OBSTETRIC AND GYNAECOLOGIC CASES AND COMMENTARIES.

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Dedicated to my grannie, mother and aunts.

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I sincerely thank my senior colleagues without whose constant advice, criticism and supervision this book would not have come to being.

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JEFF.

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GENERAL INTRODUCTION

The case records and commentaries presented here were managed by the author in Muhimbili Medical Centre (MMC) which incooperates the Faculty of Medicine, University of Dar es Salaam. It is the largest centre and has the only radiotherapy facilities in the country. MMC is objectively meant to provide service, education and conduct research. Teaching is undertaken of both undergraduate and postgraduate doctors, dentists, pharmarcists, nurses and para-medical personnel.

THe department of obstetrics and gynaecology is one of the major disciplines at MMC and is organized into four firms each with at least two consultants or specialists. There are 73 gynaecological beds and 296 obstetric beds. Of the latter, 115 are at ocean Road Hospital and 181 at the New Maternity Block (NMB). The daily average number of inpatients is however, two to three times the number of beds.

I. OBSTETRIC SERVICES:

These include antenatal, intrapartum and postnatal services.

I.1 ANTENATAL SERVICES:

Antenatal clinics (ANC) are conducted at NMB on "firm" basis and are meant for high risk pregnancies with the exception of a few paying patients and senior government employees. High risk patients are referred from peripheral ANC's by midwives with the help of special guidelines for identification of high risk factors. These include the following:-

A. Previous Obstetric History:

Caesarian Section	Cardiac disease
Instrumental delivery	EPH-gestosis
Manual removal of placenta	Hypertension
Third degree perineal tear	Eclampsia
Recurrent pregnancy wastage	Grandmultiparity
Anterpartum hemorrhage (APH)	(7 para 8).
Post-partum hemorrhage (PPH)	

B. Physical Findings

Musculoskeletal deformities	Multiple pregnancy
Malpresentations	Polyhydramnios
Abnormal lies	Intrauterine fetal death
Height below 142 in primigravidae	Anaemia of pregnancy.

C. Previous gynaecological operations

Myomectomy and repairs of viginal fistulae, third degree perineal tears and genital prolapse.

D. Complications of Labour and Miscellaneous

Fetal distress	Primigravida yonger than 16
Poor progress of a labour	or older than 35 years
Premature labour	Rhesus negative mothers.

During the first ANC visit, the doctor takes a detailed history and carries out a thorough physical examination. Laboratory investigations are made.

These include hemoglobin estimation, blood group and Rhesus determination, serological tests for syphilis, and urine for glucose, protein and culture; the latter to screen for asymptomatic bacteriuria. A plan for the patient's ANC care is then made.

Subsequent visits are made monthly until the 28th week, fortnightly until the 36th week, and weekly until delivery unless there is reason for alteration. In each visit, surveillance is made on maternal well being, and fetal well being and growth. The patient is examined for evidence of anaemia, oedema, and weight gain. Blood pressure, fundal height, fetal lie and heart sounds are recorded. Tetanus toxoid is given at 28, 32, and 36 weeks of gestation. Prophylaxis against anaemia is effected by giving routinely, Ferrous sulphate 200 mg orally twice daily and Folic acid 5 mg once daily. Similarly, chloroquine 400 mg weekly for antimalarial prophylaxis. Special examinations involving radiological investigations and Real Time B-Scan ultrasonography may be done pro renata. Unless the indication for referral to NMB ANC is not rectified, the patients are referred back to their original peripheral ANC's.

ANTENATAL ADMISSION:

Depending on nature and severity of the condition, the patient may be admitted in general antenatal wards No. 38 and 39 or intensive care ward 35. Of the 11,552 admissions in 1979/80, anaemia comprised 51%, False labour 23.0% and EPH-Gestosis 15.9%. These together with pyrexia of unknown origin (malaria included) accounted for 91.2% of all antenatal admissions. In the same period, 497 patients were admitted into the intensive care ward and of these, 56.7% were due to severe EPH-gestosis, 22.1% eclampsia, and 6% severe anaemia. These three, together with severe hypertension with pregnancy, congestive cardiac failure, Meningitis and severe abruptio placenta comprised

1.2 INTRAPARTUM CARE:

NMB labour ward conducts high risk deliveries and normal deliveries are attended at Ocean Road hospital. All intrapartum complications are referred to NMB. These two labour wards conduct, almost to an equal extent, 20,000 - 25,000 deliveries annually.

Conduct of Labour:

After admission by the nurse-midwife, the patient is reviewed by the doctor and thorough physical examination carried out. A policy of active management of labour is persued by the department. This way, a specific, prospective plan of management is outlined and the labour is monitored partographically. A Phillipport's modification of the original Friedman's portogram is used with slight modification. It is started on admission after labour is established and the cervix at least 3 cm dilated. Membranes are ruptured artificially at the earliest opportunity. Throughout the first stage of labour, the patient is nursed in the left lateral position but dorsal position in the second stage. Analgesia and sedation, are not used routinely except for selected patients and is limited to intramuscular pethidine or pethilorphan. Lack of facilities and manpower precludes use of inhalation and epidural analgesia.

During the second stage, the patient is encouraged to bear down with each contraction but relax in between. When the presenting part distends the perineum, the enchoucher supports it with a sanitary pad to avoid tears. Episeotomy is done only when indicated. The baby's face is wiped clean with sterile gauze and the air-way cleared by suction. The trunk is delivered and the cord divided between Kocher's artery clumps.

Third stage is managed actively. Intramuscular syntometrine is given with birth of anterior shoulder and the placenta delivered by controlled cord traction. It is inspected for completeness, presence or absence of infarcts, retroplacental clots and then weighed. The cord is inspected for presence or absence of the normal three vessels and the blood loss recorded.

INFANT RESUSCITATION

The state of the infant is evaluated according to the Apgar Score system. The essential armamentarium include suction catheter, infant laryngoscope, assorted sizes of plastic endotracheal tubes and oral airways, ambu bag and mask, angle poised lamp for warmth, Nalorphine, Sodium bicarbonate 0.9 molar solution, oxygen and 10% glucose. For normal infants, nasopharyngeal suction is normally adequate. For depressed infants (Apgar score less than 7), suction and oxygen administration by mask are needed while for severely depressed infants (Apgar score less than 3) endotracheal intubation is necessary. External cardiac massage and correction of acidosis are mandatory in cardiac arrest.

POSTPARTUM CARE:

Depressed infants and instrumental or operative deliveries are cared for in the neonatal unit. After the birth canal has been inspected for tears, episeotomies repaired and blood pressure found normal, the mother is observed for 24 hours in a room adjacent to the labour ward - after which uncomplicated deliveries are dis'-charged home after BCG vaccination for the baby.

1.3 POSTNATAL CARE:

Only complicated deliveries receive in patient postnatal care in NMB ward 37 and 33 for clean and infected cases respectively. Normal deliveries attend their respective maternal and child health clinics six weeks after delivery.

COMMON OBSTETRIC PROCEDURES:

A. Vaginal Examination in Labour:

This is done on admission and at least four hourly to assess progress of labour. After scrubbing and gloving oneself, the patient is made aware of the procedure and purpose and requested to void urine if any. In dorsal position with the thighs abducted, the vulva and perineum are inspected for local lesion. A sterile swab soaked in cetarlon 1 in 200 solution is picked by the right hand, handed to the left hand and one side of the vulva swabbed once antero-posteriorly. The same is repeated on the other side but with a fresh swab. The index finger and thumb of the left hand separates the labia and the vestibula and introitus cleaned ousing the right hand and a fresh swab. Without releasing the labial separation, the index and middle fingers are dipped into chlorhexidine cream and gently introduced into the vagina avoiding the sensitive anterior wall.

B. Caesarian Section:

Preoperative preparation:

1. For elective operations, the patient is advised not to feed orally after 10 p.m. on the eve of the operation.
2. At least 1000 millilitres of blood are crossmatched.
3. The anterior abdominal wall, pubic and vulval hair is shaved and the area cleaned with cetarlon then covered with sterile towels.

4. She is maintained with intravenous 5% dextrose and given 15 - 30 millilitres magnesium trisillicate to neutralise stomach acid. Nasogastric suction is not routinely used except in selected patients undergoing emergency operation immediately after eating.

5. Informed consent for operation is obtained.

6. The bladder is catheterized aseptically in theatre after the patient has been evaluated by the anaethetist.

7. The scrubbed and gowned surgeon cleans the operation field which include anterior abdominal wall, mons pubis and anterior aspects of the thighs - using cetarlon then 1 in 1000 flavine in spirit. The area is then draped with sterile towels exposing only a small area between the umbilicus and symphisis pubis.

Anaesthesia:

1. Atropine 0.6 mg is given intravenously for premedication.
2. Thiopental sodium 250 mg is given intravenously for induction.
3. A short acting muscle relaxant, suxomethonium bromide, 40mg is given intravenously followed by oxygen under intermittent positive pressure. Intubation is then done using a cuffed endotracheal rubber tube.
4. Only oxygen and Nitrous oxide are given for maintainance of anaesthesia until the baby is born and the first layer of the uterus has been repaired. Ether is then added.

5. Anaesthesia is reversed using atropine 0.6 mg, and neostigimine 1 - 2 mg intravenously. Bronchial secretions are sucked out and the endotracheal tube removed. The patient is observed in the recovery room until fully conscious, i.e. when cough and swallowing reflexes are fully active.

The Operation:

The lower segment caesarian section is employed in MMC with few exceptions. The technique is as described on pages 55, 56 and 85.

Bed Side tests

Proteinuria:

Albustix reagent strips are used. The strip consists of cellulose impregnated with Tetrabromphenol buffered to acid pH. The yellow test area turns green in the presence of protein. After dipping the strip into clean catch, fresh uncentrifuged urine, the color change is compared to a scale on the strip container.

Thus:

Trace	= 5.-20 mg/100 ml	2+	= 100 mg/100 ml
1+	= 30 mg/100 ml	3+	= 300 mg/100 ml
		4+	= 1000 mg/100 ml

Glycosuria:

A qualitative test using clinistix reagent strip is employed. The reagent strip is impregnated with glucose oxidase, peroxidases and orthotolidine. In the presence of glucose oxidase, glucose is converted to gluconic acid and hydrogen peroxide. In the presence of peroxidase, hydrogen peroxide converts orthotolidine to the blue oxidised form. This is the basis of a postive test if on dipping clinistix reagent strip into urine, the test area turns blue.

II .GYNAECOLOGICAL SERVICES:

These comprise both outpatient and inpatient services.

Outpatient Services:

Clinics are run on "firm" basis except the infertility and oncology clinics. The latter is mainly for those receiving radiotherapy on outpatient basis and patients come from all over the country. Cytological screening for cancer of the cervix which account for 80-85% of all gynaecological cancers in MMC, is not done routinely due to lack of adequate g facilities.

Inpatient Services:

There are a total of 67 beds in two wards. The number of patients is usually twice to thrice the number of available beds. Patients are admitted on appointment or as emergencies through the casuality department. Incomplete abortions accout for more than 50% of all emergency admissions. Evacuations of the uterus is done in a minor theatre in a ward side room under Pethidine 100 mg intravenously and Diazepam 10 mg intravenously unless the incomplete abortion is of the septic variety. The latter are attended to in major theatre under general anaesthesia.

Preoperative preparation for Laparotomy:

Preparation parallels that for elective caesarian section except no antiacids are given. In addition, the husbands written consent is required in cases of interval sterilization.

Anaesthesia:

Premedication and induction is similar to that used in caesarian section.

A long acting muscle relaxant, pancronium bromide (Pavlon) 6 mg intravenously is used instead of short acting relaxants. Unlike in caesarian section, Ether is given together with oxygen and nitrous oxide right from the beginning. Neostigmine is used for reversal of anaesthesia and Atropine is used as prophylaxis against the bradycardial effect that might follow neostigmine.

Preparation of the operation site:

The supine position with a slight Trandelenburg head tilt is used for abdominal operations. The Lithotomy position is used for vulvo-vaginal procedures and the knees-chest position for high vesico-vaginal festulae. Cleaning of the skin is done as described for caesarian section.

Opening and Closing the abdomen

The Midline subumbilical incision is commonly used, the paramedian less commonly and the Pflannestel rarely so. The skin incision is deepened through the subcutaneous layer to expose the rectus sheath which is then incised longitudinally with scalpel than curved Mayo scissors. The peritoneum is exposed by separating the medial edge of the rectus abdominis muscle from its attachments. The pyramidales are used as guidelines to the midline.

The peritoneum is picked up with a pair of spencer Wells' arterty forceps in the upper one third of the incision, away from the bladder. After ascertaining no bowel is entrapped, the tented peritoneum is incised with a fresh scalpel and the incision extended with Mayo Scissors under direct vision to avoid injuring bladder apex.

The perifoneal cavity is closed after completion of the planned operation, hemostasis ascertained and instrument and swab count is correctt. The upper, middle and lower ends of the peritoneal incision are picked with artery forceps and the peritoneum closed with a continuous chromic catgut No. "0" on a round bodied needle. The edges are usually everted. The rectus sheath is closed with continuous chromic catgut No 1 unless infection is suspected where interrupted sutures are used. The subcutaneous fat is not routinely stiched in obese patients. Plain catgut "000" is used, interrupted. The skin is closed with interrupted silk sutures No. "0" and are usually removed on the 7th post-operative day.

Ambulation:

Early ambulation is encouraged. The patient is encouraged to sit up as from the first post-operative day - and to be ambulant by second-third post-operative day.

ADVANCED ABDOMINAL PREGNANCY WITH VAGINAL LEAKAGE OF LIQUOR AMNII

NAME: MRS. H. R.

REG. NO. 0741/81

AGE: 28 YEARS

ADDRESS: KURASINI, DAR ES SALAAM

ADMISSION DATE: 24.9.81

LAPAROTOMY: 22.12.81

DISCHARGE DATE: 31.12.81

SUMMARY:

A gravida 2 para 0, one abortion, was referred to Muhimbili and admitted because of pregnancy after a decade of involuntary infertility and a smaller than dates fundus. She was intially diagnosed as having pseudopregnancy with fibroids but pregnancy was later confirmed by X ray and ultrasound. She leaked liquor vaginally making consideration of abdominocyesis difficult despite suggestive radiological signs. At laparotomy, abdominocyesis was confirmed and a malformed, growth retarded baby was delivered but died shortly afterwards. The placenta was removed and she recovered without problems.

HISTORY OF PRESENT ILLNESS:

The patient was referred from a peripheral clinic on 24.9.81 because she had amenorrhoea of 26 weeks but a funds equivalent to 18 weeks size. She had also involuntary infertility for ten years.

OBSTETRIC HISTORY:

This was her second pregnancy. The first ended with a spontaneous abortion, 10 years previously at 6 months of gestation.

The onset was marked by abdominal pain followed by vaginal bleeding. She aborted completely in hospital and there was no morbid event thereafter.

GYNAECOLOGICAL HISTORY:

Her menarche was at 14 years of age. She menstruates for 4 - 5 days every 28 - 30 days. The couple had been investigated for infertility and were told they were normal. Her last menstrual period was on 9.3.81. She has never practised contraception.

PAST MEDICAL AND SURGICAL HISTORY:

There was no history of tuberculosis, mumps, sexually transmitted diseases or renal disease. She has never been operated other than dilatation and curretage in 1975.

SOCIAL AND FAMILY HISTORY:

She was a housewife living with her only husband. She was a teeto-teller. Her two elder sisters had more than four children. There was no family history of diabetes or hypertension.

CURRENT PREGNANCY:

She first booked on 11.8.81 with amenorrhoea of 18 weeks. Her expected date of delivery was on 16.12.81. She had had an episode of abdominal pain and vaginal bleeding at 12 weeks of amenorrhoea , was admitted at Muhimbili and discharged as a case of threatened abortion. She first felt fetal movements at 20 weeks of amenorrhoea. She had had no fevers, bowel or urinary symptoms. She made two subsequent ante natal clinic visits the last of which she was referred to Muhimbili as above.

PHYSICAL EXAMINATION:

She looked well nourished.

There was neither pallor mucosae nor oedema.

Breasts were normal and secreting.

Her weight was 56.5 kg. compared to 56 kg at first booking six weeks previously.

CARDIOVASCULAR SYSTEM:

The pulse was 90 per minute, normal volume. The blood pressure was 120/80 millimetres mercury compared to 110/70 millimetres mercury at first booking. The heart sounds were normal.

RESPIRATORY SYSTEM:

Nothing abnormal was detected.

ABDOMINAL EXAMINATION:

The lower abdomen was asymmetrically enlarged, more towards the left. There were no tender areas. The liver, spleen and kidneys were not palpable. The uterus was irregularly enlarged to 18 weeks. Fetal parts were neither palpable nor ballotable. Fetal heart was not heard.

VAGINAL BIMANUAL EXAMINATION:

The vulva and vagina were normal. The cervix was not visualized but was felt displaced upwards and to the right and was firm. The uterus was enlarged with multiple irregularities mainly on the left side. No fetal parts were ballotable.

DIAGNOSIS:

Secondary infertility, pseudocyesis with multiple fibroids.

INVESTIGATIONS:

1. The hemoglobin was 10.5 g per decilitre.
2. The urine was negative for pathogens, glycosuria and proteinuria.
3. The stool was negative for ova.
4. Serological test for syphilis (VDRL) was negative
5. Blood group was B Rh-D positive
6. Echoscopy was out of order.
7. X-Ray abdomen showed a small fetus in transverse lie.

PROGRESS:

She was kept and monitored in the ward until delivery in view of pregnancy after a decade of involuntary infertility. Her weight gain was 0.25 kg per week. On several occasions, she complained of vague abdominal pains. The fundus grew and stagnated at 28 weeks with an unusual left lilt and prominence. The fetus was well interms of normal fetal heart rate and movements. Wrong dates or fetal frowth retardation was the working diagnosis. On 11.12.81, twelve weeks after admission, she leaked vaginally what looked like liquor. She was 38 weeks by datee but the fundus was 28 weeks and the fatal parts were very difficult to palpate. A sterile speculum examination showed liquor like fluid from high up behind the symphysis. There was no bleeding and the cervix was not visualized.

ECHOSCOPY: REAL TIME B - SCAN

1. Cephalic presentation with biparietal diameter of 8.5 cm equivalent to 32 weeks gestation.
2. Fetal heart rate 140 per minute.
3. Oligohydrammios.

4. Placenta localization was uncertain.
5. There were bizzare echoes making interpretation of uterine outline difficult.

Additional diagnoses considered included:

1. Uterine fibroid with left lateralhorn pregnancy.
2. Premature rupture of the membranes.

It was decided to wait at least wo weeks since at 32 weeks, the baby was not rearable under Muhimbili conditions. She continued to leak liquor scantly and irregularly. She was afebrile and there was no uterine tenderness. The fetal heart was normal.

INVESTIGATIONS: ON 22.12.81

1. ECHOSCOPY showed a biparietal diameter of 9.5 centimetre, fetal heart activity was demonstrable but other echoes were difficult to interpret.
2. X-Ray abdomen lateral prone view showed a singleton baby, cephalic presentation with fetal parts overlying the maternal spine. Fetal maturity was 38 weeks. Uterine shadow was not demonstrable for certain.
3. Serial liquor cultures were negative for pathogens.
4. Nile blue test showed fetal squames at least 36 weeks maturity.
5. Hemoglobin was 12 g per decilitre.

DIAGNOSIS:

Term abdominal pregnancy with early rupture of the membranes.

MANAGEMENT:

Laparotomy was recommended at once.

Blood group B - positive, 3000 millilitres were crossmatched. Consent for anaesthesia and operation was obtained. Preoperative preparation, premedication and general anaesthesia was given routinely.

LAPAROTOMY:

1. The abdomen was opened through a left lower paramedian incision.
2. The membranes were found ruptured, the fetal head was applied to the postero-lateral aspect of the uterus and the trunk was lying obliquely towards the left paracolic space. A female baby was delivered, breech first.
3. The placenta was attached to the right adnexa, posterior aspect of uterus and omentum. The uterus was enlarged to 16 weeks size with multiple fibroid seedlings. The left tube and ovary were normal.
4. The main blood supply to the placenta was identified as arising from the right ovarian vessels. These were secured, right salpingo-ophorectomy was done and the placenta and membranes removed successfully. Hemostasis was ascertained after a blood loss of 1400 millilitres and the abdomen closed in layers without drainage.

THE BABY:

The sex was female

Apgar score was 2 at one and five minutes

The weight was 2.5 kg.

The head was idented with a disfigured face, short neck and talipes equino varus adductus.

It died 30 minutes later.

POST OPERATIVE CARE AND PROGRESS:

1. The pulse, blood pressure and respiratory rate were monitored hourly for the first twelve hours and were normal.
2. She was transfused 2000 millilitres blood.
3. Fluid intake was an average of 2500 millilitres per day for the first three days after which she was fed orally. The corresponding urine output was 800 millilitres.
4. Pain was relieved with intramuscular pethidine 100 mg 8 hourly for the first three days.
5. Injection Ampicillin was given intravenously 500 mg 6 hourly for three days then 500 mg thrice daily for a further two days.

She made uneventiful recovery and by the eighth post-operative day, the wound had healed by primary intention and the hemoglobin was 11 g per decilitre. She was discharged home.

FOLLOWUP:

The patient did not return for follow up.

COMMENTARY:

This case is presented to show that the diagnosis of abdominal pregnancy may be very difficult despite diagnostic aids and that the occurrence of such rarities as leakage of liquor vaginally, further taxes ones diagnostic acumen.

Hospital incidence of abdominocyesis range from 1 in 402 to 1 in 15,000 deliveries (1,3) and in Muhimbili, it is 1 in 6517 deliveries. Majority are of the secondary type and commonly follow tubal abortion and only rarely after rupture of a caesarian scar. Primary peritoneal pregnancy is the rarest of the types (3).

Clinical presentation is so variable that no set of symptoms are absolutely diagnostic. This patient had secondary infertility for a decade, followed by amenorrhoea, abdominal pain and vaginal bleeding. The former three are among the most consistent symptoms (1, 2) of secondary abdominocyesis yet they were overlooked during the first admission. Leakage of liquor vaginally was indeed difficult to associate with abdominocyesis hence the necessity to confirm it by the Nile Blue test. Such leakage is moreover, very rare, the only case report in the literature available to the author was attributed to an amniotubal fistula (4). In our case, the free liquor after rupture of the membranes, perhaps gained entrance through the normal left tube and drained downwards through the vagina.

Palpation of the fetus, lying behind intestines, was very difficult in this patient in contrast to other cases where it may be extremely easy (1, 2). Sonographic criteria for diagnosis of abdominal pregnancy include demonstration of a fetus separate from the uterus, absent uterine wall between fetus and bladder, close approximation of the fetus to maternal abdominal wall and localization of the placenta outside the confines of the uterine cavity(5). Neither were demonstrated for certain in this patient. Misdiagnosis is suggested to be due to inadequate demonstration of pelvic anatomy, probably an effect of over-lying bowel gas and adhesions (6). Ironically, a very bizarre sonogram may be a valuable suggestion of such pregnancy (7). The deformed head and the difficulty of ascertaining the midline (falx cerebri) echo amongst bizzare ones led to a suspiciously large difference in biparietal diameters on the two occasions.

Radiological signs are useful if not diagnostic but are also prone to pitfalls. In this case, the high transverse lie which is suggestive was overlooked until fetal overlapp of maternal spine which is nearly diagnostic (8) was demonstrated later on. However, overlapp is rarely demonstrated (9) and it has been shown even in intrauterine pregnancy particularly in the rare sacculated uterus. Bowel gas anterior to the fetus in two planes and abscence of a uterine shadow around the fetus are the other useful signs, though the latter may be difficult to ascertain amidst inflammatory or oedematous thickening of the membranes. Pelvic angiography (8, 9) is regarded as conclusive and the definitive diagnostic sign is a lithopaedion (8, 9).

The questions constantly asked are when to operate, what should be done to the placenta and why babies invariably die if membranes are found ruptured at laparotomy, the inherent high mortality notwithstanding. The diagnosis of abdominal pregnancy seem to depend on a high index of suspicion, elaborate history taking, careful physical examination and meticulous interpretation of sonographic and radiological signs.

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HABITUAL ABORTION

CERVICAL INCOMPETENCE

CERVICAL CERCLAGE

NAME: MRS. R. M.

REG. NO. 877/81

DELIVERY NO. 5496/M/82

AGE 33 YEARS

ADDRESS: KIBAHA , COAST REGION

CERVICAL CERCLAGE: 14.12.81

DELIVERY DATE: 10.5.82

DISCHARGE DATE: 12.5.82

SUMMARY:

Cerelage for cervical incompetence was done on a gravida 7 para 0 + 5 midtrimester abortions and one tubal ectopic gestation. She delivered vaginally a full term baby. A commentary is made on aspects of aetiology and management of cervical incompetence.

CURRENT PREGNANCY:

The patient first booked at peripheral clinic at 12 weeks of amenorrhoea . She was subsequently referred to Muhimbili on account of five previous consecutive midtrimester abortions. She had no specific complaints when seen on 30.11.81

OBSTETRIC HISTORY:

She was gravida 7 par 0+ 5 abortions and one ectopic tubal pregnancy.

1. 1969: She aborted at 20 weeks after a febrile illness, low abdominal pain and vaginal bleeding. It was a live male fetus. No evacuation was done.

2. 1971: Abortion at 18 weeks. She was evacuated at Marangu hospital.

3. 1972: Abortion at 18 weeks. No evacuation was done.

4. 1974: Abortion at 16 weeks. Evacuation was done at Utete hospital.

5. 1975: Abortion at 16 weeks. She was not evacuated.

6. 1976: Ruptured right tubal ectopic pregnancy. She was operated at Muhimbili and made an eventiful recovery. With the exception of the first abortion, all the others were preceeded by spontaneous premature rupture of the membranes, mild labour pains then expulsion of fresh abortuses within six hours.

GYNAECOLOGICAL HISTORY:

Her menarche was at the age of 13 years.

Menstrual interval was 26-32 days and regular. Duration of menses was 4 - 5 days.

The last menstrual period was on 20.8.81 and therefore the expected date of delivery was on 27.5.82.

There was no history of contraception.

PAST MEDICAL AND SURGICAL HISTORY:

She has had no major illness. She has never suffered from sexually transmitted diseases.

She has never been operated other than evacuations and for ectopic pregnancy.

FAMILY AND SOCIAL HISTORY:

She was a housewife married to her only 1 husband who was a petty trader. Non of her two sisters has had similar abortions. There was no family history of diabetes or hypertension.

PHYSICAL EXAMINATION: FIRST VISIT 30.11.81

She looked healthy. She was not pale, was afebrile and had no oedema. Breasts were normal and secreting.

CARDIOVASCULAR SYSTEM:

The pulse was 82 per minute, normal volume. The blood pressure was 110/60 millimetres of mercury. There was no cardiomegally. Heart sounds were normal.

RESPIRATORY SYSTEM:

Nothing abnormal was found

ABDOMINAL EXAMINATION:

There was a sub-umbilical median surgical scar. The lower abdomen was lightly distended. There was no renal angle tenderness. There was no organomegally. The fundal height was 14 weeks and corresponded with weeks of amenorrhoea. The uterus was non-contractile.

VAGINAL EXAMINATION:

The vulva and vagina were normal. The cervix was bluish, the oss was 2 centimetres open. and membranes were visible but no herniating. There was no liquor drainage. The cervix was not effaced.

Bimanual examination was not done obviously to avoid possibility of membrane rupture.

DIAGNOSIS:

Cervical incompetence was diagnosed on the basis of a dilated os and history. This was explained to the patient.

MANAGEMENT:

She was admitted to the gynaecological ward for investigations and cervical cerclage.

INVESTIGATIONS:

1. Hemoglobin was 11.9 g per decilitre.
2. Blood group was "O" Rh-D positive
3. Serological test (VDRL) for syphilis was negative.
4. Urine was negative for pathogens, protenuria and glycosuria.
5. Fasting blood sugar was 60 mg percent.
6. Stool was negative for parasites
7. Blood urea was 12 mg percent
8. Serum creatinine was 0.6 mg percent.

CERVICAL CERCLAGE: 14.12.81

MCDONALD PURSE STRING SUTURE

The patient had routine preparations for vaginal operation except an enema was omitted. Premedication and general anaesthesia was given as routinely.

In Lithotomy position, after cleaning, catheterization and drapping the initial vaginal examination findings were confirmed.

1. A Slight Trendelenburg's position was maintained to facilitate membranes to fall back away from the internal os.
2. The anterior lip of the cervix was held and drawn down by a sponge holding forceps.
3. Using a half circle, round bodied needle, a No. 3 double strand nylon stitch was inserted sub-epithelially at the level of the internal os. Starting at 10 o'clock position, it was advanced such that the point of emergence in each of the four quadrants was the same as the point of insertion.
4. A No. 4 Hegar's dilator was inserted very carefully to just above internal os before the suture was tied at 12 o'clock leaving ends 4 cm long to facilitate removal. The dilator was meant to ascertain outlet for cervical secretions.

Her immediate post operative condition was good. Blood loss was approximately 30 millilitres. The blood pressure was 100/60 millimetres mercury, the pulse was 82 per minute.

POST OPERATIVE MANAGEMENT:

1. Blood pressure and pulse were monitored hourly for the first six hours and were normal.
2. Diazepam 10 mg was given orally six hours after operation and continued eight hourly for the first 48 hours.

3. The uterus was palpated for contractions four hourly for the first 24 hours. None were detected.
4. She was kept in bed rest for five days. The one week post operative stay in the ward was uneventiful. She had no abdominal pain, vaginal bleeding or abnormal vaginal discharge. Urine culture on the fifth day was negative for pathogens. She was discharged home on 22.12.81 with the following advice that:

    1. She should not have coitus for the rest of the current pregnancy.
    2. She should report back immediately in case of any labour pains or unusual vaginal discharge.
    3. She should attend the Muhimbili high risk ante natal clinic starting two weeks after discharge home.
    4. She should rest as much as possible at home.

ANTENATAL CARE:

The First Visit 8.1.82

She had no complaints but she reported was sensing something like fetal movements. She was 18 weeks pregnant by dates. She looked healthy. Her card showed she was 160 cm tall and her weight was 63 kg. Hemoglobin was 10 g per decilitre. Urine was negative for protein. Blood pressure was 130/70 millimetres mercury.

CARDIOVASCULAR AND RESPIRATORY SYSTEMS:

Nothing abnormal was detected.

ABDOMINAL EXAMINATION:

The fundal height was 18 weeks size. The uterus was not contractile. No fetal movements were felt.

VAGINAL EXAMINATION:

The vulva and vaginal were normal. The stitch was in place. There was no abnormal discharge from the cervix or vagina.

SUBSEQUENT VISITS:

She made five visits, three at four week intervals and two fortnightly. All measurements were normal. She showed a progressive weight gain of 400 g per week. On 10.5.82, she was admitted into the labour ward. She had suddenly developed fever with chills at home followed by labour pains, three hours prior to admission.

PHYSICAL EXAMINATION:

General condition was good. The temperature was 39°C. She was not pale or jaundiced. She had no oedema.

CARDIORESPIRATORY SYSTEM:

The pulse was 90 per minute, normal volume. The blood pressure was 110/70 millimetres mercury. Breath and heart sound were normal.

ABDOMINAL EXAMINATION.

There was no tender area. The fundal height was 36 weeks, longitudinal lie and cephalic presentation. Fetal size was about 2800 g. Contractions occured every 5 minutes for 40 seconds. The fetal heart rate was 150 per minute and regular. The head was four fifth above the pelvic brim. The bladder was not distended.

VAGINAL EXAMINATION. 1.30 P.M.

The vulva w and vagina were normal. The cervix was exposed by a speculum. The McDonald stitch was removed in the course of which membranes ruptured. The liquor was clear and no cord was seen. The cervix was 50% effaced and 5 cm dilated. The position of the presenting part was right occipital anterior, three fifths in the pelvis. There was no moulding. The pelvis was assessed as in the introduction and found adequate.

LABORATORY INVESTIGATIONS:

1. Blood smear showed malaria parasites, 3+
2. Urine was negative for acetone but showed proteinuria 1+.

DIAGNOSIS:

1. Malaria
2. First stage of labour, active phase.

MANAGEMENT AND PROGRESS OF LABOUR:

1. Chloroquine 200 mg was given intramuscularly eight hourly for twenty four hours and was followed by 300 mg base orally once daily for three days.
2. Fetal heart rate and contractions were recorded half hourly.
3. Maternal pulse, blood pressure and descent of the presenting part were recorded hourly.
4. Cervical dilation was assessed four hourly.
5. The patient was nursed in the left lateral position to avoid supine hypotension.

The progress of labour was good and she delivered at 4.35 p.m.

SUMMARY OF LABOUR:

First stage:	6 hours	10 minutes
Second stage	-	35 minutes
Third stage;	-	5 minutes
Total duration:	6 hours	50 minutes

Placenta and membranes were delivered complete, had no abnormalities and weighed 400 grams. Blood loss was 150 millilitres.

THE INFANT:

It was female, Apgar score at five minutes was 10 and the weight was 2,700 g. There were no obvious congenital malformations.

THE MOTHER:

The temperature was 37.5° Centigrade. Post delivery blood pressure was 130/70 millimetres of mercury. The uterus was well contracted. There was no active bleeding though the vagina. The perineum was intact.

On 12.5.82 (48 hours after delivery), both the mother and infact were discharged home with advice to attend post natal clinic six weeks later but the mother disclosed that she would be away in Moshi by then and would attend clinic there.

COMMENTARY:

Midtrimester habitual abortion is a very distressing condition to a woman anxious to have a child. Palmer and Lacomme in 1948, were probably the first to associate it with the incompetent cervix although Shirodkar pioneered its surgical closure in pregnancy (1).

The exact incidence of such a condition is unknown in this country but 35-40 cases are admitted to Muhimbili annually (2). The chance that cervical incompetence may account for midtrimester abortion is 25% certain, 33% probable and 50% possible. It is unfortunate that the diagnosis was made after five potentially preventable abortions had occured. The world over, cervical incompetence is rarely diagnosed before 2 - 3 abortions (1, 3, 4). One cannot say whether there was incompetence prior to the first abortion or not. History of premature rupture of membranes followed by precipitate relatively painless labour which is typical of incompetence was not obtained in the first abortion although it was in all the subsequent ones. The above are largely subjective and many exceptions have been reported (1,4). Cervical incompetence is attributable to cervical damage more than 85% of the time, few cases are due to congenital tissue deficiency and rarely is it physiological or dysfunctional (1,3,4). Nevertheless, certain aetiological aspects remain obscure (5,6). Perhaps the first expulsion in this patient, although an abortion, mechanically damaged the cervix (3). Whatever the case, the basis of putting a cerclage is more on the typical history than the finding of a dilated cervix.

The cerclage was done within the optimal time of 14 - 16 weeks gestation when an abnormal fetus is unlikely (1,3,4). The argument that after 16 weeks, the uterus straightens up from anteversion thus allowing gravitational weight to act on the incompetent cervix should be allowed with the awareness that a number of pregnancies reach term despite untreated incompetence (1,4).

Cerclage probably works by interfering with uterine polarity. Successes have been reported even when the cervix was upto 50% effaced, up to 8 cm dilated, and with herniating but intact membranes (6, 7). Such cases are exceptional. Usually cerclage should be done electively and successes upto 83% are expected where the cervix is uneffaced and less than 2 cm dilated (6,7).

This case exemplifies success without use of tocolytic drugs. Such drugs are irregularly available at this centre and even then some reports (6,7) show no significant differences in the success rates with or without their use.

The untimely onset of labour before 37-38 weeks inevitably led to removal of the suture after onset of labour.

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RHEUMATIC HEART DISEASE IN PREGNANCY

NAME: MRS K. L.

REG. NO. 285011

AGE: 33 YEARS

GRAVIDA 5 PARA 4

ADDRESS: KINONDONI: DAR ES SALAAM

ADMISSION DATE: 31.3.82

DELIVERY DATE: 24.6.82

DELIVERY NUMBER: 9669

DISCHARGED DATE: 10.7.82

SUMMARY: Valvular

A case of valvar heart disease in pregnancy is presented. Although she went into cardiac failure towards the end of-midtrimester, she was successfully controlled with digoxin and diuretics. She was delivered by vaccuum extraction of a healthy term baby. The puerperium was uneventiful. The couple refused interval sterilization.

PAST OBSTETRIC HISTORY ON ADMISSION:

She was gravida 5 para 4, all were normal full term deliveries but the last three were assisted by vaccuum extraction because she had heart disease which was first diagnosed during the second pregnancy. The second and third children died in their infancy. The last born child was 7 years old. There was no puerperal sepsis in the last delivery. She has never practised any contraception.

GYNAECOLOGICAL HISTORY:

Since her menarche at 12 years of age, she has been menstruating for 4 - 6 days every 30 - 32 days. She had once sought help from family planning clinic regarding her infertility but was told it would be better for her to remain so given her heart disease.

PAST MEDICAL AND SURGICAL HISTORY:

She has been under treatment for Rheumatic heart disease for the last twelve years. She has been admitted five times in the past because of heart failure. The last admission was three years ago in Zaire. She has been on a monthly injection she does not know by name ever since onset of the heart disease. Similarly she has been on oral drugs only during admissions and for short periods thereafter. She regularly attended the cardiac clinic every month. She has never contracted venereal diseases. She had had no surgical or dental operations.

SOCIAL AND FAMILY HISTORY:

She was a housewife. She had only adult education and could just read and write. Similarly her second husband; the current pregnancy of which was the first in their marriage. The first husband divorced her because of alleged infertility. She was a non smoker. There was no family history of heart disease, diabetes or hypertension.

CURRENT PREGNANCY:

The last menstrual period was on 1.10.81 and the expected date of delivery was 8.7.82. Her antenatal record showed that she first booked at 13 weeks of amenorrhoea. Her heart disease was described as functional grade II. She concurrently attended cardiac clinic and continued so fortnightly.

The following results were based on investigations and measurements at first booking:-

Her weight was 64 kg and was increasing normally. The blood pressure was 100/70 millimetres of mercury. The hemoglobin was 13 gm per decilitre.

The urine was negative for pathogens, proteinuria and glycosuria. The blood group was "O" Rh- positive. The VDRL was negative. She was given Benzathine penicilline 2.4 mu everym month intramuscularly. She was well during the two subsequent monthly antenatal visits and was to be admitted at 28 weeks to guarantee rest and surveillance during this time when hemodynamic changes are maximal. A fortnight to this time, she became breathless at rest and orthopnoeic. This was preceeded by painless, non productive cough. She had no fever or urinary symptoms. She was admitted on 31.3.82.

PHYSICAL EXAMINATION ON ADMISSION

She looked well nourished. She was dyspnoiec. She was afebrile, acyonotic and not pale. She had pitting sacral and ankle oedema.

CARDIOVASCULAR SYSTEM:

The radial and femoral pulses were synchronous at a rate of 100 per minute, regular and normal volume. There was no pulse deficit. The blood pressure was 90/70 millimetres mercury. The jugular venous pressure was raised. The praecordium was hyperactive. The apex beat was in the 5th left intercostal space in the anterior axillary line and was heaving. The first hear sound was soft, with no opening snap.
He pulmonary component of the second heart sound was accentuated.
There was an apical midiastolic murmur and a pansystolic murmur radiating to the axilla.

RESPIRATORY SYSTEM:

She was dyspoeic with a respiratory rate of 28 per minute. Chest movements were symmetrical. The trachea was central. Breath sounds were vesicular but there were fine basal crepitations. There were no wheezes or bronchial breathing.

ABDOMINAL EXAMINATION:

There were no surgical scars. There was no renal angle tenderness. The liver was palpable 3 cm below costal margin, smooth and tender. The spleen and kidneys were impalpable. The fundal height was 26 weeks and corresponded with dates. There were no contractions. The fetal heart rate was 150 per minute and regular.

DIAGNOSIS:

Mitral stenosis and incompetence with congestive heart failure i.e. Heart disease in pregnancy grade IV.

MANAGEMENT:

Medical colleagues were consulted and the patient was managed jintly.

1. INVESTIGATIONS

The hemoglobin was 11.8 gm per decilitre. The urine was negative for protein, pathogens and glycosuria. Serum electrotytes were normal. Chest X - Ray showed cardiomegally, No Kelly - B lines.

Electrocardiogram - P - mitrale, left and right ventricular hypertrophy, sinus rythm.

2. DRUG THERAPY

She was nursed propped up in bed.

The following druge were given:-

a. Frusemide 80 intravenously, then 40 mg orally once daily.

b. Diogoxin 0.5 mg three times for one day then 0.5 mg daily for two days, then 0.25 mg daily.

c. Slow-K (Potassium chloride) 750 mg one daily.

d. Benzathine penicilline 2.4 MU intramuscularly.

PROGRESS:

She was advised to take minimal salt in her diet. The heart failure was controlled. She was alloted functional grade III and remained so until delivery. She was kept in the ward throughout for the rest of the pregnancy.

1. Drugs were administered as above.
2. The hemoglobin was checked monthly and was above 12 gm per decilitre.
3. The urine was checked for pathogens fortnightly and was normal.
4. Dental hygiene was stressed.
5. She was seen at cardiac clinic fortnightly.
6. She gained an average of 375 gm per week.

On 24.6.82 labour pains started spontaneously at 4.15 a.m. She was admitted into the labour ward.

PHYSICAL EXAMINATION

Her general condition was good. She was not dyspnoec. She was afebrile, and mucous membranes were pink. She had slight ankle oedema.

CARDIOVASCULAR:

Peripheral pulses were synchronous and the rate was 88 per minute.

The blood pressure was 110/60 millimetres mercury.

The jugular venous pressure was not raise. The praecordial auscultatory findings were as previously described.

RESPIRATORY SYSTEM:

Respiratory rate was 18 per minute.

Breath sound were normal. There were no wheeze or basal crepitations

ABDOMINAL EXAMINATION:

There was no tenderness.

The liver was impalpable.

The fundal height was 38 wekks and baby size was estimated to be 2900 grams.

The lie was longtudinal and a cephalic presentation.

Contractions were palpable once every 5 minutes for 30 seconds.

The fetal heart was 148 per minute and regular.

VAGINAL EXAMINATION:

The vulva and vagina were normal.

The cervix was half effaced and 4 centimetres dilated. Membranes were intact. The position of the present part was left occipital anterior and the level was three fifth past the brim.

The pelvis was found adequate for that baby. Membranes were ruptured, clear liquor ensued and there was no cord prolapse. The following measures and drugs were given during labour:

1. She was propped up on a high bed.
2. Oxygen was kept nearby.
3. Analgesia and sedation was achieved by pethidine 100 mg intramuscularly.
4. Ampicillin was given 500 mg instranenously six hourly.
5. Urine was negative for protein and acetone. Fetal heart was monitored every half hour. Head descent and contractions were assessed hourly. Cervical dilatation was assessed every four hours.

PROGRESS AND DELIVERY

She progressed uneventifully to second stage in seven hours. She was instructed not to bear down during the second stage which was assisted by vaccuum extraction as follows:-

1. The patient, on a high delivery bed, was put in semi lithotomy position, swabed and draped with sterile towels as in the introduction.
2. Local infiltration anaesthesia was effected with liguocaine 1% as described under episoetomy.

3. A sterile vaginal examination confirmed the cervix was fully dilated, the position of the presentation was left occipital anterior and it was at the level of the ischial spines. There was no caput, the bladder as palpated through anteior vaginal wall was not full and therefore catheterization was omitted. The perineum was confirmed to be roomy.

4. A number 5 cup and traction chain were assembled and connected to the vaccuum machine. The cup, guided by the fingers of the left hand, was applied to the highest point on the vertex, taking care not to include any vaginal tissue. The suction pressure was gradually built up to 0.8 kg/cm^2 at intervals of 0.2 kg/cm^2 per two minutes.

5. During a contraction, the head was disengaged from the symphysis by a downward pull and delivered by pulling downwards and upwards during the next contraction, without any maternal effort. The vaccuum was released and the trunk delivered routinely.

6. No active management of the third stage was instituted. The placenta and membranes were expelled spontaneously within 15 minutes. Blood loss was about 400 millilitres. The perineum was ascertained intact and the uterus was well contracted. The past delivery blood pressure was 120/70 millimetres mercury.

7. SUMMARY OF LABOUR:

Duration of first stage was	7 hours	40 minutes
" " second stage was	-	25 minutes
" " third stage was	-	15 minutes
TOTAL	8 hours	20 minutes

THE BABY:

The sex was female, with an Apgar score of 10 at one minute. The weight was 3000 g and there were no external malformations.

She was monitored closely for 48 hours and then transferred to post-natal ward. Maintanance drugs were given as previously. On the fourteenth day, after uneventiful progress, she was discharged home. She was strongly advised on interval sterilization.

Maintainance drugs, Digoxin, frusemide, and slow-K were continued including monthly penicillin. She was followed up fortnightly by our medical colleagues.

FOLLOWUP AT END OF PUERPERIUM 10.8.82

There was no morbid even throughout the puerperium. She was lactating normally. She had discussed with her husband about sterilization but they both refused arguing that this was the first child of their marriage. Further explanation and education of the need for sterilization did not alter their stand. Fortunately they stated that they are required traditionally to abstain from coitus until the child is weaned.

EXAMINATION:

The hemoglobin was 12 g per decilitre. Urine culture grew no pathogens. She had no evidence of heart failure. Vaginal examination showed normally involuted organs.

COMMENTARY:

Heart disease in pregnancy is mainly rheumatic and to a lesser extent, congenital. It is rarely due to syphilis, hyperthyroidism, cardiomyopathy or hypertension (1 - 4).

Its diagnosis and management must be made in the light of the pregnancy induced hemodynamic changes (1 - 5). Despite various compensatory, changes, notably a 40% rise in cardiac output, there is a net increase in the work of the heart (1 - 5) and consequently there are various subjective symptoms. Cardiac functional grading as currently based on subjective symptoms may ensure false security by overlooking symptomless but serious lesions. On the other hand, it may unduly tax a doctor's attention in cases of insignificant lesions superimposed by cardiac neurosis.

The first admission was scheduled to concide with maximum strain from hemodynamic changes between 28th and 32nd week. Other streinous times are during labour and the first 24 hours postpartum (1 - 5). She went into cardiac failure before the scheduled admission in the abscence of such precipitating factors as anaemia, infection or emotional upset. Perhaps the hemodynamic changes simply overwhelmed the compensatory one.

Digitalis was used for its inotropic action on the damaged myocardium . Had the lesion been mi tral stenosis without incompetence, digitalization would have been controversial (1). Its place in such cases is during fibrillation (1, 5). Pulmonary oedema , had it occured, is a more catastrophic complication and additional management would include morphia, aminophylline and even venesection.

The fact that she was in failure and was later rated grade III - IV, necessitated her confinement to hospital thus avoiding the bother of antenatal visits since the slightest or no activity would render her dyspnoeic. More important of course, was to ensure monitoring and rest.

A short, anxietless, and effortless second stage but a slow third stage were all aimed at minimising cardiac work. ; the latter by avoiding sudden closure of uteroplacental circulation.

The value of children in cementing the marriage bond is reflected by their refusal of sterilization. This may have roots in the socio-cultural set up. This woman with grade III - IV cardiac disease, para 5 and now aged 33 years, surely deserved sterilization. Each risk factor above nearly doubles the perinatal and maternal mortality (1 - 4) let alone their cumulative effect. Functional grade III and IV are associated with perinatal mortality rates of 12% and 31% respectively. Similarly, maternal mortality rates of 5% and 22%.

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RETAINED PLACENTA
MANUAL REMOVAL

NAME: MRS T. R. ADDRESS: KIBAHA: COAST REGION

REG. NO. BBA 271 ADMISSION DATE: 31.3.82

AGE: 18 YEARS DISCHARGE DATE: 3.4.82

SUMMARY:

A primigravida was referred from Kibaha a on account of retained placenta following a normal term vaginal delivery. Blood loss had been initially moderate but a mere trickle on admission. Uterine contraction ring was diagnosed and the placenta successfully removed manually under general anaesthesia.

OBSTETRIC HISTORY:

She was a primigravida

GYNAECOLOGICAL HISTORY:

Her menarche was at 14 years. Menses lasted 4 days every 28 days. The last menstrual period was on 30.6.81 and therefore the expected date of delivery was 6.4.82. She had no operations.

PAST MEDICAL AND SURGICAL HISTORY:

She had no major illness or any surgical operations.

SOCIAL AND FAMILY HISTORY:

She was married, unemployed and neither smoked nor drank alcohol. There was no history of diabetes, hypertension or twins in the family.

CURRENT PREGNANCY:

She booked at Kibaha Health Centre on 10.11.81 when she was 20 weeks by dates. She made seven subsequent visits which were all uneventiful. The antenatal card she carried showed that she had no detected risk factor.

On 30.3.82 she experienced labour pains. She delivered normally a male baby but failed to expel the placenta. Moderate bleeding followed but stopped spontaneously. The referral note showed that the first stage lasted 18 hours, the second, one hour; and that Ergometrine 0.5 mg was given intramuscularly with delivery of the anterior shoulder. Delivery of the placenta by controlled cord traction failed hald an hour after which she was referred to Muhimbili.

PHYSICAL EXAMINATION ON ADMISSION: 31.3.82, 4.30 A.M.

General condition was satisfactory. Mucous membranes were pale. There was no oedema. The extremeties were warm and intravenous saline drip was running. Temperature was 37.2^{0} Centigrade.

RESPIRATORY SYSTEM:

Nothing abnormal was detected.

ABDOMINAL EXAMINATION:

There was no scars. There was a bulge in the hypogratrium. There was no tender area. The liver, spleen, and kidneys were not palpable. The uterus was 16 weeks size, normal shape and well contracted. There was no uterine tenderness. The bladder was not distended. There was no fluid thrill or shifting dullness.

VAGINAL EXAMINATION:

The vulva was normal with the clumped umbilical cord hanging outside. There was no perineal tear. There was slight trickling of blood from the vaginal introitus. The external cervical os was patulous, a constriction was felt 8 cm beyond the external os. The uterus was 16 weeks size and no rent was felt. There was traction upwards an the tautened cord when the fundus was pushed upwards.

DIAGNOSIS:

Retained placenta due to Contraction ring.

MANAGEMENT:

Manual removal under anaesthesia.

1. INVESTIGATIONS

(a) The hemoglobin was 7.5 g per decilitre.

(b) The blood group was "O" Rh-D positive and 1000millilitres were cross matched.

(c) Urine was negative for protenuria, glycosuria or ketones.

II. Routine preoperative preparation for vaginal operation was done and consent for operation obtained.

III. General anaesthesia was given routinely and the patient placed in lithotomy position. After routine cleaning and drapping the bladder was catheterized, 100 millilitres of clear urine came out.

(a) The cord was steadied with the left hand and the right had introduced into the uterine cavity guided by the cord.

(b) The left hand was then used to keep constant external control of the fundus throughout the manipulation by steadying it downwards.

(c) The constriction encountered was slowly dilated by the fingers, With the palm of the hand facing the uterine cavity, a partially separated border of the placenta was encountered and the placenta sheared from its attachment by a sawing motion of the ulnar border. The placenta was gently withdrawn by traction. It was examined and found complete including the membranes.

(d) Ergometrine 0.25 mg was administered intravenously and the uterus was well contracted. Blood loss was estimated to be 350 mls.

Meanwhile, the first 500 millilitres of blood were given. The pulse was 88 per minute and normal volume and the blood pressure was 110/70 mm mercury.

POST OPERATIVE CARE AND PROGRESS:

1. Another 500 millilitres of blood were given.
2. Blood pressure, and pulse were monitored hourly for the first twelve hours and were normal.
3. Vaginal pad showed no evidence of bleeding.
4. Fluid intake was 1500 millilitres for the first twelve hours and urine output was 500 millitres.
5. Check hemoglobin on the third post operative day was 9.2 g. She was discharged home, having been afebrile throughout and was given routine iron and folic acid.

FOLLOW UP EXAMINATION SIX WEEKS POST DELIVERY:

She came back as instructed on 18.5.82. Her general condition was good. Bimanual pelvic examination revealed no pathology. The hemoglobin was 10 g per decilitre.

COMMENTARY:

The placenta is considered retained if it has not been expelled within half an hour of birth of the baby (1, 2). It is an obstetric emergency with main complicationsof postpartum hemorrhage, infection and subsequent anaemia.

Aetiological factors include mismanagement of the third stage, uterine inertia, various degrees of morbid adherence (accreta, increta and percreta), and ruptured uterus such that the placenta escapes into the peritoneal cavity. The latter two are rare causes.

The commonest cause is however mismanagement of the third stage such as fiddling with or overzealous massage of the uterus. Such physical interference and rarely oxytocics may give rise to a constriction ring. The latter was diagnosed in this patient by actually palpating a constriction during bimanual examination and confirmed during manual removal. It was a complete constriction but lesser degrees have been described (1, 2). If engometrine was the cause in this patient, then commencement of cord traction to deliver the placenta was most likely delayed.

Generally, management of retained placenta is aimed at expediting delivery to avoid or minimize exanguinating hemorrhage and infection later on. In case of the former, immediate manual removal de facto is the wiser choice. When there is no hemorrhage, revealed or concealed, as it was in this case, proper preparation for manual removal under general anaesthesia should be done. Availability of cross-matched blood must be ascertained.

The constriction was successfully dilated mannually in this patient. Relaxants such as amyl nitrite and halothane anaesthesia have also been used (1, 2) but the success in the latter is usually followed by dissapointing consequent hemorrhage.

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ANTEPARTUM HAEMORRAHAGE

PLACENTA PRAEVIA CONFIRMED BY ULTRASOUND

VERTICAL INCISION LOWER SEGMENT CEASARIAN SECTION

NAME: MRS J. J. GRAVIDA 3 PARA 2

REG. NO. 515 ADMISSION DATE: 7.8.82

AGE: 24 YEARS CAESARIAN SECTION: 26.8.82

ADDRESS: KIGAMBONI, Dar es Salaam DISCHARGE DATE: 3.9.82

SUMMARY:

The patient presented with causeless, painless vaginal bleeding at 32 weeks gestation. Anterior major placenta praevia was suspected and confirmed by Real time B - Scan ultrasonography and conservative management instituted. She had a second episode of heavy vaginal bleeding at 35 weeks of gestation. She was thenceforth delivered of a live baby by lower segment (vertical incision) caesarian section. She recovered without any morbid event.

HISTORY OF PRESENT ILLNESS:

She complained of causeless, painless vaginal bleeding which started two hours prior to admission. She was 32 weeks pregnant by dates. She was rising from bed when she noticed red, clotless blood from vagina trickling down her legs. It was neither mixed with mucus nor liquor and the amount soaked the front of her underpants. She felt normal fetal movements but no dizziness. She applied a vaginal sanitary pad and reported to Muhimbili high risk labour ward two hours later.

CURRENT PREGNANCY:

She first booked in a peripheral clinic when she had 24 weeks amenorrhoea. Her last menstrual period was on 26.11.81 and the expected date of delivery therefore was on 2.10.82. She made two subsequent uneventifull antenatal visits.

PAST OBSTETRIC HISTORY:

She was gravida 3 para 2; all alive and well. Previous babies were term, normal vaginal deliveries at two years spacing. There were no morbid events in the antepartum, intrapartum or postpartum period.

GYNECOLOGICAL HISTORY:

Her menarche was at 14 years of age. She menstruated regularly every 25 - 32 days for 3 - 5 days. She used no contraception. She had had no gynaecological operations.

PAST MEDICAL AND SURGICAL HISTORY:

She had had no major illness since childhood. She had no history of bleeding disorders. She has never had any surgical operations.

FAMILY AND SOCIAL HISTORY:

She was a housewife married to a fisherman. She neither smoked nor drank alcohol. There was no history of diabetes, hypertension or twins in the family.

PHYSICAL EXAMINATION:

She looked healthy. Her khanga was blood stained. Mucous membranes were moderately pale. She was afebrile. The breasts were normal and secreting. There was no oedema or generalized lymphadenopathy.

CARDIOVASCULAR SYSTEM:

The extremeties were warm

Pulse was 100 per minute, normal volume

Blood pressure was 100/60 millimetres mercury. The heart sounds were normal.

RESPIRATORY SYSTEM:

Nothing abnormal was detected.

ABDOMINAL EXAMINATION:

The lower abdomen was enlarged. There were no surgical scars. There were no tender areas. The liver, spleen and kidney were not palpable. The fundal height was 32 weeks corresponding with dates. The uterus was cystic, non tender. The lie was longitudinal, cephalic presentation. The head was floating and displaced to the right. It could not be made to engage. There were no contractions. The fetal heart was 138 per minute and regular.

VAGINAL EXAMINATION:

The vulva was normal. There was slight ~~bringt~~ bright red blood coming from the introitus. The perineum was normal. There were no hemarrhoids.

DIAGNOSIS:

Antepartum hemmarrhage? Placenta praevia. Local cervical or vaginal bleeding were the other possibilities considered.

INVESTIGATIONS:

1. The hemoglobin was 8 g per decilitre compared to 9.6. g in the last ante-natal visit two weeks previously. The blood group was "O" Rh-D positive.
2. The urine showed trace proteinuria, no glycosuria and no pathogens.
3. ULTRASONOGRAPHY:

   A Siemens multison 400 Real time B- Scan with a 2.5 MHZ multi-element transducer was used.

3.1. The patient was placed in supine position and couplant oil applied to the patients skin for coupling ultrasonic rays to the patient. Incidentally she had a distended bladder which aids identification of the uterus.

3.2. The abdomen was scanned long-tudinally and transversely at several sections. It showed a singleton baby, Cephalic presentation. Fetal heart action was demonstrated by observing scatter echo alternating with specular echo in the fetal thorax.

The biparietal diameter was estimated from the outside to the inner echo of the parietal eminences after identifying the midline echo. It was 8.5 centimetres equivalent to 32 weeks gestation. The placenta was identified by the speckled echoes with a sharp line echo of the chorionic plate in the anterior uterine wall. With the aid of the echo free full bladder, the cervix and internal os was identified, it was covered by the placenta completely.

Liquor (echo free) volume was normal. This confirmed a diagnosis of major anterior placenta praevia. Classification into types was not possible since the internal os was closed and one would not be able to guess whether at full dilatation it would be covering partially or completely.

MANAGEMENT:

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

1. Complete bed rest was advocated for the first twenty four hours after which she was instructed to rest in bed as much as possible.
2. Dextrose (5%) drip was given to maintain an intravenous life line in the first twenty four hours.

3. Phenobarbitone 90 mg was given twice a day for sedation.
4. She was instructed to reserve blood soaked sanitary pads if any, for counting.
5. The fetal heart and blood pressure were monitored four hourly daily.
6. Sanitary pads were inspected for any evidence of bleeding every four hours for the first 24 hours.
7. She was transfused 1000 millilitres cross matched blood after there was no evidence of vaginal bleeding 24 hours later and a further 1000 millilitres were reserved.

PROGRESS: There was no more vaginal bleeding. Vaginal and cervical inspection on the fifth day after admission was normal. The blood pressure and fetal heart were normal. The hemoglobin was 9.8 g per decilitre. An elective caesarian section was planned to be done at the 37th week of gestation. She was however kept in the ward throughout although she craved to go home on grounds that she lived across a ferry the services of which end at midnight. She made uneventful progress, weight gain was 450 g per week.

At the 35th week of amenorrhoea, she had spontaneous vaginal bleeding with slight labour like pains. The blood was red, without admixture with mucus or liquor and the amount was estimated to be 500 millilitres.

PHYSICAL EXAMINATION:

The mucous membranes were slightly pale. There was no oedema. She was afebrile.

CARDIOVASCULAR SYSTEM:

The pulse was 90 per minute normal volume. The blood pressure was 100/60 millimetres mercury. The heart sounds were normal.

RESPIRATORY SYSTEM:

It was normal.

ABDOMINAL EXAMINATION:

The fundal height was 36 weeks size. The uterus was soft, non tender. The lie was longitudinal, cephalic presentation, floating head. Fetal weight was estimated to be 2600 g. There were no palpable contractions. The fetal heart was 150 per minute and regular.

VAGINAL INSPECTION:

She was bleeding actively.

MANAGEMENT:

Caesarian section was decided to be done at once.

1. Dextrose 5% drip 1000 millilitre was given fast.
2. Hemoglobin was 7.6. g per decilitre and 1500 millilitres of "O" positive blood were cross matched.
3. Informed consent for operation was obtained.
4. Preoperative preparation for caesarian section was done as described in the introduction. A Ryles' tube was introduced as she had just taken porridge. Aspiration was done and 30 millilitres of magenesium trisilicate syringed into the stomach through the tube. The was rocked gently to the left, right and back to left lateral position to ensure mixing of the antiacid with gastric contents.
5. Anaesthesia was given and maintained as described in the introduction.
6. After routine cleaning, drapping and bladder catheterization, the abdomen was opened through a midline sub-umbilical incision.

7. The lower uterine segment was exposed with a Doyens' retractor. It was well formed but with engorged blood vessels, those at the lateral corners rather massively. Packs were introduced into the paracolic spaces to seal off the general peritoneal cavity.
8. A semilunar transverse incision was made through the loose uterovesical peritoneum, concavity upwards, and extending 5 cm on either side of the midline. The peritoneum was very gently stripped downwards with a finger. The retractor was adjusted to retract the bladder. It was obvious the massively engorged veins at the corners would be damaged if a transverse incision was made. The midline was less vascular, and by simple judgement, an adequate, vertical incision confined to the lower segment was viewed possible. The bladder was pushed further downwards and selective ligaturing of engorged vessels near the midline was done.
9. Using a scalpel, the myometrium was scored along the proposed incision vertically in the midline. A stab penetrating the myometrium at the middle was made. This was extended with scissors downwards and upwards stopping 2 centimetres short of the junction of the upper and lower segment. The placenta was bulding underneath.
10. The membranes were reached above the placenta with the fingers and ruptured. Clear liquid ensued and was promptly suctioned away by the assistant.
11. The head was lifted upwards through the incision by the palm while the assistant concurrently applied gentle fundal pressure. It was thus delivered by extension. The shoulders and trunk were delivered as routinely.

12. Bleeding points were promptly secured with Green-Armytage clumps. Intravenous ergometrine 0.25 mg was given and the placenta and membranes delivered by controlled cord traction. They bore no abnormalities. The placental bed was mopped with warm packs until oozing ceased. The uterine wall was repaired with a continuous locked first layer chromic catgut no. 1 and a second layer of interrupted sutures, also no. 1. Care was taken to appose myometrium without interposing decidna. Hemostasis was ascertained.
13. Reperitonization of the uterine wound was done susing continuous no. "0" chromic catgut. Adnexae were inspected and found normal. The peritoneal cavity was mopped dry and the abdomen closed routinely after swab and instrument count was found correct. Total blood loss was estimated at 800 millilitres. At the end of the operation, the blood pressure was 100/70 millimetres mercury and the pulse was 100 per minute, normal volume.

THE BABY:

The Apgar score was 10. The sex was made and weighed 2450 g. There were no external maliformations.

POST OPERATIVE CARE:

1. The patient was transfused 1500 millilitres of blood.
2. Fluid intake was an average of 3000 millilitres 5% dextrose per 24 hours and the urine output was 950 millilitres.
3. Blood pressure, pulse and respiratory rate were monitored hourly for the first 24 hours and were normal.
4. Pain was relieved with intramuscular pethidine 100 mg 8 hourly for the first 48 hours.
5. Vaginal sanitary pads were inspected for bleeding. There was no post partum hemorrhage.

PROGRESS:

She made uneventiful recovery. The would healed by first intention and stitches were removed on the seventh post-operative day. The hemoglobin was 9.5 g per decilitre. She was discharged home on 3.9.82. and advised to report for post natal examination six weeks later.

FOLLOWUP EXAMINATION: SIX WEEKS POST OPERATIVE (12.10.82)

The patient returned seven weeks after the operation. General condition was good. Hemoglobin was 10.4 g per decilitre. Breast were normal and lactating. The scar showed no signs of infection. The uterus was not palpable abdominally.

VAGINAL EXAMINATION:

The cervix looked healthy. The uterus was slightly bulky, anteverted, mobile and non tender. The adnaxae were impalpable. She was advised to attend family planning.clinic nearest to her home.

THE BABY:

It was healthy looking. The weight was 3300 grams, a gain of 900 grams..

COMMENTARY:

Antepartum hemmorhage is encountered in 1% of deliveries in Muhimbili and of these, 30% are due to placenta praevia (1). The presentation in this patient with causeless, painless vaginal bleeding at 32 weeks of gestation was typical.

Ultrasonography (2, 3) in the confirmatory diagnosis of placenta praevia has the advantage of being non invasive; 95 - 99% accurate, and fetal maturity can be assesed reasonably by determining the biparietal diameter.

Expertize is required to demonstrate the chorionic plate echo without, which placental localization is doubtiful. It should however, only aid and not replace clinical judgement. Other diagnostic aids include radiography, scintillation scanning, thermography and vaginal-pelvic examination. The latter should be done in theatre under readiness for operative intervention. Nevertheless it is often not thoroughly done for fear of provoking undue hemorrhage (4).

Conservative management in this patient was on fetal interest for at 32 weeks, it is unrearable under our conditions and even elsewhere, perinatal mortability is high, 40 - 75% (4). The conduct of such management should ensure optimal fetal-maternal monitoring and guarantee immediate surgical intervention whenever necessary. (4, 5,). Blood loss was replaced and cross matched blood reserved all the time. She was refused home management not because she lived across the ferry but it has no place in major placenta praevia in our setting unlike elsewhere where it might be necessitated by prohibitive financial costs to the patient (4).

Pregnancy was terminated on event of a second bleeding amount, including to 500 millilitres because at 35 weeks gestation, the baby was rearable. Furthermore, such repetitive bleeding increases fetal risk eightfold hypoxic neorologic damage being encountered in 50 - 60 per 1000 such deliveries (4). Scarcity of donor blood is another obvious reason

Lower segment caesarian section was done despite prior knowledge that the placenta was anterior and would therefore be encountered leave alone the obviously tortuous vessels on its surface,.

Whereas classical section would have avoided all the above, in it self, it bleeds considerably and apart from necessitating sterilization, it offers no accessibility to bleeding points after removal of the placenta. The vertical incision was made after judgement showed it would avoid major bleeding. This was not only in keeping with surgical principles but was partly dictated by scarcity of donor blood. Additionally such an incision affords perfect apposition, there is less chance of sepsis involving veins in the broad ligaments and therefore thrombo-embolism, and the lowest point facilitates drainage. However, it may easily involve the upper segment (5).

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RUPTURED UTERUS, COLPORRHEXIS AND CERVICAL TEAR FOLLOWING BREECH EXTRACTION: REPAIR AND TUBAL STERILIZATION:

NAME: MRS B.M. GRAVIDA 5 para 4

REG. NO. 4291 ADMISSION DATE: 5.8.82

AGE 30 YEARS LAPAROTOMY: 5.8.82

ADDRESS: KINONDONI DISCHARGE DATE: 16.9.82

SUMMARY:

The patient had a breech extraction of a 2300 g live baby following cord prolapse, apparently uneventifully. She was found very pale and shocked three hours later. There was no obvious postpartum hemorrhage. Ruptured uterus was suspected and in addition, cervical and vaginal vault tears were confirmed on examination under anaesthesia. Laparotomy, repair and tubal sterilization was done after vigorous resuscitation. She had a stormy recovery.

ANENATAL PERIOD:

She was booked at a peripheral clinic when she had 24 weeks amenorrhoea. She made three subsequent visits. There were no abnormalities detected.

HISTORY OF PRESENT ILLNESS

She felt labour pains on 4.8.82 five hours after which she was admitted at Ocean Road hospital. She was 36 weeks pregnant by dates. There was no history of febrile illness, anterpartum hemorrhage or leakage of liquor. However, the membranes ruptured spontaneously during admission and the cord prolapsed outside the introitus. The referral note and labour record showed that:-

The cord was pulsatile but very feebly. Fetal heart was 100 beats per minute and regular.

The cervix was fully dilated except for a thin rim in aterior lip. The presentation was a complete breech just above ischial spines. The pelvis was adequate for the estimated 2500 g baby. Breech extraction was done. Baby was male, weighed 2100 g, Apgar score 7. Third stage was complete and lasted 5 minutes. Blood loss was 150 millilitres and post delivery blood pressure was 110/60 millimetres mercury. There was no obvious maternal injury. However, the blood pressure was recorded 60/0 millimetres mercury on routine checkup 3 hours later. History of respiratory embarassment or convulsions post delivery was neither recorded nor obtained on this second admission. She was referred to Muhimbili because of suspected uterine rupture.

OBSTETRIC HISTORY ON ADMISSION:

She was gravida 5 para 4, all previous deliveries were spontaneous vaginal, normal and full term at 2½ years spacing. She had had no obstetric operations, manual removal of the placenta or puerperal infection.

GYNAECOLOGICAL HISTORY:

Her mernache was at twelve years of age. Her menstrual interval was every 25 - 32 days and menstruated for 3 - 5 days. She had had no gynaecologic operations. She had used the oral contraceptive pill for two years previously without complications. Her last menstrual period was on 29.11.81 and the expected delivery date was on 5.9.82.

PAST MEDICAL AND SURGICAL HISTORY:

She had had no major illness since childhood. She had no history of tuberculosis, sexually transmissible diseases or bleeding disorder. She had had no surgical operations.

FAMILY AND SOCIAL HISTORY:

She was a house wife. She neither drank alcohol nor smoked cigarettes. There was no family history of diabetes, hypertension or pre-eclampsia.

PHYSICAL EXAMINATION:

She was conscious and communicating verbally. Extremeties were cold. Mucous membranes were very pale. The temperature was 36.5° C.

NERVOUS SYSTEM:

Pupils were equal, normal size and reacting to light. There was no neck stiffness. Kernings sign was negative.

CARDIOVASCULAR SYSTEM

The pulse was 120 per minute and thready. The diastolic blood pressure was unrecordable. Jugular venous pressure was not raised. There was no cardiomegally. Heart sounds were normal. There was no gallop rythm or murmurs.

RESPIRATORY SYSTEM

She was not dyspnoeic. Respiratory rate was 22 per minute. Respiratory movements were symmatrical. The trachea was central. Breath sounds were vesicular. There were no added sounds.

ABDOMINAL EXAMINATION

There were abdominal breath movements. There were no scars. The lower abdomen was distended. There was no generalised tenderness. The liver, spleen and kidneys were not palpable. The hypogastrium was tender particularly on the right side. The uterus was 14 weeks size, contracted and tender on the right side. The bladder was not distended. There was fluid thrill and shiffting dullness.

VAGINAL AND BIMANUAL EXAMINATION:

The vulva and perineum were normal. There was slight active bleeding. The vagina had a fist size clot. The cervix had a tear on the right side. There was active bleeding. The tear in the cervic was felt continuous upwards with a uterine tear on right side. The uterus was 14 weeks and well contracted.

DIAGNOSIS:

RUPTURED UTERUS

CERVICAL TEAR.

~~SHOCK~~ HEMORRHAGIC SHOCK

MANAGEMENT PLAN:

1. Resuscitation
2. Investigations
3. Examination under anaesthesia
4. Laparotomy.

1.1 Trendelenburg's position was maintained to facilitate cerebral circulation.

1.2 Sponge holding forceps were applied to bleeding points on the cervix. The vagina was packed with gause to tamponade oozing points.

1.3 Normal saline 3500 millilitres were given rapidly followed by 1500 millilitres 5% dextrose. Syntocinon 20 units were given in drip.

1.4. Chloramphenicol 1 g was given intravenously statim then 500 mg six hourly.

1.5. Bladder catheterization revealed 80 millilitres of clear concentrated urine.

Blood pressure and pulse were monitored quarter hourly. After one and half hours of vigorous resuscitation, the pulse was 110 per minute, nearly normal volume, the blood pressure was 90/60 millimetres mercury and urine output was 45 millilitres per hour.

2.1 The hemoglobin was 3.5 g per decilitre and blood group "O" Rh-D positive. Cross matching of 2500 millilitres was requested for.

2.2. Urine was negative for f glycosuria and proteinuria.

2.3 Blood urea was 25 mg per cent and creatinine was 1 mg per cent.

2.4 Electrolytes (serum) were normal i.e. sodium 140, Potassium 3.5, bicarbonate 20 and chloride 100 mmol per litre.

She was transfused 1000 millilitres blood and the pulse was 100 per minute, normal volume, blood pressure was 100/60 millimetres mercury and urine output was 60 millilitres per hour. This was 2½ hours after admission.

3.1 Informed consent for anaesthesia and operation was obtained.

3.2. Preoperative preparation and general anaesthesia was given as described in the introduction.

3.3. In lithotomy position, after cleaning and drapping with tawels, vaginal and bimanual examination was done, previous findings were confirmed and in addition, tear of the vaginal vault on the right side.

It was continuous with the utero cervical tear with two active bleeders which were subsequently clumped and tied off. Laparotomy was decided upon and was started three and a quarter hours after admission.

4.1 The abdomen was opened through a subumbilical median incision and the findings were: -

a. A hemoperitoneum admixed with liquor approximately three to four litres.

b. A retrovesial hematoma equivalent to about 750 millilitres

c. An incomplete anterior uterine rupture starting at mid corpus in the midline and extending downwards and laterally to involve the cervix and right antero lateral part of the vaginal fornix. The tear was complete at the junction of the upper and lower segment which was not friable. The bladder was intact. The uterovesical peritoneum which had been incised transversely was gently pushed down with the finger and retracted together with the bladder with a Doyen's retractor. The uterine arteries were not involved by the tear. A combined abdominovaginal repair and tubal sterilization was decided upon as the definitive treatment.

4.2 <u>REPAIR AND BILATERAL TUBAL LIGATION:</u>

a. Bleeding points on the uterus were clumped with Green Armytage forcepts and those on the cervix and vagina with artery and Long Allis forcepts respectively. The latter two were effected vaginally under guidance of the abdominal surgeon to avoid the uterine vessels and ureter.

(b) Starting at such a level that was visible vaginally when cervical traction was applied downward with two ring forcepts, the uterine wall was repaired with No. 1 chromicised catgut, the first layer with a continuous stitch and the second interrupted.

(c) The cervix was similarly repaired but sung No. 0 Chromic catgut . Only the lower most part of the vault rupture was repaired using interupted No. 0 catgut. The part near the paracervical tissues was left unstitched for fear of picking on the ureter.

(d) Free blood and liquor was sucked away and the peritoneal cavity mopped with abdominal packs. Hemostasis was ascertained and uterovesical peritoneum repaired with No. 0 chromic catgut, continuous suture.

(e) A modified Pomeroy's bilateral tubal ligation was done. The mid point of each fallopian tube was picked up with straight long artery forcepts and the base of the loop crushed with curved arterty forcepts. The crushed area was ligatured with chromic catgut No. 1 and the loop excicised away.

(f) A corrugated rubber drain from the left broad ligament through uterovesical space to the right broad ligament and out through skin. was left insitu to warn of any bleeding and in case of infection. The abdomen was closed in layers after instrument and swab count was found correct.

At the end of the operation, the general condition was satisfactory, the pulse was 100 per minute, good volume and the blood pressure was 120/70 millimetres of mercury. The mucous membranes were still pale.

POST OPERATIVE CARE AND PROGRESS:

1. Blood pressure, respiratory and pulse rate were monitored ½ hourly for the first 6 hours, hourly for the next 6 hours and 4 hourly for the next 12 hours. They were normal.
2. Morphine 15 mg was given intramuscularly. 6 hourly to relieve pain and anxiety.
3. Chloramphenical 500 mg was continued.
4. Fluid intake was 3.5 L in the first post operative day and the urine output was 980 millilitres.
5. She received a further 1500 millilitres of blood through second post-operative day.

3RD POST OPERATIVE DAY:

General condition was good. Temperature was 38°C. The lungs were clear at anscultation. The abdomen was not distended. There was little serosnguinous draindage. Bowel sounds were present and normal. There was normal lochia per vaginum. The urine was clear. The drain was shortened, she was fed orally but the catheter was left insitu for 10 days in case there was occult bladder damage. The temperature normalized next morning but she was given metronidazole 400 mg thrice a day as prophylaxis against anaerobic organisms. She made good progress, the drain was removed on the 5th day. She was ambulant.

8TH POST OPERATIVE DAY

She developed high fever, temperature was 39°C. The mucous membranes were pale, no jaundice. The lungs were clear. The wound had healed well except two spetic foci in the lower one third and the drain site was discharging foul smelling darkish pus. The cervical repair had healed and there was no abnormal discharge from the os. Pus was draining through the rent in the vaginal vault. All stitches were removed.

INVESTIGATIONS:

1. Blood slide revealed malaria parasites 3+
2. Hemoglobin was 6.8 g per decilitre.
3. Blood cultures were negative
4. Urine culture was negative.
5. Endocervical swab culture revealed mixed organisms.
6. Pus culture from drain site revealed Bacteroides melaninogenicus. Sensitive to clundamycin.

TREATMENT

1. Chloroquine injection 200 mg intramuscularly was given 8 hourly for the first 24 hours, followed with 300 mg base orally daily for three days.
2. Clindamycin 300 mg was given intravenously 8 hourly for five days .
3. The would was dressed twice daily with Eusol and vaginal toilet was done twice daily with 1 in 100 cetavlon.
4. Blood transfusion 1000 millilitres.

She remained mildly febrile for the next one week despite negative slide for malarial parasites and negative urine, blood and pus cultures. The catheter, was removed on the twelve post-operative day.

18TH POST OPERATIVE DAY

She developed an injection abscess which was incised and drained. She was afebrile as from the 20th day onwards the drain site healed but the pus like vaginal discharge continued and ceased on the 28th post-operative day. The hemoglobic was 8.9 per decilitre. The rent in the vaginal vault had closed. The cervix was healthy. The uterus was 12 weeks size, non tender. The right adnexae were thickened but non tender. She was discharged home on 6.9.82, the 32nd post operative day and on ferrous sulphate tablets.

FOLLOWUP EXAMINATION, 8 WEEKS AFTER OPERATION:

Three weeeks after discharge home-

The hemoglobin was 9.5 g per decilitre. The abdominal wound and drain site had healed. There was no abnormal vaginal discharge. The cervix and vault were normal. The uterus was 10 weeks size, non tender. The baby was well.

COMMENTARY:

Ruptured uterus cord prolapse are both very serious obstetric complications. The incidence of the former in Muhimbili is 1 in 863 deliveries with a maternal and perinatal mortality of 8.6% and 74% respectively. The former is usually due to hemorrhage and sepsis.

The most likely aetiology of the rupture was the forceful breech extraction of the baby albeit small. Given such circumstances of a small baby, cord prolapse with severe bradycardia and seemingly fully dilated cervix, breech extraction was probably irresistible.

The lesson is however, bitterly clear that the ruptured uterus necessitating sterilization, 32 days hospitalization, expensive multiple chemotherapy, 7 units of blood tranfusion, chronic low abdominal pain coupled with possibility of permanent infant neurological damage, was indeed, a very big price to pay.

Although there has never been universal agreement on the method suitable for delivering a breech (1, 2, 3) leave alone cord prolapse, the place of breech extraction is increasingly becoming hard to justify if not actually obsolete (1,3). In the management of cord prolapse, it might hardly have a place only when the cervix is fully dilated, there is evidence of cord compression, both assisted breech delivery and caesarian section are not immediately feasible and operator skill is optimal! The deterrent is not only maternal injuries as learnt above but also high perinatal mortality. Where expertise and facilities were optimal, it has been reported to be 13% and 6.7% for breech extraction and assited breech respectively versus 7.5% for caesarian section (2). For prolapsed cord, perinatal mortality is higher for vaginal, 31% than caesarian delivery 14% (4). Fetal mortality of 10% and 70% have been reported within 30 minutes and one hour of diagnosing cord prolapse respectively. The aim, however, remains to deliver the fetus as fast as possible to avoid cord pressure. Ingeneous methods have been tried with varying successes to facilitate the latter and include filling the bladder with saline to displace presenting part and even pharmacological tocolysis (4) while buying time for the appropriate method of delivery.

Vigorous resuscitation against hemorrhagic shock and simple repair of the uterus was done successfully in this patient. The former is an essential step and the latter illustrates the principle that the quickest, simplest, yet effective method should be chosen in managing ruptured uterus.

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UNDIAGNOSED TWINS: DELAYED SECOND STAGE

VACCUUM EXTRACTION

NAME: MRS M. A. ADDRESS: OYSTER BAY, DSM

REG. NO. 178025 ADMISSION: 12.8.82

AGE: 23 YEARS DISCHARGE: 15.8.82

SUMMARY:

A secundigravida was admitted in labour with pyrexia and early rupture of the membranes. Occipital posterior position and intrapartum fetal death were diagnosed. Contrary to the above, a male, live baby of low Apgar score was delivered by vaccuum extraction following delayed second stage. A second twin was discovered and delivered spontaneously.

PAST OBSTETRIC HISTORY:

She was gravida 2 para 1. The previous delivery was in 1979, normal and weighed 3500 g.

GYNAECOLOGICAL HISTORY:

Menarche was at 13 years of age. Duration of menses was 3 - 4 days every 25-30 days. She has never used any contraception. The last menstrual period was on 10.11.81.

PAST MEDICAL AND SURGICAL HISTORY:

She had had no major illness. She had never been operated upon.

FAMILY AND SOCIAL HISTORY:

She was a housewife. She was a teetoteller. There was no history of twin deliveries, diabetes or hypertension in the family.

CURRENT PREGNANCY:

The expected date of delivery was on 17.8.82. She first attended antenatal clinic at 24 weeks of amenorrhoea. Her antenatal card showed that all baseline measurements and investigations were normal. She made two more visits a month apart, she was well and in the last visit, the fundal height was 32 weeks and corresponded with dates. She had an average weight gain of 2.5 kg per month. She did not attend clinic anymore until on 12.8.82 when she had fever and labour pains. She had been bereaved of her mother, had gone upcountry and had been pre-occupied with mourning. The fever was sudden in onset, with chills followed by labour pains and rupture of the membranes. She had no urinary symptoms and she was feeling fetal movements. She was admitted into a peripheral labour ward an hour later but was referred to Muhimbili high risk ward because she was thought to have a big baby and therefore feto pelvic disproportion.

PHYSICAL EXAMINATION:

She was well nourished. The mucous membranes were not pale and there was no oedema. She was febrile, 39°C.

CARDIOVASCULAR SYSTEM:

The pulse was 100 per minute, normal volume. Blood pressure was 110/70 millimetres mercury. Heart sounds were normal.

RESPIRATORY SYSTEM:

Nothing abnormal was detecte.

ABDOMINAL EXAMINATION:

There were no surgical sacrs. There was a sulcus in the suprapubic area. There was no superficial or renal angle tenderness.

The liver and spleen were not palpable. The fundal height was 38 weeks and corresponded with the dates. The lie was longitudinal, cephalic presentation; at the brim. The fetal back could not be felt and fetal limbs were felt anterior. The breech was in the fundus; no other fetal pole was identified. The urinary bladder was not distended and the sukus was identified as due to the angle of the neck and sinciput. Fetal size was estimated to be 3200 g. There was enough liquor and 1 - 2 contraction were occuring every 10 minutes for 20 - 30 seconds. The fetal heart was not heard by fetoscope.

VAGINAL EXAMINATION:

The vulva was normal. Clear liquor ensued on exerting fundal pressure. The vagina was of normal warmth. The cervix was effaced and 4 cm dilated. The vertex was not very well applied to the cervix. The posterior fontanelle was in the right posterior segment of the pelvis. The bregma was not easily felt. The level was four-fifths, there was no caput. The membranes were rupture, there was no cord prolapse. The pelvis was adequate and the perineum quite roomy. Liquour was not foul smelling.

DIAGNOSIS:

1. Malarial infection
2. Intrapartum fetal death
3. Malpostion, right occipital posterior.
4. Early rupture of membranes.

INVESTIGATIONS

1. Hemoglobin was 9.5 pg per decilitre.
2. Blood slide was postive for malaria parasites.
3. Urine was negative for acetone, protein, and sugar.
4. Blood group was "O" Rh-D positive.

MANAGEMENT:

1. Chloroquine 600 mg base was given orally statin followed by 300mg after 8 hours and then 300 mg once daily for three days.
2. Aspirin 600 mag was given at once.
3. Dextrose 5%, 2000 millilitres was given intravenously as she had not and could not eat.

Trial of labour was decided upon.

PROGRESS:

The fever abated one hour after medication. She had very painful contractions and backage. She was given pethidine 100 mg intramuscularly for analgesia and sedation. Ampicillin 500 mg intravenously six hourly was given in view of early rupture of membranes. A total of four, four hourly vaginal examinations to assess progress of labour were made and details were recorded on a partogram as in the introduction. During the last examination,(16 hours after the first and 19 hours after alleged onset of labour pains and rupture of membranes), the cervix was fully dilated, the level of the head was just above ischial spines and there was a small caput. The position was the same. She was encouraged to bear down with each contraction. and anticipated prolonged labour. After an hour of bearing down without progress, it was decided to do vaccuum extraction.

DELIVERY:

Vaccuum delivery eas conducted successfully as described uner case of rheumatic hear diease on page with minor modification mainly rotation of the occiput to anterior position. Episeotomy was considered unnecessary as the perineum was found to be very roomy. A male baby, 3000 g was delivered and contrary to earlier diagnosis, it was alive with an Apgar score of 6. A second twin was suspected after the fundal height remained high. The lie was longitudinal, cephalic presentation and fetal heart was 150 per minute and regular.

On vaginal examination, there was no cord presentation, and membranes were ruptured artificially. She delivered spontaneously 8 minutes later; a female baby, 2600 g weight and Apgar score 10.

POST DELIVERY DIAGNOSIS

Undiagnosed twins, misdiagnosed intrapartum fetal death.

SUMMARY OF LABOUR

First stage	19 hours
Second stage	1 hour 15 minutes
Third stage	- 5 "
Total	20 hours 20 minutes

First and second twin delivery interval 8 minutes.

Blood loss 350 millilitres.

Post delivery progress of both mother and babies was uneventiful. Blood slide was negative for malarial parasites. Hemoglobin was 8.8 g per decilitre. She was discharged home on routine oral iron and folic acid..

FOLLOWUP: SIX WEEKS POST DELIVERY:

She reported back on 29.9.82. Her general condition was good. Mucous membranes were not pale. Hemoglobin was 10 g per decilitre . The uterus was impalpable abdominally.

VAGINAL EXAMINATION:

The vulva and vagina were normal. There was no abdormal discharge. The cervix looked healthy. The uterus was normal size, anteverted and mobile. She was advised to start contraception.

COMMENTARY:

The diagnosis of twins was not made until at delivery. Infact, only 70% of twin gestations are suspected the world over (1) and only 55.4% are clinically diagnosed before delivery in Muhimbili (2).

In this patient, history of the various subjective symptoms of twin pregnancy could not be obtained nor were palpable impressions suggestive. The difficulty in palpation becomes appreciable in this case when the larger first twin in posterior position is viewed disposed longitudinally infront of the smaller second twin in similar lie but anterior position. Had the circumstantial event which interferred with antenatal attendance not happened, perhaps serial average weight gain would have signalled multiple pregnancy even if uterine volume did not. Early antenatal diagnosis of twins minimises risk of prematurity in those who benefit from rest particularly between 32-36 weeks gestation (1, 2). Bed rest has not been extensively practiced here due to overcrowding.

The moderately deflexed head due to posterior position felt big and was regarded as evidence of fetopelvic disproportion. The fetal heart was not heard, albeit erraneously, again due to posterior position. It is usually best heard over the scapular but poorly so anteriorly due to overlying limbs. The concomittant pyrexia which is a known cause of fetal death (4) further contributed to the elusive diagnosis. Such misdiagnosis may have serious implications where, by facilitating conservative management, the resultant delay may eventually lead to a compromised fetus with low Apgar score as in this case or even actual fetal death. In conditions where fetal heart anscultation is naturally difficult, more sensitive methods such as Deptone, Ultrasound or fetal electrocardiogram, should be employed despite concurrent presence of maladies which may offer satisfactory explanation of intrapartum fetal death.

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GRANDMULTIPARITY

PREVIOUS CAESARIAN SCAR WITH SUBSEQUENT VAGINAL DELIVERIES

ELECTIVE CUM EMERGENCY CAESARIAN SECTION AND STERILIZATION

NAME : MRS F. A

REG. NO. 356

DELIVERY NO. 11800/M/82

AGE: 42 YEARS

GRAVIDA 20 PARA 17 + 2 ABORTIONS

ADDRESS: KIBITI, RUFIJI

ADMISSION DATE 12.10.82

CAESARIAN SECTION: 24.10.82

DISCHARGE DATE: 2.11.82

SUMMARY:

The patient was referred from Mchuki hospital Rufiji on account of extreme grandmultiparity, previous caesarian section, hypertension and lack of adequate emergency facilities. She was gravida 20 para 17 + 2 abortions. All were full term normal vaginal deliveries except the fifth which was a set of twins, the seventh which was preterm and the eleventh which was a caesarian section because of placenta praevia. Only four children were alive, fourteen died, all in early childhood except one in the neonatal period. Labour started before the elected date for caesarian section. Emergency caesarian section and tubal sterilization was done. She got a live baby and recovered without problems.

CURRENT PREGNANCY:

She first booked on 25.6.82 at 20 weeks of amenorrhoea at a peripheral clinic in Kibiti. She did not know her last menstrual period for certain but it was around early February 1982 and the expected date of delivery was mid November, 1982. She first felt quickening towards the end of May 1982.

She made four uneventiful subsequent visits to the clinic except the last one when she was referred to Mchuku hospital because of raised blood pressure on 17.9.82. She was 32 weeks pregnant by dates. She was hospitalized for three weeks, had no swelling of feet, loin pain or fevers. She was referred to Muhimbili on 11.10.82 on account of the extreme grandmultiparity, previous caesarian section, mild hypertension and uncertainity of availability of optimal facilities for operative intervention at the peripheral hospital.

PREVIOUS OBSTETRIC HISTORY ON ADMISSION, 12.10.82

She was gravida 20 para 17, with one set of twins and two abortions. All pregnancies resulted in normal spontaneous vertex vaginal deliveries except the following:-

5th - Twins. The second twin was a breech delivery

7th - Caesarian section because of antepartum hemorrhages possibly placenta praevia. She recovered normally.

11th - Preterm delivery at 34 weeks of gestation

15th - Abortion at 12 weeks gestation. It was preceeded by a febrile illness. She was not evacuated. There was no morbid event.

17th - Abortion at 10 weeks. No precipatating factor was evident and she was not evacuated.

The first child was born in 1958 and the last in 1980. The average interval between pregnancies was one year and she has practised no contraception. She does not remember the birthweight of any of her children. Only five deliveries were conducted in hospital, the rest at home.

She had had no problems in the antenatal, intrapartum or postpartum period throughout all these pregnancies except the last one when she was transfused blood because of postpartum hemmorrhage. She had no history of anaemia or hypertension during or in between pregnancies. Of the 18 babies born alive, only 4 were alive, 14 died, all in their childhood because of measles, diarrhoeal diseases and febrile illness. Only one baby born pretermdied in the neonatal period of a convulsive illness.

GYNAECOLOGICAL HISTORY:

Her menarche was at 15 years age. She menstruates for 5 - 7 days every 25-32 days. She has never had post-coital or intermenstrual bleeding. She has never used contraceptives.

PAST MEDICAL AND SURGICAL HISTRORY:

She was an unemployed, illiterate housewife. This was her second marriage. She was divorced after the death of the first four children. Her husband was an illiterate peasant. There was no history of diabetes, twins, hypertension or malignant diseases in the family.

PHYSICAL EXAMINATION:

She looked healthy but slightly obese. The mucous membranes were not pale. She had no oedema. She was afebrile. Her height was 149 cm. Her weight was 86 kg compared to 80 kg at first booking 14 weeks previously.

CARDIOVASCULAR SYSTEM:

The radial pulse was 82 per minute, normal volume and synchronous with the femoral.

The blood pressure was 150/100 millimetres mercury compared to 140/80 millimetres mercury at first Booking. The jugular venous pressure was not raised. Praecordial activity was normal. There was no cardiomegally. Heart sound were normal. There were no murmurs.

RESPIRATORY SYSTEM:

Nothing abnormal was detected.

ABDOMINAL EXAMINATION:

The abdomen was enlarged. There was a subumbilical median surgical scar. There was no tender area. The liver, spleen and kidnyes were not palpable. The fundus was 34 weeks versus dates 35 weeks. There was no uterine or scar tenderness. The lie was longitudinal, cephalic presentation. There were no contractions. The fetal heart was 148 per minute and regular.

DIAGNOSIS:

1. Grandmultiparity
2. Previous caesarian section with successive vaginal deliveries.
3. Mild hypertension? Essential
4. High Child mortality.

PLAN OF MANAGEMENT

1. Investigations, monitoring and treatment of hypertension.
2. Establish maturity.
3. Elective caesarian section and tubal sterilization at 38 weeks

INVESTIGATIONS:

1. The hemoglobin was 10.5 g per decilitre
2. The blood group was "O" Rh-D positive.
3. Urine was negative for glycosuria, protein, and pathogens.

4. The stool was negative for ova.
5. Serological test (VDRL) for syphilis was negative.
6. Blood urea was 15 mg percent.
7. Serum creatinine was 0.6 mg per cent.
8. Fasting blood sugar was 65 mg per cent.
9. Biparietal diameter was 9 centimetres equivalent to 35 weeks gestation.
10. The placenta was anterior. There was no praevia.

TREATMENT

She was encouraged to rest as much as she could. She was given phenobarbitone 60 mg twice a day.; and also routine antenatal drugs. She was advised to cut down on dietary salt. She made uneventiful progress for the following two weeks. She was scheduled for elective section at 38 weeks gestation on 1.11.82. During the waiting, she was instructed to ask relatives to donate blood, 1500 millilitres but there were none. The husband was unavailable to consent for tubal ligation. On 24.10.82, she experienced labour pains at 9. p.m., a week to elective delivery. She was admitted into the labour ward.

MONITORING

The blood pressure was measured four hourly. It fluctuated between 140-/80 and 150/100 of mercury. The fetal heart was similarly monitored, it was normal. Urine was examined daily for protein but it was negative. Weight was determined weekly. She gained an average of 480 grams in one week.

PHYSICAL EXAMINATION:

She was not pale, edematous or febrile. The pulse was 80 per minute, normal volume. The blood pressure was 150/100 millimetre mercury. The jugular venous pressure was not raised. The heart sounds were normal. Breath sounds were normal.

ABDOMINAL EXAMINATION: There was no organomegally or tender areas. The fundus was 36 weeks corresponding with estimated date. The lie was longtudinal, cephalic presentation; unengaged. Estimated fetal weight was 3000 g. There was no uterine or scar tenderness. Contractions were moderate, 2 every 20 minutes for 40 seconds. The fetal heart was 140 per minute and regular.

VAGINAL EXAMINATION:

The vulva and vagina were normal. The cervix was, half effaced and 4 cm dilated. The membranes, were intact. There was cord presentation. The presenting part was cephalic, above pelvic brim. The pelvis was adequate.

ADDITIONAL DIAGNOSES

1. Active phase of labour
2. Cord presentation.

MANAGEMENT

Emergency caesarian section and tubal sterilization.

PREOPERATIVE INVESTIGATIONS AND PREPARATION:

1. Urine was negative for proteinuria and glycosuria.
2. Blood, 1500 millilitre was crossmatched.
3. Routine preoperative preparation was done.
4. She consented for anaesthesia, operation and sterilization.
5. Anaesthesia was given routinely.

OPERATION: LOWER SEGMENT TRANSVERSE CAESARIAN SECTION AND POMEROYS' TUBAL STERILIZATION

After routine cleaning and draping, the abdomen was opened as described in the case of "placenta praevia".

FINDINGS:

There were no adhesions or varicase blood vessels in the lower segment. The uterus was very thin all over, alarmingly so in the lower segment. There was no obvious rupture.

WHAT WAS DONE:

A lower segment caesarian section was done as described for the case of placenta praevia on page..55.00.. except a transverse incision was made instead of a vertical one. A live male baby in right occipital posterior was delivered after rotating the fact anteriorly and nasopharyngeal suction done. Ergometrine 0.25 mg was given intravenously with delivery of the shoulders. Synctocinon 20 units in 500 millilitre dextrose were given by drip. The placenta and membranes were delivered completely after spontaneous separation. There were no abnormalities. The uterus was well contracted; was repaired and tubal ligation done as in the case of ruptured uterus. The ovaries were normal. The abdomen was closed routinely. The estimated blood loss was 450 millilitres. At the end of the operation, her general condition was good, she was not pale, the pulse was 86 per minute normal volume and the blood pressure was 110/80 millimetres of mercury.

POST OPERATIVE CARE AND PROGRESS:

1. Blood pressure, pulse and respiratory rate were monitored hourly for the first twelve hours and they were normal except the blood pressure which fluctuated between 110/80 and 150/100 millimetres of mercury.

2. She was transfused 1000 millilitres of blood.
3. Fluid intake was 3000 millilitres per day and the urinary output was 1200 millilitres for the first 24 hours.
4. Pethidine 100 mg was given intramuscularly every eight hours to relieve pain for the first 24 hours. She made good progress.

There was no postpartum hemorrhage. The hemoglobin on the fifth postoperative day was 11.8 g per decilitre.

The urine was negative for proteinuria and pathogens. The blood pressure 130/90 millimetres mercury rising up to 150/100 millimetres mercury. The wound healed by first intention and sufures were removed on the seventh post-operative day. She was discharged home on 2.11.82 with advice that he blood pressure should be checked weekly at the nearest dispensuary and she should return six weeks later. She revealed she was going back to Rufiji and would attend followup there.

COMMENTARY:

Although no parity is free of obstetric complications, (1) those attributable to grandmultiparity have often been numerous and serious (2). However, it is increasingly being revealed that, with good antenatal care and optimal obstetric management, the grandmultipara may not be more if not less risky than lesser parities (3, 4). Despite such a revealation, I do not consider it a desirable prospect. The incidence of grandmultiparity (para 8 and above) in Muhimbili was 8.9% and 92.4% of these were between parities eight and ten (3). This was twice the incidence in Columbia twenty four years previously (5).

This patient exemplifies a series of obstetric complications attributable to grandmultiparity. Thus she had had antepartum hemorrhage due to placenta praevia necessitating caesarian delivery, postpartum hemorrhage, abortions, preterm delivery, twins and currently; obesity, hypertension, and malposition with cord presentation. All these are associated with grandmultiparity (1, 2, 3).

Her parity, eighteen out of twenty conceptions was indeed extreme and so were the fourteen childhood deaths. This is testimony to the observation that people will not stop having babies until assured that those they have will survive to adult life (6). The high child mortality from preventable diseases was not only appalling but cost her a divorce which in turn probably sustained the desire to have living children in an attempt to cement the marriage bond.

Although she booked as late as 20 weeks of gestation, abscence of anaemia signifies satisfactory antenatal survaillance (3, 4). Her transfer from the peripheral hospital, on additional grounds of uncertainity of availability of facilities for dire emergencies was a correct decision and emphasizes the other logistic problems which are beyond the realm of the patient and practitioner. However, such a transfer at 34 weeks gestation through many miles of rough road, could have easily induced a premature labour and all the complications enroute, nullifying what the transfer was meant to avoid though seemingly inevitable.

It may seem intolerable that the woman was not sterilized in passing during the caesarian section for the eleventh delivery.

One can imagine how difficult it was to decide, for then, she had no live child and probably withheld consent for sterilization. At parity ten, maternal mortality rises five times the overall rate (2) and in quarter of the time, it is due to rupture uterus. It was very daring indeed to have tried such a scar above not only once, but six successive times. It was again exceptional that the scar withstood the trials given the high degree of grandmultiparity, for each subsequent delivery increasingly weakens it through stretching. Often such exceptions leave the woman very confident and may make her insuggestible and may consequently end in disaster. It is extremely dangerous to try such scars for, unlike in the lower parities where ruptured uterus is preceeded gradually by warning signs, it may rupture after very short labour and even under close supervision (2).

Contractions are usually very strong and coordinated while the uterus is compr^mi^osed by successive tear and wear (2). This is probably, if not certainly, the kind of patient one sterilizes in passing during caesarian section for good intentions regardless of consent.

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PREMATURE RUPTURE OF THE MEMBRANES CONSERVATIVE MANAGEMENT: AMNIOTOMY AND NORMAL DELIVERY

NAME: MRS N. M.

REG. NO. 9346/81

AGE: 37 YEARS

ADDRESS: KIGAMBONI, DAR ES SALAAM

ADMISSION DATE: 11.6.81

Delivery Date: 11.7.81

Discharge Date: 16.7.81

SUMMARY:

The patient, a gravida 9 para 8 with two consecutive perinatal deaths, one of which was a fresh still birth at term following abruptio placenta in the seventh pregnancy, and the other, a first week postnatal death born preterm, was admitted at 32 weeks of amenorrhoea with premature rupture of the membranes (PROM). She was managed conservatively and successfully until she delivered at 36 weeks of gestation. Apart from malaria pyrexia, antenatally, there was no morbid event. She refused puerperal sterilization despite grandmultiparity on grounds that it was the first live born baby in her second marriage.

PREVIOUS OBSTETRIC HISTORY:

She was gravida 9 para 8, 6 children were alive and well.

All deliveries were normal, spontaneous vaginal and at term except the last two of which the seventh was a fresh stillbirth at term following abruptio placenta, and the eighth, was a preterm delivery at 30 weeks which died in the first postnatal week. There was no PROM or febrile illness in the last delivery. Labour was painful and lasted twelve hours. She had had no hypertension or oedema in any of the previous pregnancies. The average child spacing was two years.

GYNAECOLOGICAL HISTORY:

Menarche was at 14 years of age. Menses were for 5 - 7 days every 28 - 35 days. She had never had intermenstrual bleeding or postcoital bleeding. Her last menstrual period was Mid November, 1980 and the expected delivery date was late August, 1981. She had had no bleeding since last menstrual period. She had used no contraceptives.

PAST MEDICAL AND SURGICAL HISTORY:

She had been admitted to hospital only for obstetric reasons. She had no history of sexually transmissible diseases, tuberculosis, renal disease or diabetes mellitus. She had had no surgical operations.

SOCIAL AND FAMILY HISTORY:

She was married for the second time. Her first husband died of unknown illness after fathering the first six children. Her second husband had another wife with four living children. She did not smoke or drink alcohol. There was no family history of twins, hypertension malignant disease or diabete mellitus.

CURRENT PREGNANCY.

She first booked on 18.3.81 with 20 weeks of amenorrhoea at Kigamboni clinic. She had been feeling fetal movements since four weeks previously. No abnormalities were found at that booking and the five subsequent visits. Before her sixth visit was due, she leaked spontaneously, vaginally what looked like liquor. There was no mucous, blood or labour pains. She felt fetal movements normally. She had no stress urinary incontinence. When she reported this to her peripheral clinic, she was referred to Muhimbili on 11.6.81 at 32 weeks gestation by dates.

PHYSICAL EXAMINATION ON ADMISSION:

She looked healthy but moderately obese. She had no oedema. She was afebrile. The mucous membranes were not pale. The breasts were normal. Her antenatal card showed that her height was 162 centimetres and her weight had increased by a weekly average of 0.4 kg from 75 kg at first booking to current 78.5 kg.

CARDIOVASCULAR SYSTEM:

The pulse was 84 per minute, regular, normal volume. Blood pressure was 140/90 millimetres mercury unchanged from first booking. Jugular venous pressure was not raised. There was no cardiomegally and heart sounds were normal.

RESPIRATORY SYSTEM:

Nothing abnormal was detected.

ABDOMINAL EXAMINATION:

The abdomen was distended. There were no surgical or scarification marks. There was no tender area superficially. There was no organomegally. The fundus was 32 weeks corresponding with dates, and cephalic presentation. There was no uterine tenderness or contractions. Liquor volume felt normal. Fetal heart was 150 per minute and regular.

VAGINAL EXAMINATION:

Vulva and vagina were normal. Clear liquor like fluid, oderless was coming out of the introitus in moderate amounts. A sterile speculum examination exposed a bluish, thick cervix with a closed os through which clear liquor was coming out. A swab was wetted as the fluid gushed out on fundal pressure and sent for culture. Another swab was taken from the posterior vaginal pool similarly for culture and microscopy.

DIAGNOSIS:

Premature rupture of the membranes (PROM) at 32 weeks. A note was made of her grandmultiparity, moderate obesity, mild hypertension and previous abruptio placenta and preterm delivery.

PLAN OF MANAGEMENT:

Since the baby was unrearable, the patient not infected or in labour, it was decided to institute conservative management with a strict watchful wait. She was encouraged to rest as much as possible.

INVESTIGATIONS:

1. The hemoglobin was 11.2 g per decilitre and the blood group was B Rh-D positive.
2. White cell count was 6,000 per mm^3 and the differential count of 70% neutrophils and 30% lymphocytes was normal.
3. Urine was negative for glycosuria, and pathogens but proteinuria was 1+.
4. Blood urea was 10 mg per decilitre and creatimine 06. mg per decilitre.
5. Cervical liquor swab culture grew no pathogens bu the posterior vaginal pool swab grew mixed commensal organisms. Microscopy revealed no trichomonas or candida.
6. Fasting blood sugar was 60 mg %.
7. VDRL was negative.

Investigations No. 3, 4 and 6 were repeated weekly and were negative.

MONITORING:

She was kept in the ward to facilitate monitoring and rest.

1. Temperature, maternal pulse,fetal heart rate were monitored four hourly every day and were normal.

2. The average weekly weight gain was 0.42 kg.

3. The uterus was palpated daily for tenderness but none was demonstrated.

Liquor leakage was very scantly two weeks after admission.

On 2.7.81 four weeks after admission, she had high fever with chils and vomiting but no cough or painful micturation. The temperature was 39°C. Mucous membranes were neither pale no jaundiced. Cardio-respiratory findings were normal.

ABDOMINAL EXAMINATION:

The fundus was 36 weeks, equivalent to dates, cephalic presentation and estimated fetal weight was 2800 g. There was no uterine tenderness but mild contractions. Fetal heart rate was 160 per minute and regular.

VAGINAL EXAMINATION:

There was scanty, clear, odourless liquor through introitus. The cervix was soft, mid position and 3 cm dilated. The pelvis was assessed and found adequate. There was no cord presentation, membranes were swept, the high head was pushed 'down the brim and amniotomy done revealing clear liquor. The blood slide was positive for malaria parasites 3+. Urine was negative for acetone and proteinuria. Injection chloroquine 200 mg was given intramuscularly, eight hourly for 24 hours then 300 mg base once daily orally for three days.

Labour progressed smoothly and she delivered vaginally a 3.2 kg male baby Apgar score 10 at 6.20 a.m. on 11.7.81

The third stage was managed actively, the placenta and membranes were complete, normal and weighed 600 g. Blood loss was 250 millilitres.

SUMMARY OF LABOUR

First stage	7 hours	30 minutes
Second stage	0	30 minutes
Third state	0	05 minutes
Total	8 hours	05 minutes

Post delivery blood pressure was 140/90 millimetres mercury and remained so for the next three days. She remained afebrile. Check hemoglobin was 9.8 g per decilitre. The baby suffered no febrile morbidity. They were discharged home on the fourth postnatal day after she refused puerperal sterilization on ground that this was the only live baby in this second marriage. Nevertheless, she was exhaustively enlightened on the possible risks of another pregnancy and was strongly advised on contraception. She did not return for followup.

COMMENTARY:

Spontaneous leakage of amniotic fluid prior to onset of labour lacks universal agreement regarding terminology and definition (1, 2, 3, 4, 5, 6, 7). However, premature rupture of the membranes (PROM) is the most widely used term. Variations obtain regarding gestational age and length of latent period before onset of labour. Some use PROM regardless of gestational age provided there is a latent period of one or more hours (1) others specify twelve or more hours (2, 3) before onset of labour. Beard (4) limit such usage to less than 38 weeks of gestation, whereas in Drife's (5) usage, PROM refers to 37 weeks or more and preterm rupture of the membranes thereafter, unless it occurs as a last event of the first stage of labour which is then normal. Hydrorrhoea gravidarum (7), largely obsolete, refers to leakage in early midtrimester due to failure of fusion of decidna capsularis and vera.

Comparative incidences of PROM are therefore not feasible but generally ranges between 6% and 12% (2 , 3). The importance of PROM lies in its largely unknown aetiology and therefore difficult prevention, its association with premature labour, prematurity, ascending infection, perinatal, maternal morbidity and mortality (1-5, 8-10).

Of the known predisposing factors to PROM (1,2,5,8) those applicable to this patient include age, grandmultiparity, previous premature labour, and possibly low social economic status and family instability. Beta hemolytic streptococcal infection, and trichomoniasis were excluded but viral infection could not be excluded. Other aetiologies which could not be excluded were trauma, localized membrane weakness, degenerations and ascorbic acid deficiency (2). There was no obvious factor associated with increased intra-abdominal or intra-amniotic pressure.

Diagnosis was easily made by visualizing liquor like fluid from the introitus in abscence of infection and stress urinary incontinence. Such visualization including the degree of cervical dilatation and effacement without interfering with the os is the main advantage of speculum examination over digital. The latter is obviously inconclusive regarding exact point from which liquor leaks and is associated with infection in 29.7% compared to 0% when a sterile speculum is used (2, 8 -10). Where nature of the leakage is uncertain, laboratory aid must be employed to ascertain alkaline p^H, aborization and ferning (which is sensitive depending on concetration of sodium and protein), lanugo hair and fetal squames by staining with Nile Blue sulphate (8 - 10). Sophisticated tests include detection of diamine oxidase activity even in as little as 10 microlitres of fluid(11).

The need to be sure of the diagnosis of PROM is necessitated by the highly controversial management (2-5, 8-10) when gestation is less than 34 weeks. Conservative management aims at minimising prematurity to avoid the inherent high perinatal mortality if less than 34 weeks gestation.(8,9). The aggressive approach to deliver within 12-24 hours of PROM regardless of gestation is meant to avoid infection with its associated fetal maternal morbidity and in fact corrected perinatal mortalities of 25% - 50% have been reported if PROM is longer than 24 hours (8, 9, 10). Such infection in the mother may later present as infertility (8). Moreover in gestations older than 34 weeks, 80-90% of those with PROM deliver within 24 hours (2) thus nullifying the aim of expectant therapy.

Conservative approach was chosen in this patient because the baby at 32 weeks is unrearable at Muhimbili. Despite being a grandemultipara, she had had two consecutive fetal loses and she needed a live baby with potential to survive in order to cement her second marriage bond which was seemingly so important that she even refused sterilization.

The conduct of management was such that chances of infection would be minimized or detected at the earliest i.e. serial liquor cultures, leucocyte counts, fetal tachycardia, body temperature and uterine tenderness. Where affluence and facilities permits, detection of increased concetration of serum C - reactive protein, decreased serum compliment activity (5) and amniotic fluid phosphate - zinc ratio greater than 200 (12) precedes infection by at least twelve hours. Prophylactic antibiotics were not used not only for fear of resistant strains but there was no locally established sensitivity pattern to guide on choice leave alone the fact that antibiotics do not protect the fetus although they may reduce maternal morbidity .

Elsewhere, antibiotics are given to high risk patients only i.e. carriers of B - hemolytic streptococci (5) and local vaginal antiseptics such as dilute iodine (13), acriflavine and nitrofurazone suppositories (2) have decreased morbidity if instituted within four hours of PROM.

There are conflicting reports that PROM per se, generates stress leading to elaboration of fetal adrenal steroids and consequent acceleration of lung maturity (5, 14). Pharmacologic acceleration of lung maturity was therefore not instituted, for the agents, ranging from prolactin to glucocorticoids (14), are rarely available locally and even then significant fetal maternal risks are associated with their use.

It is unfortunate that this patient withheld consent for sterilisation due to social cultural values despite health education on the high chance of cumulative obstetric and medical complications if she conceived again. She is a grandmultipara, obese, with hypertension, and in addition, her age, 37 years is prone to getting offspring with chromosomal abnormalities (15).

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SICKLE CELL ANAEMIA IN A PRIMIGRAVIDA

NORMAL DELIVERY

NAME: MISS H. H. DATE OF ADMISSION: 28.5.82

REG. NO. 26298 DELIVERY 12.10.82

AGE: 18 YEARS DISCHARGE DATE: 22.10.82

ADDRESS: TANDALE, DAR ES SALAAM

Summary:

An unmarried primigravida was referred from a peripheral clinic during her first booking because of severe anaemia and jaundice. Sickle cell anaemia and concurrent malaria infection were diagnosed - and treated with blood transfusion, folic acid and chloroquine respectively. She was delivered vaginally of a live baby without any complications in the antenatal, intrapartum and immediate postpartum periods. She was unable to decide on suggested sterilization and was lost to followup.

HISTORY OF PRESENT ILLNESS:

She first booked at Tandale clinic on 28.5.82 at 18 weeks of ammenorrhoea complaining of body weakness and yellow eyes. She was referred to Muhimbili on the same day. She narrated that she had high fever three days previously which partially responded to antimalarials. She had concurrent yellow eyes without upper abdominal pain or body itching. She had had recurrent yelow eyes since childhood and on occasions she had to be transfused with blood. The last transfusion was more than a year ago. She had no cough, chest pain loin pain, painful micturation or dental problems. Her motions were normal and stools were not pale. Her diet included a variety of maize meal, rice, beans fish and beef. She had not felt any fetal movements. She gave up regular antimalarias she had been using for a long time in the previous month because of itching.

POST OBSTETRIC HISTORY:

She was multiparous.

GYNAECOLOGICAL HISTORY:

Menarche was at 16 years of age. She has been menstruating for 3-5days every 30 days. She experienced premenstrual molimina. Her last menstrual period (LMP) was on 21.1.82 and the expected delivery date was on 28.10.82. She had never used contraceptives. She had no vaginal bleeding since LMP.

PAST MEDICAL AND SURGICAL HISTORY:

She had had recurrent attacks of malaria and jaundice since childhood and on four occasions she was admitted at Morogoro and treated as above. She had never contracted sexually transmitted disease, tuberculosis or had had any surgical operations.

SOCIAL AND FAMILY HISTORY:

She was unmarried staying with her uncle. She completed primary education two years previously and was currently taking tailoring course. Of her three sisters and two brothers, one of her brothers died of a similar illness aged 24 years. There was no family history of diabetes, twins or hypertension.

PHYSICAL EXAMINATION:

She was asthenic with frontal skull bossing. She was conscious with no fetor hepaticus or asterexis. Mucous membranes were very pale and the sclera was lemon yellow. There was no finger clubbing or koilonykia. There were no tender joints or swellings. There was no oedema or lymphadenopathy. Teeth and gums were healthy. Breasts were normal. The temperature was 38.9o centigrade. Her height was 148 cm and weight was 49 kg.

CARDIOVASCULAR SYSTEM:

Pulse was 90 per minute, regular and normal volume. Blood pressure was 100/60 mm mercury. Jugular venous pressure was not raised. There was no cardiomegally. The heart sounds were normal, no triple rythm.

RESPIRATORY SYSTEM:

The trachea was centrally placed. Respiratory movements were symmetrical. Breath sounds were normal.

ABDOMINAL EXAMINATION

The lower abdomen was distended with a prominent linea nigra. There was no superficial tenderness. There was no renal angle tenderness. There was just palpable non tender hepatosplenomegally. The fundus was 18 weeks equivalent to dates.

VAGINAL INSPECTION:

Vulva and vagina were normal. There was no abnormal discharge. The perineum was normal.

DIAGNOSIS:

? Sicke cell anaemia

? Malaria

Midtrimester pregnancy.

INVESTIGATIONS:

1. Blood slide showed malaria parasites 2+
2. Hemogram showed.
   a. Hemoglobin 5.6 g per decilitre.
   b. Red blood cell count 2 million per mm^3
   c. Leucocyte count was 5,000 with normal differential count of 68% neutrophils, 31% lympocytes and 1% eosinophils,.
   d. Hematocrit (PVC) was 16.8%
   e. Mean corpuscular volume (MCV) was 89
   f. Mean corpuscular hemoglobin concentration MCHC) was 29.3%
   g. Reticulocyte count was 14%
   h. Platelete count was 525,000 per microlitre.

i. Sickling test was POSTIVE and Hemoglobin electrophoresis showed HB SS.

j. Peripheral blood film showed sickled cells, occasional target cells and nucleated Red blood cells.

3. Stool was negative for ova

4. Urine was negative for pathogens, proteinuria and glycosuria. Urobilinogen was positive.

5. Hepatitis B antigen and antibody were negative.

6. Blood group was O Rh-D positive. Crossmatching of 1500 millilitres was done.

TREATMENT:

1. Chloroquine 600 mg base statim orally. Then 300 mg six hourly for 24 hours followed by 300 mg daily for three days.

2. Frusemide 40 mg intravenously and phernegan 25 mg intravenously for diuresis and antipruritic effect respectively.

3. Blood transfusion 1500 millilitres.

4. Folic acid 5 mg daily. This together with chloroquine 300 mg base prophylaxis weekly were given throughout pregnancy and puerperium.

PROGRESS:

The fever abated and the jaundice cleared after five days. Blood slide was negative for malaria parasites. Hemoglobin was 8.2g/decilitre and hematocrit was 28.6% two weeks post-transfusion. Urine was negative for pathogens and urobilinogen. She had just felt fetal movements at 20 weeks gestation. She was discharged home with instructions to continue chloroquine and folic acid as above and to attend antenatal clinic fortnightly. She was advised to avoid travelling to her home area in Morogoro which was of high altitude.

She attended antenatal clinic ten times as instructed without fail. During each fortnightly visit, the hemoglobin and urine were checked, the later for proteinuria and pathogens. The hemoglobin remained between 7 and 9 g per decilitre throughout. Weight gain was 350 g per week. On 12.1082, she had labour like pains and was admitted to the high risk labour ward. Incidentally, it was the very day she was scheduled for fetal pelvic assessment.

PHYSICAL EXAMINATION:

General condition was satisfactory. Mucous membranes were slightly pale without jaundice. She was afebrile. There was no oedema or musculo-skeletal pain. The pulse was 84 per minute, normal volume. Blood pressure was 100/70 millimetres mercury. Heart sounds were normal. The lung fields were clinically normal.

ABDOMINAL EXAMINATION:

The abdomen was distended. There was no superficial tenderness. The spleen and liver were not palpable. The fundus was 38 weeks corresponding with dates. Presentation was cephalic, and could be made to engage. Estimated fetal weight was 2700 g. There was no uterine tenderness. Contractions were occurring twice every ten minutes for half a minute. Fetal heart rate was 148 per minute, regular. The bladder was not full.

BIMANUAL EXAMINATION:

Vulva and vagina was stained with shimmy bloody discharge. The cervix was effaced, 3 cm dilated; membranes were intact and there was no cord presentation. The position of the presenting part was right occipital anterior, well applied to the cervix, with no caput or moulding. The pelvis was assessed adequate for the baby. Artificial rupture of the membranes was done revealing clear liquor and no cord prolapse.

CONDUCT AND PROGRESS OF LABOUR

1. Partogram could not be utilized as graphic paper was out of stock. Nevertheless, fetal heart rate and rythm, frequency, strength and duration of contractions and head descent were assessed half hourly and were normal. Cervical dilatation was determined four hourly which was satisfactory at one centimeter per hour.
2. Intravenous 5% dextrose, a total of three litres were run.
3. She was delivered vaginally without episeotomy except perineal support.
4. The third stage was managed actively as described before. The placenta and membranes were complete and weighed 700 g with few infarcts. Blood loss was 200 millilitres.

SUMMARY OF LABOUR:

First stage	13 hours	30 minutes
Second stage	-	50 minutes
Third stage	-	05 minutes
Total	14 hours	25 minutes

THE BABY:

Male, Apgar 10, weight 2800g. There were no external malformations.

POSTPARTUM PROGRESS:

She was kept in the ward for 10 days. Post delivery blood pressure was 120/70 millimetres mercury and remained so until discharge. There was no episode of fever, jaundice, bone, pain, loin pain or uterine tenderness. Urine was negative for pathogens. Hemoglobin was 7.8 g per decilitre. She was discharged home on 22.10.82 on folic acid 5 mg daily and chloroquine 300 mg weekly. She was advised that without a screened spouse for sickle cell disease, the chance of getting an effected baby could not be predicted.

It was suggested that she would be better off sterilized as effective contraceptives mainly the pill and intrauterine devices were unsuitable for her, the former because of increased chance of thromboembolism and the latter because of infection. She did not give a decision and she was lost to followup.

COMMENTARY:

Anaemia of pregnancy is the leading cause of admission, comprising 37.1% in Muhimbili (1). It is largely due to nutritional deficiency in view of increased demand and mainly, iron deficiency. The role of malaria infection is increasingly being evident (2,3). Sickle cell anaemia is uncommonly encountered with in pregnancy but the carrier state is about 12% for the whole country and in certain areas in Morogoro, it is as high as 40 - 60% (4). The disease is inherited as Mendelian recessive and most of those with homozygous disease succumb in early age (5) hence few encounters in reproductive age. This patient is presented to highlight the need to accurately diagnose anaemia in a place where it is so common that even when accompanied with jaundice, it may easily be attributed to superimposed malaria.

The diagnosis in this patient was a easily suspected from the typical history of recurrent jaundice of which a sibling died of. Laboratory screening, in this case, sodium metabisulphite, or any reducing agent including faeculent material containing E. Coli (5) can be done even in primary care centres. Reducing agents, hypoxia and acidosis induces polymerization of the terminal 6 amino acids (6) consequently aggregating the hemoglobin molecule into a gel rigid enough to distort the red cell shape into a sickle (6,7).

Electropharesis was only to confirm hamozygosity and to exclude other less severe varieties of the sickle cell disease such as Hb SC and Hb B Thalassaemia. The latter two are common in West Africa.

This patient had a relatively uneventiful antenatal, natal and postnatal course mainly because of vigilant surveilance and prevention of the many possible complication. The exception was during admission. The concurrence of malaria in a sickler, primigravida in early second trimester was a particularly bad combination. At such gestation and parity other things notwithstanding, the infection is unusually severe for as yet unknown reasons (3).

The rationale for such close monitoring was based on the known sickle cell anaemia obstetric and medical complications supplementing each other. Thus the severity of anaemia is compounded by increased demands of pregnancy, sickling and increased susceptibility to malaria. Urinary, pulmonary and bone infection particularly salmonella are also increased and so are viral infections. Fetal risks include abortions, 11-23%, prematurity 13-71%, intrauterine deaths account for nearly 2/3 of perinatal mortality and 16-49% of viable babies are small for dates because of decreased placenta circulation and overall fetal salvage rates range from 48% to 82% (6, 7, 8, 9).

Maternal risks include mortality 10 - 25% (7, 8) or 3.8 per 1000 pregnancies (6), increased pre-eclampsia, 31%, pelvic thrombosis and puerperal endometritis (6 - 9). Painfull crises may mask such catastrophies as ectopic pregnancy and abruptio placenta (8).

Iron prophylaxis was not given for tissues are usually overloaded with that from hemolysis. Prophylactic blood transfusion in the last 8 weeks of pregnancy unlike elsewhere is not our stand as long as the hemoglobin is 8 g per decilitre or above which is the steady state maintained by the bone marrow. Blood which is hard to get, is given when the hematocrit is less than 18 or during blood loss. Where it is given, results have remained controversial. Whereas simple or exchange transfusion decrease the proportion of HbSS by diluting and suppressing its synethesis by bone marrow(6,9) it does not invariably decrease maternal or perinatal mortality or low birth weight (9) and sometimes hepatitis and alloimmunization has occured (9). On the other hand, Risks (10) has reported improvement in maternal mortality with exchange transfusion.

This patient's obstetric future is uncertain. Her singular marital status makes genetic counselling which is essential, difficult even if it were available at Muhimbili. Moreover, she claimed she does not expect marriage because would be husbands abhore her chronic illness. She has only considered the possibility of sterilization which I and others (11) advocate given her shortened life span. Effective contraceptives such as the pill and intrauterine devices are unsuitable for her because of increased thromboembolism and infection respectively. Antenatal second trimester recombination DNA analysis to avoid an affected baby (9,11,12) will not be feasible in the near future here. The saying "For past sorrows, let us moderately lament them, for those to come, seek wisely to prevent them" cannot be better applied elsewhere than in this case.

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LONG OBSTETRICAL COMMENTARY:

" ADVANCED ABDOMINAL PREGNANCY IN MUHIMBILI MEDICAL CENTRE:

A PROSPECTIVE STUDY"

ABSTRACT

A prospective study was conducted on 16 patients with advanced abdominal pregnancy and results compared with those of 200 high risk intrauterine pregnancies over a 2 year period. The incidence of 1 in 3259 deliveries was double that of previous 5 years. All ages, parties and gravidities were susceptible and infertility prior to index pregnancy was a significant antecedent factor ($p < 0.001$).

The most consistent symptoms in early pregnancy were abdominal pain and vaginal bleeding. In late pregnancy they were acute or chronic abdominal pain and painful fetal movements where as difficulty in fetal palpation was the most significant sign. The sensitivity of clinical suspicion was 68%, utrasound 85% and X ray diagnosis 93%. Sepsis was the leading maternal complication but other formidable complications including the only fatality were associated with placenta left insitu. Perinatal mortality was 87.5%.

Abdominal pregnancy remains a diagnostic challenge and certain aspects of fetal mortality are ill-understood. It is suggested that the placenta be primarily removed except in the rarest trying cases. Pregnancy should be terminated on diagnosis. Primary and early secondary prevention are stressed.

INTRODUCTION:

Advanced abdominal pregnancy is a rare form of extrauterine pregnancy within the peritoneal cavity (,1,2,3,4,5,6,7). Albucasis in AD 936 was probably the first to describe it (1, 2, 3. 4) whereas Jacob Nufer is said to have performed the first operative delivery followed by survival of both mother and fetus in AD 1500 (4, 8). Since then, literature on the subject has generally been fascinating but pessimistic (9, 10). Maternal morbidity and mortality is significant while perinatal mortality is discouragingly high (1-6, 10-16) making the entity paradoxic since it is often said to follow periods of infertility(17). It seems there is no universal agreement on what gestational period constitutes advanced abdominocyesis (4, 13, 18, 19, 20) and how its incidence should be expressed (15,21,22). However, the main problem of such pregnancy lies in its diagnosis and management (4,6,12,14,23). Although the former is viewed as notoriously difficult (8,13,24), claims have been made that it can be made correctly without much difficulty provided it is initially suspected and thereby better results may be anticipated in treatment (17).

Whereas the pathogenesis, with few exceptions is secondary to tubal ectopic pregnancy (4,7,13,22), development to advanced stages reflects poor obstetric care (12,16). Recently, ectopic pregnancy has been reported to be increasing the world over (21, 25-29).

Within two months in 1981 three cases of advanced abdominal pregnancy were encountered with in Muhimbili Medical Centre (MMC).

In two of these, the diagnosis was incidental, and in the other, it was extremely challenging. Since the reported incidence of abdominal pregnancy varies from one per 402 to 15,000 deliveries (13,5) such an occurrence in a place where an average of 25,000 deliveries take place annually coupled with poor obstetric care as is true of most developing countries; it was felt that probably abdominocyesis was not so rare. Unfortunately, previous medical record keeping in MMC was discourangingly poor. Consequently, it was interesting to conduct a prospective study with the purpose of finding the incidence and describing the diagnosis and management of advanced abdominocyesis in MMC.

The specific objectives were to:-

1. Determine the hospital incidence and find out the age and previous obstetric history of the patients.
2. List the presenting clinical signs and symptoms.
3. Find out the limitations of diagnostic aids used.
4. Compare preoperative differential diagnosis with the postoperative.
5. Describe placental location and its subsequent management.
6. Find out maternal complications.
7. Find out fetal outcome.

METHODOLOGY:

All patients in the antenatal wards who were clinically suspected and those incidentally found to have abdominocyesis at operation between January, 1981 and December, 1982 were included in the study.

The general guidelines for clinical suspicion included the following symptoms and signs either singularly or their various combinations:-

A history suggestive of tubal accident in early pregnancy, involuntary infertility prior to index pregnancy, painful fetal movements, difficult as well as extremely easy fetal palpation, transverse lie, uterus separately palpated from the fetus and properly conducted failed oxytocin induction in fetal death.

Only extrauterine pregnancies within the peritoneal cavity were included. Given the obstetric bias of the study and lack of universal definition of advanced abdominocyesis (4,13,18-20), only gestations of 28 weeks or more since the last menstrual period were included.

All suspected patients were to be subjected to ultrasonographic and radiological investigations but due to circumstancial constraints which arose, some were subjected to either of the investigations and others to both.

Real Time - B scan Echography (Siemens, Multison 400, West Germany) was used by either of the two specialist obstetricians familiar with its use and Allibones diagnostic criteria (30) were used. Basic radiological investigations included an erect lateral, supine decubitus and anteroposterior abdominal X-rays. Where clinical suspicion was considered very strong and the fetus proved dead by ultrasound or fetal cardiotocography and the initial investigations above equivocal; special radiological investigations were done. All results were reported by one radiologist. Laparotomy was done singly or jointly by residents and consultant obstetricians.

Operative findings and extent of surgery were recorded in detail. In cases incidentally found at laparotomy, the author was informed and the surgeon interviewed in case of missing details. Relevant clinical information was obtained from the patient as soon as she was found fit to do so. For every patient delivered of abdominocyesis, the next ten-twelve patients delivered of intrauterine pregnancies in the high risk delivery centre were interviewed and basic obstetric data recorded. Results were analysed according to objectives and the Fischer Exact Test was used for statistical comparison where appropriate.

RESULTS:

A total of 16 patients were found to have advanced abdominal pregnancy at laparotomy. Of these, 11 were clinically and investigatively suspected and 5 were incidental findings. A total of 19 patients were initially clinically suspected and in 13 of these, the suspicion was also supported investigatively. These underwent laparotomy but two were found to be intrauterine. Those suspected but excluded by investigations were eventually delivered of intrauterine pregnancies.

INCIDENCE:

Total deliveries = 52,147 Incidence 1 in 3259 deliveries

Total ectopics = 212 Incidence 1 in 53 ectopics.

TABLE 1A: AGE AND OBSTETRIC HISTORY:

PATIENT S. NO.	AGE (YEARS)	OBSTETRIC HISTORY	INFERTILITY (YEARS)
1. M. K	35	Gra 4 Para 3	7
2. H. J.	29	Gra 5 Para 4	-
3. S. M.	16	Gra 1 Para o	-
4. A. N.	35	Gra 7 Para6	10
5. A. M.	25	Gra 2 Para 1	4
6. H. B.	20	Gra 1 Para 0	-
7. H. R.	28	Gra 2 Para 0, Abortion 1	10
8. H. S.	38	Gra 4 Para 1, Abortion, 2	15
9. E. R.	26	Gra 3 Para 2	-
10. Z. M.	34	Gra 3 Para 1, Ectopic, tubal 1	12
11. M. H.	20	Gra 1 Para o	-
12. A. M.	22	Gra 2 Para 1	-
13. A. S.	27	Gra 4 Para 2, Abortion 1	-
14. C. N	23	Gra 1 Para 0	-
15. A. A.	29	Gra 4 Para 3	-
16. C. J	39	Gra 10 Para 9	4

TABLE 1B: SUMMARY OF OBSTETRIC DATA OF 16 ABDOMINAL PREGNANCIES AND 200 HIGH RISK INTRAUTERINE PREGNANCIES

	ABDOMINAL PREGNANCIES	INTRAUTERINE PREGNANCIES	FISCHER EXACT TEST
Primigravidae	25%	24%	-
Grandmultipara(Parity 8)	6.2%	9%	-
Mean age	27.9(16-39)	26.6%(14-40)	-
Modal age group	25-29	25-29	-
Mean gravidity	3.1(1-10)	4(9-12)	-
Mean parity	2 (0-10)	2.7(0-11)	-
Previous abortions	18.8%	18%	-
* Stillbirths	50%	9%	$p < 0.001$
Infertility prior to index pregnancy	50%(4-15)	1%(3-4)	$9 < 0.001$
Perinatal mortality	87.5%	23%	
Martenal mortality	6.4%	0%	

* Index pregnancy only.

Figures in brackets indicate range. Incidence of infertility was significantly higher in abdominal than intrauterine pregnancies. Neither of the primigravidae in the two groups had infertility. Infertility here means failure to conceive despite regular exposure to the risk of pregnancy for not less than two years. Maternal and fetal risks were gravest in abdominocyesis.

TABLE 2: CLINICAL PRESENTING SYMPTOMS AND SIGNS IN 16 ABDOMINAL PREGNANCIES

EARLY PREGNANCY (LESS THAN 20 WEEKS			
SYMPTOMS	NUMBER	SIGNS	NUMBER
Amenorrhoea	16	Abdominal tenderness	2
Abdominal pain	7(10%)	Abdominal mass	
Vaginal bleeding	4(2%)		
Nausea and vomitting	3	Cervical excitational tenderness	2
Painful defaecation	2		
Fainting	1		
Purulent vaginal disc discharge	1		
LATE PREGNANCY:			
Amenorrhoea	16	Difficult fetal palpation	1
Abdominal pain	13 (2%)	Abnormal lie	7
Painful fetal movements	7(0)	Abdominal mass	7
Loss of fetal movements	6(6%)	Uterus separately palpated	5
Vaginal bleeding	5 (3%)		
Spurious labour	5 (0%)	Displaced cervix	5
Nausea and vommitting	3 (0%)	Easily palpable fetal parts	4
General malaise	3	Abdominal tenderness	4
Weight loss	3	Inpalpable round ligaments	3
Leakage of liquor before labour	1 (8%)	Abnormal cul de sac	2
		Dilated cervix	1

N.B: % refer to high risk intrauterine pregnancies. For clarity, only those symptoms whose incidence was significantly different ($p < 0.05$ / < 0.001) between the two groups were indicated as such. Comparison between incidences of signs were not made since control group was interviewed after delivery. Only two patients were admitted in early pregnancy. Most patients had multiple symptoms & signs.

TABLE 3A: CLINICAL SCREENING, DIAGNOSTIC AIDS AND THEIR LIMITATIONS

I CLINICAL SUSPICION

	LAPAROTOMY +	LAPAROTOMY −	
+	11	8	Sensitivity 68.8%
−	5	−	Specificity ?

Although only 19 cases were intially suspected, the 5 incidental cases were included as false negatives.

II CLINICAL SUSPICION AND ULTRASOUND

	+	−	
+	5	1	Sensitivity 83.3%
−	1	6	Specificity 87.7%

Only 13 of the 19 suspected patients were screened by ultrasound; the others could o not because it was out of order. The false negative case was No. 7 who leaked liquor and the false positive was one of the two intrauterine pregnancies.

III CLINICAL SUSPICION A AND X-RAY

	+	−	
+	10	2	Sensitivity 90.9%
−	1	6	Specificity 75%

The false negative was patient No. 13 who had acute poly-hydramnios. The two false positives were both intrauterine pregnancies. In one of the latter, clinical suspicion by three obstetricians was very strong, fetal movements had subjectively ceased and fetal heart sounds were not heard with fetoscope.

Ultrasound and fetal cardiotocography were out of order. Since X-Ray findings were only suggestive, she was subjected to hysterography (HSG), cystrography and abdominal aortography. HSG failed due to leakage of dye through the patulous cervix, cystrography was suggestive and aortography was nearly conclusive. It showed unilateral ovarian artery hypertrophy with small undisplaced uterine arteries. (Fig 2). But much to our disappointment, the fetus was intrauterine and alive at laparotomy.

IV: ULTRASOUND AND X-RAY:

A total of twelve patients had both ultrasound and X-ray examinations Five of these were true positives and six, true negatives by both method One patient was false positive (one of the intrauterine pregnancies whom did not have special radiological investigations) by both methods. One false negative at ultrasound (No. 7) was true positive at X-ray. The one false negative at X-ray (No. 13) was not screened by ultrasound. The agreement between the two methods was therefore absolute in true negatives.

TABLE 3B: FREQUENCY OF X-RAY AND ECHOGRAPHIC DIAGNOSTIC SIGNS IN TRUE POSITIVES

X-RAY N=10	NO	ECHOGRAPHY N=5	NO
High Transverse lie	3	Fetus separate from uterus	3
Fetal overlapp of maternal spine	2	** Absent uterine wall between fetus and bladder	- 1
Initimate application of fetal parts to maternal abdominal wall	1		
* Maternal intestinal gas overlapp in two planes	1	All above	1
* Lack of uterine outline	1		
* More than one above	2		

* These signs were demonstrated in the two false positives
** This sign was demonstrated in false positive.
No chorionic plate was demonstrated outside the uterus.

TABLE 4: COMPARISON OF PREOPERATIVE AND POSTOPERATIVE DIAGNOSES

S. NO.	PREOPERATIVE DIFFERENTIALS	CLINICAL SUSPICION	POSTOPERATIVE DIAGNOSIS
1.	Polyhydramnios, Twins, Transverse lie	0	Singleton abdominal
2.	Twins	0	Heterotopic (abdominal intrauterine.
3.	Polyhydramnios, Twins Abdominal pregnancy	+	Singleton abdominal
4.	IUD with ovarian cyst, Appendencitis, intestinal Obstruction, AFD	+	Singleton AFD
5.	Abruptio placenta, IUD, Appendencitis, Intestinal Obstruction, AFD	+	Singleton AFD
6.	Threatened abortion, Perforated appendincitis, Peritonists, Typhoid	0	AFD, Ileal-sigmoid perforation fecal peritonitis, normal appendix & Adnexae.
7.	Threatened abortion, Fibroid with pseudocyesis, lateral horn pregnancy IUFGR, PROM, Abdominal pregnancy.	+	Singleton abdominal, Multiple fibroids.
8.	Fibroid, ovarian cyst. pseudocyesis, Abdominal pregnancy.	+	Singleton abdominal, Fibroid.
9.	Transverse lie, impending ruptured uterus.	0	Singleton abdominal
10.	Fibroid with pregnancy, dermoid cyst, Abdominal pregnancy	+	Mummified, AFD
11.	Abdominal pregnancy	+	Singleton abdominal
12.	Intrauterine pregnancy with twisted ovarian cyst, abdominal pregnancy.	+	Singleton abdominal
13.	Acute polyhydramnios, Abdominal pregnancy.	+	Singleton abdominal
14.	Pregnancy in bicornuate uterus, Abdominal preg.	+	Singleton abdominal
15.	Pregnancy with twisted ruptured ovarian cyst	0	Heterotopic . AFD & live intrauterine.
16.	CLL, Hepatosplenomegally, Abdominal pregnancy.	+	Abdominal pregnancy, hepatosplenomegally.

IUD = Intrauterine death
AFD = Abdominal fetal death
PROM = Premature rupture of membranes.
IUFRG = Intrauterine fetal growth retardation.
CLL = Chronic Lymphatic Leukemia.

Pregnancy with ovarian cyst, (5 patients) multiple pregnancy and polyhydrammios were the most frequent differential diagnoses. Patient No 2 had multiple pregnancy as suspected but heterotopic. She delivered the intrauterine fetus normally and the abdominal one was discovered when laparotomy was done for the supposedly retained second twin. Patient 16, was undergoing radiotherapy for huge hepatosplenomegally due to chronic lymphatic leukemia. She had had oligomenorrhoea with spells of amenorrhoea following previous chlorambucil therapy. Of the 11 patients suspected to have pregnancy coexisting with pathological conditions the latter were confirmed in only four cases i.e. 6,7,8 and 16. All cases in which abdominocyesis was an incidental finding presented as acute obstetric and/or surgical emergencies.

TABLE 5: PLACENTAL ATTACHMENT AND MANAGEMENT

S. NO.	LOCATION	SURGERY	DRAINAGE	BLOOD LOSS (ML.)
1.	RAD, POD Posterolateral pelvic wall	CR, RSO	+	1000
2.	RAD, Rectosigmoid Small intestine	Cord ligation Placenta Insitu	-	500
3.	RAD, POD	CR, RSO	-	1200
4.	Resorbed completely	Removal fetus	-	400
5.	Abdominal wall Omentum, LAD	CR, LSO Partial omentectomy	+	1200
6.	Ileo-caecal, Sigmoid, Uterine funds	CR, Ileo-caecal & Sigmoid repair of perforation, Appendecectomy Transverse colostomy	+	1500
7.	RAD, Omentum Posterior uterus	CR, RSO	-	1800
8.	Uterine Fundus LAD, Sigmoid	PR, SAH, LSO	+	2000

S. No.	LOCATION	SURGERY	DRAINAGE	BLOOD LOSS (ML)
9.	RAD, Small intestine Rectosigmoid	Cord ligation Placenta insitu	-	500
10.	Resorbed	Removal of mummified fetus	-	500
11.	LAD, Omentum	CR, LSO	+	1000
12.	RAD, Omentum	CR, RSO	+	800
13.	Intestines, RAD	Cord ligation Placenta insitu	-	1000
14.	Omentum, LAD	CR, Partial Omentectomy LSO	-	600
15.	Left broad Ligament LAD	CR, LSO	+	500
16.	Right broad ligament Posterior uterine wall.	CR, Internal & R-Ovarian artery Ligation, TL	-	500

RAD = Right adnexa, LAD= Left adnexa, POD, Pouch of Douglas,
CR = Complete removal, PR=Partial removal
RSO, LSO = Right and Left salpingoopherectomy, SAH=Sub total abdominal hysterectomy.

Placental attachment and extent was variable. Of the 14 cases in whom the placenta was insitu at operation, 12 were attached to the adnexae in addition to other structures. Of the adnexal attachments, 7 were on the right and 5 on the left side. In case number 4 and 10 i.e. mummified fetuses, the placenta had resorbed completely. In case 6, the placental attachment had perforated terminal ileum (2 x 2 cm) just before ileo-caecal junction and another perforation, 4 x 2 cm, was evident on the distal sigmoid colon. Despite the fecal peritonitis, the adnexae and appendix were grossly normal, but the latter was removed in passing. All placentae were primarily removed except cases 2,9, and 13 where, although the main blood supply was identified as from the adnexal (ovarian) vessels, there was extensive attachment to bowel.

In case 8, the placenta was inadventently partially separated and subtotal hysterectomy had to be done to control the bleeding. Blood loss ranged from 400 millilitres to 2000 millilitres. The average blood loss in cases where the placenta was primarily removed was 1126 millilires.compared to 667 millilires in cases where the placenta was left insitu.

A drain was necessary in 7 cases all due to the oozing after removal of the placenta except in the one case of fecal peritonitis.

TABLE 5: MATERNAL COMPLICATIONS AND OUTCOME

S. NO.	PLACENTA REMOVED DRAINAGE + OR -	COMPLICATIONS	POST OPERATIVE HOSPITALIZATION (DAYS)	MATERNAL OUTCOME
1.	+	-	10	Alive & well
3.	-	-	8	" "
4.	Spontaneous	-	8	" "
5.	+	Anaemia Sepsis	20	" "
6.	+	Ileo-caecal & Sgmoid perforation, Klebsiela & bacteroides sepsis	90	Alive chronic abdominal pain
7.	-	Anaemia	13	" "
8.	+	Anaemia, sepsis	23	Alive & well
10.	Resorbed		8	" "
11.	+	Anaemia, septic shock	21	Alive
12.	+	-	7	"
14.	-	-	10	"
15.	+	Anaemia	8	"
16.	-	Anaemia	10	"
	PLACENTA INSITU DRAINAGE + or -			
2.	-	Intestinal obstruction Cachexia, unresorbed placenta	57	Alive, Abdominal pain
8.	-	Febrile morbidity vomitting, abdominal mass	30	Alive
12.	-	Unresorbed placenta Abdominal fistula, septicaemia, cachexia Anaemia	65	Died

The leading post operative complication was sepsis 7 patients in all despite prophylaxis with penicillin and metronidazole.

Post-operative hospitalization was shortest in cases where the placenta was removed, averaging 11.3 days(excluding colostomy case number 6,90 days) and longest where it was left insitu; an average of 51 days.

In addition, post-operative course for the latter group was very stormy and the only maternal death occurred in this group. The placenta failed to resorb, she developed an abdominal fistula, septicaemia and intractable anaemia and cachexia. A record 13 units of blood were given but in no way was relaparotomy feasible. In case 2 relaparotomy to remove the placenta was done because of intestinal obstruction on 50th post operative day. The placenta had degenerated, and completely walled off from the peritoneum but was adherent to large bowel. Although the operation was relatively easy, she developed paralytic ileus, urinary tract infection wound sepsis, malnutrition and burst abdomen. All these required a further 53 days totalling a record 110 days of hospitalization.

TABLE 7: PETAL OUTCOME

S. NO.	SEX	CONDITION AT BIRTH	APGAR SCORE	MEMBRANES	WEIGHT (GRAMS)	DEFORMITIES	SUBSEQUENT PROGRESS
1.	F	Alive	10	Intact	3100(41)	-	Alive at 2 years
2.	M	FSB	0	Ruptured	2800(38)	-	-
3.	F	Alive	8	Ruptured	2990(36)	-	Died after 30 hours
4.	M	Mummified	0	Resorbed	1300(44)	?	-
5.	M	MSB	0	Ruptured	1600(32)	-	-
6.	?	MSB,infected	0	Ruptured	700(28)	?	-
7.	F	Alive	2	Ruptured	2500(40)	Asymmetrical head & face Neck tumor Talipes	Died after 30 minutes.
8.	M	Alive	6	Intact	2730(38)	Facial asymmetary	Died after one week
9.	F	Alive	8	Intact	2430(36)	-	Discharged alive lost to followup
10.	F	Mummified	-	-	500(43)	-	-
11.	F	Alive	6	Intact	1800(38)	Idented head	Perinatal death.
12.	F	Alive	2	Intact	750(30	-	Died after 5 minutes.
13.	M	Alive	4	Intact	2000(36)	-	Died after 4 hours
14.	M	FSB	0	Intact	800(28)	-	-
15.	M	FSB	0	Ruptured	650(28)	NIL	-
16.	M	MSB	0	Ruptured	1200(29)		-

M = Male, F = Female, FSB = Fresh Still Birth

MSB = Macerated stillbirth. Numbers in brackets denote gestational period in weeks from last menstrual period.

Fetal outcome was poor. HAlf were still born end only two survived the perinatal period. No baby survived the first 48 hours if membranes were found ruptured at laparotomy. Only three babies had obvious deformities.

DISCUSSION:

The incidence of advanced abdominocyesis was I per 3259 deliveries or 1 per 53 ectopic pregnancies. Comparisons are difficult to make since the definition of the antity varies from report to report (4, 13, 15, 18 - 22). The terms abdominal and extrauterine pregnancy have been loosely applied in the literature (9) and various gestations ranging from 12 to 28 weeks have been regarded as d advanced pregnancy (4, 13, 18 -20). Since the incidence of abdominocyesis is related more to ectopic pregnancy than to deliveries (15, 21, 22) and since ectopics have increased significantly in the last decade (21, 25 - 29) it is important on expressing such incidence to mention the time frame. Most literature on the subject spans 10 - 30 years making this two year study a more "point" incidence. Total incidence of abdominal pregnancy has doubled in the last 5 years compared to previous 23 years (27). Nevertheless earlier reports in this country, though non-specific in definition and gestation, showed incidences of 1 per 6517 deliveries or 29 ectopics(31, 32). The present incidence is therefore twice as much but similar to that of 1 per 4000 deliveries in East Africa (33) and 1 per 3,372 deliveries in one United States hospital (12). In the Third World, the incidence was as high as 1 in 402 deliveries in South Africa (13) and as low as 1 in 102,000 deliveries in Saudi Arabia (16). The root cause has been suggested to be pelvic inflammatory disease treated with antibiotics(13, 22) but a secondary factor is poor obstetric care (12,16) such that these ectopics reach advanced stages undetected.

AGE AND OBSTETRIC HISTORY:

All ages, gravidities and parities were susceptible to abdominal pregnancy.

The similarity between the study and control groups in mean age, modal age group, mean gravidity, parity and abortion rate suggest that neither of the above is related to occurrence of abdominal pregnancy. This was also the case in Rahman's series (16) except that fetal wastage leading to low parity was common in cases with abdominal pregnancies. High incidence of abdominocyesis has been reported in patients with low gravidity (12, 34, 35) but there was no control group. The average age of primigravidae was comparable in both groups, 19.7 and 18.7 years. This contrasts sharply to 28.1 years and 19 years for abdominal and intrauterine pregnancies respectively in another series (22). Infertility prior to index pregnancy was significantly higher ($p < 0.001$) in abdominal than intrauterine pregnancies 50% and 2% respectively. However, unlike in Rahman's series (22), neither of the primigravidae had infertility. Similarly, in one large serie (12) only one of the 13 primigravidae had infertility. The average duration of secondary infertility, 7.8 years, being over 10 years in more than half the patients was indeed long and conforms to other reports (6, 12, 13, 20). Although the abortion rate was similar between the two groups, it is worthnoting that in the abdominocyesis patients, all the abortions except one, were subsequantly followed by long periods of infertility. Possibly there was post abortal sepsis with resultant tubal damage which is one of the commonest causes of secondary infertility in Africa (36).

CLINICAL SYMPTOMS AND SIGNS:

Clinical presentation is so variable that no set of symptoms are absolutely diagnostic. Failure to interpret correctly the symptoms and signs in early pregnancy constitutes the greatest pitfall in diagnosis (17) for the course nearly parallels - that of simple ruptured ectopic pregnancy.

In this series, 50% and 25% had abdominal pain and vaginal bleeding respectively in early pregnancy compared to 10% and 2% in intrauterine cases (p 0.005 /0.001). In other series (15 - 17) the incidence of the two symptoms had been almost 100%. That only two patients were admitted in early pregnancy suggest unawareness of the implications of such symptoms which in turn, is a reflection of poor obstetric care. Never the less, even in these two, the diagnosis was missed.

Acute or recurrent abdominal pain and painful fetal movements were the most consistent significant symptoms of abdominocyesis i.e. 81% and 50% versus 2% and 0% for intrauterine pregnancies. They may be attributable to the abnormal location of the fetus disturbing adjacent structures. Others included vaginal bleeding, unexplained nausea and vomitting and spurious labour. The latter which occured in 31% is ill-understood (6,20) but perculiar to extrauterine pregnancy particularly near term and is charcterized by severe abdominal pain, decidual expulsion giving bloody discharge, agonal fetal movements and almost invariably fetal death (6). Leakage of liquor as in case No 7 is an extremely rare (24) presentation and further taxes ones diagnostic acumen as presented at length in short commentary no.1... and is diagramatically depicted in figure..1...

Palpation may vary from extremely difficult to extremely easy (3-6, 13, 15, 16, 20). In this series, the leading clinical sign was difficulty in palpation of fetal parts, 56%, followed by abnormal lie mainly transverse and abdominal mass separate from the uterus. The latter is considered diagnostic but the uterus is seldomly recognized as such (8).

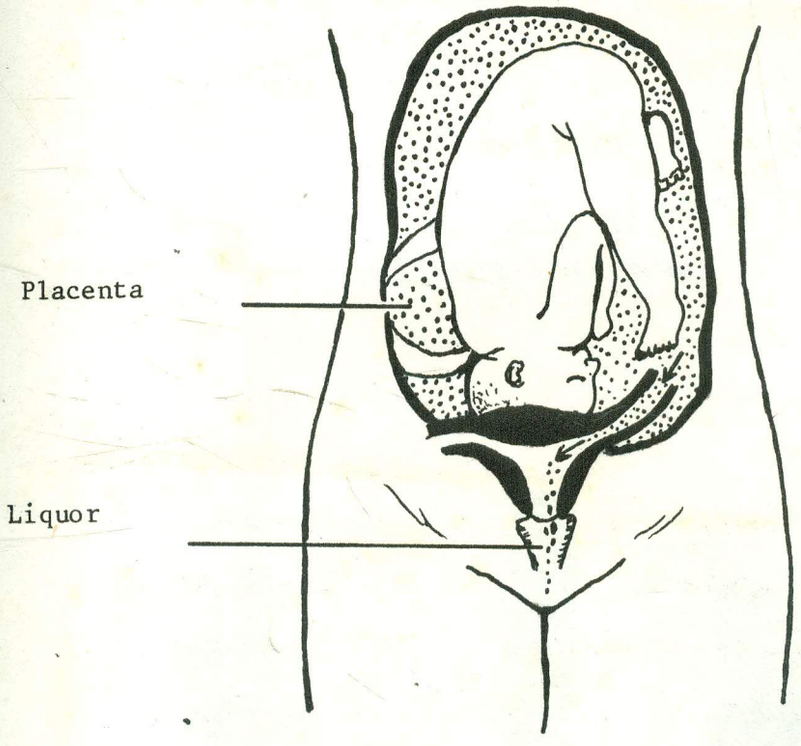


FIG I: DIAGRAMMATIC EXPLANATION
OF LEAKAGE OF LIQUOR



FIG: 2A



FIG: 2B

Abdominal aortography showing unilateral (left) ovarian artery hypertrophy and small undisplaced uterine arteries.



FIG: 3

Fetal parts overlapping maternal spine

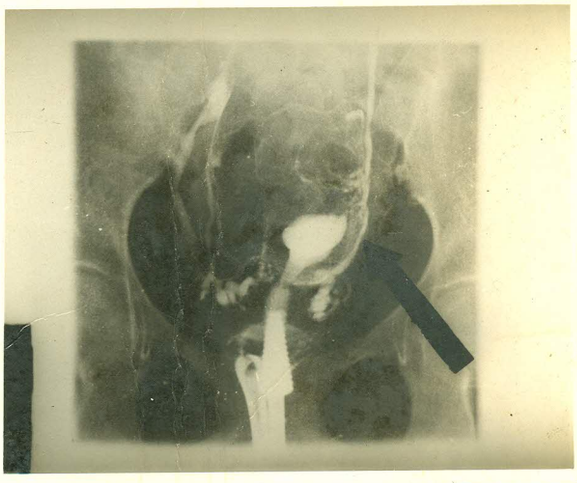


FIG: 4

Venous intravasation during hysterosalpingograp

Obesity and palyhydramnios may incidentally contribute to difficult palpation (12) but it is usually due to the fetus lying behind distended intestines leave alone tenderness. Easy palpation may falsely be so in multipara with lax abdomen and is considered too subjective to be reliable (8, 20).

DIAGNOSTIC AIDS AND THEIR LIMITATIONS:

The cornerstone in the diagnosis of abdominal pregnancy is a high index of suspicion (4, 13, 17). Its sensitivity in this series was nearly 70%. It has been said that once the diagnosis becomes suspect, proving its presence is rarely difficult (17) but the multitude of diagnostic aids (37 - 40) which have been developed attest to existence of dagnostic limitations.

Ultrasound is increasingly playing a major role in the diagnosis of extrauterine pregnancy and the diagnostic features have been described by several authors (30, 41-44). The criteria for such diagnosis in this study were those reviewed by Allibone (30), mainly demonstration of fetus separate from uterus, absent uterine wall between fetus and bladder, close approximation of fetus to maternal abdominal wall and localization of the placenta outside the confines of the uterine cavity. The sensitivity of ultrasound in this series was 83.3% and the specificity was 85.7% . Interpretation of diagnostic signs may be difficult (8, 14.43) as it was in two cases in this series resulting into false negative and positive. Misdiagnosis may be due to inadequate demonstration of pelvic anatomy (43), probably an effect of overlying bowel gas. Ironically, a very bizzare sonogram may be a valuable suggestion of abdominocyesis (14).

In this series, and another (15), the placenta was never localised. Although much depends on the skill of the sonographer and quality of the machine, (26), lack of an intact chorionic plate in abdominocyesis and multiple areas of implantation amongst adhesions makes (14,43) and made placental identification difficult in this series. It is thus a disadvantage since such localisation forecasts operative difficulties.

Radiology is very useful and many signs have been described (45,46). In this series, it had the highest sensitivity, 90.9%, and a specificity of 75%. Of the signs, few are indicative, fewer are conclusive, some are suggestive and others are either doubtiful or misleading. Bizarre lie, including high transverse occured in 5/10 (50%) and has been reported upto 75% (13,45). Although suggestive, it is unreliable particularly the assertion that if the back is inferior, it is nearly diagnostic (13,45). The back was superior in all the 5 cases and so was it in other recent series (13, 16, 45). Absent uterine shadow around fetus is helpful but is too subjective and good quality films are essential (8,13,45). It may be impossible to assess in hydramnios (45) due to similar radiopacity and consequently, case no 13 was diagnosed false negative. Further difficulties arise when there is inflammatory or edematous thickening of the membranes (14,45,46). Fetal overlapp of maternal spine (Figure 3) in a true erect lateral was once thought pathognomonic (47,48) but is probably only indicative (45) and has been reported even in intrauterine pregnancy particularly sacculated uterus (12,13,45). Moreover, it is uncommon, it occurred in 2/10(20%) in this series and in 8% in another. of 34 patients (45). In this study, a supine decubitus view was taken in the belief that overlapp may be a false negative in erect lateral where the abdomen was pendulous or lax (49) but no discrepancies were noted.

Maternal gas overlapp in two planes was demonstrable in 1/10 but the uncertainity whether one is dealing with the same bowel gas collection in frontal and lateral views makes its assessment difficult and misleading (45) . Indeed, this together with absent uterine outline were the misleading signs in the intrauterine case which had special radiological investigations. Gas anterior to the fetus is considered more valuable (14,45,46). HSG is pathognomonic (45,46). Apart from leakage of dye as was the case in the only patient in this series, other technical difficulties are attributable to uterocervical displacement.

Cystography was misleading even under fuluoroscopy. There was no interspace between fetus and bladder. Aortography is considered conclusive (45,46) and in addition, provides dynamic and marphological information about uteroplacental circulation. It was however, false positive in the only case in this study, ( )
Diagnostic signs are based on state of placental circulation, calibre and course of uterine arteries and "uterogram" in late phase. In our case (figure 2), there was apparent enlargement of the left ovarian artery, the right was not visualized, and the uterines were small and undisplaced. Probably aortic blood was not sufficiently diluted as injection pressure was not instrumentally controlled (49).

PREOPERATIVE AND POST OPERATIVE DIAGNOSES:

Abdominal pregnancy simulates a variety of conditions including acute obstetric and abdominal catastrophies such as impending ruptured uterus (case 9), abruptio placenta (case 5), and peritonitis (case 6). Such presentation overwhelms one's patience resulting in hasty emergency management as it was in all the 5 unsuspected cases.

Although a definitive preoperative diagnosis does not solve all the problems of management, it provides time to make adequate preparation particularly as regards ascertaining availability of ample amounts of compatible blood. Coexisting rarities (24) such as abdominocyesis with leakage of liquor vaginally in case 7 was hard to envisage and delayed the diagnosis by 90 days. The differentiation of advanced heterotopic pregnancy from intrauterine is difficult and is usually a diagnosis by surprise as in case 2. The condition is rare and its advanced state even rarer (30) although there are reports of viable heterotopic pregnancies (11, 12, 50, 51, 52) and even twin intraabdominal pregnancies (53,54). Case 16 who had [redacted] CLL and previous drug induced oligamenorrhoea-amenorrhoea overlapping with that of pregnancy reminds of the need to exclude pregnancy in women of childbearing age whatever the circumstances.

MANAGEMENT, COMPLICATIONS AND OUTCOME

The questions constantly asked are when to operate and what should be done to the placenta. Some await fetal viability if gestation is 20 weeks (20) or between 28-34 weeks (9,12,35,55) arguing that dangers are not significantly greater at 30 weeks than 20 weeks (20) and that the treatment of the placenta at early gestation is not easier than at term but only the bleeding surface is less (12). There are reports of successful delays as such, without additional morbidity to the mother (9,12,35,38,55,56). However, they were either single cases or very small series. On the other hand, recent large series suggest that maternal risks are significant and perinatal mortality is too high to justify any delay for the sake of the baby (6,10,17). The rare exception is when the baby is extremely desirable the patient has given informed consent and facilities for monitoring and operative intervention optimal all the time.

In this series, pregnancy was terminated as soon as the diagnosis was made. Decision was easily made since 8/16 were term, 2/16 mummified one had extensively been irradiated and the other five were both acute obstetric and surgical emergencies.

The management of the placenta has remained the "noued du probleme" (20). All placentae except three, were removed in this series and the average blood loss of 1126 millilitres, although twice that in unremoved placenta is comparable to that associated with caesarian section (63). However, exsanguinating hemorrhage at such removal has been reported (12, 15, 23) and is the main deterrent. Other complications include injury to bowel necessitating resection (5, 6, 20) and ureteral injury if sac is adherent to lateral pelvic wall. In the three cases where the placenta was irremovable and left insitu, the cord was ligated close to it although it has been suggested that such ligation is not only unnecessary but antecedes formation of fetal vascular cysts in retained placentae (15, 22). In the above cases there was considerable oozing from the unligated cord. The other option in the management of the placenta involves use of methotrexate but it was not employed in this series. Advocates of such use maintain that by promptly destructing trophoblastic tissue placental vascularity decreases and so is the risk of hemorrhage from separation (57,58,59). However, these were single case reports and recent series of 5 patients strongly recommend that its use be limited or condemned altogether (16). Such destruction accumulates necrotic tissue thereby providing a favourable medium for colonic bacterial growth (16).

Although placental removal is the most dangerous part of the operation, it permits smooth recovery. Thus the average duration of hospitalization of 11.3 days in those with removed placenta contrasts sharply to 51 days in those with placenta insitu.

The incidence of morbidity was not only 100% in the latter group but included such formidable complications as intestinal obstruction, septicaemia, ileus, abdominal fistulas, cachexia and burst abdomen. The same has been reported in one of the latest series (16). In this study, the only fatality occured where the placenta was left insitu. This was also true in two other large series (16,60). In other series where death occured in both groups, (11, 12, 55, 61) mortality was 2-3 times higher if the placenta was left insitu than when removed. The overall case fatality rate was 1/16 (6.3%) and is comparable to that reported in current literature (14,15,16,17) although it is very high compared to the overall maternal mortality rate of 0.19% at MMC during the same period.

Whether the placenta was removed or not, sepsis remained the major complication (43.8%) despite prophylactic antibiotics and this was also true in Barnett's series (17). However, post-operative sepsi at MMC is generally high, upto 50% of all caesarian sections.

Although it cannot be dogmatically stated, the placenta should be removed primarily except in the most trying cases. Generally, the determinants of placental management are its topography, blood supply and complications present at the time(60). Placental removal in one series of 101 cases, reduced incidence of complications from 72.4% to 18.5%, relaparotomy rate from 40% to 9.2% and readmission rate from 24% to 0%. There is therefore need to be aggressive in placental management.

Fetal outcome was discouragingly poor. Perinatal mortality of 87.5% was four times that of the other high risk group at the centre and twenty two times higher than the overall perinatal mortality at MMC. Perinatal mortality rates of 40 - 100% have been reported in the literature (1-6,10-17). THis, together with the high maternal mortality rate make abdominocyesis one of the gravest obstetrical complication to both the baby and mother. It has been observed that othe other factors notwithstanding, babies invariably died if membranes were found ruptured at laparotomy and that they died of respiratory distress (12,16). In this series 7 babies were born alive and of such gestation that they were potentially rearable under MMC conditions. In two of these, membranes were ruptured and in five, they were intact. However, all the two in the "ruptured group" and 3/5 in the intact group died within 48 hours of birth. No impressions can thus be made. Although much is known about fetal interrelationship with amniotic fluid (62), no explanation is evident of such observations and whether there is a causal relationship at all.

This study shows that:-

1. The incidence of advanced abdominocyesis has doubled compared to five years previously.
2. All ages, gravidities and parities are susceptible.
3. Long periods of infertility prior to index pregnancy is a significant historic antecedent factor.
4. Presentation is extremely variable but abdominal pain and vaginal bleeding in early pregnancy together with recurrent abdominal pain, painful fetal movements and difficulty in fetal palpation are significantly very useful symptoms and signs in diagnosis.

5. Diagnosis is made in third trimester mainly near term, a reflection of poor obstetric care.
6. Proving the diagnosis after clinical suspicion is not without setbacks. X-ray seems to be more sensitive but less specific than ultrasound.
7. Presentation mimicking acute obstetrical-surgical conditions may be so overwhelming that the possibility of abdominocyesis may be overlooked.
8. Sepsis is the leading maternal complication. Placenta left insitu is associated with formidable complications and a high case fatality rate.
9. Fetal survival is practically insignificant and certain aspects of its mortality remain obscure.

CONCLUSION AND RECOMMENDATIONS:

The incidence of advanced abdominal pregnancy is increasing. The Diagnosis remains problematic despite diagnostic aids. Successful diagnosis depends on a high index of suspicion, elaborate history taking, careful physical examination, avoidance of pitfalls in diagnostic techniques and meticulous interpretation of sonographic and radiological signs. Septic maternal orbidity is significant and mortality was confined to unremoved placentae. Prophylatic antibiotics should be used liberally and the placenta should be removed primarily unless all odds are against such removal. Fetal survival is practically insignificant and termination of pregnancy should be undertaken statin on making the diagnosis. Primary prevention should be targeted at eradicating or controlling predisposing factors for ectopic pregnancy. Secondary prevention should be aimed at early pregnancy and effected by correct interpretation of warning symptoms and timely surgical intervention.

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