregnant women admitted to labour ward due to either labour pains at any gestational age or those destined for Caesarean section. The gestational age in weeks, symphysiofundal height in centimeters and abdominal girth in centimeters were measured and recorded. The actual birth weights of fetuses in kilograms who were delivered were also recorded.

Symphysio-fundal height and abdominal girth were positively correlated to birth weights with coefficient of correlation r of 0.74 and 0.69 respectively significant at level of $P < 0.001$ and that, it respectively explains 55%, 47% of the observed variation in birth weight. When these measures were combined it explained 69% of the observed variation in birth weights. Gestational age was not correlated to birth weight and had a coefficient of correlation r of 0.01 ($P > 0.295$).

An equation of higher predictive value was formulated using the two significant variables namely symphysio-fundal height and abdominal girth and the equation tested in another sample of hundred patients. The symphysio-fundal height and abdominal girth were measured and estimated

foetal weight calculated by substituting the value for symphysiofundal height and abdominal girth in the equation. The estimated foetal weight was then compared to observed birth weight and the sensitivity and specificity calculated.

The sensitivity in detecting the birth weight below 2kg was 88.2% and specificity was 84.3% and the sensitivity in detecting the birth weight more than 3.8kg was 83.3% and specificity was 68%.

In conclusion, symphysio-fundal height and abdominal girth were better predictors of birth weight than gestational age. It seems justified therefore to investigate the value of an equation of higher predictive value for use in antenatal care in developing countries.

Introduction and Review of Litreature.

Birth weight is known to influence both perinatal morbidity and mortality[1]. A simple, easy,cheap and accurate method of estimating foetal weight in utero would therefore be useful to a practicing clinician. There are several methods used in attempts to achieve this. Some of these methods are simple, such as palpation of the uterus and measurement of the uterine fundus above symphysis pubis. While others are complex such as ultrasound estimation of biparietal diameter, foetal volume and abdominal foetal circumference.

Campbel and Wilkin[2] in a series of 140 patients using ultrasonic measurement of the foetal abdominal circumference to estimate foetal weight showed that, accuracy of predictions varied with the size of foetus. At a predicted weight of 1 Kg, 95% of birth weights fell within 160 grams, while at 2Kg, 3 Kg and 4 Kg the corresponding values were 290 grams, 450 grams and 590 grams. Extra polation of these data to routine screening of obstetric population showed that a single measurement at 32 weeks and 36 weeks of gestation would successfully detect 87% and 75% of small for dates fetuses respectively.

Warsof et al [3] in his study of 85 patients estimated foetal weight by ultrasonic measurements of biparietal diameter, abdominal circumference and total intrauterine volume, in which he showed that abdominal circumference correlates better with birth weight than either biparietal diameter or total intrauterine volume. However, birth weight predictions were more accurate, within the standard deviation of 106 grams/kg when abdominal circumference and biparietal diameters were used together.

In the study of 98 patients by Belzian et al[4] fundal height measurement was used to predict foetal weight inutero with an accuracy of 90%. The study further showed that, systematic and careful measurement of fundal height seems to be an accurate method for detecting pregnancies with endangered foetal growth. Such measurements of fundal height could be used as a screening test in the diagnosis of intrauterine growth restriction(1U GR).

Papiernik et al [5] showed that 20 among 23 pregnancies with fundal height below the 10th percentile corresponded to birth weights below the 10th percentile, thus giving an accuracy of 90%.

Mongelli et al [6] estimated foetal weight based on symphysio – fundal height and gestational age. Using Multiple Regressional analysis for foetal weight estimated by ultrasound, gestational age and symphysio – fundal height he showed that foetal weight estimation using symphysio-fundal height and gestational age can be performed with an accuracy comparable to that of ultrasound scan. In another study of 778 patients with a singleton foetus Thompson et at [7] estimated the predictive value of maternal weight and symphysio – fundal height in determining foetal weight. It was found that maternal weight was a poor predictor of foetal weight, and that fundal height had a sensitivity and specificity of 68% and 60% respectively in determination of foetal weight.

Ojwang et al [8] measured the fundal height at the mid point of the upper border of symphsis pubis to the highest point of uterine fundus. The longest circumference of the abdomen was taken as the abdominal girth. Fundal height multiplied by girth in centimeters was calculated and the result expressed in grams. There was a good correlation between estimated

weight taken before delivery of the baby and actual weight taken after the delivery with error of 450 grams.

Lebdev et al [9] using similar meaurements to Ojwang et al were able to achieve the same results in estimation of birth weights, within a standard deviation of 180 grams.

Walraven et al [10] gathered symphysio – fundal height measurements from 1509 women who had both a singleton delivery and available data of predelivery maternal weight, height and mid-upper arm circumference and from 73 women who had a twin delivery. They found that symphysio-fundal height was a better predictor of birth weight than maternal height, predelivery weight or mid-upper arm circumference. The study further showed that at a cut-off point of level of 30cm for symphysio-fundal height, the detection rate for birth weight below 2500 grams and 2000 grams was 66% and 68% respectively and at a cut-off point of 38 cm the detection rate for twin pregnancy or birthweight > 4kg was 76%.

STUDY RATIONALE.

Birth weight is known to influence perinatal morbidity and mortality[1] in a study on low birth weight babies done at Muhimbili Medical Centre – Dar es Salaam by Maji et al [11], it was noted that low birth weight carried a 3 fold morbidity risk and a 7 fold mortality risk and that delivery by Caesarean section of low birth weight babies improved the outcome, thus the estimated foetal weight is useful to assist in decision making regarding the mode of delivery.

Simpler techniques for estimating foetal weight can be useful in a developing country for various reasons. Such methods are cheap, easy to

use, non invasive, accurate, and can be used anywhere, even in small institutions and domiciliary midwifery to monitor the foetal growth and select high risk cases which may require more specialized care.

Muhimbili Medical Centre caters for high risk pregnancies which require planned deliveries. Thus simple methods of foetal weight estimation would be highly beneficial to obstetricians in decision making about the mode of delivery and prediction of the neonatal outcome. The aim of this study is to see the applicability of these simple methods in our set up.

STUDY HYPOTHESIS.

Can gestational age, symphysio-fundal height and abdominal girth be predictors of foetal weight?

BROAD OBJECTIVE.

Prediction of foetal weight by gestational age, symphysio-fundal height and abdominal girth.

SPECIFIC OBJECTIVES.

1. To determine the correlation between maternal symphysiofundal height and birth weight.
2. To determine the correlation between maternal abdominal girth and birth weight.
3. To determine the correlation between gestational age and birth weight.
4. To formulate the equation of higher predictive value in determination of foetal weight.

METHODOLOGY

STUDY SITE:

This prospective cohort study was done in the labour ward of Muhimbili Medical Centre from 1st September to 31st December 1998 . Muhimbili Medical Centre is a tertiary referral hospital in Dar es Salaam, Tanzania, providing speicalised care. It caters for the Eastern and Central zones of the country. The centre has three main activities, which are provision of services, research and teaching for medical students, post graduates and paramedical staff.

1. OBSTETRICS:

(A). Antenatal Services:

(i). Out patient:

The centre runs high risk clinics for pregnant mothers' referred from the peripheral clinics and hospitals. In these peripheral clinics and hospitals the antenatal clinics are conducted by midwives whose main concern is to supervise normal pregnancy and select high risk pregnancies for referral. Of recent, due to current shortages of medical facilities even normal pregnancies are referred to Muhimbili Medical Centre.

(ii). In patient;

The 4 antenatal wards have 200 beds against a daily bed state of 300 patients.

The main reasons for admission are:-

1. Anaemia in pregnancy.
2. False Labour.
3. Hypertensive disorders in pregnancy.
4. Others – include – antepartum hemorrhage, multiple pregnancy, bad obstetric history, malpresentation and medical disorders.

STUDY POPULATION:

Patients admitted to the Labour ward during the study period(1st September to 31st December 1998) with labour pains either at term, preterm or those destined for elective Caesarean section for various indications were studied.

EXCLUSION CRITERIA:

1. Polyhydramnios
2. Multiple pregnancy
3. Obese patients.
4. Patients with already engaged presenting part.

SAMPLE SIZE

Assuming, the weight descrepancy postnatally to be 20-30% with a confidence interval of 90% the sample size was calculated in the " EPI info version 6" programme using the cohort sampling to be 600.

SELECTION OF PATIENTS.

In order to avoid bias, a random selection of 10 consecutive patients was done during the day time. These included patients complaining of labour

pains at any gestational age. The recruitment was carried out everyday of the week for 10 weeks.

Each of these patients were seen on admission by the author and details of antenatal care, parity , age and last normal menstrual period recorded.

Expected date of delivery was then be calculated by Naegel's[12] formula by adding seven to the first day of last normal menstrual period and adding nine to the month of last normal menstrual period. Gestational age in weeks was then calculated.

Patients not knowing their last normal menstrual period were also included in this study, their gestational age verified postnatally by Dobowitz[13] method.

The patients were asked to empty bladder and were examined in supine position. If the abdomen was found unduly enlarged than expected for the duration of pregnancy and/ or if it was difficult to feel the foetus, and/or if fluid thrill was elicited then polyhydramnios was suspected and patients excluded from the study. If the abdomen was found enlarged more than expected for the duration of pregnancy and/or multiple foetal poles palpated and/or foetal heart sounds heard in two or more separate areas the diagnosis of multiple pregnancy was made and patients excluded from the study. Patients with undiagnosed multiple pregnancy were excluded from the study.

If the presenting part was found to be fixed above the pelvic brim then the diagnosis of engaged presenting part was made and patients excluded from the study.

Having excluded the above group the symphysio-fundal height was then measured with a metric tape made of non-elastic, non stretchable material calibrated in centimeters. The measurement was taken from the midpoint of the upper border of symphysis-pubis to highest point of the uterine fundus, using the cubital edge of the hand to sustain the tape while attempting to reach the middle part of the uterine fundus.

The abdominal girth was taken as the longest circumference of the abdomen using the same non-elastic, non stretchable metric tape measure calibrated in centimeters.

After the delivery, the birth weights of the infants were taken to the nearest 10 grams by using a common standard simple beam balance scale.

DATA ANALYSIS

The data for the entire sample was analyzed using the statistical package for the social sciences(SPSS PC^{+}) and 'STATA' software packages. The data was entered into the computer and printout made. The author then compared the original data with the printed data and eliminated all the errors. Means, Standard deviations, minimum and maximum values were obtained for all quantitative variable(birth weight, symphysiofundal height,

abdominal girth and gestational age). Association between quantitative variables was determined by multiple regressional analysis used where by the dependant, or outcome variable was the infants birth weight. -The independent variables selected for analysis were:

1. Symphysio – fundal height.
2. Abdominal girth.
3. Gestational age

The regression coefficient r, multiple r^2, and F statistics was calculated. The r value represents the degree of association between the dependent variable and the independent variables.

The multiple r^2 indicates the extent to which the variance in birth weight is explained by the independent chosen, and the F statistics for each independent variables indicates whether or not that variable achieves statistical significance in explaining the outcome of birth weight. After this, various linear regression models were fitted to the data to obtain the best predictive model for the data. In this analysis symphysiofundal height and abdominal girth were considered to be the good predictor variables. An equation of good predictive value with the use of symphysio-fundal height, abdominal girth was derived.

The equation derived was tested in another sample of hundred patients based on the same selection criteria as the study population.The expected foetal weight inutero for these patients was calculated by the derived equation and the sensitivity and specificity were calculated over the actual birth weight.

TABLE OF RESULTS

GENERAL CHARACTERISTICS

The distribution of age and parity of the pregnant mothers is given in tables I and II.

TABLE I

AGE GROUP DISTRIBUTION OF STUDY POPULATION.

Age group(Years)	No. of patients	Percent
15- 19	72	12
20 -24	184	30.7
25 - 29	175	29.2
30 - 34	118	19.7
35- 40	51	8.5
Total	600	100

The mean age was 26.2 years (S.D 5.5), the youngest mother was 15 years and the eldest 40 years.

TABLE II

PARITY OF STUDY POPULATION.

Parity	No. of Patients	Percent
1	175	29.2
2	182	30.3
3	132	22
4	64	10.7
5	26	4.3
6	13	2.2
7	7	1.2
8	1	0.2
Total	600	100

There were 29.2% primipara, 30.3% who had parity of 2 and 22% had parity of 3. Thus, 80% had parity of 3 or less.
The mean parity was 2.4 births (S.D 1.4), with a range of 1-8 births.

GESTATIONAL AGE AND BIRTH WEIGHT

The gestational age and birth weight is shown in tables III and IV.

TABLE III

THE DISTRIBUTION OF GESTATIONAL AGE AND MEAN BIRTH WEIGHT.

Gesational age in weeks	Number	Mean birth weight in kg	Standard Deviation	+ Std deviation	- Std deviation
30-32	11	2.9786	0.5957	3.5743	2.3829
33-34	11	2.6429	0.4429	3.0858	2.2000
35-36	21	2.9353	0.6151	3.5504	2.3202
37-38	164	3.0947	0.4566	3.5513	2.6381
39-40	221	3.0987	0.5000	3.5870	2.5870
41-42	172	3.0976	0.494	3.5916	2.6030

Majority of women in the study group were at term(37-42 weks) (92%) and 8% were preterm (30-36 weeks).

The mean gestational age was 40 weeks (SD 12.7) with a range from 30-42 weeks.

Most of the women (36.8%) in the study group had gestational age between 39-40 weeks with a mean birth weight of 3.0870kg.
The mean birth weight did not increase with an increase in gestational age.

TABLE IV

THE DISTRIBUTION OF GESTATIONAL AGE AND BIRTH WEIGHT

Gestational age(wks)	Weight (kg)		
	2 - 2.99	3 - 4	>4
30-32	6	5	0
33-34	8	3	0
35-36	12	8	1
37-38	56	103	5
39-40	88	123	10
41-42	66	101	5

60% of those with preterm delivery had babies weighing less than 3kg, and only 2.3% had babies weighing more than 4kg.

FIGURE 1

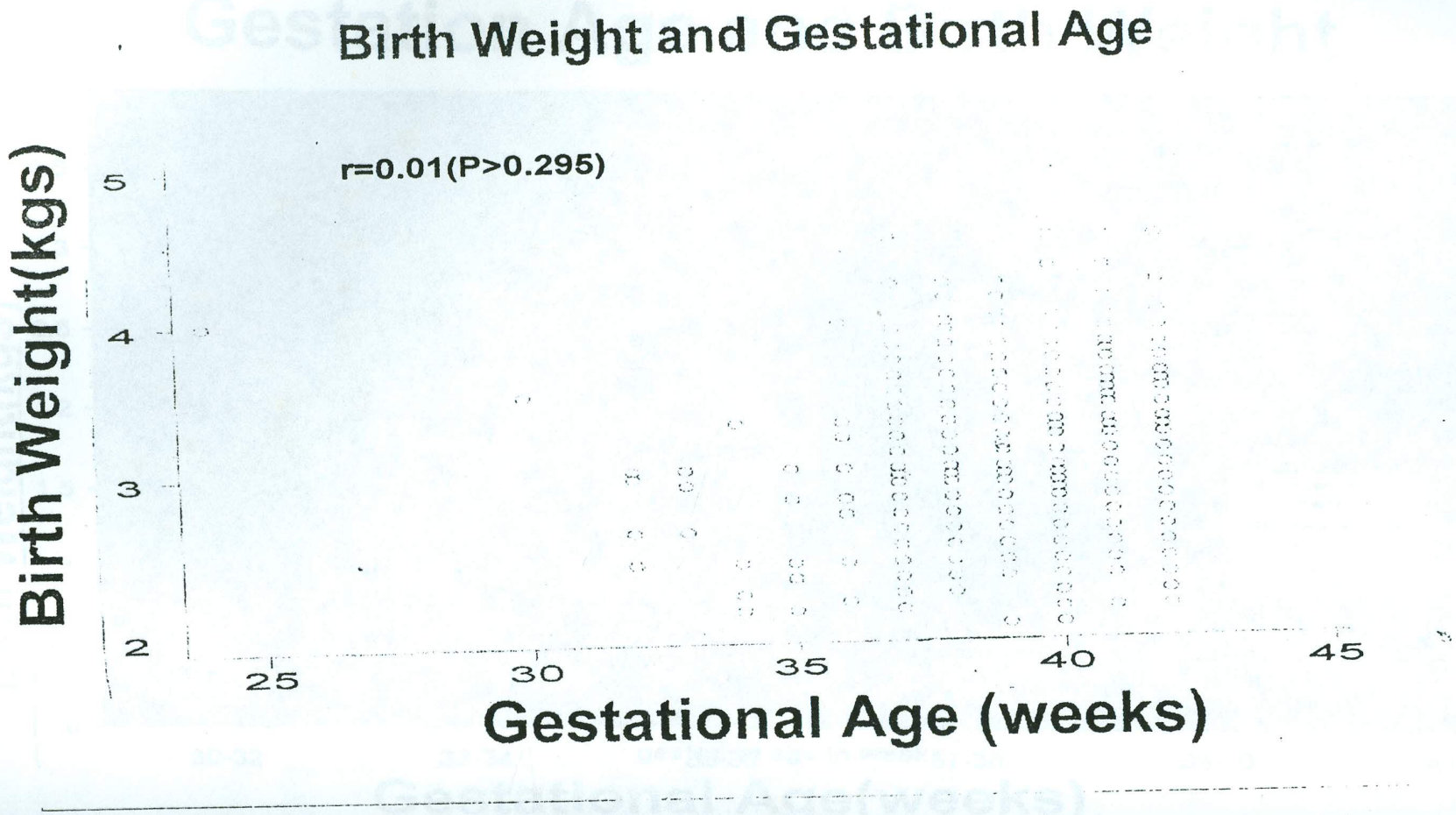


Figure 1 shows Scatter graph of birth weight and gestational age.
There appears to be no relationship between birth weight and gestational age
The coefficient of correlation r is 0.01(P>0.295).

FIGURE 2

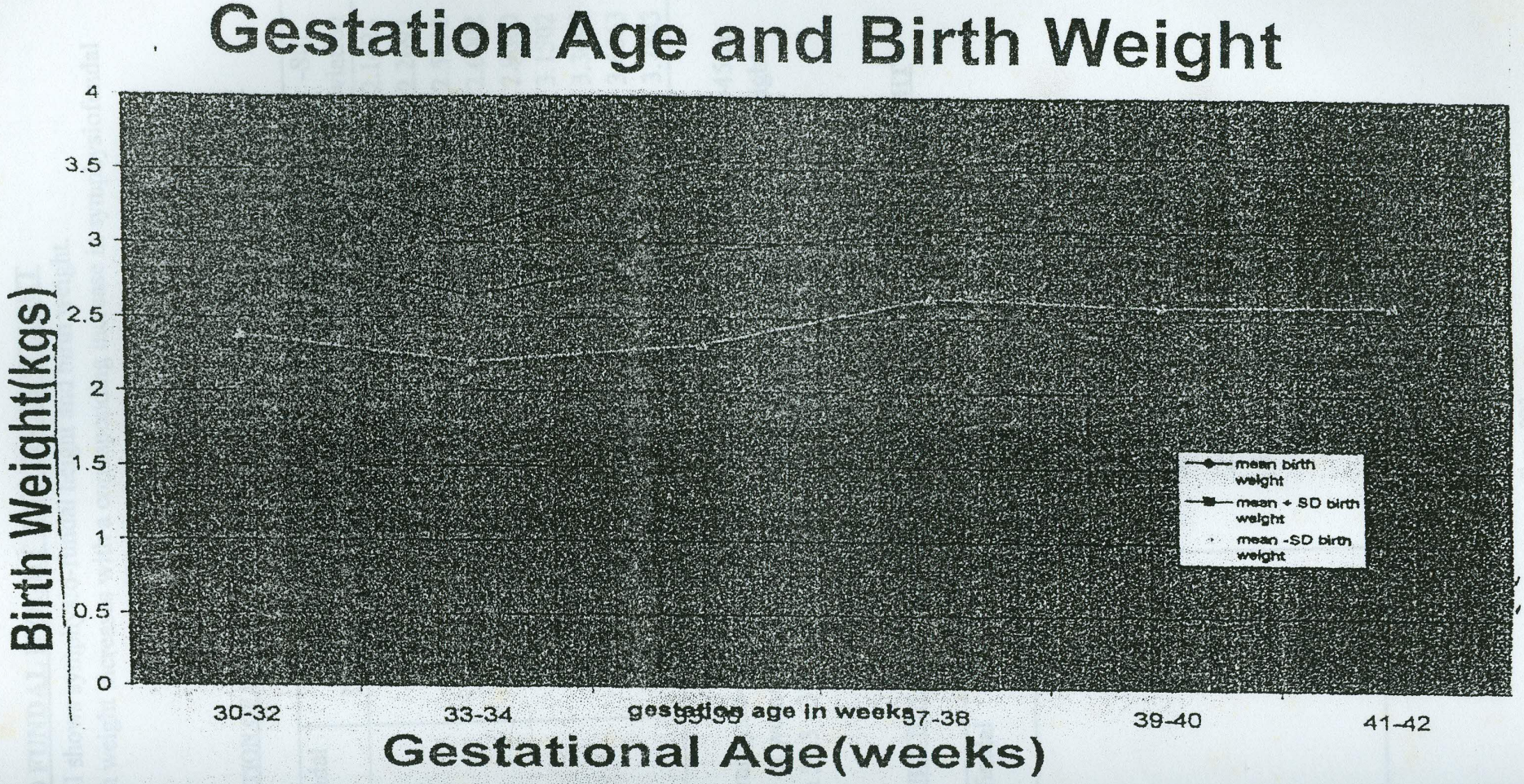


Figure 2 shows the Geometrical relationship between birth weight and gestatonal age
The birth weight does not increase with an increase in gestational age.

SYMPHYSIO FUNDAL HEIGHT AND BIRTH WEIGHT

Table V and VI shows symphysio-fundal height and birth weight.
The mean birth weight increases with a corresponding increase in symphysiofundal height.

TABLE V

THE DISTRIBUTION OF SYMPHYSIO FUNDAL HEIGHT AND MEAN BIRTH WEIGHT

Symphysiofundal height(cm)	Number	Mean birth weight in kg	Standard Deviation	+Std deviation	-Std deviation
27 - 29	34	2.4074	0.2646	2.6720	2.1428
29.1 - 31	39	2.6367	0.3674	3.0041	2.2693
31.1 - 33	140	2.8336	0.3044	3.1380	2.5292
33.1 - 35	138	3.0076	0.3174	3.3250	2.6902
35.1 - 37	139	3.2673	0.3673	3.6346	2.9000
37.1 - 39	50	3.5400	0.3904	3.9310	3.1502
39.1 - 41	38	3.6987	0.3293	4.0280	3.3694
41.1 - 43	5	4.0000	0.3937	4.3937	3.6063
43.1 - 45	7	4.2071	0.4188	4.6259	3.7883

The mean symphysio-fundal height was 34.5cm(Sd 3.25), with a range of 27-45cm. The majority of women in the study group (69.5%) had symphysio-fundal height ranging from 31.3 - 37cm with a mean birth weight of 3.036kg.

TABLE VI

THE DISTRIBUTION OF SYMPHYSIO-FUNDAL HEIGHT AND BIRTH WEIGHT

Symphysio-fundal height (cm)	Weight (kg)		
	2 - 2.49	2.5 - 4	>4
27 - 29	33	1	0
29.1 - 31	39	10	0
31.1 - 33	88	52	0
33.1 - 35	53	85	0
35.1 - 37	25	113	1
37.1 - 39	3	39	8
39.1 - 41	0	33	5
41.1 - 43	0	3	2
43.1 - 45	0	2	5

The percentage of women with babies of birth weight less than 2.5kg decreases from 97% to 6% as symphysio-fundal height increases from 27 -29cm to 37.1-39cm respectively.

FIGURE 3

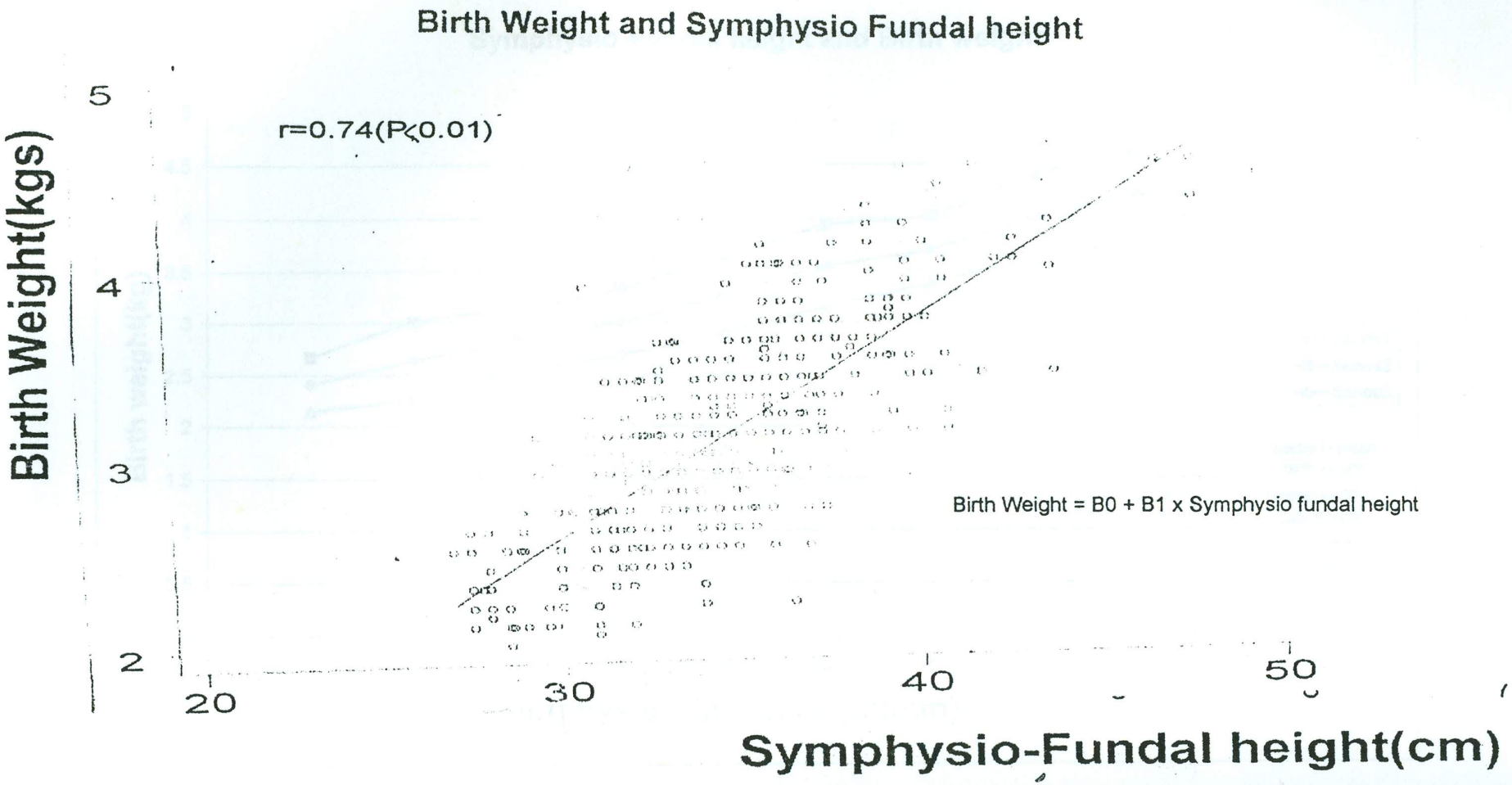


Figure 3 is a Scatter graph of birth weight against symphysio-fundal height. There is a positive correlation of birth weight and symphysio fundal height with a correlation coefficient of 0.74 significant at a level of $P<0.001$.

FIGURE 4

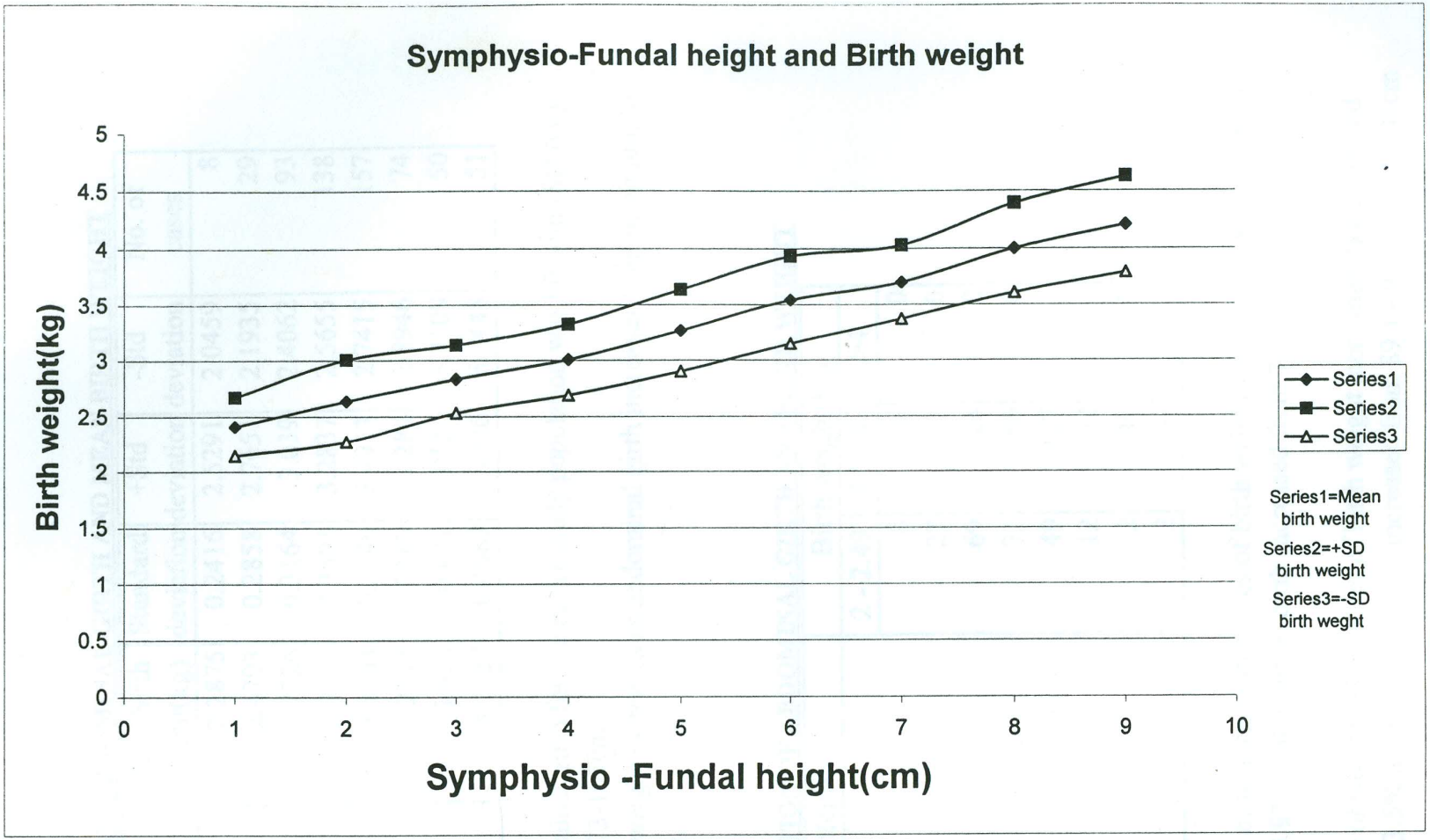


Figure 4 shows a Significant increase in birth weight with a corresponding increase in symphysio fundal height.

ABDOMINAL GIRTH AND BIRTH WEIGHT

Tables VII and VIII shows the relation between abdominal girth and birth weight.

TABLE VII

DISTRIBUTION OF ABDOMINAL GIRTH AND MEAN BIRTH WEIGHT

Abdominal girth (cm)	Mean birth weight(kg)	Standard deviation	+Std deviation	-Std deviation	No. of cases
73-77	2.2875	0.2416	2.5291	2.0459	8
77.1-81	2.4793	0.2858	2.7651	2.1935	29
81.1-85	2.7226	0.3164	3.039	2.4062	93
85.1-89	2.9246	0.3591	3.2837	2.5655	138
89.1-93	3.1164	0.3749	3.4913	2.7415	157
93.1-97	3.2115	0.3169	3.5284	2.8946	74
97.1-101	3.613	0.421	4.0151	3.2109	50
101.1-105	3.7137	0.4689	4.1826	3.2448	51

The mean abdominal girth for the entire study population was 90.6cm (SD 6.6) with a range of 73-105cm.

The mean birth weight increases as abdominal girth increases from minimum to maximum range.

TABLE VIII

THE DISTRIBUTION OF ABDOMINAL GIRTH AND BIRTH WEIGHT

Abdominal girth(cm)	Birth weight(kg)		
	2 - 2.49	2.5 - 4	>4
73-77	8	0	0
77.1-81	27	2	0
81.1-85	69	24	0
85.1-89	72	66	0
89.1-93	49	107	1
93.1-97	12	62	0
97.1-101	2	40	8
101.1-105	2	37	12

The percentage of women with babies of birth weight less than 2.5kg decreased from 100% to 3.9% as abdominal birth increased from 73-77cm to 101.1 - 105cm respectively.

The percentage of women with babies of birth weight more than 4kg increased from 0.6% to 23.5% as abdominal girth increased from 89.1 - 93 to 101.1-105cm respectively.

FIGURE 5

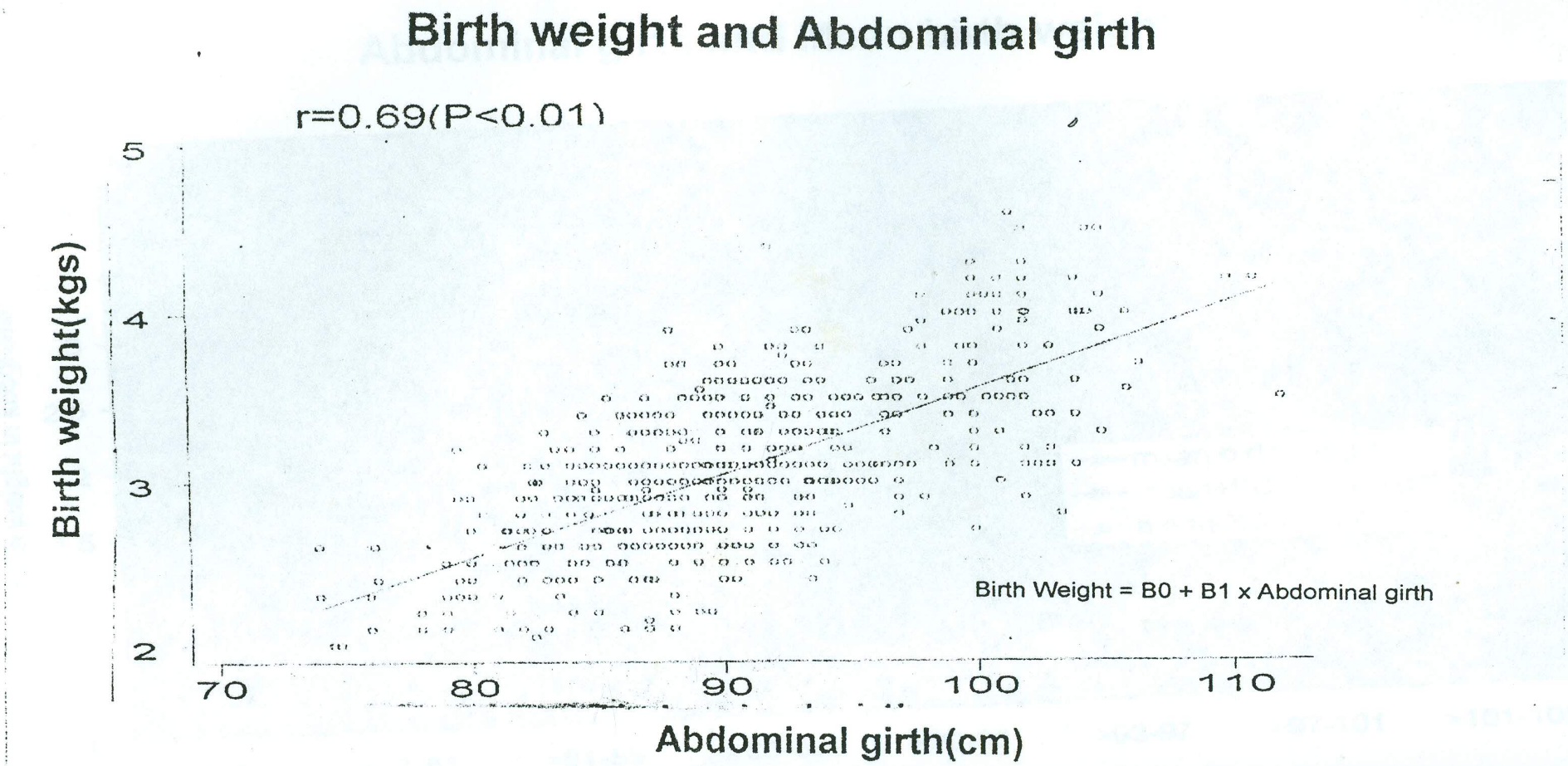


Figure 5 is a Scatter graph of birth weight against abdominal girth. There is a positive correlation between birth weight and abdominal girth with a correlation coefficient of 0.69 significant at a level of $p < 0.001$.

FIGURE 6

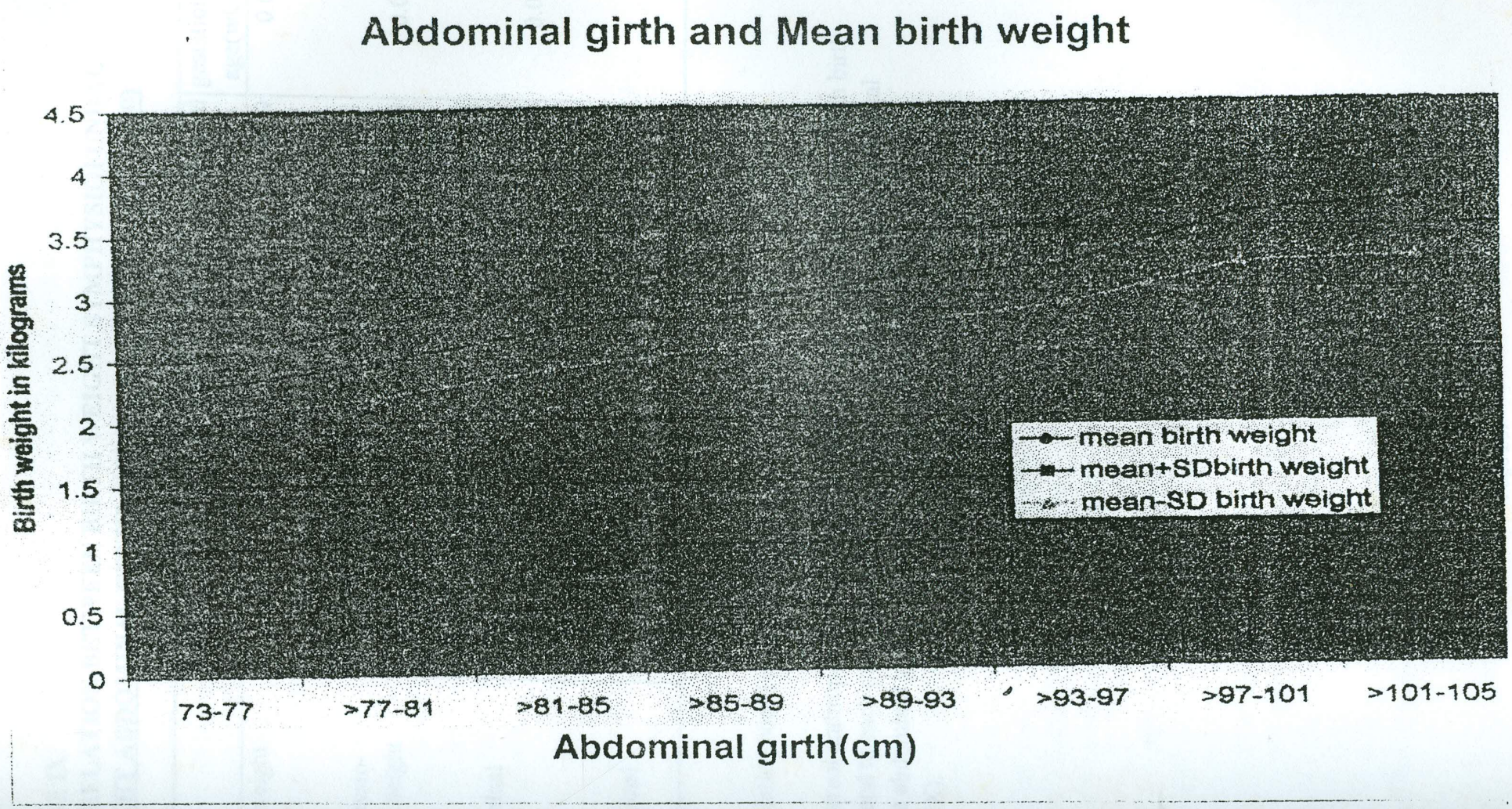


Figure 6 shows an increase in birth weight with a corresponding increase in abdominal girth.

TABLE IX:

CORRELATION BETWEEN BIRTH WEIGHT SYMPHYSIOFUNDAL HEIGHT ABDOMINAL GIRTH AND GESTATIONAL AGE (N=600)

	Birth Weight (kg)	Symphysio-fundal height(cm)	Abdominal girth(cm)	gestational age(wks)
Birth weight	1	*0.74	*0.69	0.01
Symphysio-fundal height		1	*0.48	*0.04
Abdominal girth			1	0.03
Gestational age				1

* Correlation coefficient r significant at a level of $p<0.001$.

All maternal anthropometric measurements were significantly correlated with birth weight and to each other, except gestational age with birth weight, gestational age with abdominal girth, and gestational age with symphysiofundal height (Table IX).

Table X shows stepwise multiple regressional analysis with birth weight as the dependant variable and symphysio-fundal height and abdominal girth as independent variables.

All maternal anthropometric indices were significantly correlated with birth weight. Symphysio-fundal height and abdominal girth explained, respectively 55% and 47% of the observed variation in birth weight.
A model including symphysio-fundal height and abdominal girth accounted for 69% of the variation in birth weight.

TABLE X
STEP WISE MULTIPLE REGRESSIONAL ANALYSIS WITH BIRTH WEIGHT AS THE DEPENDANT VARIABLE AND SYMPHYSIO-FUNDAL HEIGHT, ABDOMINAL GIRTH AS INDEPENDENT VARIABLES.

Model Variables	r	B	F test	r2
Symphysio-fundal height(cm)	0.74	0.112	738.24	0.55
Abdominal girth	0.69	0.51	529.49	0.47
Symphysio-fundal height		0.081	429.7	0.69
+				
Abdominal girth		0.32	269.3	

of the linear independent variables, the birth weight was best correlated with symphysio-fundal height and then abdominal girth.
The best fit with the use of symphysio-fundal height was
Birth weight = B0+B1 symphysio-fundal height
where, B0 (constant)= -0.81 (standard error 0.143)
B1(regression coefficent)=0.112(standard error 0.004)

The best fit with the use of abdominal girth was
Birth weight = B0+B1 Abdominal girth
where B0 = -1.54
B1 = 0.51+/-0.002
The best fit using both, symphysio-fundal height and abdominal girth was
Birth weight = B0 + B1 abdominal girth + B2 symphysio-fundal height.
Where, B0 = -2.61
B1 (partial regressional coefficient) = 0.32+/-0.002
B2(Partial regressional coefficient) = 0.081+/-0.004

Since symphysio-fundal height and abdominal girth are positively correlated (r =0.48) and both are positively correlated to birth weight adding abdominal girth to the final model reduced the regression coefficient of symphysio-fundal height. This is an example of confounding. The relationship between birth weight and symphsio-fundal height is over estimated in the simple regression model due to confounding abdominal girth.

TABLE XI

PERFORMANCE OF EQUATION IN DETECTING BIRTH WEIGHT LESS THAN 2KG

Observed birth weight	Calculated birth weight		
	⩽2.0kg	>2kg	Total
⩽ 2kg	15	2	17
>2kg	13	70	83
Total	28	72	100

Sensitivity is the proportion of true positives that are correctly identified.
thus, Sensitivity = 15/17 x 100
Sensitivity = 88.2%

Specificty is the proportion of true negatives that are correctly identified.
thus, specificity = 70/83 x 100
specificity = 84.3%

Table XI shows the sensitivity and specificity pattern of the derived equation in calculating the birth weight less than 2kg.
of the 17 patients who had birth weights of less than 2kg, almost all, 15 were correctly identified as such by the equation, giving a sensitivity of 88.2%
of the 83 patients who had birth weights of more than 2kg, 70 were correctly identified as such by the equation, giving a specificity of 84.3%.

TABLE XII

PERFORMANCE OF EQUATION IN DETECTING BIRTH WEIGHTS MORE THAN OR EQUAL TO 3.8KG

Observed birth weight	Calculated birth weight		
	<3.8kg	⩾3.8kg	Total
< 3.8kg	60	28	88
⩾3.8kg	2	10	12
Total	62	38	100

Sensitivity =10/12 x 100
Sensitivity = 83.3%

Specificity = 60/88 x 100
Specificity = 68.18%

Table XII shows senstivity and specificity pattern of the derived equation in calculating the birth weight more than 3.8kg.
of the 12 patients who had birth weights of more than an equal to 3.8kg, almost all, 10 were correctly identified as such by the equation, giving a sensitivity of 83.3% of the 88 patients who had birth weights of less than 3.8kg, 60 were correctly identified as such by the equation, giving a specificity of 68.18%.

DISCUSSION

This study is an attempt at evolving a simple technique involving two maternal anthropometric parameters in prediction of foetal weight in-utero. The technique described is simple, can be quickly learned and is usually completed in less than five minutes. It shows that maternal symphysio-fundal height and abdominal girth (in centimeters) are good predictors of foetal weight. The coefficient of correlation was 0.74 and 0.69 respectively. Similar findings have been recorded in several studies which these parameters were used to estimate foetal weight in utero. (Walraven et al [10] 1995, Mongeli et al[6] 1997, Thompson et al[7] 1997, Belzian et al[4] 1977). The overall results from this study were better than those from central Tanzania (Moller et al[14] 1998). One probable explanation could be the motivation, training and regular surveillance of health workers involved. Gestational age was not a good predictor of foetal weight and this could be explained by the difficulty in obtaining correct dates from most of our patients who are unsure of their dates, or that their cycles are irregular. This can lead to wrong calculations for gestational age. Secondly, some women conceive while on lactational amenorrhoea or conceive immediately after stopping hormonal contraceptives thus making it difficult to ascertain the exact last normal menstrual period. In places where there is high incidence of foetal wastage there is an increased frequency of pregnancies (repeated pregnancies as a replacement of foetal wastage) leading to shorter intervals between the pregnancies and hence predispose to IUGR (intrauterine growth retardation). Thus, gestational age has not been found

to be useful predictor of foetal weight in such situations. (Marilyn et al[15] 1190, Beazley et al[16]1970).

In Tanzania it is estimated that 40% of pregnant women are HIV positive, and have concurrent illnesses, thus a high prevalence of IUGR(intrauterine growth retardation). Thus, gestational age may not be a useful predictor of foetal weight.

The Sensitivity and specificity in this study of single predelivery symphysio-fundal height and abdominal girth in detecting babies less than 2kg and babies more than or equal to 3.8kg are comparable to results form serial measurements for detection of these babies. (Westin et al[17] 1977, Belzian et al[4] 1978, Quaranta et al[18] 1981, Cnattingius et al[19] 1984, Mathai et al[20] 1987, Neilson et al[21] 1988).

Using ultrasonographic measurement of foetal abdominal circumference in estimating foetal weight(Campbel and Wilkin[2]) showed that ultrasound had a sensitivity of 75% in detecting small for dates fetuses at 36 weeks. In our study the sensitivity of detecting these fetuses was 88.2% signifying the fact that estimation of foetal weight using these simple measures as in our study can be performed at an accuracy comparable to that of an ultrasound.

Walraven et al[10] found out that single pre-delivery height measurement had a sensitivity of 68% and 76% in detecting birth weight less than 2kg and more than 4 kg respectively. In our study, using both symphysio-fundal height and abdominal girth measurement the sensitivity was 88.2% and 83.3% respectively for birth weights less than 2kg and more than 4kg respectively, fact pointing to increased accuracy if two anthropometric measurements are used in estimation of birth weight.

A comparison of serial measurements of symphysio-fundal height and abdominal girth with a single measurement of fetal abdominal

circumference by ultrasound (often not available in developing countries) in the third trimester for the prediction of foetal weight (Pearce and Campbell 1987[22]) showed a slightly higher sensitivity having set the false positive to be equal to 21%, the sensitivity for ultrasound and symphysio-fundal height measurements were 83% and 76% respectively. When, as in this study the aim is to detect infants weighing less than 2.0kg, a level at which hospitals in developing countries often admit newborns for specialised neonatal care (Singh et al 1988[23]), the sensitivity is slightly higher.

In conclusion, this study presents a statistically derived formula for the prediction of foetal weight with the use of symphysio-fundal height and abdominal girth, which can be easily measured using a simple measuring tape. The accuracy of prediction using this formula has also been validated. Since the calculations are cumbersome especially for grass root health workers charts can be made with the computations already performed so that a health worker can utilise it in a user friendly manner after measuring the symphysio-fundal height and abdominal girth to find the estimated foetal weight.

Recommendations:

1. Large scale studies are required to further validate how good the model we have developed is before it is used in the clinical practice where ultrasound facilities are lacking.
2. Simplified charts showing the estimated foetal weights for different anthropometric measurements should be developed so that these can be used easily by the health worker even at a grass root level.

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