OBSTETRIC AND GYNAECOLOGIC CASES

AND COMMENTARIES

FOR THE

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BY

DONALD G. MAWALLA, MD (UD)

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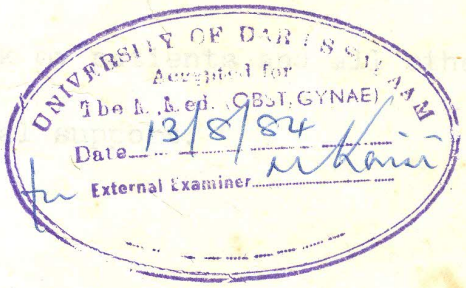
FACULTY OF MEDICINE

This is to certify that the cases presented in this book were managed personally by Dr. D.G. Mawalla, under my direct or delegated supervision.

DR. M. KAISI, M.B. Ch.B(EA); M.Med(UD)
HEAD, DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY



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INTRODUCTION

ORGANIZATION OF OBSTETRIC AND GYNAECOLOGICAL SERVICES IN DAR ES SALAAM

Muhimbili Medical Centre is one of the three referral Hospitals which provide specialist medical services in Tanzania. Apart from the role of providing the medical services, Muhimbili is the largest medical teaching centre. Among the courses offered are: Undergraduate and Postgraduate Doctors, Pharmacy, Dentistry, Paramedical studies and all levels of nursing courses.

OBSTETRIC SERVICES

Muhimbili marternity unit caters for the cold and emergencies requiring specialist care from the peripheral dispensaries, hospitals and private marternity houses. In the recent past the number of antenatal attendants has increased probably due motivation efforts by health education programme which is nation wide.

Antenatal Services:

1. Outpatient

Antenatal services are offered in the peripheral dispensaries and hospitals, where is is mainly done by midwives. The main aim at these clinic is to indentify the risk factor in pregnancy and deal with them or refer the patients to the District hospitals or Muhimbili Hospital where deemed necessary. There is a list of risk

factor which helps the midwives during the antenatal clinics. At Muhimbili the "At-risk-clinic" is being run by specialists, Residents and Consultants. It caters for Grade I and II in addition to the referred at"risk" pregnant women.

At booking, the patients history and initial examination findings are recorded in MPCUI Form (copy attached). Urine is tested for glycosuria and albuminuria and blood is taken for serology (VDRL) tests for syphilis. Blood group and Rhesus factor as well as the haemoglobin level is determined. Weight and heights are also taken, the later is of particular significance to us because it has been shown that women below 145 cm. height tend to have cephalopelvic - disproportion. In the specialist clinics more detailed examinations and investigations are done.

Antenatal clinic attendance is done once monthly up to 32 week of gestation, thereafter once a fortnight until 36 week of gestation, then weekly until delivery. The mother may be advised to attend more frequently when necessary. In each visit, oedema, anaemia, blood pressure, and weight are checked. Also clinical examination specifically furdal height, foctal lie, prescutation and foctal heart rate. Urine is also tested for albumin, and sugar.

The tetanus toxoid doses are given to mothers at 28, 32 and 36 week gestations.

For those patient with treatable conditions like anaemia and syphilis, are sent back to continued at their peripheral clinic where they are cuved. Supplementary drugs given from the time of booking throughout pregnancy to 4 weeks postnatally are: Ferrous

sulphate tablets 200 mg. twice daily; Folic Acid tablets 5 mg. daily; and prophylactic antimalarials chloroquine sulphate 300 mg. once weekly.

Inpatient

There are two Antenatal wards each with about 70 beds at the Muhimbili Maternity Block. Normally these wards have more patients (100 average) than the beds.

The main causes for antenatal admissions are :

i) Anaemia: Contribute about 50% of all admissions

ii) False labour

iii) EPH-Gestosis and other hypertensive disoders of pregnancy; Constitutes about 25% of antenatal admissions.

iv) Others: including antepartum haemorrhage, malpresentations, multiple pregnancies and urinary tract infections.

Intrapartum Care:

All normal (Uncomplicated) deliveries are conducted at the Ocean Road maternity hospital which is run by midwives and two interning doctors. There is an efficient embalance services between that hospital and Muhimbili Unit where all problems are referred to when they occur. The average of deliveries for the whole Department of Obstetric and Gynaecology of Muhimbili is around 26,000 per year. About 50% of these take place at Ocean Road Hospital, while the rest is made at Muhimbili Maternity Unit. Average deliveries at the Ocean Road Hospital is 50 - 60 per day, while at Muhimbili is 20 - 30 per day.

When a patient is admitted in the labour suite, history is taken, urine tested for albumin, sugar and acetone. The blood pressure, temperature, evidence of oedema and anaemia are also checked. The abdomen is palpated and the foetal heart sounds ascultated. A vaginal examination when indicated is performed as detailed later is this introduction. Enema is administered depend on the stage of labour. The patient is kept in first stage room for observation unless she is in advanced stage of labour. Her progress is charted on the partogram (Modified form by Philliport). Analgesia is used routinely, by giving, Pethidine hydrochloride or Pethilorphan in dose of 50 mg. to 100 mg. intramuscularly or morphia 10 - 15 mg - whichever is found to give satisfactory affect. There are only three obstetric beds in the second stage room so that most of the deliveries take place in the first stage room reserving three beds for complicated deliveries like breeches, multiple pregnancies, instrumental deliveries with vaccum or forceps, and for repair of perineal lacerations and episiotomies. Most deliveries are conducted by midwives while abnormal deliveries like the above mentioned are conducted by doctors.

The labour ward team is made up of: doctors (interns, or Residents) of whom there is at least one of each in the labout ward throughout 24 hours of the day, but more often the intern doctor is on call for 12 hours. Also there is one specialist or consultant on call each day who can be called-in in case of

emergencies. There is always a well set tray on a trolley which contain the rescusitation kit for the newborn. The third stage of labour is managed actively and ergometrine given at the end of the second stage, and the placenta with the membranes delivered by Brandt-Andrews method.

Postnatal Care:

(i) Inpatient

For the normal deliveries taking place at Muhimbili Maternity Unit are transferred to Ocean Road Hospital after few hours to reduce congestion. There, they are discharged home after 24 hours.

At Muhimbili there are two postnatal wards for the clean cases and the other for septic cases. There is also an intensive care ward with 9 beds, for the very sick patients. This is usually occupied by severe pre-eclampsia and eclamptic patients, as well as the shocked patients. There is a neonatal ward for premature and sick babies or for those, whose mothers are very sick or unable to take care of them.

(ii) Outpatient

There is a once weekly combined Post-natal and Family Planning Clinic. Only mothers who had abnormal labour or puerperium or those with other specific indications are given appointment to attend this clinic. While the mothers are seen by the Obstetricians, the babies are seen by the Paediatricians at the same time.

GYNAECOLOGICAL SERVICES

Gynaecological patients are referred to Muhimbili Gynaecological Clinic from the nearby dispensaries, health centres and hospitals and also from other regions in the Central, Southern and Eastern part of the country. Those who require hospitalization for operation or otherwise are admitted to the ward straight away or by appointment. Emergency cases are admitted to the ward through the casualty. Patients with gynaecological malignancies needing radiotherapy are referred to this hospital from all over the country since we have the only radiotherapy unit in the country.

There is a once weekly infertility clinic.

There are two gynaecological wards with a total of 70 beds but there are usually over 120 patients in the wards everyday. The main gynaecological problems are abortions, ectopic pregnancies, pelvic sepsis, uterine filbroids, urinary fistulae, and cervical cancer. Evacuation of uterus for incomplete abortions is usually done in the minor theatre by the ward, under sedation except for septic cases which are done in major theatre under general anaesthesia.

Cytological screening for cancer of carvix is not done as a routine procedure; it is only done in suspected cases or on request.

SPECIAL PROCEDURES

In the cases presented the following procedures were performed as explained below; they will not be explained again in individual cases, but reference will be made to "Special Procedures" where necessary.

1. Urine testing for Glycosuria

Clinistix reagent strips were used. It is a quick test and specific for Glucose. The impregnated part is dipped into freshly passed urine in a clean container. It is then observed for one minute, and the presence of glucose will be indicated by colour change into blue. The test does not indicate the amount of glucose.

This is an enzyme test, the slip being impregnated with glucose Oxidase, peroxidase and orthotolidine. In the presence of Glucose Oxidase glucose is converted into gluconic acid and hydrogen peroxide. In the presence of peroxidase, hydrogen peroxide converts orthotolidine to the blue oxidized form, hence the blue colour.

2. Urine testing for Proteinuria:

This is done by using albustix reagent strips. The test area of the reagent strip is made of cellulose impregnated with Tetrabromophenol buffered to an acid pH. In the presence of protein the yellow test area turns green.

The area is dipped into fresh uncentrifuged urine in an clean container. After removing excess urine on the edge of the container, the colour change is compared to the scale on the

bottle containing the strips. The amount of protein in the urine is expressed in mg of protein per 100 mls of urine. It is a quick test hence suitable for handling the many antenatal patients.

The amount of Protein in urine is expressed as follows:

Trace = 5 - 20mg/100 mls: 1 + = 30 mg/100 mls:

2+ = 100mg/100 mls: 3+ = 300mg/100 mls:

4+ = 100mg/100 mls:

3. Method for Vaginal Examination in labour:

The hands are thoroughly serubbed for 5 minutes in running water using sterile boiled brush and soap. A sterile disposable glove is put on the right hand. With the help of an assistant the patient is put in dorsal position. A sterile swab soaked in savlon solution 1:20 is picked by the right hand and handed to the left hand. The right side of the labia is swabbed once antero-posteriorly. Another swab is picked and the same procedure repeated for the left labia. The labia are then separated using the left hand and the vaginal introitus is then swabbed once antero-posteriorly using another swab. While still separating the labia, the index and the middle fingers of the right had are dipped into Chlorihexidine cream and the two fingers gently introduced into the vagina.

4. The Method for Urethral Catheterization:

Scrubbing of hands is done as described for vaginal examination. Sterile gloves are worn on both hands. With the patient in the dorsal position, the labia are cleaned as described above but after separating the labia, the urethral meatus is swabbed instead of the vaginal introitus. A sterile catheter held with sterile gauze is dipped into chlorhexidine cream and gently introduced into the urethra. Slight pressure is applied suprepubically to ensure complete emptying. The colour and amount are noted.

5. Routine Procedure used in repair of Episiotomy:

In all cases that required episiotomy the J shaped or curved posterolateral episiotomy is used. To ensure asepsis the hands are scrubbed, sterile gloves worn and sterile instruments and suture used. In Breech deliveries and in other cases where episiotomy is anticipated, the perineum is first infiltrated with 1% lignocaine. As soon as the presenting part distends the perineum two fingers are inserted into the vagina to prevent injury to the fetus, and the episiotomy performed using Mayo's Scissors. Big bleeding vessels are ligated immediately using catgut No.2/0. Repair is done in layers. The vaginal mucosa is first repaired with continuous chromic catgut No.0 starting from the apex of the incision. The deeper tissues including

the perineal muscles are approximated with interrupted catgut sutures No. 00 chromicised. The perineal skin is repaired with interrupted chromic catgut sutures No.1.

6. Routine pre-operative procedures for abdominal surgery:

The fitness of the patient for operation and general anaesthesia is checked system by system. The patient is explained in detail about the operation. She is then asked to sign a conset form for general anaesthesia in the evening. The patient is given light diet on the day prior to operation and an enema is administered on the night prior to operation, after which she is not allowed to take anything by mouth. The abdominal and perineal skin is scrubbed with soap and water and shaved, urine is checked for glyosuria; blood pressure, pulse and temperature are checked and recorded. Injection atropine 0.6 mg I.M. is given half an hour before proceeding to theatre, as a pre-medication.

7. Routine procedure for sterilizing abdominal skin and draping the abdomen for Laporatomy:

The surgeon was scrubbed and dressed ready for operation. Then standing at a distance from the operating table to avoid contact, two swabs on swab-holders, soaked in savlon solution 1:20 were used in turn. The whole of the abdominal skin from the breasts to the mons pubis and laterally to the flanks was cleaned starting from the middle working laterally. The anterior aspect of the thighs was also cleaned. The same procedure was repeated with swabs of savlon in 70% alcohol

solution. The patient was covered with sterile towels only exposing the operation area. The towel covering the mons pubis and the thighs was mounted on McIntosh. The sterile towels were kept in place using clips.

8. Routine procedure used in opening the abdomen:

A midline subumbilical incision was made longitudinally reaching just above the symphisis pubis. It was deepened through the subcutaneous fat layer till the rectus sheath was exposed. The bleeding points were ligated with plain catgut No.2/0. The rectus sheath was incised longitudinally with curved Scissors (Mayo's) and the medial edge of the rectus muscle exposed. It was then separated from the adjascent tissues exposing the extraperitoneal fat and the peritoneum. The peritoneum was picked near the upper end of the wound and incised between two Spencer-Wells forceps taking care not to injure any viscera such as bowel underneath. This incision was extended downwards taking care not to reach the bladder. Any bleeding vessels were clamped and ligated.

9. Routine procedure used in closure of the abdomen:

In each case haemostasis was ascertained, abdominal cavity mopped dry and swabs and instrument count confirmed correct before starting to close the abdomen. The upper and lower ends of the peritoneal incision were picked with artery forceps.

The peritoneum was closed using continuous chromic catgut sutures No.0, everting the edges. The rectus sheath was closed with continuous chromic catgut No.2, and when the patient was obese, the subcutaneous fat layer was approximated with interrupted plain catgut No.0. The skin was closed with interrupted silk sutures No.0.

A round body needle was used for the peritoneum, a trocher needle for the rectus sheath, and a cutting needle for the skin.

ANTE NATAL

M.F.C.W.1 (Revised 1957)

Classification M.F.M. 27 or 28 (If in use) _____ Registeerd No. _____

Mother's Name _____ Tribe _____ Age _____

Husband's Name _____ Occupation _____

Address _____ Religion _____

No. of Previous Pregnancies:

Results. 1 _____ 5 _____

2 _____ 6 _____

3 _____ Over 6 _____

4 _____

PRESENT PREGNANCY

Last Menstrual Period _____ Expected Date _____ Date of 1st Exam. _____ Examined by _____

Height of Fundus _____ Foetal Heart _____ Position _____ B.P. _____ Oedema _____

Breasts _____

Teeth _____

Heart _____

Lungs _____

Abdomen _____

Urine _____

Blood Hb. Serology

Date _____ W.R. _____

Kahn _____

Group _____

Rh. _____

Vaginal Exam _____ Date _____

Remarks _____ Examined by _____

Date	Oedema	B.P.	Fundus	Wt.	F.H.	Position	Urine	Remarks Treatment	Seen by

CEPHALO - PELVIC DISPROPORTION.

CAESAREAN SECTION.

NAME: Mrs. M.S.H.

AGE: 20 Years.

REG.NO.: 16212.

DELIVERY NO.: 9876/M/82

ADDRESS: Temeke, Dar es Salaam

PRIMIGRAVIDA

LAST MENSTRUAL PERIOD: 10th June, 1981.

EXPECTED DATE OF DELIVERY: 17th June, 1982.

DATE OF ADMISSION: 16th June, 1982.

DATE OF DELIVERY: 16th June, 1982.

DATE OF DISCHARGE: 24th June, 1982.

SUMMARY:

This was a 20 year old primigravida who had booked at a peripheral antenatal Clinic at the gestation of 24 weeks. She made four subsequent visits to the clinic. Cephalo-pelvic disproportion was diagnosed in labour, and consequently Caesarean section was performed. A 3.5kg. female baby was delivered with an Apgar score of 10. The post-operative period was uneventiful. The mother and her baby were discharged in good condition.

Reason for Admission:

This patient was referred from Temeke, a peripheral maternity unit, because of a poor progress of labour. She had been in labour for eight hours prior admission to our labour ward. She had had spontaneous rupture of membranes at Temeke maternity unit. There was no history of vaginal bleeding associated with labour pain. Her micturation and bowel opening were normal.

Present Obstetric History:

Her last menstrual period was 10th September, 1981. The expected date of delivery was 17th June, 1982. From her antenatal card records; she was booked at Temeke, a peripheral antenata clinic at the gestation of 24 weeks. At her first visit she was found to be in good general condition. She was 146 cm. tall and her weight was 53kgs. The blood pressure was 100/60mm Mercury. She had no oedema of the ankles, and her fundal height was 24/40. Her estimated haemoglobin level was 12.0gm. per decilitre, and her urine was negative for albumin and sugar. There was no bacterial growth from her mid-stream urine specimen; and the stool was negative for parasites. Her blood group was 'B' Rh-Dpositive, and the VDRL test was negative.

Thereafter, she made four more visits. During her antenatal period the blood pressure was between 100/60 and 110/70mm. mercury and she had neither ankle oedema nor albuminuria. There was no history of vaginal bleeding or dishcarge, or dysuria. She was given tetanus toxoid at 28, 32 and 36 weeks respectively. She also received the routine prophylaxis drugs (chloroquine, ferrous sulphate and folic acid). Her last haemoglobin level was 11.5gm/decilitre.

Gynaecological History:

Her menarche was at 13 years of age. Her cycles was 4 days every 28 days, regular and of normal flow. She had not suffered from any gynaecological illness. She had not been on any contraception.

Past Medical History:

There was no history of serious illness in the past.

Family History:

There was no history of epilepsy, hypertension, diabetes mellitus or twins in her family. She denied history of tuberculosis contact.

PHYSICAL EXAMINATION AT ADMISSION.

General Condition:

Her height was 146cm. She was of good nutritional status. She was afebrile and clinically not pale. There was mild (+) ankle oedema.

Cardiovascular System:

The pulse rate was 78/minute, regular and normal volume. The blood pressure was 110/70 mm. Mercury. The heart sounds I and II were normal. There was no murmur.

Respiratory System:

There was no abnormality detected.

Musculo-Skeletal System:

There was no clinically detectable abnormality of the limbs, pelvis or spine. The body musculature was normal.

ABDOMEN:

The abdomen was uniformly distended. The liver and spleen were not palpable. The renal angles were not tnder. The fundal height was 36 weeks, and the fetal lie was longitudinal with a cephalic presentation. The head was engaged. The foetus was estimated to be 3.5kgs. The foetal heart rate was 142/minute, regular. There was no area of tenderness over the uterus. The uterine contractions were strong, lasting up to 40 seconds each time, and were occuring at a frequency of 3-4 contractions per 10 minutes.

Pelvic Examination:

This was performed under asceptic conditions as detailed in introduction.

The vulva and vaginal mucosa were normal. The cervix was fully effaced and was 7cm. dilated. The membrane were ruptured and the presentation vetex in a left occipital-anterior position. The head descent was 3/5 with the cervix not well applied on it. The head had a caput formation (++) and woulding (+++)

The sacral promontory was easily reached at 10.5cm; and the sacral curve was normal. The ischial spines were not prominent. The sub-pubic angle was narrow (admitted 2 fingers with difficult). The intertuberrous diameter was 6.5 (admitted 3½ knuckles of a clenched fist). The liquor was not meconium stained nor foul smelling.

Conclusion:

Cephalo-pelvic disproportion, and caesarean section indicated.

PREPARATION:

Three units (1.5 litres) of blood were crossmatched. The haemoglobin level was 11.3gm/decilitre. Urine tests for albumin sugar and acetone were negative. The abdomen and perineum was shaved and the consent for operation obtained. A drip of 5° per cent dextrose was set up.

Operation: Emergency Caesarean Section

Before anaesthesia was given, a Foley's catheter No.14 was placed into the bladder under asceptic conditions. It was left in-situ to draining continously.

Premedication:

She was given 100 per cent Oxygen by a mask (denitrogenation) and then Atropine sulphate 0.6mg. was give intravenously.

Anaesthesia:

She was induced with Thiopentone sodium 250mg. and relaxed with 40mg. of suxamethonium Bromide, both were given intravenously. She was then immediately intubated and inflation of the cuff was perfo-rmed. Few breaths of 100 per cent Oxygen were given at first, before she was maintained on Nitrous Oxide 50% with Oxygen 50%, until the delivery of the foetus.

Small doses of suxamethonium Broride was given intravenously whenever it was necessary to maintain muscular relaxation in the patient. After delivery of the baby, she was maintained on nitrous oxide, oxygen and ether. The Anaesthetist also gave 0.25mg. of ergometrine meleate intravenously just as the head of the foetus was delivered.

Procedure:

The abdomen was cleaned with Hibitane solution and flavine-in spirit respectivelly, and drapped with sterile towels.

A sub-umbilical median incision was made. and the abdomen opened as detailed in introduction. A Doyen retractor was applied on the inferior end of the abdominal incision to expose the lower segment of the uterus. Then two wet laparotomy packs were placed each to either side of the uterus; to keep the bowel away from the operation site and also to absorb any fluid spilled during the operation. The lower uterine segment was identfied, then the loose utero-vesical peritoneum over it was picked-up with a dissecting forceps, and a small transverse incision made on it in the midline. Thie incision was extended laterally to near the round liagments. Thereafter, with a gauze on a sponge-holding forceps, the lower peritoneal flap together with the bladder were pushed downwards behind the symphysis pubis. The bladder was kept down and away from the lower segement

by the Doyen retractor. Then with a knife, a 2cm. transverse incision was made on the exposed lower uterine segment. Through this, two fingers of the left hand were inserted between the fetal head and uterus, thus enabling safe extension of the incision to the right with a pair of scissors. The same was done on the opposite side of the incision. The Doyen retractor was removed. The fetal head disengaged and directed out through the uterine incision by operator's left hand. The baby cried immediately as the pharynx and nostrils were being aspirated. The body of the foetus was delivered, and the blood in the cord "milked" to the baby before it was doubly clamped and devided. Green Armytage clamps were applied on the cut edges of the uterus. And the placenta and its membranes were completely removed by a "Controlled cord-traction". The uterus had contracted well.

The uterine incision was repaired in two layers. The first layer was made by a continous sturue begining at the lateral end, taking the whole depth of the uterine wall excepting the decidua. In this layer a No.'O' chronic catgut stitch was used, and long sutures were left at the ends of the incision and held by small artery forceps.

The second layer was sutured continously with the same type of stitch, and in a manner that, the first suture line was obliterated by the latter. Then the vesical-peritoneum was closed with a continous catgut suture. No.2/O. Haemostasis was ensured, all free blood and blood clots were removed and in turn the packs were gently with-drawn from the sides of the uterus. The uterine appandages were inspected and were normal.

After ascertaining that the gauze-count was correct, the closure of the abdomen was begun. The peritoneum was sutured by a continous stitch of No.'O' chromicized catgut, whereas the rectus sheath was

closed with a continuous chromicized catgut No.1 sutures. Then the superficial fascia and the fat layer was apposed by a number of interrupted sutures with a fine catgut (2/0). To the skin of a number of matress sutures were applied, using a No.1 silk stitch. Then the wound was cleaned, dried, covered with sterile gauzes, and straped. The uterus was gently pressed downwards on the fundus, to expel blood clots. The vagina was then mopped-dry with gauzes on a sponge-holding forceps. And there was no macroscopic haematuria of the catheter urine. The blood loss was estimated to be 500mls. During the operation she had received 0.5 litres of blood transfusion. The placenta weighed 0.45kg.

The Baby:

She weighed 3.5kg; Apgar score was 10 at 1 minute and at 5 minutes. The cord was tied with a sterile cord. She had no obvious congenital malformation.

Post-Operative Care:

1. Intravenous infusion: 1 litre of Normal saline and 1.5 litres of 5 per cent Dextrose per 24 hours.
2. Pethidine 100mg. intramascularly 6 hourly for 24 hours.
3. Ampicillin 500mg. intramuscularly 6 hourly for 24 hours, then oral ampicillin 500mg. three times a day for 4 days.
4. Blood transfusion 0.5 litre.
5. Check and record: the blood pressure, pulse rate, urinary output, input 4 hourly.

First 24 hours Post-Operative:

Her general condition was good. She was afebrile ($37^{o}C$) and not pale. The pulse rate was 78/minute, regular and of normal volume. Her blood pressure was 110/70mm. Mercury. The chest was clear. The abdomen was not distended, soft, and the uterus was well contracted. Bowel sounds were scanty. The urinary output was satisfactory and

the catheter was removed. The intravenous infusion was also discontinued. She was started on oral sips of water and ambulation.

The Second to the Eighth Post-Operative Day:

She was in good general condition. She was afebrile, and both the pulse rate and blood pressure remained normal. The chest was. clear The abdomen was soft and not tender. There was no vaginal bleeding or foul-smelling vaginal discharge. Micturation and bowel opening were normal. Her haemoglobin level on the fourth post-pperative day was 12.3gm per decilitre. The wound had healed well and all the stitches on theskin were removed on the seventh day.

The baby was well, and feeding on the breast milk. She was vaccinated with BCG. On the eighth post-operative day, the mother and the baby were discharged. She was given an appointment to come to the postnatal clinic after 6 weeks.

Postanatal Visit:

She had no complaints. Both her and the child were in good condition. She was afebrile and not pale. The blood pressure was 100/60mm. mercury. The abdomen was soft and the scar had soundly healed. There was no palpable mass in the abdomen. Pelvic examination revealed that; there was no vaginal discharge, the cervix and uterus were normal, and the uterine appandages were not palpable. There was no pelvic tenderness or mass. The haemoglobin level was 13.2gm. per decilitre.

She was advised on family planning and the need to send the child to the under-five clinic.

COMMENTARY:

Cephalo-pelvic disproportion and the consequences of obstructed labour, are still major obstetrics problems in our population. They contribute to the already high perinatal mortality and maternal

morbidity. The incidence of severe disproportion in our institution is in the range of 1.9 per cent (Msimbe, 1978). For the time being and in the near future as the birth weights increase, the incidence is expected to rise correspondingly (Mtimavalye,1974). But in the next generation or two an inverse trend of events in likely to occur since as the nutrition improves, the stature of our women will also improve. Thus a fall in the incidence is postulated in the far future.

Cephalo-pelvic disproportion occurs in labour when the fetal head is too large to traverse the maternal pelvis. This may result from various factors such, a small or deformed pelvis, unusually large fetal head, or malpresentation and malposition. As it was the case in this patient, the commonest cause of disproportion is a general pelvic contractions. Ideally disproportion should be diagnosed and evaluated right from the antenatal period. Everett (1975) has demonstrated in our women, a close association between height and the risk of diproportion, thus the height of 145cm. or below indicate specialized hospital delivery. Abnormality of the limbs, spine or gait may be associated with disproportion. Likewise, childhood diseases such as ricketts, poliomyelitis and tuberculosis may result into asymmetrical reduction of pelvic capacity. A previous history of difficult labour as suggested by; operative delivery, severe degree of perineal damage or moulding of fetal head, still birth and neonatal death, should lead one to suspect disproportion. The assessment of disproportion is not easy, hence the need for some form of pelvimentry. The external pelvimentry (Donald,1974) is considered as old-fashioned, and the information obtained is very inaccurate and valueless. Internal pevimenty has therefore remained the most vital source of information. This is

routinely performed at 36 weeks of gestation in all primigravida except where it is contraindicated as in ante-partum haemorrhage. In this patient, this was only done in labour. Inspite of the acurate measurement presented by radiological pelvimetry, it is only of significant value in confirming the clinical finding of major pelvic abnormalities (Awiti,1979) before elective caesarean section.

This patient was subjected to emergency caesarean section because she was diagnosed to have a cephalopelvic disproportion in labour. This operation is also indicated in suspected cases of diproportion with supplementary indications such as previous section, maternal diseases or bad obstetric history. But, for the majority of cases with minor disproportion, they are given trial of labour. And a close monitoring with the help of the partogram will make the diagnosis quite early and call for intervention.

The outcome of labour in most types of disproportion is dependent on the pelvic measurements, uterine contraction and the moulding of the fetal head. Thus, the dynamics of labour are more important than the mechanics. Often, disproportion is not proved, since labour may have to be intervened due to other causes.

The consequences of disproportion in labour are preventable. Since disproportion is still a common problem in our population, there is need to improve our obstetrical care particularly in antenatal screening as evident in this case. For a selected group of patients, symphysiotomy has a demonstrable advantage over caesarean section and subsequent pregnancy (Kairuki, 1975). As long as we still have new patients with genital urinary fistulae we know we are a long way from success in this respect.

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PREMATURE RUPTURE OF THE MEMBRANES.

CONSERVATIVE TREATMENT.

INDUCTION AT 37 WEEKS OF GESTATION

NAME: MRS. M.S.

AGE: 29 YEARS

REG. NO.: 18257/81

GRAVIDA: 4 Para 3 + 0

DATE OF ADMISSION: 14th January, 1982.

DATE OF DELIVERY: 3rd February, 1982.

DATE OF DISCHARGE: 5th February, 1982.

SUMMARY:

This was a 29 years old lady. Gravida 4 Para 3 + 0. She presented with history of draining liquor at 34 weeks of gestation. The diagnosis of premature rupture of the membranes was confirmed by sterile speculum examination, and was managed conservatively. She was induced at 37 weeks of gestation, and a 2.5 kg. baby delivered successfull. The puerperium was uneventiful.

History of present condition:

The lady was admitted to the New Maternity Ward with history of spontaneous draining of liquor for about 12 hours prior to admission. There was no history of abdominal pain, vaginal bleeding or fever. She also denied history of trauma. She had not used local medicinal-herbs per vaginum. There was no history suggestive of urinary incontenence or any renal diseases. Foetal movements were normal.

Antenatal Period:

Present Pregnancy:

She was booked at Kigamboni, a peripheral antenatal clinic on

15th September, 1981 at 17 weeks of gestation. The last menstrual period was 18th May, 1981. The expected date of delivery was 25th February, 1982. By dates she was 34 weeks pregnant. In her first was first antenatal visit these were noted; the haemoglobin was 12.8 gm/dl, the blood pressure was 100/70mm. mercury, weight was 57 kg. and was 152 cm. tall. The fundal height corresponded to gestational age of 16 weeks. There was no protenuia or glycosuria. There was no peripheral oedema. She made four subsequent visits to the clinic and throghout there was nothing remarkable.

Previous obstetric history:

She was gravida 4 Para 3 + 0, with all children alive. All the pregnancies had had uneventiful anternal periods and were full term spontaneous vaginal deliveries. There was no history suggestive of puerperal sepsis.

Gynaecological history:

Her menarche was at 13 years of age. Her cycles were of 5/28 days, regular, normal flow. She had had no gynaecological operation before. She denied history of sexually transmitted diseases. She was not on any contraceptive practice.

Past medical history:

There was no history of similar condition before. She had had no majór illness.

Family history:

There was no history of twins, high blood pressure or diabetes mellitus in her family.

Social history:

There was nothing contributory.

PHYSICAL EXAMINATION

General condition:

She was in good nutritional status. She was afebrile and not pale. There was slight pitting oedema of the ankles.

Cardio-respiratory system:

This was unremarkable.

Abdomen:

The abdmen was uniformly distended. A few old "native-therapeutic marks" above the umbilicus were noted. There was no surgical car. There was no area of tenderness. The liver and spleen were not palpable. Both renal angles were not tender. The fundal height was 34/40 and was corresponding to dates. The lie of the foetus was longitudinal, with a cephalic presentation. There was no evidence of hydramnios of twins. The stimated fetal size was 2.2 kg. The foetal heart rate was 140/minute and regular.

Vaginal examination:

The patient was placed on an obstetric bed in the lithotomy position. The attending doctor (author) had scrubbed and had put on sterile gloves as described in the introduction.

Inspection:

The external genitalia were normal and were wet. A clear fluid was noted to be draining from the introitus as the patient strained. It was smelling liquor amnii.

Speculum examination:

The vulva and perineum were cleaned with savlon solution and in turn draped with sterile towels. The bladder was emptied by introduction of a catheter; and the introitus swabbed again with the antiseptic solution.

Thereafter, a sterile bivalve speculum was gently inserted into the vagina and opened. The cervix was well visualized. It was healthy looking, thick and the os was closed. A pool of clear fluid was noted in the posterior vaginal fornix. Then liquor was demonstrated to be flowing from the cervical os as the patient coughed or strained when asked to do so. The flow was minimal and no meconium staining noted. Specimen of the flowing liquor were obtained by a sterile swab and pipette respectivelly. No digital examination was done, and the speculum was withdrawn gently.

The liquor was alkaline when tested with the Nitrazine paper. No organisms were cultured from the both specimens.

Conclusion:

This was confirmed to be premature rupture of the membranes at 34 weeks of gestation. The foetus was in good condition but immature. There was no evidence of infection or antepartum haemorrhage. A conservative approach was decided upon. The patient was admitted to the antenatal ward.

Laboratory investigations:

1. Haemoglobin : 12.4gm/decilitre
2. Blood group : 'B' Rh "D" positive
3. V.D.R.H. : Negative
4. Urine : Negative for Albumin and sugar
5. Leucocytes count : Total was 5,580 cells/mm^3, differential was normal.

Care in the Antenatal ward:

1. She was confined to bed
2. The maternal pulse, temperature and the fetal heart rate were monitored 4 hourly
3. Blood pressure, and urine tests for albumin were done twice daily.

4. Maternal weight and abdominal girth were recorded twice weekly.
5. She was also given phenobarbitone tablets 60 mg. twice daily to facilitate bed rest. Antimalarials were also given as prophylaxis. She continued with oral iron and folic acid daily.
6. Regular review of the patient was done daily by the doctor. The general condition, uterine tenderness or change of colour or odour of the liquor was checked for.

She made a good progress with this management and the draining stopped two days from the day of admission. All the vital signs monitored, remained normal. When she was 37 week by dates, decision to induce labour was reached as she had noted draining of liquor again. This was confirmed by speculum examination. This was discussed with the patient and agreed upon. She was given an enema.

Labour: Urgementation with syntocinon:

The pelvis was evaluated and was found to be adequate for that foetus. The membranes could be felt and were artificially ruptured. The liquor was clear. An intravenous drip of 5 percent Dextrose (500 mls) containing 5 international unit of syntocinon was set up.

It was initially set to run at 10 drops per minute and this was increased at 15 minutes interval by 10 drops/minute until the strong contractions were achieved. The progress of labour was closelly monitored and recorded on the partogram as in case no. 4 (Vaginal delivery after caesarean section). Ten hours from the time the syntocinon drip was started the cervix was fully dilated. The second stage was conducted as in case no. 4. It took 20 minutes. But unlike in case no. 4 a liberal episiotomy was performed as the fetal head was crowning, in order to minimize trauma to the head. A female baby was delivered with an Apgar score 10, and weighed 2.5 Kg. The baby was immediated wrapped into a warm sterile towel and was sent to the

neonatal unit for observation. She had no obvious malformation. The third stage was conducted as described in the introduction and then the episiotomy was repaired.

The patients' post delivery conditions was good. The blood pressure was 100/80 mm.mercury, and the pulse was 78/minute of good volume. There was no vaginal bleeding. She was then sent to the postnatal ward for rest.

Puerperium:

The following day she was reviewed. Temperature was 37.0°C and she was not pale. The blood pressure and pulse rate were normal. The abdomen was soft and not tender. There was no vaginal bleeding. The slight lochial discharge was not foulsmelling. The baby was in good condition. The mother and her baby were discharged the next day in good general condition.

COMMENTARY:

This patient presented a fairly common and an important obstetric problem of premature rupture of the membranes. This condition has no standard definition as yet, but is most widely and preferably defined as, the spontaneous vaginal leakage of liquor amnii occuring before the onest of labour. Whereas the other conditions where the rupture of membranes occur during the first stage of labour or at full dilatation of the cervix are referred to as early and timely rupture of membranes respectivelly. The incidence is between 6 and 12 per cent of all pregnancies (Anonymous, 1979). This condition was observed in about 3 per cent of pregnant women attend at our Centre's Maternity unit (Mtimavalye, 1978). In spontaneous rupture of membranes, the main concern lies in about the 2 to 3 per cent of all pregnancies where it occurs before the 37th week of gestation (Zaaijman,1982), because of the addition risk of prematurity and infection.

The aetiology is largely unknown but in a few cases, some speculation or implication can be made. The commonly associated causes are; trauma, hydramnios, and cervical incompetence (Naeyz, 1980). Other causes have been associated, such as; localized low tensile strength of the membranes (Creatsas, 1981), Ascobic acid deficiency, infection, malpresentation and multiple pregnancy. None of these was obvious in this patient.

It was not difficult to reach the diagnosis in this patient, since the leakage of liquor was easily demonstrated from the cervical os. However, in some cases this can become a problem especially if the fluid leaking can not obviously be established to be liquor amnii or not. It is in these case where a number of laboratory procedures may be of help. The presence of lanugo hair, fat globules and fetal squamous cells confirms amniotic fluid. Another common test carried out as was done in this patient, is to determine the alkaline pH of the fluid with the Nitrazine paper. The normal gestational pH of vagina is 4.6 - 5.5, while the amniotic fluid is 7.0 - 7.5. This test is hampered by false positive results which occur due to presence of alkaline cervical mucus, urine or blood as well as antiseptic solutions. Furthermore, a drop of amniotic fluid on a glass slide will demonstrate the fern pattern or aborization when it dries-up. The latter is more reliable and has less false results than the nitrazine test. And on rare occasions if urinary incontinence co-exists with this condition, it might necessitate the use of oral phenazopyridine to stain the urine. Alternativelly, if still unclear, the amniotic fluid is stained by amniocentesis, but this procedure is discouraged and avoided by most worked due the high risk of staining the foetus and introduction of infection.

P.T.O. - 3)

The management of patients with premature rupture of the membranes depends on a number of factors. The major problems which have to be tackled simultaneously are; to avoid premature delivery and the development within few hours, otherwise it is induced with syntocinon or if contraindicated, then caesarian section is employed. When rupture occurs before term as was the case here, then a conservative approach may be taken. This decision may be dictated upon by the presence of infection and the centre's ability to cope with premature babies. In this patient the latter influenced our decision on management. Once the conservative approach has been adopted as was the case in this patient, close monitoring and follow-up are of prime importance if this can not be afforded, it is more unsafe and the alternative approach is recommended. Every effort must be made to detect any threat to the maternal and/or the fetal well being, and consequently effecting immediate delivery. The most feared complication during this period is the development of chorioamnionitis, whose risk increases significantly with digital vaginal examination. It is associated with high maternal and fetal morbidity/mortality. Our experience is that, sepsis associated with this condition is not only a real risk but an important one, hence our high suspicious index on this subject matter. This seem to be contraty to finding at other centers. Schreiber, (1980) claims that the risk of amnionitis does not increase with the passage of time after rupture of the membranes. The same was found in at least the preterm pregnancies (Mead, 1980). The most probable explainations for this difference is the environment and the availability of facilities which are poor in our case. In a bid to deal with this problem, reseachers have of recent demonstrated that, the concentration of 'C - reactive protein' rises at least twelve hours before other signs

of infection appear (Evans 1980). In our case, we are still depending on serial clinical signs for early detection of development of infection. As a preventive measure to this problem, some physicians advocate the use of prophylactic antibiotics. But this step has met a number of obstacles. It was difficult to say for how long and what type of drug to use, since the drainage of liquor may persist for weeks, and the type of bacterial aimed at is not determined or might be found to change from time to time which could even be a contaminant. At the same time, what could be done about the side-effcts of prolonged use of antibiotics? The sum of all this have forced the majority of workers to drop the whole issue of prophylatic antibiotic use in this condition. Consequently, if there is evidence of infection then conservative approach is contra-indicated, and if it develops, it is aggressively treated with massive doses of broad-spectrum antibiotics given parenterally. Cephalosporin are drugs of choice since they are safe to the foetus and significant concentraction can be reached in the amniotic fluid.

To the neonate, the problems of prematurity is more important than infection. This is the advantage of conservative approach which should be employed whenever possible. From most of the work done on the issue of respiratory distress syndrome, it appears that the use of steroids to reduce this risk is now gaining acceptance. Contrary to many previous findings, recent researchers have found that, rupture of the membranes by itself doesn't have the effect of accelerating pulmonary maturity. In relation to that, James (1982) found no basis to expect harmful effects on the fetus when steroids are used, and actually studies have shown no interference with the humoral response of the foetus. At our center the use of steroids in this condition is not a common practice.

Since there is little that can be done about the control of the aetiological factors, few practical steps should be emphasised. Peripheral workers should be cautioned about the dangers of digital

examination and the need to send these patients to appropriate centres. It must be emphasised that it is "safer to transport the preterm baby in-utero than the reverse". Whenever extra-uterine environment is satisfactory for the foetus, delivery must be effected without much ado. In this way, we might succeed in reducing the associated morbidity and mortality rates.

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RETAINED PLACENTA.

BLOOD TRANSFUSION.

MANUAL REMOVAL UNDER GENERAL ANAESTHESIA.

NAME: Mrs. S.T.S.

AGE: 18 years.

REG. No.: 6434/82.

DATE OF ADMISSION: 8th July, 1982

DATE OF DISCHARGE: 15th July, 1982.

SUMMARY:

This was an 18 years old primigravida admitted to the labour ward in the New Maternity Block due to labour pains at 36 weeks of gestation and anaemia. She was found to be in second stage of labour and had spontaneous vaginal delivery of a preterm baby weighing 2.4Kg. The third stage of labour was complicated with retained placenta. Manual removal under general Anaesthesia was performed and blood transfusion was given. Both mother and baby were discharged in good general condition a week later.

Antenatal period:

She booked at a peripheral clinic on the 13th May, 1982 when she seven months pregnant. Her recorded last normal menstrual period was 1st November 1981 and the expected date of delivery was 8th August 1982. On the first visit, the haemoglobin was 11.5gm per decilitre and the blood pressure was 110/80 mm. mercury. There was no ankle oedema; and she was 154cm tall. The uterine fundus was 28/40. The foetus was in longitudinal lie with a cephalic presentation. There was no albiminuria or glycosuria. Hookworm ova were found in

her stool. There was no history vaginal bleeding or draining. There was also no history of twins, Diabetes Mellitus, or high blood prssure or epilepsy in her family. She was given Bephenium hydroxynaphthoate 2.5gm base (5gm sachet) once daily for 3 days to treat hookworm infestation. She was also given the routine supplement of iron and folic acid as well as prophylactic antimalarials. This patient never turned up again at the antenatal clinic.

Gynaecological history:

She could not recall her age when she had menarche. The cycles were of 5 days every 30 days, normal flow without pain. There was no history of abnormal vaginal bleeding or discharge. She had not been on contraception. She had not been subjected to any gynaecological operation.

Past medical history:

She had no history of major illness in the past. This was her first hospital admission.

Faimily and social history:

There was nothing contributory.

History on admission:

This patient was referred from Ocean Road Hospital because of premature labour and anaemia. There was no history of antepartum haemorrhage or draining of liquor.

PHYSICAL EXAMINATION: - On admission.

General examination:

She was pale, not jaundiced and the temperature was 36.8°C. There was mild ankle oedema (+). The pulse was 82 per minute, regular good volume. The blood pressure was 110/80 mm mercury.

Cardio-respiratory system:

There was no obvious pathology noted.

Musculo-skeletal and central nervous systems:

They were normal

Abdominal examination:

The abdomen was uniformly distended. There was no area of tenderness. The liver and spleen were not palpable. The renal angles were not tender. The fundus was at 36 weeks corresponding with the gestational age. The fetal lie was longitudinal with a cephalic presentation.

The head was already engaged. The fetal heart rate was 148 per minute, regular and was better heard below the umbilicus on the left side of the abdomen. The uterine contractions were strong, lasting about 30 to 40 seconds and at a rate of 3 cpmtractions per 10 minutes. She was observed to be bearing-down with each conctraction and complained of the 'daefication - feeling'.

Vaginal examination:

This was performed as detailed in the introduction. The external genitalia were normal. The membranes were bulging through the fully dilated cervix. The membranes ruptured as the examiners fingers were trying to palpate the presenting part and exclude cord presentation. The liquor was clear, there was no cord prolapse, and the vertex in left occipital anterior descended into the pelvis to the level of 2/5. The amount of liquor was normal. The bony pelvis was found to be adequate for the foetus. She was ecouraged to bear down with each contraction.

As the head was crowning a leberal episiotomy (mediolateral) was done under local anaesthesia, to prevent trauma to the preterm's head.

An intravenous injection of ergometrine maleate 0.25 gm. was given with the anterior shoulder delivery. Within 25 minutes she had a spontaneous vaginal delivery of a male baby with Apgar score 10 at one minute. The baby weighed 2.4. The baby was wrapped into clean warm linen and sent to the neonatal unit for observation.

Management of the third stage of labout:

After delivery of the baby, the uterus contracted. Controled-cord-traction (Brandt-Andrew's maneuver) was employed to deliver the placenta. This procedure failed, and then a gentle rub was applied on the uterus to ensure firm uterine contractions. The bladder was catheterized and only 50 mls of clear urine was removed. The cord-traction continued, but there was no cord-lengthening or vaginal bleeding. On vaginal examination, the cervix was dilated 6 cm and the cord was followed up but the placenta could not be palpated. By then 30 minutes had elapsed since the delivery of the baby. The placenta was considered retained. It was decided upon to send the patient to theatre for manual removal of the placenta, under general anaesthesia.

Preparation:

1. Intravencus dextrose/saline drip was set up to keep the vein patient.
2. Two units (1 litre) of cross matched blood were available. This had been requested on admission because of her anaemia. Haemoglobin was 11.9 gm per decilitre. One more unit of cross-matched blocd was requested. She received 0.5 litre of blood transfusion pre-operativelly.
3. Urine was tested for albumin and sugar. It was negative for both.
4. The perineum and abdomen were shaved, and the patient consented for the operation.
5. Blood pressure and pulse rate were 110/80mm. mercury and 84/minute good volume.

Premedication and anaesthesia:

An intramuscular injection of 0.6 mg of Atropine was given as premedication. Anaesthesia was given as in case no. 5 (secondary post partum haemorrhage). She was then placed in the lithotomy position, cleaned and the bladder was catheterized. About 200 mls of clear urine was obtained.

Procedure:

On inspection, the external genitalia was normal except for the episiotomy which was not bleeding. There was no vaginal bleeding, and the clamped cord was hanging at the introitus. The cord was shortened. The vaginal examination was performed. The cervix was 6 cm. dilated and it was intact. Then, the operators (author's) right hand was insinuated into the vagina up to the uterus, while the left hand separated the labia. Then the left hand was placed on the uterus externally to stablize it as the right hand entered the uterine cavity. This hand with its fingers kept together looked for a cleavage plane. The plane was identified, and the hand continuously worked its way between the placenta and the uterine wall. There was moderate resistance in the process, but eventually the placenta was detached in-toto. There was slight bleeding from the uterus. And the placenta was pulled out by a cord-traction while the right hand was still inside the uterine cavity, in case final exploration of the cavity would have been required. In that case re-insertion of the hand would increase the risk of infection developing later on. During the procedure of manual removal, a drip of Dextrose-saline 500 mls to which 20 international units of syntocinon had been added was running to maintain uterine contractility and control bleeding. The hand was removed finally and the uterus contracted well. Blood loss was estimated to be about 100 mls. The vagina and

perineum were mopped - dry, after repairing the episiotomy as described in the introduction. A sterile pad was applied on the vulva.

She recovered well from the anaesthesia. Her blood pressure was 110/70 mm. mercury, and the pulse was 90 per minute, regular good volume. The abdomen was soft and there was no evidence of free fluid in it.

Post-operative management:

1. One horuly monitoring of the blood pressure and pulse rate. Urinary output was also monitored 4 hourly, and vaginal bleeding was checked regularly. All were normal.
2. Intravenous infusion was continued. She received one litre of blood transfusion.
3. Ampicillin 500 mg. was given 8 hours (oral) for 5 days. She was reviewed at 8 and 24 hours Post-operativelly. The blood pressure, pulse rate and temperature were normal. There was no undue abdominal pain or vaginal loss. She continued with iron and folic acid daily. After 8 hours she was allowed to go to the neonatal ward to breast-feed her baby. Her haemoglobin was 12.4gm dl., and on examination of her stool, there was no ova or cyst of a parasite found. Both the mother and the baby were discharged on the fifth day from the day of admission in good condition.

Postnatal Clinic (follow-up)

Six weeks later she came back for follow-up. She had no complaint and the baby was feeding well on breast milk. There was no history of vaginal bleeding or discharge. She denied history of abdominal pain, urinary symptoms or fever. She was not pale, and the uterus was well involuted to normal size. There was no vaginal discharge and the episiotomy had healed well. The pelvic organs were normal and no

pelvic mass was palpable. Her haemoglobin was 13.0gm/dl. She was educated on the advantage of regular antenatal visits and advised to book early as well as to delivery in hospital in her subsequent pregnancy. She was also advised to send the child to the maternal. and child health clinics. She was also started on the oral contraceptive pill to which she chose.

COMMENTARY:

Delayed completion of the third stage of labour because of retained or adherent placenta is a common complication of delivery. Usually the placenta separation occurs within five minutes after the delivery of the baby. In about 95 per cent of the patients, the placenta is delivered within 30 minutes, beyond which it is considered to be retained as was in this case.

The adherent placenta, which was found in this patient, is an uncommon cause of retained placenta. There are three forms of such morbidly adherent placentae; placenta accreta, increta and pancreta. The pathology in these conditions ranges from, increased and firm uteroplacental union, deep trophoblastic penetration to the complete penetration of the uterine wall respectivelly. Previous conditions such as; endometriosis, manual removal of placenta, or any operation involving the uterine cavity may predispose to adherent placenta. There was no evidence of any of these in this patient. It has also been observed that this condition is commoner where pregnancies have terminated prematurely. This was the case in this patient.

Of these conditions, only the placenta accreta as was the case here, that it can be stripped off the uterine wall. Otherwise the adherence in the other forms is absolute, and attempts to remove them results into tearing the placentae in pieces, thus running into a high risk of uterine perforation.

However, the retention of placenta is commonly due to mismanagement of the third stage of labout. Over enthusiastic manipulation of the fundus before the placenta separates, will stimulate tetanic instead of the rythmic uterine contractions. Likewise if the parenteral ergometrine is administered too early or too late, the formation of "hour-glass" constriction results due to sustained uterine or cervical contraction. And as a consequence, the placenta is arrested in the active contractile portion of the uterus. Occasionally the anomaly of the uterus is the cause of retained placenta. With active management of the third stage of labour in combination with administration of an oxytocic injection at the delivery of the anterior shoulder, there should not be delay in the delivery of placenta. This is the widely accepted procedure and is the practice at our centre. It ensures safety and shorter third stage. The limit of 30 minutes is also widely accepted, since exceeding this even in the abscence of haemorrhage has nothing to be gained. Nevertheless, in cases associated with torrential haemorrhage, not a single minute should be wasted before the placenta is removed. And this is when one is forced to remove the placenta manually without general anaesthesia to save life. Together with these measures, blood transfusion and fluid infusion are of prime importance in the management of this condition. Prophylactic broad spectrum antibiotics are indicated in this conditions.

Recurrence of this condition in subsequent pregnancies is common. This together with her poor antenatal attendence in that pregnancy, prompted us to emphasise health education to her. She has however, indicated how much more coverage is needed for those who increase our registration (Antenatal) numbers but are actually not receiving the care. Hence they have to be more motivated by educating them individually and families at large on the advantages of regular antenatal care.

VAGINAL DELIVERY FOLLOWING PREVIOUS CAESAREAN SECTION.

NAME: Mrs. A.S.

AGE: 24 Years.

REG.NO.: 17980

DELIVERY NO.: 10097/M382

ADDRESS: Swahili Street, Dar es Salaam

GRAVIDA: 4 Para 3 + 0

LAST MENSTRUAL PERIOD: Early November, 1981

EXPECTED DATE OF DELIVERY: Mid August, 1982.

DATE OF ADMISSION: 11th August, 1982

DATE OF DELIVERY: 11th August, 1982

DATE OF DISCHARGE: 12th August, 1982.

SUMMARY:

This was a 24 years old house-wife, Gravida 4 Para 3+0. She had booked at 20 weeks at Muhimbili antenatal Clinic, to which she made regular visits. She had had an abdominal delivery in the previous pregnancy due to foetal distress. Her antenatal period was unremarkable, and trial of vaginal delivery was contemplated.

She was admitted at term in labour. Clinical re-assessment revealed no contraindication to trial of vaginal delivery. Labour was closely monitored. Five hours after admission she was safely delivered of a 3.400kg, male baby with Apgar score 10 at one minute. The scar was ascertained to be intact after delivery. Both the mother and her baby were discharged the next day in good condition.

Reason for Admission:

The patient was admitted to the labour ward from home, with complaints of rythmic lower abdominal pain and constant lower backache for five hours prior to admission. The intermittent pains were coming within a progressivelly shorter invervals and increasing intensity. She had also noticed mucoid-discharge per vaginum but there was no history of vaginal bleeding or draining of liquor. Her bowel habits and micturation were normal.

Present Obstetric History:

Her last menstrual period was in early November, 1981. The expected date of delivery was in mid-August, 1982. She booked at Muhimbili Antenatal Clinic on 3rd March, 1982 when she was 20 weeks pregnant. At the first antenatal visit, her weight was 55kgs. and her height was 153cm. The blood pressure was 110/70mm. mercury. Her haemoglobin level was 11.9gm. per decilitre. There was no sugar or albumin in her urine. She had no pedal oedema and the fundal height was 20/40 (see above). Her blood group was 'O' RhD- Positive and VDRL test was negative. Culture of her mid-stream urine specimen did not reveal any bacterial growth.

Previous Obstetric History:

She was Gravida 4 Para 3 + 0. The first two pregnancies were full term spontaneous vaginal deliveries. These deliveries were conducted in hospital and the birth weights were 2.9 and 3.0kgs. respectivelly. The second born died from Measles at the age of 2 yrs. Her third pregnancy in 1980 was full term normal pregnancy which ended in caesarean section due to foetal distress. A live male baby weighing 3.0kgs. was delivered, and he was well at home. She denied history suggestive of post-operative wound sepsis. From her previous notes, she had had a lower segment caesarean section, and the foetal distress resulted from a tight cord arround the neck.

Gynaecological History:

Her menarche was at 14 years of age. Her cycles were of 5 days duration in every 30 days, painless and the flow was scanty. She had no history of abnormal vaginal discharge or bleeding. She had been on oral contraceptive pill for eight months up to September, 1981.

Past Medical History:

She had not been hospitalized for any other illness. She had not had blood transfusion eccept during her previous operation (caesarean section).

Family History:

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

Antenatal Progress:

She made nine regular antenatal visits. And she received ferrous sulphate 200mg. twice a day, and folic acid 5mg. once a day and chloroquine sulphate 300mg. base weekly. There was no history of vaginal bleeding or lower abdominal pain. At 36 weeks of gestation, her pelvis was evaluated clinically and it was found to be adequate. Her antenatal period was otherwise unremarkable.

Labour:

She went into labour on 11th August, 1982 at 39 weeks of gestation.

PHYSICAL EXAMINATION:

On general examination: She was of good nutritional status. Her height was 153cm. She was not pale and she had no peripheral oedema. Temperature was 37.0^{o} Centigrade.

Cardiovascular System:

The pulse rate was 76 per minute, regular and of normal volume. The blood pressure was 110/80mm. mercury. The heart sounds were normal and there was no murmur.

Respiratory System:

There was no abnormality detected.

Abdominal Examination:

The abdomen was uniformly distended. There was a sub-umbilical mid-line surgical scar. Both liver and spleen were not palpable. There was no tenderness in the renal angles. The fundal height was 36/40. The foetus was in a longitudinal lie, with a cephalic presentation and the head was engaged. The liquor was adequate and the stimated foetal size was 3kgs. There was no tenderness over the hypogastrium. The foetal heart rate was 140 per minute and regular.

Pelvic Examination:

The examination was perfomed under asceptic condition as detailed in the introduction. The vulva and vaginal mucosa were normal. The cervix was fully effaced with a dilatation of 4cm, and the membranes were bulging through the cervical os. After ascertaining abscence of the cord in the forewaters, the membranes were ruptured with a Kocher's forceps. There was no meconium in the liquor. The presentation was a vertex with a left occipital anterior position. The head had descended to a station 2cm. above the ischial spine and was well applied on the cervix.

Assessment of the bony pelvis was also performed. The sacral promontory was not reached at 12.5cm. and the sacral curve was normal (concave, with a mobile coccyx). The ischial spines were not prominent, and the lateral walls of the pelvis were parallel. Two fingers could be admitted in the sub-public angle (normal), and intertuberous diameter was 7cms. (4 knuckles of a clenched fist). The foetal heart rate was re-checked and was 140/minute and regular.

Conclusion:

The pelvis was adequate and a spontaneous vaginal delivery was expected.

LABOUR (TRIAL OF SCAR):

The labour was very closely monitored and recorded regularly on the partogram (attached). Two units (1.0 litre) of crossmatched blood were reserved in the blood bank, and her haemoglobin level was estimated (12.5gm/dl.). Also an infusion of 5 per cent Dextrose was set-up and other preparations for caesarean section were made, lest it became necessary in due course.

The progress of labour was good. There was no undue vaginal bleeding, and tenderness was not elicited in lower uterine segment (over the uterine scar). Both the maternal pulse and foetal heart rates were normal. The cervix was fully dilated five hours after admission.

Management of Second Stage:

The doctor in attendat had scrubbed and put on sterile gloves (as in introduction), and the patient was placed in dorsal position, on an obstetric-bed. Both the perineum and the vulva were cleaned with 1 per cent Habitane solution, and drapped, with sterile towels. She was encouraged to 'bear-down' with each coutraction. The perineum was infiltrated with 7 mls of 1 per cent Lignocaine hydrochloride solution and left medial-lateral 'J-shaped' episiotomy performed (as described in introduction), as the head was distending the perineum. The perineum was supported by a sterile pad and as the head came out, it was rotated to the left. There was no cord arround the neck. Then the head was held by the doctor's hands which were applied on the temporal sides, and a gentle downward traction applied. The anterior shoulder was delivered and consequently the posterior shoulder delivered by an upward traction, and in turn the body followed with ease. Immediately after the head was delivered, the oropharynx of the baby was sucked. The cord was then doubly clamped, divided and tied with a sterile cord-tie.

The baby was a female and had had an Apgar scores of 10 at 1 minute and at 5 minutes. She weighed 3.400 kgs.

Management of Third Stage:

She had received 0.25mg. intravenously of Ergometrine maleate just after the delivery of the first shoulder. The placenta was delivered by 'controlled cord traction' (as in introduction). The placenta and membranes were found to be completely removed. The episiotomy was repaired (as in introduction). The estimated blood loss was 200ml.

Then the lower uterine scar was palpated from inside and there was no defect felt. The uterus had contracted well, and there was no obvious vaginal bleeding. The vaginal and perineum were cleaned, and a sterile pad applied over the vulva.

The post-delivery pulse rate was 86/minute, regular and of good volume. The blood pressure was 110/80 mm. mercury. Both the mother and her baby were transfered to the postnatal ward for rest and observation.

Puerperium:

The mother and her baby remained in good health. She maintained the same pulse rate and blood pressure. She was afebrile and not pale. The abdomen was soft, non-tender and the uterus was well contracted. She had normal dusky-red lochia flow which did not have an offensive oduor. The baby was sucking well from the breast and she was vaccinated with BCG. They were both discharged twenty-four hours later. The mother was given an appointment to postnatal clinic after six weeks.

Postnatal Clinic:

She was in good general condition. She was not anaemic. The pulse rate and blood pressure were normal. The abdomen was scaphoid,

soft and non-tender. The uterus was well involuted. There was no abnormal vaginal discharge. The pelvic organs were normal. She was discharged from the clinic with an advise to attent her near-by (MCH) Maternal and Child Health Clinic for the care of the child and for her child-spacing programme.

COMMENTARY:

There is always a risk of uterine scar rupture in subsequent pregnancy or labour after a caesarean section. The risk is significantly more if classical incision was employed. The poorly healed-scar following the classical incision, may rupture in the last 10 to 14 days (Munrokerr,1977) of pregnancy or during labour itself. This accident is less frequent after a lower segement caesarean section, and if it occurs, it does so during the course of labour.

In this patient our main concern was firstly, to plan the mode of delivery and secondly, to manage the attempted vaginal delivery ('Trial of Scar') with her scarred uterus.

The place of vaginal delivery following a caesarean section is still a controversy. Many authors assert strongly that, the frequency of uterine repture is not appreciably attered by allowing selected patients to deliver vaginally. Almost all obstetricians now agree about performing elective repeat section before term in patients with undoubtedly weak scars, such as, scars from vertical incision in the upper segment or hysterotomy, or inverted "T" incision with part of it extending to the upper segment. Likewise, patients with two or more previous sections are subjected to elective section at term.

Our practice, is to anticipate vaginal delivery in those patients where there is no recurring or new indication for caesarean section.

The patients are evaluated right from the antenatal period and each woman is assessed individually. In this patient, the indication for her previous caesarean section was clearly known to be non-reccurent and there was no history suggestive of unsound scar (i.e. puerperal sepsis). There was no malpresentation, and disproportion was excluded beyond doubt by clinical assessment. Hysterograms and lateral radio-pelvimetry could not be performed, but they would have been of value in the assessment of the uterine scar and pelvic capacity. The former, which is done during the non-pregnant period demonstrates the defect ("Wedge-depression") of the scar and if the defect is less than 5mm. deep, the scar can be "relied" upon (Donald,1977). The clinical pelvic assessment at 36 weeks of gestation revealed that the pelvis was adequate for that foetus. And new indications for caesarean section were excluded.

Labour in a woman with a previous section scar is on anxious time for both the obstetrician and the patient herself. The lower segment scar is assumed to be sound up to the time of labour, and then it is weakend by the uterine expulsive activity. Thus, the labour must be conducted in a hospital delivery unit with all readiness to intervene. Prolonged labour must be avoided. The diagonal line on the partogram of this patient was intended to be an 'action-line' rather than an (alert-line)as is the case in normal labour.

Even if the cervical-gram looked normal, intervention could be indicated by other vital signs which were regularly checked. A significant increase of the maternal pulse or a reduced foetal heart rate or tenderness over the lower segment scar would indicate imminent rupture of the scar. Also vaginal bleeding or swelling in the supra-pubic area would indicate the same, although it may be too late. There was none of these undue signs in this patient and her labour

progressed smoothly. The second stage of labour took only 15 minutes and it was felt that assistance of ventous extractor was not necessary in her case.

It is of interest to not that, despite the threats of scar rupture in the literature, this patient managed smoothly and delivered the heaviest (3.4kg) child in her obstetric history. The scar was ascertained to be intact after delivery by digital palpation of the lower segment scar from inside. Obstetricians in the Western countries practice a more conservative approach. They urge that, although caesarean section is in general more dangerous than vaginal delivery, it is less dangerous than vaginal delivery from a scarred uterus. Thus, their justification for the policy of 'one a caesarean section always a section'. Since women in these population tend to have smaller families, this practice is more practiced.

However, in our population where the desire of women to have big families is far from being disfavoured, vaginal delivery of a previous section has a place. Nevertheless, this practice must remain as a matter of exception rather than a general rule. Probably, more emphasis should be made on better surgical technique and earlier decision to perform lower segment section for better scars. Again, symphysiotomy may be employed in mild cephalo-pelvic disproportion cases (Kairuki,1975), which could be of great value in our population where the patients might come to hospital late or not at all in the subsequent pregnancies.

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RECORD OF LABOUR

Delivery No. 10097/M/82.

NUMBER : 17980/82

Surname: MRS. A. S.

Other Names:

Address: Swahili Street
D' Salaam

Age 24 yrs.

Tribe MZARAMO.

ADMISSION DATE 11th/August'82 TIME 4 pm BY WHOM m.D.G

ADMISSION (Reason of admission etc.) In labour, Previous uterine scar (one).

FROM HOME / ~~HOSPITAL TRANSFER~~ / ~~ANTE NATAL WARD~~ / ~~CLINIC~~

SUMMARY OF ANTE NATAL ABNORMALITIES — Normal. Previous ~~Scar~~ Caesarean Section 1980. Vaginal delivery anticipated.

LMP Early/11/81 EDD: Mid/8/82

OBSTETRIC HISTORY: Gravida: 4 Para 3 Living Children: 2

YEAR	COMPLICATIONS	METHOD	WT	ALIVE	YEAR	COMPLICATIONS	METHOD	WT	ALIVE
1977	FTND.	SVD	2.9kg.	A/W					
1979	FTND	SVD	3.0kg	Died at 2yrs. (measles)					
1980	Fetal distress. LSCS		3.0kg	A/W					

EXAMINATION

General condition good

Temperature 37° C

Blood pressure 110/70mm Hg.

Oedema NIL

Urine: Protein Neg. Acetone Neg.

Height 153 cm.

Hb.- estimation of present 12.5 gm/dL.

last recorded A/N

BLOOD GROUP: 'O' Rh "D" Positive

Fundal height 36

Size of fetus ≈ 3.0kg.

Lie longitudinal

Presentation cephalic

Fetal heart heard normal. 140/m

Liquor: Membranes intact ✓
Clear
Meconium stained

If membranes ruptured: Date

Time

INITIAL VAGINAL EXAMINATION AND PELVIC ASSESSMENT

UP TO 20 SECS.

20 - 40 SECS.

CTIONS

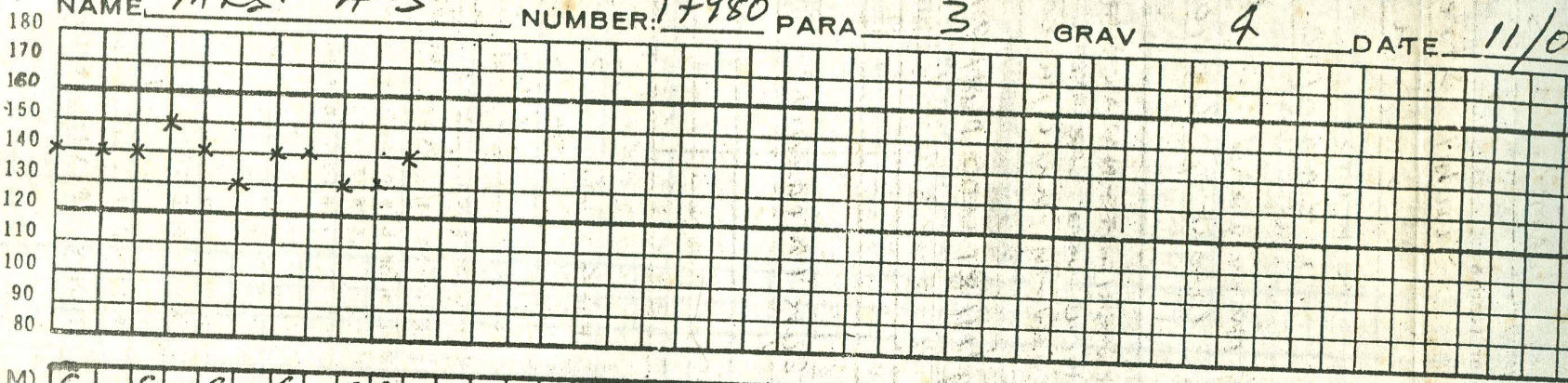
MINUTE

RECORD OF LABOUR

SPECIAL INSTRUCTIONS TRIAL OF
Check: Sc
vag
BP

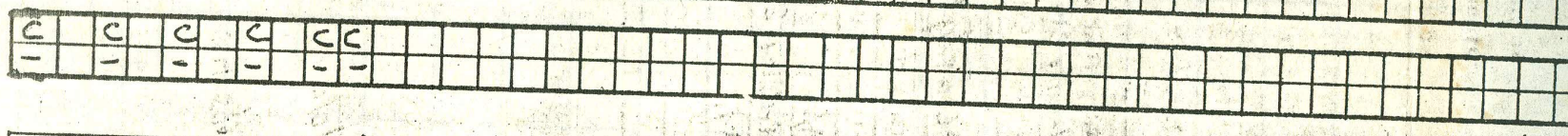
NAME MRS. A.S NUMBER 17980 PARA 3 GRAV 4 DATE 11/0

FETAL HEART RATE



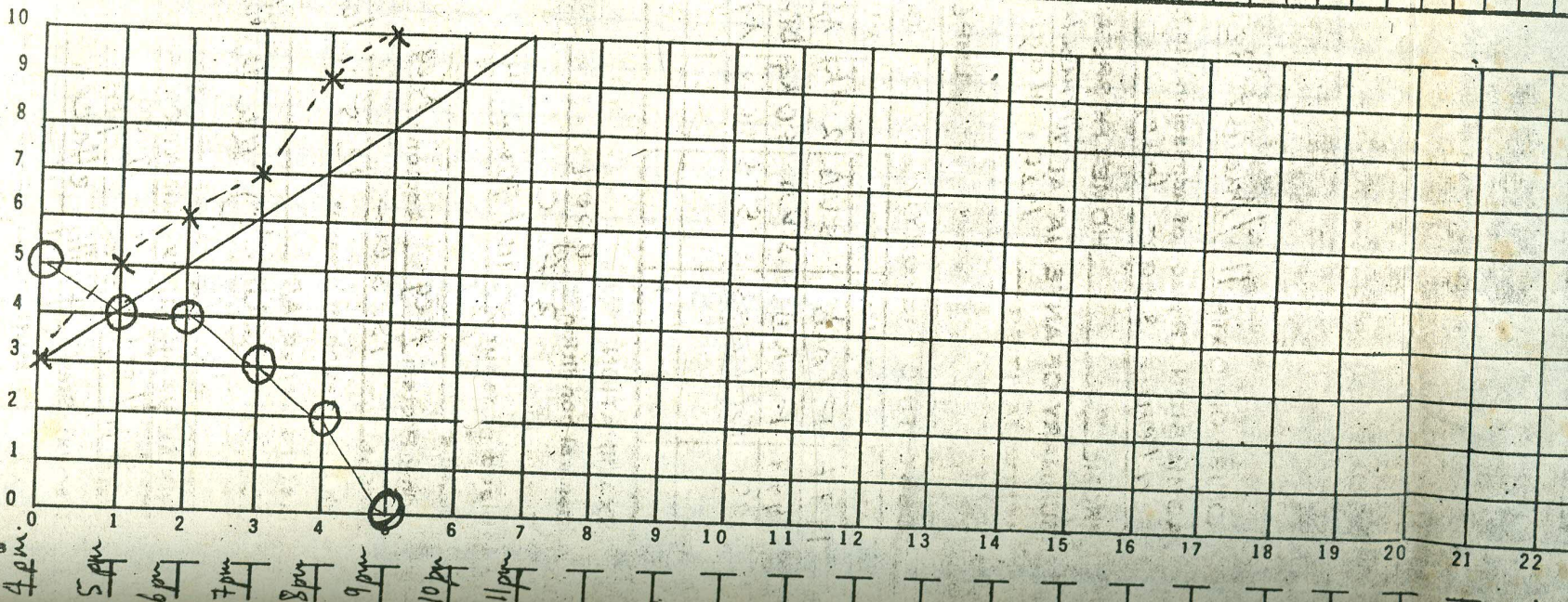
DURATION OF RUPTURE OF MEMBRANES 0 Hrs.

LIQUOR (I, C, M) MOULDING



CERVIX

DESCENT



DURATION OF LABOUR 5.45 Hrs.

Hours 0 1 2 3 4 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

TIME 4pm 5pm 6pm 7pm 8pm 9pm 10pm 11pm

UP TO 20 SECS.

20 - 40 SECS.

MORE THAN 40 SECS.

CONTRACTIONS PER 10 MINUTES 5 4 3 2 1

DRUGS AND I.V. FLUIDS	500mls. 5% Dextrose		500mls. 5% Dextrose		
OXYTOCIC DROPS / MINUTE					
PULSE	84	84	86	86	86
BLOOD PRESSURE	110/70	110/70	110/70	110/70	110/70
URINE — PROTEIN	—	—	—		—
URINE — ACETONE	—		—		—
URINE — VOLUME					
TEMPERATURE	37.0°	37.2	37.2	37.3	37.4

FIELD

Date of birth 11th August 1982 Time of birth 9.00 pm

METHOD OF DELIVERY S.V.D

Weight 3.400kg Sex: MALE APGAR 10

Method of Resuscitation Suction.

SUMMARY OF LABOUR:

First Stage: Duration 4.45 hrs Second Stage: Duration 15 minu

Third Stage: Duration 5 minutes Placenta and Membranes Complet

Blood Loss 200 mls. Reasons for PPH —

Perineum Episiotomy Repair by DR. Mawalla.

Delivered by DR. Mawalla. Supervision by —

SECONDARY POST - PARTUM HAEMORRHAGE.

BLOOD TRANSFUSION.

EXPLORATION OF UTERINE CAVITY.

NAME: Mrs. J.K.

AGE: 30 Years.

DELIVERY NO.: 10074

REG.NO.: 17262

PARA: 4 + 0

DATE OF DELIVERY: 29th August, 1982.

DATE OF AIMISSION: 4th September, 1982.

DATE OF DISCHARGE: 9th September, 1982.

SUMMARY:

This was a 30 years old housewife, Para 4 + 0, who was in her first week of puerperium. She presented with post-partum haemorrhage. Examination revealed an afebrile, grossly pale and shocked lady. Her uterus was poorly involuted. She was transfused with blood and the uterine cavity explored. Few retained pracenta tissue were removed, and she made on unremarkable recovery.

History of present illness:

This patient had been referred from Temeke dispensary with history of heavy vaginal bleeding for 4 hours prior to admission. She was in her first week of puerperium. The vaginal bleeding was of sudden onset, heavy, with clots and was accompained with colicky lower abdominal pains. She also complained of dizziness and weakness. She had no fever or offensive vaginal discharge proceeding the vaginal bleeding. Her bowel opening and micruration were normal.

History of recent delivery:

Her last normal menstrual period had been on 20th November, 1981 and her expected date of delivery was on 27th August,1982. She had booked at Temeke (a periphery clinic) antenatal clinic at 23 weeks of gestation. There was no history of antepartum haemorrhage. Her antenatal period was unremakable. The last haemoglobin level in the antenatal period (20th August,1982) was 12.1gm/decilitre.

On 29th August,1982, she went into a sponteneous labour for which she was admitted at Ocean Road Hospital (Normal delivery unit, see introduction). She had a normal vaginal delivery of a male baby weighing 3.2kg. The delivery of the placenta and the immediate post-delivery period were reported to had been uneventiful. There was no history suggestive of a perineal tear and an episiotomy was not done. She was discharged in good condition 24 hours after delivery.

Past obstetric history:

She had had three previous deliveries, all of which were full term normal deliveries. All the children were living. There was no history of antepartum or previous post partum haemorrhage.

Gynaecological history:

She could not remember her age at menarche. Her cycles were 6/28 days, regular and of normal flow. She had no history of intermenstrual or post-coital bleeding. There was no dyspareunia. She had not used any contraceptive.

Past medical history:

She had not been transfused with blood before and she had not had any abdominal or pelvic operation. There was no history of any major illness. She was not on any regular medication.

Family history:

There was no history suggestive of bleeding - tendency in her family. She also denied history of diabetes mellitus, high blood

pressure or cancer of genital organs in her family.

Social history:

She was a housewife. She neither smoked nor drank alcohol.

PHYSICAL EXAMINATION:

General examination:

She looked weak, restless and she was sweating. She was grossly pale. Her temperature was 36.8°C. There was no pedal oedema or jaundice.

Cardiovascular system:

Her pulse rate was 110/minute, thready and regular. The blood pressure was 90/60mm. mercury. The jugular venous pressure was not raised. The heart was not enlarged and the heart sounds were normal. There were no murmurs.

Respiratory system:

She was not dyspnoeic and the breath sounds were vesicular. There were no added sounds.

Abdomen:

The abdomen was not distended and was moving with respiration. There was no surgical scar, and there was no tenderness elicited. Both the liver and spleen were not palpable. The renal angles were not tender. The uterus was not well involuted and its size was equivalent to 18 weeks pregnacy. There was no evidence of free fluid in the abdomen.

Pelvic examination:

The external genitalia was normal, and there was fresh blood oozing through the introitus. The vaginal mucosa was normal. The cervix was patulous, and the os was dilated to 3 cm. Through the cervix blodd clots were palpable in the uterine cavity. The uterus was bulky and not well contracted. There was no mass palpable in the pelvis.

Diagnosis:

Secondary post-partum haemorrhage with shock.

Plan of mangement:

1. Blood grouping and cross-matching for 3 litres was done.
2. Intravenous infusion with: 1000mls. of plasmagel and 1000mls. of normal saline were given.
3. Morphine 15mg. intramuscularly was given, to allay the patient from the anxiety.
4. Blood pressure and pulse rate were monitored ½ hourly, while the urinary output (from a continuous draining urethral catheter) was checked and recorded one hourly.
5. Bed-side clotting time was: 5 minutes.

   Haemoglobin: 7.5gm/decilitre.

   Urine: negative for Albumin
   negative for sugar.

   White blood cell count: total was 8,500 cell/mm^3.
   Differential was normal.
6. The patient was prepared for examination under Anaesthesia and exploration of the uterine cavity.

By the time she went to theater the patient had received an infusion of 2 litres of fluid and ½ a litre of blood transfusion. Her pulse rate was 80/minute, of good volume. There was minimal vaginal bleeding. Her urinary output was satisfactory.

OPERATION: EXPLORATION OF UTERINE CAVITY:

Anaesthesia:

Atropine sulphate 0.6mg. was given intravenously as premedication. She was induced with Thiopentone sodium 300mg. and scoline 100 mg. intravenously. Maintainance was effected with Nitrous oxide and Oxygen.

Procedure:

When she was fully anaesthetized, she was placed in lithotomy position. The perineum and vaginal were cleaned with Hibitane solution, and she was draped with sterile towels. The urinary bladder was catheterized with a metal catheter and 100 mls. of urina[illegible] removed.

Examination revealed that, there was no tear of the perineum, vaginal mucosa or of the cervix. The cervix was patulous and the os admitted 3 finger, and there were clots coming from the uterus. The uterus was bulky, soft and its size was equivalent to 18 weeks pregnancy.

Then the uterus was manually evacuated of the blood clots, after which the uterine cavity was gently explored with both the index and middle fingers. The uterine wall was intact except there were irregularity due to a soft tissue on the posterior wall. These tissues were removed with the help of sponge-forceps and identified as placenta tissues with some membranes. Then a wide sharp curette was used cautiously to evacuate the uterine cavity. This was done with a syntocinon intravenous infusion running to effect contraction of the uterine wall. There was minimal bleeding from the uterus which had by then contracted well.

The placental tissues removed from the uterus were sent for bacteriology and sensivity, as well as histology. During the operation she received one litre of blood transfusion.

Post-operative care:

The patient had to continue with intravenous fluids and blood transfusion. The blood pressure, pulse rate, temperature and urinary output were checked and recorded 4 hourly. She was also covered with antibiotics (Ampicillin) for 5 days.

First 24 hours post-operative:

She was in a good general condition. Her blood pressure was 110/70 mm. mercury and the pulse rate was 82 per minute of good volume. She was not pale and she was afebrile (37°C.) The chest was clear. The abdomen was not distended, soft and there was no area of tenderness. The uterus was well involuted and vaginal bleeding had stopped. Both the intravenous infusion and urethral catheter were discontinued.

Second to fifty post-operative day:

She remained afebrile, and the blood pressure and pulse were normal. There was no vaginal bleeding or discharge. The abdomen was soft and not tender. Bowel habits and micturation were normal. Culture results revealed; mixed insignificant bacterial growth. Her haemoglobin level was 11.2gm. per decilitre (on fourth day). She was discharged on the fifty day on iron tablets, and she was given an appointment to post-natal clinic after 4 weeks.

Follow-up:

She was in good general condition and she had no complaint. There was no history of vaginal bleeding or discharge. Pelvic examination revealed no abnomality of the pelvic organs. Her haemoglobin level was 12.8gm/decilitre. Histology result revealed; necrotie trophoblastic tissue and no malignant cells seen. She was then discharged from the clinic.

COMMENTARY:

This patient presented with a relatively uncommon, but a pontentially dangerous condition of bleeding in the puerperium. Secondary post-partum haemorrhage is any abnormal or excessive bleeding from the birth canal which occurs between ten hours (Moir and myerscough, 1971) and twelve weeks (Melody, 1949) after delivery.

As was the case with this patient, this condition can be severe and may require re-hospitalization, transfusion and even operation. It is a common and particularly dangerous problem in the tropics (Lawson and Sterwart, 1977) where the patients admitted may be severely exanguinated after haemorrhage at home.

The chief predisposing factors of this condition are; pelvic infection, uterine atony, laceration of the birth canal and retained products of conception. In this patient there was subinvolution of the uterus due to retained pieces of placenta, membranes and blood clots. Most secondary post-partum haemorrhage as was in this patient, reveal themselves within the first week or nine days of the puerperium. On rare occasions the haemorrhage may be due to endoparametritis, or the injudicious use of oestrogen to suppress lactation in which case there is bleeding within two weeks of their withdrawal. This use of hormones is very rarely practiced by our women. An even rare causes, is bleeding from submucous fibroids. On the other hand, this bleeding may follow a caesarean section in which it occurs in the second or third post-operative week. The bleeding in these cases, is generally thought to originate from a major branch of the uterine artery eroded by local infection near the lateral angles of the uterine wound.

The diagnosis of post-partum haemorrhage due to retained products of conception was clinical in this patient. The history was not clearly suggestive, such as in cases where the placenta was removed manually or if there was unexplained primary post-partum haemorrhage, and if she had her delivery attended by an unskilled person. The ultrasonography though not used in this patient, is helpful in making the diagnosis. But it has a few false positive because the decidua, and the organizing blood clots have the same appearance as the placental tissue. However, it is more accurate (Rome, 1975) in excluding retained products of conception.

This patient's condition called for surgical treatment because of the features of retained products. Otherwise the conservation approach of bed rest, ergometrine, antibiotics and blood replacement is usually advocated, The conservative treatment is very effective and is attended by remarkably few complications (Rome, 1975). The few if any retained products in patients treated conservativelly tend to have little consequence, as they get autolysed or lost in lochia. But if bleeding persists or recurs sugical treatment should be employed. The retention of portions of placenta carries with it the great dangers of haemorrhage and sepsis, thus (Myerscough,1977), "no piece of it should ever be left behind". If these portions are retained long enough, they tend to become organized and rather densely adherent to the uterine wall. This makes its removal not only difficult but its presence in the uterine wall may escape detection.

Secondary post-partum haemorrhage is largely preventable if the third stage of labour is conducted well and thorough routine checking on the completeness of the placenta and its membranes. It is more obvious to think of this condition occuring in patients delivering at home. But, this patient's case, demonstrates the need for improved standard of the delivery services at our busy maternity units.

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OBSTRUCTED LABOUR, RUPTURED UTERUS.

REPAIR AND STERILIZATION

NAME: Mrs. P.Z.

AGE: 33 Years.

REG. NO: 19823.

RESIDENCE: Kawe, Dar es Salaam.

GRAVIDA: 8 Para 7 + 0

LAST MENSTRUAL PERIOD: Mid December, 1981.

EXPECTED DATE OF DELIVERY: Late September, 1982

DATE OF ADMISSION (FROM HOME): 22nd September, 1982.

DATE OF LAPAROTOMY: (Repair + Sterilization)
22nd September, 1982

DATE OF DISCHARGE: 9th October, 1982

SUMMARY

This was a 33 years old lady, Gravida 8 Para 7 + 0 who had booked at 35 weeks of gestation at a peripheral clinic where she made only one more visit. She had been in labour at home for about 20 hours before admission. On physical examination she was found to have obstructed labour and a ruptured uterus. Laparotomy was performed after initial rescusitation, the uterus repaired and sterilization done. Her recovery was uneventiful and she was discharged in good condition on the 17th post operative day.

PRESENT OBSTETRIC HISTORY:

This patient could not recall the exact date, but she was certain that her last menstrual period was in Mid-December, 1981. Her expected date of delivery was in late September, 1982. By dates she was term. She had booked at 34 weeks of gestation at a peripheral clinic. In her second visit she was found to have; haemoglobin level of 9.0gm/dl, blood pressure of 120/80mm mercury, fundal height 34/40 and with a cephalic presentation. There was no history of vaginal bleeding since conception. She had been in labour at home for about 20 hours and had had spontaneous rupture of membranes 10 hours before admission. Four hours prior admission she had noted caesation of labour pains accompanied with slight vaginal bleeding and a constant severe pain suprapubically. The abdomen was noted to distend. There was no history of haematuria. She denied history of having taken local medicinal herbs to occelerate labour or any of her labour attendants (relatives) having applied pressure on the abdomen.

PAST OBSTETRIC HISTORY:

She was gravida 8 Para 7 + 0 with all children living. The first six pregnancies had been full term normal deliveries at home. She claimed that she no had problem which required delivery at hospital. The seventh was full term normal delivery at a Health Centre (1979). There was no history of antenatal, intra-partum or postnatal complications. She could not recall the birth weight or dates of the deliveries. She could only vaguelly recall the number of visits she made to antenatal clinics in her previous pregnancies.

GYNAECOLOGICAL HISTORY :

Her menarche was at about 14 years of age. Her menstrual cyeles were 5/30 regular, normal flow. There was no history of intermenstrual bleeding or post coital bleeding. She had never used any contraceptives.

PAST MEDICAL HISTORY:

There was no history of hypertension or diabetes mellitus, or suggestive of renal diseases.

SOCIAL AND FAMILY HISTORY:

Both the husband and her were peasant farmers and had had no formal education. There was history of twinning in her family.

PHYSICAL EXAMINATION:

She was anxious and in pain. She was anaemic, and dehydrated, but not jaundiced. Her temperature was 36.8^{o}C. The pulse was 110, weak volume, regular. The blood pressure was 110/60mm Mercury.

CARDIOVASCULAR RESPIRATORY AND NERVOUS SYSTEMS:

There was no abnormality detected.

ABDOMEN:

The abdomen was distended, tense and very tender particularly suprapubically. The fundal height could not be defined well due to tenderness, but a head was palpable just above the pubic symphisis. The other foetal parts could not be palpated for the same reason. There was no foetal heart heard. The bowel sounds were scanty. There was equivocal evidence of free fluid in the abdomen.

VAGINAL EXAMINATION:

It was conducted as detailed in introduction. There was slight blood oozing from the vagina. The cervix was oedematous and dilated 6 cms. The head could be palpated high up at the brim, and there was a huge caput.

CLINICAL IMPRESSION:

Obstructed labour with ruptured uterus, and therefore laparotomy was planned.

IMMEDIATE TREATMENT AND PREPARATION FOR LAPAROTOMY:

1. Blood was taken for grouping and crossmatching and haemoglobin. 2 litres of blood were requested. The haemoglobin was 6.5 gm/dL.
2. An intravenous drip of Normal saline was started using a canula. One litre was run-into within the first 30 minutes, thereafter another litre was running at 30 drops per minutes.
3. An intramuscular injection of Morphia 10 mg was given to control pain and allay the patient of her anxiety.

More suction of the peritoneal blood was done and then the intestines were pushed away from the operation site with two wet abdominal pack with their identification "tails" held by small artery forceps. The tear on the uterus was repaired in two layers with chronicized No. 2 catgut stitch. Haemostas was well achieved.

Sterilization: (Pomeroy technique)

The left fallopian tube was positivelly identified by locating the fimbriated end by the adjacent ovary. It was then picked-up in the mid portion with a Babcock forceps thus creating a loop of which its base was ligated with silk stitch 2/0. The knucle of the tube was then cut across and removed. The procedure was repeated on the opposite side.

Then the abdominal cavity was mopped dry after removing the abdominal packs, and washing the intestines with Normal saline. The abdomen was closed in layers as detailed in the introduction after ensuring that the instrument and swabs count was correct.

The estimated blood loss was 1400 mls. Her post-operative blood pressure was 110/70mm. Mercury and the pulse was 110/minute.

THE INFANT:

The infant was a fresh still born, female, weighing 3.5 kg. There were no obvious congenital malformations. There was a huge caput over the vertex.

POST-OPERATIVE INSTRUCTION AND MANAGEMENT:

1. Intramuscular injections of Morphia 15 mg. 6 hourly for 48 hours.
2. Ampicillin 500 mg. intravenously 6 hourly for 78 hours, then oral Ampicillin 500 mg. thrice daily for 5 days.

3. Intravenous infusion of Normal Saline 2 litres and 1 litre of 5% Dextrose per 24 hours.
4. Blood pressure, Pulse ½ hourly for the first 8 hours, then 4 hourly - these remained normal. 4 hourly temp. chart.
5. Continuous bladder drainage with strict input and out-put chart. The urine output and colour were good. The catheter was removed after 14 days.
6. Four hourly aspiration of the Ryles tube. This was removed after 48 hours.
7. More blood transfusion - she received 1500 mls of blood transfusion.

She made a steady recovery. She remained afebrile and the abdomen was soft and non-tender. The intravenous infusion was discontinued on the 3rd post operative day and she could take oral fluids. The wound healed well without sepsis. Her bowel habits were normal.

She was informed about the findings at laparotomy and the surgical management performed on her. The catheter was removed after 14th day, her micturation was normal. Her haemoglobin was 9.5gm/dl on the 10th post-operative day. She was discharged in good condition with iron and folic acid tablets to use at home. She was also given a postnatal appointment - 6 weeks.

FOLLOW-UP:

She was in good health and had no complaint. She was not pale. The abdomen was soft, with the scar soundly healed, and there was no mass palpable. Pelvic examination revealed normal reproductive organs and there was no other pelvic masses. She

was discharged from the clinic, and advised to send her young children to the under-five clinic regularly.

COMMENTARY:

Of the most forminable accidents that may occur in obstetric practice, ruptured uterus is one. It often taxes the ability of even the most competent obstetricians. It is also a major cause of maternal deaths and fetal loss especially in the developing countries where obstructed labour is still unattended to, thus making obstructed labour a major cause for this condition. This is evidenced by the appalingly high (7.2%) maternal death rate associated with ruptured uterus at Muhimbili Medical Centre between 1973 - 1977 (Mtimavalye, 1979).

In this case, the uterus had ruptured spontaneous following prolonged and obstructed labour at home. Of the main causes of spontaneous rupture of uteruss are, cephalo-pelvic disproportion and malpresentation. The former is the most common and is believed to be on the increase in our population because of the increasing birth weights without increasing pelvic capacity of our women (Mtimavalye, 1974). Parity has a significant influence on the liability of the uterus to rupture spontaneously, and the risk is the lowest in the primigravida. The weakened uterus of the maltiparae (as was the case in this patient) due to increased fibrous tissue in place of myometrium, puts this group at high risk. In this case, this grandmultigravida who most probably had a big baby (cephalopelvic disproportion) as evidenced by the weight and caput formation on the vertex, had shown ignorance

about the need for both modern antenatal and delivery services. She probably preferred a Traditional Birth Attendant (TBA) to the midwives at her nearest dispensary. It is well known that, a good member of multiparae think that "they are experienced" and therefore see no need to get assistance of a skilled and trained attendant at delivery. As was disproved in this case, there are a lot of "unforeseen" complications such as malpresentations, fetal congenital abnormalities and abnormalities of the birth canal which may obstruct labour. The practice of t taking local medicinal herbs "Oxyctocics" is not uncommon in our community, thus contributing to the causes of spontaneaus rupture of uterus. At times, traumatic factor may play a role at home, where the Traditional Birth Attendants apply fundal pressure to relieve obstructed labour; this history was denied in this case by the patient.

Maternal death can be avoided by an energetic and prompt institution of treatment as was the case in this patient. However, is her case, her fairly good general condition unlike the usual moribund states with which such patients are admitted with, played a significant role for the good outcome. Blood transfusion was also fortunately available in this case.

The type of surgical treatment should be indivualized in such cases, with the main aims of, "using the shortest procedure that causes least shock and getting the patient off the operating table in the best condition". Repair of the rent was performed in this patient because it was in this case easier and quicker than hysterectomy. The later is employed if there is extensive rupture

and devitalized tissues. Sterilization was done to protect her from antenatal uterine rupture in case of subsequent pregnancy. The urinary bladder was catheterized for 14 days to ensure both accurate urine output monitoring initially when the patient was shocked and also to discourage fistula formation.

The maternal mortality and morbidity from such cases will be improved by instituting adequate fluid and blood replacement, antibiotics in high doses and prompt surgical treatment. This case reminds us also of the low coverage by our antenatal and delivery facilities.

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ABRUPTIO PLACENTA.

ARTIFITIAL RUPTURE OF MEMBRANES.

ASSISTED VAGINAL DELIVERY.

NAME: Mrs. M.A.

AGE.: 19 Years.

REG.NO.: 16986

DELIVERY: 4912

REFERRED FROM: Magomeni Dispensary, Dar es Salaam.

DATE OF ADMISSION: 7th May, 1982.

DATE OF DELIVERY : 8th May, 1982.

DATE OF DISCHARGE: 10th May, 1982.

GRAVIDA: 3 Para 2 + 0.

SUMMARY:

This was a case of Abruptio placenta in a 19 years old mother, gravida 3 para 2 + 0, at 37 weeks of gestation. Clinical evaluation revealed that, the foetus was alive and viable, and the cervix was dilated to 8cm. She was rescusitated with intravenous fluids and blood transfusion. She had an expenditious assisted vaginal delivery of 2.680kg. baby with Apgar score 8. There were no complications. Both the mother and her child were discharged two days later in good general health.

Reasons for Admission:

This patient was referred to Muhimbili maternity ward with history of progressive severe abdominal pain and tightening, and slight vaginal bleeding for 4 hours prior to admission. There was no history of draining of liquor amnii and she was at 37 weeks of gestation. She was still feeling normal foetal movements. She also

complained of generalized weakness, dizziness but denied history of fainting. She had no history of trauma associated with the main complaint. The expected date of delivery was 26th May, 1982. By date (on admission) she was 37 weeks pregnant. She booked at a peripheral clinic (Magomeni) on 10th January, 1982 at 20 weeks of gestation.

First Antenatal Clinic:

She was found to be of good nutritional status. Her haemoglobin was 12.8gm per decilitre. The blood pressure was 160/60 mm. Mercury. There was no pitting ankle oedema, her height was 160 cm. and weighed 60 kgs. There was no albuminuria or glycosuria. Her fundal height was 20/40 and there was no other organomegally in the abdomen. Her blood group was 'O' positive, VDRL was negative and there was no ova or cyst of parasitic helminths.

Subsequent visits: (Summary)

She made six more visits to the antenatal clinic. Throughout that period she was in good general condition. The haemoglobin (one week prior admission) was 12.0 gm.per decilitre. She had no proteinuria and her weight gain was normal. The blood pressure remained between 100/60 and 110/70mm. mercury. There was no history of vaginal bleeding or draining of liquor. She had no particular complaint.

Previous Obstetric History:

She was Gravida 3 Para 2 + 0, both children were alive. Both pregnancies ended as full term normal deliveries in 1978 and 1980 respectivelly. There was no history of antepartum haemorrhage or post-partum haemorrhage.

Gynaecological history:

Her menarche was at 15 years of age. Her cycels had been of 28 days for 5 days, regular and of normal flow. There was history

of dysmenorrhoea. There was no history of intermenstrual bleeding or previous gynaecological operation. She had not been on any contraception.

Post Medical history:

There was nothing worthy noting.

Family and Social history:

There was no history of Hypertension, Diabetes mellitus or bleeding - tendence in her family. She did not smoke nor drink alcohol.

PHYSICAL EXAMINATION: (on admission).

General examination:

She was a young lady of good nutritional status. She was in severe pain and sweating on the face. She looked very pale but not cyanosed or jaundiced. The temperature was 36.8°C. There was no peripheral oedema.

Cardiovascular system:

The pulse rate was 110/minute, regular with a weak volume. The blood pressure was 90/50 mm. mercury. There was no cardiomegally and the heart sounds SI and SII were normal. There was no murmur.

Respiratory system:

The respiratory rate was 20/minute. The air entry was normal in both lung fields, and there were no added sounds.

Abdominal examination:

The abdomen was uniformly enlarged and the fundal height was equivalent to term pregnancy. There was no tenderness in the renal angles. The uterus appeared tense, and was tender with the maximum tenderness elicited over the fundus. The foetal lie was longitudinal but the presentation could not be well established due

to the generalized tenderness. The foetal heart beats were audible at a rate of 150/minute, regular, and this was best heard below the umbilicus.

Vaginal examination:

There was slight vaginal bleeding. The vaginal mucosa was normal. The cervix was full effaced, soft and dilated 8cm. with the memberanes bulging. The presenting part was vertex and there was neither cord presentation nor placental tissue felt in the lower uterine segement. Then artificial rupture of the membranes was done.with a Kocher's forceps, and moderate amount of liquor drained out which was observed to be bloody. The head descended and fitted well onto the cervix at station 3/5. The position was left occipital anterior and the head was felt to be relativelly small to the spacious pelvis. The foetal heart rate was rechecked 148/min. and regular. There was no undue vaginal bleeding.

Diagnosis: Abruptio placenta at 37 weeks with a live and viable foetus.

Decisions on management:

1. Rescusition of the mother
2. Laboratory investigation for coagulation defect.
3. To effect quick vaginal delivery with the assistance of ventous extractor.

Treatment of Shock:

(1) Morphine 15mg. was given intramuscularly to allay the patient of the anxiety and pain.

(2) Intravenous drip was set up and 1000 mls. of Normal Saline was given within the first $\frac{1}{2}$ hour, and she was later given 5 per cent Dextrose.

(3) Urgent request for cross-matching of 2000 mls. of blood group 'O' Rh "D". She did receive 500 mls. blood transfusion before delivery. Her haemoglobin was 6.8 gm/dl.

(4) An indwelling urethral catheter was inserted for continuous urine drainage. In the first hour she had passed 60 mls. of clear urine.

(5) The blood pressure and pulse rate were monitored ½ hourly, and at the end of the first hour the readings were; 100/60 mm. mercury and 98/minute, regular, good volume respectivelly.

Laboratory Investigations:

(Bed-side clotting time was 5 minutes).

1. Haemoglobin 6.8 gm/dl.
2. Blood: Fibrinogen level was 350 mg./100mls. (normal)
   Bleeding time was 4 minutes (Duke's method)
   Clotting time was 3'30" (Date + Laidlaw method)
   Platelet count was 300,000/mm^3.
4. Urine: Negative for sugar
   Positive for acetone.

Labour: Assisted vaginal delivery (summary)

The contractions bad become stronger after the rupture of the membranes and the foetal head descended deeply into the pelvis. The cervix was 8cm. dilated with the vertex well applied on it.

Ventous extraction:

A 'J'-shaped left medial-lateral episiotomy was done under local anaesthesia. Then a medium-sized ventous cup was inserted by the doctor's (author) right hand, and was applied over the posterior fontanelle of the foetal head. The fingers of the doctor felt around (repeatedly) the cup's rim and ensured that no maternal soft-tissue was caught by the cup. At the same time his left hand

holding at the tractor bar of the ventous instrument, applied a constant traction, as the assistant was increasing the negative pressure at one minute intervals. A negative force of 0.8kg. had been created within 10 minutes, and more traction was applied on the tubing of the ventous extractor. With two strong uterine contractions the head discended steadly to the perenium and the pressure, was released to remove the cup. The ~~baby~~ foetal head, was delivered, then followed by the trunk and the limbs. The baby was a male and had 8 an Apgar score of 8 at one minute, He was sucked from the nasal-pharynx. He weight 2.6 kg.

After delivery of the baby, an intravenous infusion of 5 per cent Dextrose (1000mls) to which 40 international unit of syntocinon bad been added, was set up to effect good uterine contractidity. But just after the delivery of the baby an intramuscular injection of syntometrine was given. The third stage of labour was conducted by controlled-cord traction, and it was completed within 3 minutes. There was a retroplacental clot (about 400 mls) of blood was noted and the placental had an evidence of aerly sepation on one side of its margin. The uterus contracted well and no undue vaginal bleeding was noted. The stimated blood loss was about 1800 mls. and the placenta weighed 490 gms. Then the episiotomy was repaired as detailed in the introduction. The drip of syntocinon and the urethral catheter were not discontinued to ensure contractility of uterus and accurate measurment of urinary output. One more litre of blood transfusion was given. Twelve hours later both the catheter and the drip were discontinued since all the vital parameters monitored were stabilized and normal. She was then transferred to the postnatal ward.

Postnatal care:

On the next day she was found to be in good general condition. She was mildly pale, afebrile and her pulse was 76/minute regular and of good volume. The abdomen was soft, with the uterus well contracted and there was no evidence of free fluid in the abdomen. There was no vaginal bleeding or undue discharge. She received another 1.0 litre of blood transfusion. Her haemoglobin on the second day of puerperium was 9.5 gm/dl. She was then discharged with her child, both in good general health. She was given iron and folic acid tablets to use at home, and she was given an appointment to attend our postnatal clinic four weeks later.

Postnatal visit:

She looked healthy and she had no complaints. She was not pale and the blood pressure was normal. The abdomen was soft, non-tender and the uterus was not palpable. Pelvic examination did not reveal any pathology. Haemoglobin was 11.8 gm per decilitre. Her bowel habits and micturation were reported to be normal. She was, therefore, discharged with some more iron tablets to use at home and advised to start family planning practice.

COMMENTARY.

This patient presented with an interesting obstetrical emergence of premature sepation of the placenta with a live foetus. This potentially fatal condition known as Abruptio placenta (Accidental haemorrhage) may involve part or whole of the a normally implanted placenta. It is an important cause of perinated as well as maternal morbidity and mortality. This is because of the ensuring anoxia and shock, to the foetus and mother respectivelly. The incidence of this condition is difficult to establish since it is more often reported under the wide classification of antepartum haemorrhage. In most

reports, both abruptio placenta and placenta praevia account for about 50 per cent of antepartum haemorrhage, but the former is more commoner in the majority of the series. Interestingly, the incidence is reported to be higher in the developing countries (Thomson 1982, Lawson 1957). This is probably a reflection of the prevalent associated factors in these-economic status. Unfortunately we have no local data at our centre.

For long now, the aetiology of abruptio placentae have been a subject of conjucture and controversy, and the precise causes are still unknown. In this case, this problem was experienced as there was no definite causative factor implicated. However in the literature there are multiple epidemiological factors associated with this condition. The formerly accepted high association between abruptio placenta and hypertensive disorders of pregnancy (particularly pre-eclampsia), is now doubtful whether it is really true, since the evidences for it are variable. Some workers (Hibbard,1964) finds it doubtful to relate the two because it is not even clear as to which is the cause and which is the effect. Notwithstanding all this Donald(1974) and Jeffcoate (1966) generally accept that, pre-eclampsia is a major associated factor. de Valera(1968) found this true in most cases of primigravida,although in most series the incidence is higher with multipara women (Hibbard and Hibbard,1963) and this is four times as high as in pri,igravidae (Donald,1974). Other factors implicated are; folic acid deficiency, low socio-economme status, smoking, polyhydraminios and trauma, but the evidences are still unclear.

Management of a patient with abruptio placenta is very challenging. The progressive nature of the pathology (detachment of placenta) and the corresponding results of increased risk of

haemorrhage and even development of coagulation defects, make time-factor of vital importance. In most cases the problem is almost solved completely by effecting delivery within a short period of time usually for the interest of the mother since almost always the foetus is already dead. But in this case, the matter was more delicate and complex since the foetus was alive. Hence the need to salvage it in the shortest possible time. Generally, the method of choice of delivery is the vaginal route, except for special cases like this one (live foetus); when an alternative mode of delivery might be considered. In this patient vaginal delivery was decided upon because; the foetus was considered alive and viable, and she was almost in second stage of labour. There was no obstetrical contraindication to that mode of delivery. And although the response to shock treatment was satisfactory, there was still the real risk of further placental separation which could have caused a rapid death of the foetus due to acute anoxia. Thus, assisted vaginal delivery was the answer for the interest of the foetus. Apart from the advantage of effecting expedition vaginal delivery, the use of ventous extractor, prevented the foetus from aspirating and undue trauma to the baby and mother at delivery. However, caesarean section could be employed as an alternative or as the only method of choice for the fetal or mother's interest. In this patient, we were ready to resort to it if necessity arose. Caesarean section in this condition is indicated mainly when the foetus is alive, viable and no major congenital malformation detected. In the abscence of clotting defect this operation may also be indicated if there are complications of the abruptio such

as; progressive shock in-spite of aggressive treatment, acute renal failure in a patient who is not in labour or too far from delivery. Other indications for the abdominal mode of delivery include; disproportion, malpresentation, previous uterine scar, failed induction and lack of progress of labour. In all these instances, the mother's condition must be stablilized and coagulation defect corrected first. The method outcome of this management (section for a live foetus) in abruptio placenta is challenged by some workers (Lewis 1965) who urge that, the babies delivered are asphyxiated and premature infants, thus translating a still birth into a neonatal death or a brain-damaged infant. This is not completely true and it have been shown to the contrary by a good number of workers, who followed up the babies.

The third stage of labour was actively managed in this patient for fear of postpartum haemorrhage which is common in this condition due to atonic uterus. Indeed this is the most dangerous stage. Apart from the myometrial retraction, control of bleeding from the placental site is effected by liberal doses of oxytocics.

The outcome in this case was very gratifying since we managed to salvage the foetus. The mixed nature of the abruptio as compaired to if it was completely cancealed, the speed with which delivery was effected and the aggressive treatment of shock, all appear to have contributed to the success in this patient. In our centre, the most difficult problem yet to be solved in the

management of such a condition is the inavailability of fresh blood and lack of supportive laboratory investigation in case of a coagulopathy.

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TWO PREVIOUS CAESAREAN SECTIONS. CLASSICAL CAESAREAN SECTION AND STERILIZATION

Name: Mrs. T. H.

Age: 29 years

Ref: 15521

Address: Mwanarumango, Dar es Salaam.

GRAVIDA 3 Para 2+0

Date of Admission: 3rd September 1981

Date of Operation: 3rd September 1981

Date of Discharge: 13th September 1981

SUMMARY

This patient had booked at a peripheral clinic in the third trimester and later referred to Muhimbili 'at-risk' Clinic. Elective repeat caesarean section was planned for her at 38 weeks gestation due to two previous uterine scars with cephalopelvic disproportion. She did not turn up for that untill when she was admitted in labour. Classical Caesarean section was performed due to dense adhesions in the lower segment, and bilateral tubal ligation also done. Her recovery was not eventiful. She was discharged with her child in good health.

Reason for admission

Labour pains for 4 hours at (at term) prior admission.

Present Obstetric history:

The patient had booked at a peripheral clinic at 30 weeks of gestation; where she attended twice before she was referred to Muhimbili Medical Centre 'at-risk' clinic, because of the previous uterines scar. She attended our (Muhimbili) antenatal clinic only once. Her last menstrual period was 9th December 1980 and her expected date of delivery was 16th September 1981. At the antenal (at -risk) clinic the following were noted; Her height was 148 cm, her blood pressure was 110/70 mm mercury and there was no ankle oedema. Her haemoglobin was 10.1 gm/dh. There was a well healed lower median surgical scar. The fundal height was 34/40, and the fetus was in longitudinal lie with a cephalic presentation. The foetal heart rate was normal. There was no area of tenderness. Both liver and spleen were not palpable and there was no tenderness over the renal angles. There was no history of vaginal bleeding or draining of liquor since conception.

At that visit she was told that she would have to be admitted at 38 weeks of gestation in preparation for an elective caesarean section. She never appear again untill this time when she was in labour.

Past Obstetric history

Her first two deliveries had been by caesarean section due to cephalopelvic disproportion in 1977 and 1979 respectively. All were full term pregnancies and the children were alive and well. She denied history of post-operative wound sepsis or fever.

Gynaecological history

Her menarch was a 12 years and her menses were of 3 days every 30 days, normal flow. There was no history of dysmenorrhoea. She denied history suggestive of previous pelvic infections. She never used contraceptive pills.

Past medical history

She had had no major illness. She had been admitted to hospital twice for the deliveries. There was no history of diabetes mellitus, or hypertension.

Family and social history

There was nothing worthy noting.

PHYSICAL EXAMINATION (on admission)

She was of good nutritional status. She was not pale, Temperature was 37.0°C. There was no peripheral oedema. The pulse was 72/minute, regular of good volume. The blood pressure was 110/70 mm mercury.

Cardio-respiratory systems

There was no abnormality detected.

Abdominal examination

The abdomen was uniformly distended. There was a lower median surgical scar. Both liver and spleen were not palpable, and no tenderness over the renal angles. The fundal height was 36 weeks. The lie was longitudinal and presentation was cephalic. Uterine contraction were palpable, occurring every 10 minutes and lasting 30 seconds. The foetal heart rate was 146/minute regular. There was no tenderness over the uterus elicited. The head was not engaged.

Pelvic examination

This was performed as detailed in introduction. The external genitalia was normal and there was neither blood nor discharge noted per vaginum. The cervix was almost fully, effaced, dilated 3 cm; and the membranes were intact. There was no cord presentation. The bony pelvis was evaluated and it was found to be contracted especially at the inlet.

It was decided to prepare the patient for emergency repeat caesarean section.

Preoperative prepatration

1. Blood grouping and cross-matching - 2 units were requested. Haemoglobin was 10.0 gm/dl.
2. Urine: negative for sugar and protein
3. The abdomen and perenium were shaved and cleaned.
4. She signed the consent for Anaesthesia.

Then the patient was transferred to the operating theatre.

Anaesthesia

This was done as in case No. 1

Procedure

The bladder was catheterized as detailed in introduction and clear urine 150 mls obtained. The abdomen was cleaned and draped with sterile towels respectively.

The old scar was excised with difficult due to subcutaneous adhesions, and the abdomen opened. There was a tough scarred tissue with complete distortion of the anatomical layers. Therefore the incision was extended arround the umbilicus and above it. The bladder was attached high up on the uterus and with dense adhesion to the anterior abdominal wall. The lateral aspects of the uterus were almost sealed off with dense adhesions as well. The bladder was not pushed down for fear of rupture and bleeding since there were large various veins over it. Therefore the only option was to ~~de~~ incise the uterus longitudinally on the upper segment, which we did. Care was taken during opening through this thick muscle layer so as not to injur the baby. Then the membranes were ruptured and the foetus delivered by breech extraction. The baby cried immediately and the cord was doubly clamped and divided. An intravenous injection of ergometrine 0.25 mgs was given by the Anaesthesist. The margins of the uterus incision were held by green-Amytage forceps for haemostasis and good exposure. The uterus was repaired in three layers with chromicized catgut No. 1. Haemostasis was well achieved.

Then the fallopian tubes were sought out from the adhesions and ligated (Pomeroy's method) as described in case No. 6 .

The abdominal cavity was mopped dry and after ensuring that gauze count was correct the abdominal closure was begun. It was not possible to identify the peritoneum from the rectus sheath due to adhesions. Both were then repaired in one layer with proline No. 2/0. The skin was closed with silk No. 1.

The vagina was cleaned after blood clots were gently squeezed by a hand over the fundus. Blood loss was estimated to be 800 mls .

The baby: weighed 3.0 kg., female. Apgar score was 10.

Post-operative care and puerperium

Her blood pressure at the end of the operation was 110/70 mm mercury and the pulse was 86/minute regular good volume.

In the post operative she had her blood pressure, pulse, temperature monitored 4 hourly. She remained normotensive and afebrile. She was given pethidine 100 mg. intramascularly 6 hourly to control pain. During the first 24 hours she received 1000 mls of blood transfusion, and she continue with intravenous infusion of normal saline alternating with 5% Dextrose - 2.5 litres/24 hours. Her urinary out put was satisfactory.

She was given Ampicillin injection 500 mg. intravenously for the first 24 hours, thereafter orally, with on the same dose thrice daily for 4 more days.

The patient recovered with out complications. The wound healed well. The stitches were removed on the 9th day and both the mother and her child were discharged the next day in good condition.

COMMENTARY:

This patient had had abdominal delivery for her previous two pregnancies due to cephalo-pelvic disproportion. Although she was correctly identified and referred to our clinic as an "At risk" women, her overal antenatal attendance was unsatisfactory. It appear, she lacked motivation of demanding antenatal care. In the first place, she book late at 33 weeks of gestation and she never appeared again at the clinic; secondly, she did not turn-up for the elective repeat caesarean section as instructed. It has been our experience with a small number of such patients who think that by reporting back in labour they will be given a chance of vaginal delivery instead of repeat section. Most likely this was the case in this patient. It is a policy at our centre to do a repeat section for all patients with two previous uterine scars.

The decision to perform Classical Caesarean section in this patient was made intra-operatively because of the dense adhesion in the lower segment which made an alternative (lower segment section) not feasible and unsafe. The intra-operative findings were not foreseen before due to lack of a suggestive history i.e. post-operative sepsis. On the other hand it could have been that one of the previous lower segment caesarean sections had an extended incision to the upper segment due to technical problems encountered at the time of delivery of the baby. Lack of peritoneal covering in the upper segment predisposes this area to the formation of adhesion to the bladder, intestines and omentum.

Today, classical section has very few indications, among them are; fibroids in the lower uterine segment, adhesions, in patients with carcinoma of the cervix who require to be delivered by operation before radiotherapy can be carried out. Some relative indications such as central placenta praevia, and transverse lie. Although Classical Caesarean section is out moded in developed countries, it still has a place in our practice in the developing countries where post-operative sepsis is still common. Therefore, there is still need to teach about this procedure in our medical training courses.

SEVERE EPH-GESTOSIS

INDUCTION OF LABOUR AT 36 WEEKS.

NAME: Mrs. R.F.

AGE: 18 years.

REG. NO.: 4527/82

Referred from Amtulbhai Clinic

PRIMIGRAVIDA.

LAST MENSTRUAL PERIOD : 19th August, 1981.

EXPECTED DATE OF DELIVERY: 26th May, 1982.

DATE OF ADMISSION: 22nd April, 1982

DATE OF DELIVERY : 29th April, 1982

DATE OF DISCHARGE: 3rd May, 1982.

SUMMARY:

This was an 18 year old primigravida who was referred for to Muhimbili'at risk clinic'from a peripheral clinic due raised blood pressure, proteinuria and excessive weight gain (EPH-Gestosis) in the third timester. She was consequently admitted and managed conservativelly in the antenatal ward for few days. But the condition deteriorated rapidly despite management with drugs (Diazepam + Hydrallazine), and intensive nursing care. She was therefore induced at 36 weeks and a 2.3 kg baby delivered. Thereafter the signs subsided to normal and both the mother and her child were discharged in good condition. Some aspects of the pathophysiology and management of this disease are discussed.

Reasons for admission:

This patient was referred to Muhimbili'at risk clinic' due to raised blood pressure, proteinuria, and oedema(excessive weight gain) at 35 weeks of gestation.

History of present pregnancy

The patient was a primigravida, who had booked at Amtulbhai antenatal clinic (peripheral clinic) on 21st January, 1982, at 23 weeks of gestation. Her last menstrual period was on 19th August 1981 and hence expected date of delivery was 26th May 1982. At booking her blood pressure was 100/70 mm mercury, and she weighed 56kg. There was no proteinuria or peripheral oedema. Her fundal height corresponded to the gestational age. She made four more visits to the clinic. Throughout her antenatal period there was no abnormality detected until on the 22nd April 1982 (at 35 weeks) when she was found to have gained 1.0kg in one week, proteinuria 1+, and pedal oedema. The blood pressure was raised to 130/90 mm. mercury. She complained of mild headache but no history of blurred vision or epigastric pain or neusea. She had no history of dysuria, vaginal bleeding or discharge since conception.

Post medical history:

She had not suffered from high blood pressure before. There was no history suggestive of renal disease, diabetes mellitus, epilepsy or venereal diseases. She had not been hospitalized for any illness before.

Gynaecological history:

Her menarche was at 15 years. Her cycles were of 28 days and a period of 5 days, regular and normal flow. She had not been on any form of contraception.

Family history:

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

Social history:

There was nothing worthy noting.

PHYSICAL EXAMINATION: (at Antenatal Clinic - Muhimbili)

General condition:

The patient was young and of good nutritional status. She was afebrile and not anaemic. There was no puffiness of the face or sacral oedema, but there was pitting oedema (+) of the ankle. The throid gland was of normal size and consistance. She was 152 cm tall.

Cardiovascular system:

The blood pressure was 130/90 mm. Mercury and the radial pulse was 78/minute, regular and normal volume. The femoral pulses were normal. There was no cardiomegally and both SI and SII were normal. There was no murmur.

Respiratory system:

There was no chest deformity and the lung fields were clear.

Central nervous system:

There was no abnormality detected. Retinoscopy was not done due to technical problem.

Abdomen:

The abdomen was uniformly distended and the skin was normal with stria grandarum and linea nigra in the lower guadrants. There was no surgical scar. Both the liver and spleen were not palpable. There was no mass or tenderness in the renal angles. The fundal height was 34/40, with the foetus in longitudinal lie and cephalic presentation. The foetal heart rate was normal (140/minute).

Pelvic examination: was not performed.

Urine test was: positive 1+ (30mg/100mls) for protein (Albustix).
negative for sugar (Dextrotix).

Diagnosis: EPH - Gestosis at 34 weeks.

Plan of Management:

1. She was admitted to the antenatal ward for bed rest and nursing care.
2. She was also given phenobarbitone 60 mg. 8 hourly as a sedative.
3. The Blood pressure was monitored every 4 hours; while the foetal heart rate, fundal height and urine for albumin were monitored once daily. Maternal weight was checked thrice in a week.
4. Laboratory investigation:
   (i) Haemoglobin was 12.2gm/dl., and the Haemotocrit was 39 per cent.
   (ii) Blood urea was 14 mg/decilitre, serum creatinine was 0.9 mg. per decilitre and Uric acid was normal (6 mg. percent)
   (iii) Blood group was 'O' Rh "D" positive
   (iv) Mid-stream urine: Albuminuria 14. (30mg/Dl.)
   : Negative for sugar
   : No pus cells or casts
   : No bacterial growth on culture medium.

All parameters remained the same in the ward until on the fifth day when the conditioned became worse. The blood pressure was persistently between 150/100 and 160/100 mm. mercury despite heavy sedation with Phenobarbitone 60 mg. thrice daily. Albuminuria was 3+ (300 mg/100 mls) and her urine output was 1000 mls. per 24 hours. The oedema had become more generalized to the lumbosacral region, hands and the face was slightly puffy. She complained of frontal headache but had no history of blurred vision, diplopia, epigastric pain or vomiting. She was then immediately wheeled to the Obstetric Intensive Care Unit where she was urgently attended.

Examination:

She was at first given an intravenous injection of Diazepam 10 mg to sedate her and to prevent convulsions. Thereafter she was examined, when she was well sedated. The blood pressure was 160/110 mm. mercury and the pulse was 76/minute regular and of good volume. Fundoscopy did not reveal any abnormality. Her knee reflexes were not increased and the lung fields were clear. There was no uterine tenderness or contractions. The fundal height was 34/40, cephalic presentation, the head was free and the fetal heart rate were 142/minute, regular.

Pelvic examination was performed under asceptic conditions as detailed in the introduction. Both the vulva and vagina were normal. The cervix was soft, uneffaced and the os was closed. The pelvic capacity was adequate. Albuminuria was 3+ but no acetonuria.

Decision:

It was decided upon to terminate the pregnancy prematurely for the interest of both the mother and foetus. This had to be executed by artificial rupture of the membranes and syntocinon infusion. Along side this, anti-hypertensive had was to be used to control the high blood pressure.

LABOUR - Induction:

Under asceptic conditions the membranes were succesfully ruptured artificially with a Korcher's forceps. The liquor was clear and vaginal re-examination ruled out cord prolapse. The foetal heart rate was normal.

Then intravenous infusion was set-up (with two ways on the "Y" connector) for running two infusions independently. In one of the 500 mls of 5% Dextrose, hydrallazine 40 mg was added and in the other bottle 5 international units of syntocinon was added. The former infusion was titrated against the diastolic blood pressure of the patient which was checked and charted regularly (every 10 minutes). It had to be stopped when the diastolic blood pressure declines to 100 mm. mercury, and could be re-started if the pressure rose to 110 or more mm. mercury. The later (syntocinon) infusion was run at a rate of 20, 30, 40, 50, 60 drops per minute, the increase being made at half hourly intervals, and had to be maintained at the rate where uterine contractions were established. Foetal heart rate was also monitored quater hourly and charted. The patient was also given Diazepam 5 mg intramuscularly 4 hourly for the reasons mentioned above. Urine output was also monitored and was satisfactory (more than 50 mls per hour).

Labour progressed well; Eight hours later she was in second stage and all parameters were normal. A generous episiotomy was performed (as detailed in introduction) as the head was distending the perineum to protect the head of the premature baby. There was no undue delay in the second stage and it took 10 minutes. When the head was delivered, the oral-pharynx was sucked well. A male baby was delivered with Apgar score 10 at one minute. He had no congenital malformation and his weight was 2.3 kilogram. The baby was wrapped in warm linen and sent to the neonatal unit for care.

The third stage was conducted by controlled cord-traction, and both the placenta and the membranes were completely removed. Ergometrine was not given, but the syntocinon infusion continued. The placenta looked normal and weighed 420 gms. The episiotomy was immediately repaired (as in introduction). Blood loss was estimated to be 100 mls.

Postpartum care

The post-delivery blood pressure was 140/100 mm. mercury, and the pulse was normal. She was well sedated. There was no undue vaginal bleeding and the uterus had contracted well. She continued to be under sedation. Twenty four hour later her general condition was good. She had not had a fit throughout labour up to that time. The blood pressure was 110/80 mm. mercury, albuminuria was trace and the oedema had subsided a bit. She was ambulant and was feeding well orally. The sedation was changed to oral 5 mg. diazepam 8 hourly and by the third day it was stopped. She was transferred to the postnatal ward for rest and to take care of her child. On the fourth day, the blood pressure was normal 100/70 mm. mercury, no albuminuria and the oedema was minimal. The child was breast feeding well. Both the mother and her child were discharged in good health and given an appointment to the postnatal clinic after 6 weeks.

Follow-ups

She had no complaints. Her blood pressure was 100/70 mm. mercury, haemoglobin was 12.5 gm per decilitre. There was no proteinuria. The episiotomy had healed well. The uterus had involuted well and there was no pathology in the pelvis. The child was well. She was then discharged from the clinic and advised to start family planning programme.

COMMENTARY:

The patient presented, had severe EPH - Gestosis (Pre-eclampsia) which necessistated premature termination by induction. This condition, also now widely known as 'Pregnancy-induced-hypertension' in the United States, is the second commonest cause of antenatal admission to Muhimbili Maternity Unit (Mtimavalye, 1978). Its incidence is difficult to determine but it seems to complicate about 5% of all pregnancies (Dewhurst, 1981). EPH-Gestosis is a disease predominiatly of primigravida and especially the young primigravidae as was the patient in this case. The incidence falls in the subsequent gravidae and somehow rising in multiparae where it is usually a superimposed condition over chronic hypertension and in the less common cases it is associated with other conditions such as : multiple pregnancy; poorly controlled diabetes mellitus (Peel, 1962); hydrammios associated with diabetes or hydrops fetalis (Hibbard, 1962) and hydatid form mole. In the last condition, the features of pre-eclampsia occur in up to 50% (Dewhurst, 1981), and infact tend to occur much earlier than the 24th week when pre-eclampsia appears to commence.

In this case, pre-eclampsis was diagnosed at the peripheral clinic by its 3 principal characteristic signs; raised blood pressure, oedema (earliest detection is by excessive weight gain), and later proteinuria. Although the aetiology of this condition is still in theories which are yet unclear, the pathological features are essentially; vascular spasm associated with salt and water retention. And the renal changes which appear to account directly for proteinuria and in all probability for salt and water retention were described by Thomson et al (1972) as:

(1) Swelling and some proliferation of endothelial cells,

(2) increased mesangial cells and matrix,

(3) abnormal granular fibrillary and basement and membran-like deposits between and with endothelial cell in the mesangial matrix in continuity with the endothelial aspect of the basement membrane.

Few years later, Zuspan (1978) worked on the pathophysiological changes and summarized the following changes:

(a) generalized anteriolar spasm (Hypertension, decreased general placental and renal blood flow which worsens according to the seventy of the case),

(b) increased vascular sensitivity and reactivity,

(c) sodium retention

(d) decrease in the glomerular filtration rate

(f) decreased vascular compartment and

(g) negative nitrogen balance.

Current knowledge revolves around the possibility of an immune disorder as the basic aitiological factor. Evidence to this effect (fetomaternal incompatibility) is accumulating; immune complexes have been found in higher than normal concentrations in the blood of pre-eclamptic women, and were found also in the placental bed and the kidney - the two main target organs for the desease process. Futhermore, Ikedife (1980) has come up with an interesting study which emphasises the importance of fetal antigenic make-up in triggering the disease.

Observations show that, this disease varies from place to place, and person to person. Our experience show that, this condition is seen much more frequently along the coastal area

and is more severe, and also the younger primigravidae do fit (eclampsia) at relativelly lower blood pressures than it is reported in Europeans. We have no explaination for that as yet.

Cardinal signs of pre-eclampsia are routinely checked during the antenatal period at the clinics. The prime aim of this exercise is to detect the disease at its early stage because if left to complicate (severe form or eclampsia) it does carry a very high morbidity and mortality for both the mother and foetus. The main cause of maternal death is cerebral haemorrhage, while coagulation problems and liver failure are the next causes in order of frequency (Townsend, 1977). The foetus may die in - utero from the slowly increasing placental infarction (insufficiency) or accidental haemorrhage. Death may occur in the neonatal period from prematurity and its complication. It was for fear of these associated complications that, this patient was admitted for bed rest and close observation. It is a well established fact that good antenatal care can prevent eclampsia, and early detection and treatment of pre-eclampsia does reduce the maternal or foetal morbidity and mortality. Unfortunately, pre-eclampsia is not yet preventable. In this patient, the disease progressed rapidly despite medical treatment, thus threatening the well being of both the mother (mainly) and of the foetus. As was the case here this disease can be cured only by ending the pregnancy and at times it means sacrificing the baby's life. This patient was very fortunate as all went well with her. Her second stage was fairly short and perineum was not tight after the episiotomy, and therefore the premature infant did not sustain injury at birth. Ideally, these

patients ~~should~~ are best assisted in this stage with delivery forceps to protect the foetal head. In this case the "lift-up" forceps which we usually use in our unit weren't available at that moment.

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RECURRENT ABORTIONS DUE TO INCOMPETENT CERVIX.

SHIRODKAR SUTURE.

DELIVERY AT TERM.

NAME: Mrs. A.A.

AGE: 26 Years.

REG. NO.: 946/82

ADDRESS: Upanga West, Dar es Salaam.

REFERRED: From Amtulbhai Clinic.

DATE OF ADMISSION: 14th April, 1982.

DATE OF OPERATION (SHIRODKAR): 16th April, 1982.

DATE OF DELIVERY: 8th October, 1982

DATE OF DISCHARGE: 9th October, 1982.

SUMMARY:

This was a 26 years old woman, Gravida5Para 1 + 3. She presented with an amenorrhoea of 14 weeks and a history of two consequetive mid-trimester abortions. The trend of events during the abortions was suggestive of an incompetent cervix. On examination the incompetence was confirmed and consequently a shirodkastitch was inserted. The pregnancy was carried to term and she had a spontaneous vaginal delivery of a female baby weighing 3.4Kg. The puerperium was unremakable.

ANTENATAL PERIOD:

Present Pregnacy: She had booked at 10 weeks of gestation at a peripheral clinic on 18th March 1982. The last normal menstrual period was 7th January 1982. The expected date of delivery was 14th October 1982. On her first antenatal visit; her haemoglobin was 13.0gm/Decilitre, the blood pressure was 110/70 mm. mercury.

She was 150cm. tall and weighed 58kg. The uterine fundus was of 14 weeks. There was no albumin or sugar in urine. She had no history of vaginal bleeding or abnormal discharge since she conceived. There were no urinary symptoms. Her bowel habits were normal.

Past obstetric history:

She was Gravida 5 Para 1 + 3, and the child was alive. The first pregnancy (1979) was a full term normal delivery, and the baby weighed 2.8kg. She received antenatal care for all her pregnancies, and there was nothing remarkable. Also the puerperial periods were uneventiful. The second pregnancy resulted into an abortion at 8 weeks gestation. This was preceeded by about of high fever, colicky lower abdominal pain, vaginal bleeding and followed by expulsion of the products of conception. The uterus was evacuated. There was no history of excessive bleeding or sepsis thereafter. The third and fourth pregnancies were aborted at $4\frac{1}{2}$ and $5\frac{1}{2}$ months. Their presentations were similar. They were preceeded by painless leakage of liquor for 3 days, then a short duration of an hour or so of suprapubic dyscomfort and terminated in expulsion of live foetuses. The placentae were expelled at the same time. There was no history of post-partum haemorrhage. There were no obvious congenital malformation noted in the expelled foetuses. She also denied history of trauma, or fever precceding these abortions.

Gynaecological History:

She had her menarche at the age of 14. Her cycles were of 5 days every month and the flow was scanty. There was no history of abnormal vaginal discharge or bleeding. She had no history suggestive of sexually transmitted diseases. Apart from the uterine evacuation after the abortion, she had no other gynaecological operation. She did not use any contraceptive.

Past medical history:

She had not had any major illness.

Family and social history:

There was no history of similar problem in her family. There was no history of Tuberculosis, Hypertension or Diabetes mellitus in her family.

PHYSICAL EXAMINATION (On Admission)

General examination: The patient was in good nutritional status, She was not pale and was afebrile. There was no lymphadenopathy or ankle oedema. The pulse rate was 72/minute, regular normal volume. The blood pressure was 120/80 mm. mercury. The thyroid gland was normal.

Cardio-respiratory systems:

There was no abnormality detected.

Musclo-skeletal and central nervous systems:

Both systems were normal.

ABDOMEN:

The abdomen was symmetrical, soft and there was no tenderness elicited. The liver and spleen were not palpable. The renal angles were not tender. The uterine fundus was equivalent to 14 weeks pregnancy. There was no evidence of free fluid in the abdomen.

PELVIC EXAMINATION:

Speculum examination: The vulva and vaginal mucosa were normal. The cervix was livid, thick and the epithelium was normal. There was no scar. The external os was patulous but the membranes could not be visualized. There was no cervical mucus.

Digital examination: The cervix was of normal consistence, and thick. The index finger was easily admitted through the internal cervical os, and the membranes were felt. The uterine size was 14 weeks of pregnancy.

Provisional diagnosis: Intra-uterine pregnancy with previous history of mid-trimester abortions due to incompetent cervix.

Decision: It was decided that a shirodkar stitch be inserted. she consented for the operation.

Laboratory Investigations:

1.	Haemoglobin:	12.9gm/decilitre
2.	Leucocytes count:	Total 7,000 cells/mm^3.
		Differential was normal
3.	Blood group:	'O' Rh "D" positive.
4.	V.D.R.L.:	Negative
5.	Blood urea nitrogen:	10mg/100mls.
	Serum creatinine:	0.2mg/100mls.
6.	Fasting blood sugar:	66mg/100mls.
7.	Cervical mucus:	Negative fern test.
8.	Mid-stream urine specimen:	Negative for sugar and Albumin.
		No bacteria was cultured.

OPERATION:

Insertion of Shirodkar stitch.

Indication: History of recurrent mid-trimester abortions, with clinically an incompetent internal cervical os.

Anaesthesia: General anaesthesia was given as described in case No. 5 (Secondary postpartum Haemorrhage).

PROCEDURE:

The patient was placed in lithotomy position. The perineum and vagina cleaned with 1 per cent chlorhexidine solution, and drapped with sterile towels. The bladder was emptied with a metal catheter.

An Auvard's speculum was gently inserted into the vagina to depress the posterior vaginal wall, and the cervix was well visualized.

The anterior and the posterior cervical lips were gripped at 12 and 6 O'clock position with sponge holders. It was gently pulled forward. A small transverse incision was made anteriorly on the vaginal mucosa about 2cm. above the cervico-vaginal junction. A similar incision was made posteriorly. At the anterior incision, the bladder was pushed away upwards to the level of internal os. Thereafter, a nylon suture no.2 mounted on an anneurysm needle was inserted beneath the mucosa. This was made to emerge at the posterior incision. The suture was re-introducted again through that incision and was passed upwards until it emerged at the anterior incision. The two ends of the suture were tied into a knot. It was fightened until the os could not admit the tip of a finger. The suture ends were cut long for easy identification and removal later. Both the anterior and posterior incision were stitched up with No.0 chromic catgut. There was no undue bleeding. The vagina was mopped dry and the instruments removed.

POST-OPERATIVE CARE:

1. Intramuscular injections of pethidine 100mg, 6 hourly for 24 hours. Then phenobarbitone 60mg. Orally every 8 hours, for 24 hours. These were given to control pain as well as to facilitate bed rest.
2. Complete bed rest for 48 hours.
3. Intravenous infusion of 5 per cent dextrose containing 40gms. Bephenine hydrochloride (Dilatol) in 500mls. The infusion was set at 40 drops/minute and it ran for 24 hours.
4. Blood pressure and pulse rate was monitoned half-hourly for the first 24 hours when the Dilatol drip was on. Uterine contraction, vaginal bleeding and discharge were also regularly checked.

Progress in the Antenatal Ward:

The patient maintained a good general condition. The pulse rate, blood pressure and temperature remained normal. There was no uterine contraction, vaginal bleeding or discharge. She spent four weeks in the ward after which she was discharged with instruction; to refrain from sexual intercourse and not to carry out any streneous exercises. If she notices vaginal bleeding or draining of liquor, or uterine contractions she must report immediately to the hospital.

Follow up antenatal care:

The patient was seen again at the clinic two week from the date of discharge. She had no complaint. There was no history of vaginal discharge or drainage of liquor. She was not pale and had no peripheral oedema. The uterine fundus was was 20/40 and foetal movements were felt. On speculum examination there was no discharge through the cervical os and the stitch was in-situ. Her haemoglobin was 12.9gm/ decilitre. Urine was negative for albumin and sugar.

She made several weekly visits to the clinic. In each visit the cervix and the stitch were checked, and there was no abnormality detected. Throughout her antenatal period all was normal with her pregnancy. She also took her iron and folic acid supplements regularly. She was on prophylactic chloroquine tablets as well.

Removal of the shirodkar stitch: at 38 week's.:

This was performed in the labour ward. She had no complaint of vaginal bleeding or draining of liquor, and there were no uterine contractions. The patient was placed on the obstetric bed and was given an intravenous injection of 100mg pethidine. Then she was placed in lithotomy position. The perineum and vagina was cleaned as described previously. A sterile bivalve speculum was gently introduced into the vagina and opened. The nylon thread was identified,

held and gently pulled anteriorly. It was cut with scissors on one side close to but below the knot and the whole suture was easily pulled out. There was no bleeding or drainage of liquor noted. She was sent to back the antenatal ward where she stayed until delivery.

LABOUR: 8th September 1982

It started in the early hours of that day with mild abdominal pains. In about half an hour from the onset, she experienced a sudden gush of liquor amnii per vagina ("early rupture of membranes") which was clear in colour. She was immediately wheeled into the labour ward. Examination revealed that she had mild labour pains, and the foetal heart rate was 140/minute. The cervix was fully effaced, 4 cms. dilated and the membranes were not intact. There was no cord prolapse. The bony pelvis was spacious.

Labour was monitored with the help of a partogram and it progressed well. She was in second stage five hours later. The second and third stages were conducted as detailed in case No. 4 and were uneventiful. The baby delivered was a male, with Apgar score 10 weighing 3.4 kg. He had no congenital abnormality.

The puerperium was unremarkable. Both the mother and her child were discharged on the next day in good condition.

Post-natal Clinic

She came back six week after delivery as advised. She had no complaint. Both the mother and child were well. She was advised to report back early in the next pregnancy, and thereafter discharged from the clinic.

COMMENTARY:

Recurrent abortions due to incompetent cervix is not infrequent in the obstetric practice. The importance of this cause of abortion clearly stands out amongst others because of its relatively easy treatment procedure which may result into the pregnancy being carried to viability if not term. Indeed the good outcomes of this treatment (cervical cerclage) are very gratifying to both the distressed women and the obstetrician.

In this patient besides the incompetent cervix there was no other apparent cause for the recurrent abortions. Cervical incompetence is either a congenital or acquired abnormality. In the former, the so called "dysfunctional" or "physiological" incompetence, there is a primary abnomality of the cervical musculature. Although there was no obvious evidence of the latter in this patient, some implications could still be made. The incompetence of the cervix was acquired in the first or second, or both pregnancies. She could have sustained un-noticed traumatic injury of the circular muscles at the internal cervical os during delivery or uterine currettage she underwent. This could explain the characteristic mid-trimester subsequent abortions that occured. The cervical trauma due to delivery are commoner where instrumentation has been done, or difficult delivery of a big baby or breech.

In this case, previous cervical trauma or any other underlying cause, was not physically demonstrable. However, the incompetence of the cervix was clinically obvious. This finding together with the patient's characteristic history confirmed the diagnosis. In our centre, diagnosis of this condition is basically clinical.

The accurate measurement of the degree of dilatation of the interal os (Peterson and Kneifer, 1973) is not practiced here as yet.

Cervical cerclage was thus indicated in this patient. She had no contraindicating factors such as labour pains, vaginal bleeding, draining of liquor or evidence of infection. This procedure of cervical cerclage serves two major purposes. Firstly, it corrects the mechanical defect. The second and more important is to change the polarity as well as to discourage the uterine contractions which would have subsequently "taken-up" the cervix and hence effecting abortion. And the operation in this case was performed at the ideal time of between 14 and 16 week's gestation. This is now accepted and recommended by most obstetricians. In our centre like in many others, we do not practice the pre-conceptional insertion of the shirodkar suture. The argument is that, it is not practically possible to gauge the "tightening" of the cervical internal os in the preconceptional period. There is also an additional possibility of having locked-in a malformed foetus which will have to be aborted anyway and you may have to remove the stitch as an emergence. Like-wise, it is wise to ascertain the well-being of the fetus before embarking on the operation, since it might not be indicated in case the foetus is not alive. This is where the ultra-sound has a major role to play. Alternativelly, as it is in our case, the information can reliably be deduced clinically by noting the increase of fundal height, maternal weight, and the presence of foetal movements as reported by the mother. The operation itself is simple, but it carries a real risk as evident by the bad

cervical tears resulting in cases where the stitch is not removed as she goes into labour. It was due to this fear, that this patient was closelly monitored post-operatively both in the ward and at the antenatal clinics. For the same reason, she was given the instructions to observe at home and the removal of the stitch at term before the onset of labour. As is usually the case in these patients, she had early rupture of membranes in the ward. This is actually, why she had to stay until delivery in hospital after removal of the suture; for fear of cord-accident at home in which case it would be difficult to salvage the baby in time.

This case has demonstrated a successful second line prevention of this distressing condition. Thus, the primary defect will still operate in the next pregnancy. Therefore, emphasis on this issue should be on primary prevention whenever possible. If the deliveries are made less traumatic by being conducted by skilled attendants rather than the Traditional Birth Attendants (TBA's) who operate widely in our population, and if the operative procedures such as dilatation and currattage are done gently and skillfully. This would be a positive step towards reducing the incidence of cervical incompetence. But then, and may be the more worrying problem, is the rampant rate of criminal abortions among our young girls. Multiple lacerations if not crushed cervix is a common presentation on admission in these patients. There is no doubt the majority of these will

later present with this condition. Hence, we should anticipate an "explosion" of this problem in the next decade or so. May be we ought to tackle the controversial issue of 'un-wanted' pregnancies now as the primary prevention of incompetent cervix.

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LONG OBSTETRIC COMMENTARY:

INCIDENCE, INDICATIONS AND OUTCOME OF CAESAREAN SECTION AT MUHIMBILI MEDICAL CENTRE IN 1982.

S U M M A R Y.

At Muhimbili Medical Centre, one thousand and seventten caesarean sections (3.9%) were made among 26001 deliveries from 1st January to 31st December 1982. The incidence is low compared to other centres in the developing countries. Poor planning in the Antenatal clinics for 'At risk' patients was observed. Cephalo-pelvic disproportion (30.5%) and previous uterine sear (22%) remained by far the most common indication for caesarean section. Perinatal mortality rate is very high and seems to contain many avoidable deaths. Maternal mortality (1.8%) is also high for the same reasons. It appears caesarean sections were postponed for too long.

The results could be improved upon by; scrupulous antenatal care, planned delivery of all 'At-risk' patients, correction of anemia antenatally, earlier decision for caesarean sections, asceptic techniques (in labour ward, theater, postnatal ward), vigous treatment of sepsis, and prophylactic antibiotic use in selected patients.

INTRODUCTION.

From the Medical history the operation, Caesarean Section is c categorised as one of the oldest operation in surgery, with its origin lost in antiquity and mythology. In the ancient days, the operation was almost always performed for the interest of foetus, while the mother's survival was considered impractical. This was well phrased by Munro kerr (1977): that "the child was from his mother's womb untimely ripped". As a result the maternal mortality rates were very high (80%) mainly due to haemorrhage, because the uterus was at that time left unsutured. It was not until Lebas(1876) advocated the concept of suturing the uterus, and followed by Porro of Italy who brought the mortality to about 50 per cent. The new concept was to perform 'Hysterectomy' in which the cervical stump was sutured into the lower end of the abdominal wound. With time this operative technique underwent several modifications and eventually the lower transverse incision was introduced by Kehrer (1889).

The whole obstetric practice was revolutionized by the introduction of caesarean section. This mode of delivery was then considered safe and it could be employed even late in labour. However the operative technique was modified further and sub-sequently the lower segment caesarean section was introduced. This advancement brought the acceptance of the concept of trial of labour, followed by trial of forceps, ventouse extraction and oxytocin stimulation. On the same basis, the range of indications for the operation was widened. In the second half of this century we have witnessed a tremendous decline of the potential risks associated with this mode of delivery. This has resulted from chemotherapy, improved anaesthesia and blood transfusion facilities. Armed with all these, the modern obstrician

feels assured and confident to employ operative technique either electivelly (planned) or on emergence basis. In general the introduction of the lower segment caesarean section has given an alternative for the difficult vaginal deliveries and the associated birth trauma to both mothers and their babies.

Muhimbili Medical Centre (MMC) offers teaching and referral medical services. Its catchment area is the whole of Dar es Salaam region and part of the coast region. There is an antenatal service for the'high risk-pregnancies'. All difficult deliveries are supposed to be conducted here as well as the abdominal deliveries. There are two wings of the maternity unit under the Department of Obstetrics and Gynaecology in this Centre. One wing is at the main Hospital where all the referrals go to and operations are performed, while the other, Ocean Road Hospital (ORH) is for normal deliveries and acts as a screening unit for the former.

Caesarean section is commonly employed in our obstetric practice, but there is scanty information about this mode of delivery in our population, where disproportion is a major obstetric problem. In addition, with the improved socio-economic and nutritional status of our women the birth weight has increased (Mtimavalye 1974) and therefore a higher rate of disporportion and in turn of caesarean section is expected. From two previous studies conducted in Dar-es Salaam, by Mtimavalye et al(1974) and Semiono(1975) there is an increasing trend of caesarean section rates. This rate was 2.5% (1956-1959) and ten years later it was 2.7%(1969), and by 1975 it was 2.76%. Nevertheless even with this change, the obstetric performance in our place is still far from satisfactory. The perinatal mortality and the maternal mortality rates are in the range of 42.9 and 1.9 per thousand birth respectivelly (Mtimavalye 1979). And the

maternal mortality associated with caesarean section during the same period was high 13.1 per cent (Mtimavalye 1979). Indeed this mode of delivery is far unsafer compaired to the vaginal route, but as stated earlier, it has an important role to play in our obstetric practice thus a balance has to be struck! It was for this reason that this study was considered worth doing in an attempt to evaluate some salient aspects of caesarean section in this centre.

The objectives were broadly intended to determine the incidence, the main indications and the characteristics of the women involved, the outcome of this operative delivery in terms of fetal and maternal morbidity and mortality rates. Also, the study intended to compaire some aspects with the previous studies and finally to contribute sugeestions for improvement of our dynamic obstetric practice.

METHOD AND MATERIALS.

This was a Prospective study undertaken in the Department of Obstetrics and Gynaecology of MMC. Dar es Salaam over the period of 1st January to 31st December 1982 (inclusive). The study population was composed of all women admitted to the maternity unit of this centre who were delivered by caesarean section. Only those patients who were delivered by caesarean section from intact uterii were included in the study. Those patients who were found to have ruptured uterus which were clinically unsuspected, were excluded from the study.

This study was conducted by the author (observer) alone, for the whole period, and the information was recorded on specially prepared forms (see Appendix I). The information was obtained by a combination of interview with the patients and the doctors involved with each patient, as well as from clinical judgement. Both the mothers and babies were followed from the day of operation to the day of discharge from hospital.

R E S U L T S.

THE INCIDENCE OF CAESAREAN SECTION BETWEEN 1ST JANUARY AND 31ST DECEMBER 1982 AT MUHIMBILI MEDICAL CENTRE (MMC.).

Table 1(a):

Number and Rates of total deliveries at Muhimbili and Ocean Road Maternity Units in 1975 and 1982.

Marternity Unit	1975		1982	
	No	%	No	%
O R H.	16367	63.3	12124	46.6
Muhimbili	9471	36.7	13877	53.4
Total	25838	100	26001	100

At MMC (whole department of obstetrics and gynaecology) 26001 deliveries were conducted between 1st January and 31st December in 1982. From table 1(a) there was no significant increase in the absolute number of deliveries between 1975 and the present study (1982) at this centre.

However these results (table 1(a) show a reduction of the rate of deliveries occuring at Ocean Road hospital, and while the rate at Muhimbili maternity Unit has increased by the same number.

Table 1(b):

Number and Rates of Caesarean Section in MMC (whole department) in 1975 and 1982.

Deliveries	1975			1982		
	No.	%	per 1000	No.	%	per 1000
Caesarean	714	2.76	27.6	1017	3.9	39
Total deliv.	25838			26001		

There has been a significant increase in the rate of Caesarean

section at MMC between the two compaired study-years (Table 1(b). The rate of the operation among all deliveries at Muhimbili maternity unit was 7.3% in the present study.

Among all caesarean sections performed at MMC in 1982, (6.2%) 63 women were operated on elective basis, while the rate of classical operation was done on 28 (2.8%) women.

Of all patient delivered by caesarean section at MMC in this study, 468(46%) were antenatally'planned' or told to deliver here, and 42% were admitted on emergency basis via ORH, while 12% of them were referred from other hospitals while in labour. Even in the first group of patient almost all were admitted in labour.

280(27.5%) of all Caesarean sections in the present study were performed in the obstetric theater which is adjacent to the Muhimbili maternity block, while the rest was done in the Main theater. The proportion of caesarean sections among all obstrical and gynaecological operations (2794) of 1982 was 36.4%.

THE CHARACTERISTICS OF WOMEN DELIVERED BY CAESAREAN SECTION AT MUHIMBILI MEDICAL CENTRE DURING 1982.

Table 2(a):

Distribution of women delivered by Caesarean Section by their age and parity at the time of operation (1982).

Age in years	Gravidity 1	2	3	4+	Total %
15 or less	41	-	-	-	41.(4.0)
16 - 25	223	197	83	56	559(55.0)
25 - 35	15	36	51	224	346(34.0)
36 - 45	1	1	3	66	71(7.0)
Total(%)	280 (27.5)	234 (23.6)	137 (13.5)	366 (36)	1017 (100)

From table 2(a); The operation was performed in the primigravidae in slightly less than $\frac{1}{3}$ (27.5%) of the patients. This was comparable with 34.0% in 1975, where primigravida was also the single major parity-group contributing to this operation. In both studies the next common parity-group delivered by caesarean section was in women in their second pregnancy 16.3%(1975) and 230%(1982).

In this study, 4.0% of the women were 'under-age' (15 years or less) and were all primigravidae.

The age range of all women delivered by Caesarean section was 14 to 44 years, with a predominance of 16 to 25 years (55%).

THE NUMBER AND RATES OF CAESAREAN SECTION BY THEIR MAIN INDICATION.

Table 3(a):

Frequency distribution of (single) main indication of Caesarean sections performed at Muhimbili Medical Centre during 1982.

INDICATIONS	No.	%
Previous uterine scar	310	30.5
Disproportion	224	22.0
Malpresentation	107	10.5
Pre-eclampsia/eclampsia	81	8.0
Fetal distress	81	8.0
Poor progress	66	6.5
APH	63	6.2
BOH	31	3.0
Cord precolapse	13	1.3
Miscellaneous	41	4.0
Total	1017	100

NB:

(i) APH = Antepartum haemorrhage.

(ii) BOH = 'Bad obstetric' history.

(iii) Miscellaneous group of indications included;

- Failed induction ---------- 15
- Premature rupture of membranes ------- 10
- Retained second twin ----------10
- Diabetes mellitus ---------- 4
- Repaire vesico-vaginal fistula ---------- 2

(iv) Malpresentation included all, malpresentations and malpositions apart from normal vertex presentations.

(v) Poor progress included abnormal uterine activity and cervical dystocia.

(vi) One or more previous uterine scars was included in the group of previous car, as well as failed 'trial of scar'

(vii) The diagnosis of disproportion was only clinical.

(viii) Fetal distress was also diagnosed clinically; by abnormal fetal heart rate, irregularly of the heart rate and passage of 'meconium'.

(ix) Only severe forms of pre-eclampsia was registered as well as eclampsia.

From table 3(a); the three most frequent single indication for caesarean sections performed at MMC during 1982 were, previous uterine scar(s) 30.5% disproportion 22.0% and malpresentation (including breech presentations delivered by caesarean section) 10.5% of all caesarean deliveries.

Table 3(b):

Number and Rates of 5 most frequent (main) indication for Caesarean Section in the years 1975 and 1982.

INDICATIONS	1975		1982	
	No.	%	No.	%
Disproportion	246	34.5	224	22.0
Prev. Scar	84	11.8	310	30.5
A P H	74	10.3	-	-
Fetal distress	73	10.3	81	8.0
Malpresentation	58	8.1	107	10.5
Pre/Eclampsia	-	-	81	8.0
N =	714	-	1017	-

NB: In the 1975 study, the number of previous scars included only two or more uterine scars.

The five most frequent main indications for caesarean section during the years 1975 and 1982 are summarized in table 3(b). In both studies, the rates of caesarean section by their main indication are more or less similar, (table 3(b); with previous scar and disproportion contributing the most (assumming the frequency of previous scar in 1975 is just as high as in the this study when the number of primary scars is included).

The proportion of primigravidae among the disproportion group was significantly higher in this study where it accounted for 150/224 (67.4%) as compared to 44% in 1975.

IV. THE FOETAL OUTCOME OF CAESAREAN SECTIONS PERFORMED AT MMC IN 1982.

Table 4(a):

Apgar score at one minute of children delivered by Caesarean section - 1982.

APGAR SCORE	NO.	%
0 - 4	100	9.8
5 - 6	105	10.2
7 or more	802	80.0
Total	1025	100

The total number of children delivered by Caesarean section at MMC during 1982 was 1025, including 8 sets of twins.

Of these children 100(9.8%) and 105(10.2%) were severely or moderately asphyxiated according to their respective Apgar scores at one minute.

Table 4(b):

Distribution of number of children delivered by Caesarean section by their Birth Weights - 1982.

Weight (Gm.)	No.	%
1001 ------ 1500	16	1.5
1501 ------ 2000	32	3.0
2001 ------ 2500	96	9.0
2501 ------ 3000	428	42.0
3001 ------- 3500	321	31.5
3501 ------ 4000	117	11.5
4001 or above	15	1.5
Total	1025	100

In this study (table 4(b), 144 (14.0%) of all children delivered by Caesarean section were of Low Birth weight (L.B.W.) i.e. weighed 2500 gm. or less.

Table 4(c):

Number and Rates of Still Birth (SB) associated with Caesarean section in 1975 and 1982.

STILL BIRTH	1975		1982	
	No.	%	No.	%
Total SB	50	6.86	122	11.90
Fresh SB	40	80.0	112	92.0
Macerated SB	10	20.0	10	8.0

The Still Birth rates associated with Caesarean section at MMC in 1975 and 1982 are summarized in table 4(c).

The rate of SB (total) in the present study has more than doubled since 1975, with a significant increase of Fresh Still Births.

The most frequent main indications for caesarean section which resulted into Still Birth deliveries 1982 were;

Pre-eclampsia & Eclampsia 31%

Disproportion 39%

Foetal distress 13%

Cord prolapse 6%

Malpresentation 6%

Poor progress 3%

Previous scar 2%

Neonatal death.

In the present study there were 43 (4.2%) neonatal deaths among all the children delivered by caesarean section. The rate was much lower (3.3%) in 1975.

The main couses of neontal deaths in the present series were;

prematurity 28%

Asphyxia 46.5%

Septicaemia 11.6%

Brain injury 9.3%

Gastro-enteritis..... 4.6%

MORBIDITY AND MORTALITY OF MOTHERS DELIVERED BY CAESAREAN SECTION AT MMC IN 1982.

Table 5:

Distribution of Mothers delivered by Caesarean section by their hospital-stay in days. - 1982.

Days	No. mothers	%
7 or less	150	14.7
8 - 14	736	72.4
15 - 21	111	10.9
22 or more	20	2.0

The hospital stay included the day of operation and discharge.

The average hospital-stay by the mothers was 12.3 days. The longest was 63 days.

The main causes of prolonged stay in hospital were; puerperal sepsis and anaemia.

Mortality:

Eleven maternal death occured in association with Caesarean section at MMC in 1982. Thus the specific maternal mortality rate for Caesarean section was 1.08 (10.8 per 100 caesarean section deliveries). During the same period the maternal mortality associated with caesarean section in the whole department was 0.42/1000 deliveries. The general maternal mortality rate at MMC in 1982 was 0.35% (3.53/1000 deliveries).

The immediate causes of maternal death in patients delivered by Caesarean section were as follows:-

Post-operative sepsis	7	(63.6%)
Haemorrhagic shock	2	(18.2%)
Anaesthetic accident	1	(9.1%)
Pulmonary embolism	1	(9.1%)

D I S C U S S I O N.

At Muhimbili Medical Centre (MMC.), one thousand and seventeen Caesarean Sections (3.9%) were done among 26001 deliveries from 1st January to 31st December 1982. The incidence of Caesarean Section for Muhimbili Maternity Unit was 7.3%. Over the years, the rate of Caesarean section in this centre has remained low, with a very gradual increase for the last two and a half decades. During the mid 50's the rate was 2.5% (1956-1959) then reached 2.7% in 1969 (Mtimavalye, 1979) and thereafter remained at 2.7% (Semiono,1975) and it rose to 3.7% in 1979 (Mtimavalye,1979). Our Caesarean section rates are also far below other African cities, for example at Accra, 10.9% (Klufio et al,1973) and at Lagos 9.8% (Oyegunle,1971). In the United States it is in the range of 6% in some centres (Jones,1976). The resultant effect of our low incidence of caesarean section is reflected by the high number of full term brain injured babies dying soon after delivery birth. The Perinatal mortality rates in this centre is high, and ranges between 44.7 and 42.9/1000 live birth in 1976 and 1979 respectivelly (Mtimavalye,1979), and 53 per 1000 live birth in 1982 (Urassa, 1983).

Planning at Antenatal Clinic:

From this study one major fact emerges; "poor planning in antenatal clinic". This fact is upheld by a number of factors. Among all caesarean sections performed at MMC in 1982, only 63(6.2%) were elective (planned). This is further exemplified by the large number of risk factors marked on the patients' antenatal cards but not acted upon in the antenatal clinic. Another bulk of risk factors was not picked up in these clinics. Among pregnant women who are not at risk and their delivery can be planned include; previous caesarean section(s), malpresentation (including breech), hypertensive disorders of pregnancy and disproportion. In the latter, primigravidae formed the biggest single parity group (27.5%), and 34.0% in 1982 and 1975 (Semiono, 1975) respectivelly. Everett (1975) found a correlation between the height and cephalo-pelvic disproportion among women of Dar es Salaam, where a height of 146 cm. or below would indicate a hospital delivery. Indeed awareness of the possible problems antenatally is the only way to improve the results of caesarean sections and pregnancy in general. In at risk groups, decision on the mode of delivery should be made before labour starts and therefore each pregnant woman at risk is planned for either elective caesarean section, or trial of labour or vaginal delivery. In this way, all at risk patients may be seen at least once in Muhimbili 'at risk antenatal clinic' for this decision. Ideally then, all primigravidae should be included, but again the feasability is doubtful in our circumstances. Thus, clear guidelines should be re-emphasised from time to time to the peripheral clinic staff, and surveillance is mandatory.

Indications:

In about two thirds of the patients (63.0%), Caesarean section was performed due to; previous uterine scar (30.5%) disproportion (22.0%) and malpresentation (10.5%) as shown in table 3(a). From table 3(b), cephalopelvic disproportion and previous uterine scar remains by far the most common indication. However, among the women operated upon for previous scar, poor progress and malpresentation, quite a number of disproportions were probably included. Thus, disproportion is even more common that the figures superficially show. Disproportion is major obstetric problems in the Developing countries as echoed by several workers (Mati 1980, Sambhi 1973 and Lawson 1967). In our institution (MMC) severe cephalopelvic disproportion is in the range of 1.9per cent (Msimbe, 1978). Mtimavalye et al (1974) has predicted an increase of the caesarean section rate in accordance to the increasing birth weight versus the unchanged pelvic stature of our child-bearing-aged women. In the present study the details of patients with previous uterine scars were not looked-into. Nevertheless, our practice is "twice a caesarean section always a caesarean". Trial of primary scar though practiced, is considered a matter of 'exception' rather than a rule.

Fetal outcome:

The perinatal death rate in this study was very high especially the fresh still birth cases. From table 4(c), the still birth rate has increased by more than 100% since 1975. The overall still birth rate for Muhimbili maternity unit are high ranging from 4.5% to 4.3% in 1976 and 1979 respectivelly (Mtimavalye,1979) and in 1982 it was 4.5% (Ngwalle,1982). Still the rate associated with

caesarean section in this study is appalingly high (11.9%). Added to the deaths, asphyxiated babies of birth. accounted for 20 per cent of all live births. The majority were due to avoidable factors occuring intrapartum, which leads to doubting the right indication(s) or at least the right timing of the caesarean sections. Such a high still birth rate is only justified if the caesarean sections were done for purely maternal reasons. A quick look at the associated indication, reveals that the caesarean sections were delayed and that planned delivery antenatally and early decision in labour would have salvaged a good number of children.

Neonatal death occured in 43 (4.2%) among all live births. Death due to asphyxia and brain injury are obvious obstetric problems, again caesarean section was too late. Neontal deaths due to septicaemia which occured in 11.6% may ds a well known obstetric problem in our place. Prolonged rupture of membranes, poor sterile techniques in the labour ward, and at caesarean section, and multiple vaginal examinations in labour are among the common associated factors. All are preventable and avoidable.

Maternal morbidity/mortality:

Majority (72.4%) of the patients stayed-in the hospital for a period of 8 to 14 days while only 150 (14.7%) had been discharged by the 7th postoperative day. Prolonged hospital stay was mainly due to sepsis and anaemia. Infection was probably acquired at different points in time in labour such as: before caesarean section (in labour wards, prolonged labour, frequent vaginal examinations); during operation (poor asceptic techniques and poor maternal hygiene). All factors are probably of influence, and all could be improved upon. Pre-existing anaemia slows down healing of tissues and hence increased chance of infection. Here, antenatal care is important. More efforts

should therefore be put into improving availability of blood for transfusion, since blood loss can also be significant at operation.

Vigorous treatment of infection when it occurs in these cases is also of prime importance. Of course, in practice a number of problem exists to this effect such as: unavailability or inadequancy of the right type of antibiotics and fluids, lack of investigation facilities and delayed results, and poor administration of drugs by the nursing staff. All were among the major factors affecting the success of aggressive treatment.

The Maternal mortality is this study is unacceptably high. There were 11 (1.08%) maternal deaths associated with caesarean section in 1982 which was higher than 0.98% in 1975 (Semiono, 1975). The general Maternal mortality rate at MMC during the same year of this study was 0.35%. The high rate in this study was largely preventable for the same reasons discussed above by earlier intervention.

The high associated mortality rates with caesarean sections in this study, makes the advocation of the wisdom of "more liberal utilization of caesarean section" more difficult to judge.

CONCLUSIONS.

1. Caesarean section rate for Muhimbili Medical Center is low compared to other centres in both developed and developing countries.
2. The majority of 'At-risk' pregnant women are inadequately identified in the antenatal clinics, and if identified no plan for delivery is made.

3. The Perinatal mortality rate among caesarean section patients is very high, and these seem to contain many avoidable deaths. In considerable number of cases, caesarean sections seems to be postponed too long.
4. Maternal mortality is high, again with avoidable and preventable factors.
5. Availability of drugs (especially antibiotics) and blood transfusion is not optimal.
6. Asceptic techniques in labour ward, theater and postnatal ward must be improved.

S U G G E S T I O N S.

1. Scrupulous antenatal care should be effected, with emphasis on increased'pick-up' rate of risk factors in the peripheral antenatal clinics.
2. In the specialist ('high risk') antenatal clinic, a plan for delivery should be made for all at-risk patients.
3. Anaemia should be corrected in the antenatal period especially in patients at risk for caesarean section.
44. Referral of all primigravidae for pelvic assessment at about 36 weeks of gestation should be given a critical review.
5. Decisions for caesarean section should be taken earlier before the fetal condition is desparate. Also there should be a 24-hours service at the obstetric theater.
6. Improvements should be made upon; asceptic technique (availability of anticeptics, instruments, gloves, swabs, towels) in the labour ward, theater and in post-natal wards.
7. When Sepsis occurs, it should be treated vigorously. There seems to be a place for prophylactic antibiotics in our circumstances.

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A P P E N D I X II

CAESAREAN SECTION A MUHIMBILI MEDICAL CENTRE
MARCH - NOVEMBER, 1982.

(A) SER.NO.: ..... REG.NO: ..... DELI.NO.;;;....

NAME: ..... AGE:.....YEARS(UNKNOWN).....

ANC: BK/UBC ..... REF.NO: .....

PARITY:

YES - ORH

- OTHER.

(B) OPERATION: Date .....time: Day/Night.

Emergence/Elective.

Indications: 1.

2.

3.

Type of op: L.S.C.S./Classical.

Complications:

BABY: Apgar score .....

F SB/MSB. Ass. Cause .....

Weight .....kg.

(C) POST-OPERATIVE:

Mother: Recovered well.

Morbidity; Causes: 1.

2.

3.

Hospital stay ..... days.

Died; ..... after.....hrs/days.

Causes: 1.....

2. .....

BABY: No problem

Morbidity; causes 1.

2.

3.

Died; .....after .....hrs/days.

causes: 1.....

2.....

A RETROSPECTIVE STUDY ON THE UTILISATION OF INSTITUTIONAL DELIVERY SERVICES BY PREGNANT MOTHERS IN RURAL MOSHI DISTRICT, TANZANIA.

By: DONALD G. MAWALLA (MD.)

A report on research project in community obstetrics submitted in part fulfilment of the regulations for the degree of Master of Medicine in the Faculty of Medicine, University of Dar es Salaam.

SUMMARY:

A Retrospective study on the utilisation of institutional delivery services by pregnant mothers was conducted in January 1982 at Marangu East, a Ward of Rural Moshi District.

A high demand for Antenatal care (90.6%) was shown to exist, but the frequency of visits and the gestational ages at booking were not satisfactory.

162 (68.9%) out of 235 mothers utilised the delivery Health facilities in that area. Maternal age, parity and distance to the Health facility influenced the utilisation pattern. Major factors contributing to non-utilisation of Health facilities were lack of transport, long distance to Health facilities and cost in terms of transportation to the Health facility and delivery charges.

INTRODUCTION.

Tanzania like other countries in the world strongly up-holds the World Health Assembly's Alma-Ata (1978) 'HEALTH FOR ALL BY THE YEAR 2000'. For a developing country like Tanzania with poor health system, there is need for a lot of improvement of the whole system before this global goal is realized. The Primary Health Care services have a particular need for improvement and especially the Maternal and Child Health (MCH) services. Since 1974 the MCH care which serves about 58 per cent of our population, has been running as an intergrated programme. And, new MCH-units are being established throughout the country at a steady rate. Ended every country irrespective of its stage of social and economic development, has an obligation in meeting the target population is in the rural areas where over 90 per cent of her people live, hence the bulkiest need of health service.

The ultimate goal of the maternity care in general is to meet the health needs of all mothers by providing; prenatal care, identify the high risk pregnancies and provide the appropriate special care for them, and to have all births attended by trained health worker (WHO Tech. Rep. Ser, 1976). This appears to be far from being abhieved in the developing countries. However, there is need to know how far from the goal are our services. Some workers suggests that, the standards of modern obstetrical care in a particular country can be judged by either the percentage of supervised deliveries (Lisasi,1979) or the level of maternal and perinatal mortality rates (Ross 1973). To this effect there is very scanty data available in this part of the world. In this country, Mbilu(1978) in his study of rural Bagamoyo and Malangalila (1979) in a study of rural Iringa came up with institutional delivery services utilization rates of 31% and 65.8% respectivelly. Another

study carried out in the rural areas of a neighbouring country, Kenya, the rate of institutional delivery was only 20%. However the demand pattern for antenatal case by pregnant mothers is more favourable. Report of the Ministry of Health (1979) in this country gives a figures of 70-80 per cent antenatal attendance (at least once) during their periods of confinment.

As mentioned above, the MCH-units are increasing in number and from the available data though scanty, the demands for services in these facilities are low. This was particularly so, for the demand for institutional delivery services, and so it was thought reasonable to carry out a study to investigate this aspect of utilization.

In broad term the objectives of the study were to determine the demand for institutional delivery, the characteristics of the mothers in relation to place of delivery, other factors influencing the utilization of the health facility, and finally to suggest ways of solving the problems where possible.

METHODOLOGY.

During the period of January/February 1982, a retrospective study was conducted in Marangu East. Marangu is a Ward in Rural Moshi District, located about 50 kms. north-east of Moshi town. It is on the slopes of Mt. Kilimanjaro (about 500..... m. above sea level) with an area of about 240 km^3 and a population of over 30,000 people (pop. density 125 per km^2). This Ward has 14 villages seven in each of East and West areas of Marangu.

In this study, five out of the seven villages of Marangu East were randomly selected (two villages had M.C.H.-units). Then two-thirds of the total number of Ten Cells Leaders (TCL's) of each

village were selected in clusters. All women under the selected TCL's who had delivered between 1st January and 31st December 1981 were included in the study. Thereafter, a house to house survey was conducted in which all the women included in the study were interviewed. A structured questionnaire offered help during the interview (see Appendix 1). The Ten cell leaders provided guidance and introduced the interviewer (author) to the families involved.

The population figures of the vallages (1978 census) and the number of women 14-44 years age groups in each village were obtained from the Marangu Ward Secretary's office. From the latter figures, the number of pregnant women each year was calculated on the assumption that, these women make up 20% of that age-group (Bennet 1979). The distances were estimated by the interviewer in kilometers. And the level of education of the women in this study was taken as the level of formal education she attended irrespective of whether she attained that level or not.

Distribution of the health facilities relevant to the study is shown on a map (see Appendix II). Almost, the whole population of Marangu East attend at Marangu Lutheran Hospital for all their delivery services. Consequently, the distances estimated in this study were done with that Hospital as a reference point. The antenatal care offered at that hospital is free of charge, but the delivery services are paid for by the mother at a rate of 75 T.Shs. per delivery.

Limitations:

1. Where the mothers did not know their ages, the interviewer had to estimate them with reference to past important local events such the second world war, Indepence of Tanzania, etc.

(2) 23 out of the 106 21%) TCL's were excluded from the study because they were not available at the time of the survey due to ill-health or were away from their homes for various reasons. Attempts to replace them were not feasible since it required more time to inform them, and this couldn't be afforded by the interviewer.

Note:

(a) The sampe size N was calculated by this formula $N = \frac{Z^2 P.Q}{E^2}$

Where N is the sample size

Z is the Confidence limit factor.

P is the Probability of occurrence of event being measured

Q is the Probability of non-occurrence (1-P).

E is the limit of accuracy or Error that can be accepted by the study.

In this calculation the following figures were used, P = 20% E = 25% of P(i.e.)i.e. 0.05, Z = 1.96

The sample size expected (N) was 246 women. However, in this study the two third number of TCL's was abitrarily taken due to lack of transport at the disposal of the interviewer, and some areas were not accessible with a car and in addition he had a very limited time for the survey. But the required sample size was realized since it coincidentally covered (the interview) 235.

(b) The response rate of the study in terms of the proportion of women delivering between the mentioned period who were interviewed was 24.8%.

R E S U L T S.

TABLE 1.

DEMOGRAPHIC DATA OF VILLAGES OF MARANGU EAST INCLUDED IN THE STUDY (Census 1978).

Villages	Total population	No.women 14-44 yrs.	Calc.no. women preg. each year	No.women in study
MSHIRI	5,100	631	126	51
SEMBETI	1,800	360	72	43
ARISI	5,256	1,051	210	47
RAUYA	4,350	1,024	205	33
SAMANGA	3,649	1,059	212	61
Total	20,155	4,125	825	235

Of the expected (calculated) 825 deliveries last year (1981) in the five villages, 235(28.5%) were interviewed.

Table 2.

UTILIZATION PATTERN OF MCH-SERVICES OF WOMEN WHO DELIVERED IN 1981 BY VILLAGE.

(a) Distribution of mothers according to the number of Ante-natal clinic (ANC) attendance by village.

VILLAGES	No. of women	Attended ANC.			
		x1 No.	x1 %	x3 No.	x3 %
MSHRI	51	48	94.1	45	88.2
SEMBETI	43	41	95.3	39	90.7
*ARISI	47	45	95.7	42	89.4
RAUYA	33	29	87.9	28	84.8
*SAMANGA	61	59	96.7	59	96.7
TOTAL	235	222	94.5	213	90.6

*Villages with MCH-facility, a Hospital at Arisi and a Dispensary at Samanga, At the latter there is no delivery facility available.

Ante-natal attendance at least once and three times or more is indicated by x1 and x3 in the tables respectivelly.

(b) Distribution of mothers according to their place of delivery by village.

VILLAGES	No. of women	Delivery at Health facility		Home delivery	
		No.	%	No.	%
ARISI	51	32	62.7	19	37.3
SEMBETI	43	24	55.8	19	44.2
*ARISI	47	41	87.2	6	12.8
RAUYA	33	26	78.8	7	12.2
*SAMANGA	61	39	63.9	22	36.1
Total	235	162	68.9	73	31.1

From table 2(a), it is evident that the mothers had utilized the ANC facility quite well, since 213(90.6%) of all women had made three or more visits of their last born - this was irrespective of the villages with an MCH-Unit.

In this study, among the 235 mothers who delivered between 1st January and 31st December 1981, only 162(68.9%) of them had delivered at a health facility.

Table 3.

DISTRIBUTION OF MOTHERS ACCORDING TO ANC ATTENDANCE AND PLACE OF DELIVERY OF THEIR LAST BORN.

Place of delivery	ANC Attended		Non-Attender		TOTAL
	No.	%	No.	%	
Home	65	29.3	8	61.5	73
Health facility	157	70.7	5	38.5	162
TOTAL	222		13		235

Table 3, show that there was no difference in place of delivery among ANC attenders. No conclusion could be drawn about the non-attenders since the numbers are too small.

Table 4.

(a) FREQUENCY DISTRIBUTION OF MOTHERS ATTENDING ANC IN RELATION TO NUMBER OF VISITS DURING THEIR LAST PREGNACY.

	No. of visits to ANC							TOTAL
	1	2	3	4	5	6	7+	
No. mothers	2	4	50	74	48	35	9	222
Total visits	2	8	150	296	240	210	63	969

The mean number of visits to ANC was 4.36. On the average each mother had made 4 visits to the ANC of during their last pregnancy.

The median was 4 i.e. more than half ot the mothers had made four visits to the ante-natal clinics.

(b) FREQUENCY DISTRIBUTION OF MOTHERS BY THEIR GESTATIONAL (weeks) AT ANC BOOKING OF THEIR LAST PREGNANCY.

GESTATIONAL AGE IN WEEKS							TOTAL
12-15	16-19	20-23	24-27	28-31	32-35	36+	
21 (9.5)	37 (16.7)	43 (19.4)	73 32.9)	41 (18.5)	6 (2.7)	1 (0.50)	222 100%

The numbers in brackets are percentages.

The mode gestational age at booking for ANC was 24-27 weeks i.e. more than half of the mother had booked at that gestational age. The earliest was at 12-15 weeks and one booked with 36 weeks of pregnancy.

Table 5(c):

DISTRIBUTION OF MOTHERS ACCORDING TO MARITAL STATUS AND PLACE OF DELIVERED OF THEIR LAST BORN.

Place of delivery	MARITAL STATUS		
	Unmarried	Married	Divorce or widow
Home	7	59	7
Health Unit	14 (66.7)	141(70.5)	7 (50.0)
Total	21	200	14

The figure in the brackets are per-centages. The marital status of the mothers did not appear to significantly influence the utlization of delivery health facility in this study. There might be a low utilization rate by the divorce or widows if the power of the study was increased.

Table 5 (d):

DISTRIBUTION OF MOTHERS ACCORDING TO LEVEL OF EDUCATION ATTENDED AND PLACE OF DELIVERY OF THEIR LAST BORN.

Place of delivery	LEVEL OF EDUCATION		
	None	Adult & Prim. Sch.	Second. Sch. or more
Home	8	64	1
Health Unit	15 (65.2)	135 (67.8)	12 (92.3)
Total	23	199	13

The figures in brackets are percentages.

Those mothers with the highest level of education have the highest utilization rates. There was no siginificant difference in the utilization rate between those who had not attended any formal education and those who had attended Adult or Primary School education

Table 6(a):

DISTRIBUTION OF MOTHERS ACCORDING TO ONSET OF LABOUR AND THE PLACE OF DELIVERY OF THEIR LAST BORN.

Place of delivery	TIME OF ONSET OF LABOUR			
	Morning	Afternoon	Evening	Night
Home	7	7	39	20
Health unit	36 (83.7)	34 (82.9)	47(54.7)	45(69.2)
Total	43	41	86	65

The figures in brackets are percentages.

From table (6(a); those mothers who had their onset of labour during the day-time made more use of the delivery health facility, reflecting the less accessibility of these facilities during the night to the pregnant women in the study area.

Table 6(b):

DISTRIBUTION OF MOTHERS ACCORDING TO DISTANCE TO NEAREST DELIVERY HEALTH FACILITY IN RELATION TO PLACE OF DELIVERY OF THEIR LAST BORN.

Place of delivery	DISTANCE (Kms.)		
	0 - 4	5 - 9	10 or more
Home	11	45	17
Health Unit	52 (82.5)	90(66.7)	20(54.1)
Total	63	135	37

The figures in brackets are percentages.

Chi square (X^2) = 9.6 ($0.001 < P < 0.01$)

There was a significant difference in utilization of institutional delivery between the three groups of distances to the health facility. The trend is a declining utilization with an increasing distance.

DISTRIBUTION OF THE HOME DELIVERIES ACCORDING TO THE TYPE OF BIRTH ATTENDANT.

	No.	%
Mother-in-law	27	36.9
Traditional Birth attendants (TBA's)	18	24.6
Mother of pregnant woman	13	17.8
Neighbour	7	9.6
No body	4	5.5
Health worker	3	4.2
Elder sister	1	1.4
Total	73	100

In the present study, relatives (mother-in-law, mother of pregnant woman, elder sister) attended the majority of home deliveries 4.38% (41), and TBA's attended only 18 (24.6%) deliveries. Four mothers had no body to assist them at all during their last born's deliveries.

REASONS GIVEN BY MOTHERS FOR NOT DELIVERING THEIR LAST BORN IN A HEALTH UNIT.

	No.	%
Distance - too long	29	39.7
Lack of means transport.	22	30.1
Lack of money (fare/hospital fee)	11	15.0
Labour was too short	4	5.5
Late in night	1	1.4
Had no escort	1	1.4
Had all previous deliveries at home	1	1.4
Mother is a TBA.	1	1.4
Feel shy to deliver in hospital	1	1.4
Don't know	2	2.7
Total	73	100

Note: Only the first reasons given by the mothers were recorded.

The three major factors associated (implicated) with the failure by the mother to utilize the delivery health

facilities were; long distance to the health facilties, lack of transport and lack of money for fare and hospital fee.

DISCUSSION.

The stratergy for Tanzania in the achievement of health for all by 2000 AD is not hundred per cent. It is unrealistic that such a level of institutional delivery shall be reached under the current economic status of the Third World countries. Nevertheless there is need as was in this study, to look back into the health system already established for evaluation purposes. And as Vogel (1980) puts it, "allocation of resources is decided by the health manager whereas utilization of services is decided upon by consumer (i.e. patient), provided services are available". Thus, utilization patterns reflect the demand for that particular service.

In this study, the mothers in Marangu East had made a high demand for the antenatal care (90.6%) during their last pregnancy. And this was irrespective of the villages with or without an MCH-unit. But their avarage number of visits to the antenatal clinic during their last gestational confinment was low (four visits), and this compaired very closely with that (three visits) made by women in rural Iringa (Malangalila, 1979). The investigator in the present study agrees optimistically with the suggested optimum 6-visits by Malangalila(1979) because, up to this time the quality of care provided by the antenatal clinics leaves a lot to be desired. The gestational age at which a woman books at the antenatal clinic, has a bearing on the number of visits she will make during that period of confinment. From table 4b in this study, more than half of the mothers made their booking at 24-27 weeks, which was also close to that of 28 weeks found by Malangalila(1979).

Whereas, antenatal care aims at ensuring that a pregnant woman reaches term in good health, a delivery attended to by an untrained and/or unskilled person may seriously jeopardise the very outcome of pregnancy. Hence, the need to have institutional delivery whenever possible. The utilization rates for these services vary from one place to another. The rate of institutional delivery in a world wide survey is in the range of 50 per cent (WHO Tech. Rep.1976). In Tanzania the rate range from as low as 31% (Mbilu,1981) in rural Bagamoyo, to 65.8% (Malangalila,1979) in rural Iringa. The latter and the general rate for Kilimanjaro region of 60% (Ministry of Health 1978) compaires very closely with the finding in this study wherein 162 (68.9%) of the mothers had had their last born at a Health facility.

There is no doubt from this study that the demands for antenatal care and delivery services were different, the latter being very low. From table 3 the ANC - attendance had no significant influence over the utilization rate of the institutional delivery services. This indicated that there were other factors inhibiting the utilization of the services. Increasing age of the mothers was found to be significantly related to the declining demand for institutional delivery services, probably the younger women who were mostly of either low parity or primigravidae, are more anxious to seek assistance during delivery. Similarly there was a declining trend for demand with increasing parity of mothers, although it could not be demonstrated to be significant - probably due to the small number involved. Marital status and education level attended by the mother except perhaps for those with the highest level of education, did not appear to influence the demand for institutional delivery services for the same reasons as above. Bennet (1980) feels that primary education

(in this present study 84.7% attended primary +/or adult education) makes the woman conscious of hygiene and nutrition, and thus prevent pregnancy wastage, while secondary school education exposure appear to be a pre-requisite for a change in attitude towards family size. Another main feature of utilization for institutional health services was the distance from the patients residence to the facility. It is known that, the proximity of the facility to consumers (patients) is a strong determinant of utilization (WHO. Report, 1974) and in this study there was a significant decline in demand for the institutional delivery services with the increasing distance (table 6b). And probably indirectly related, was the time of onset of labour of the women in this study (table 6a) whereby the night time was associated with the lowest demand for the delivery services. This feature is explicable considering the circumstances in our rural area where means of transport are scarce if not unobtainable and coupled with long distances, the physical features of that area and the fear of walking in the darkness makes the health facilities almost inaccessible.

Faced with the above two choices, the unfortunate pregnant women were left with one choice, that is to deliver at home either under the assistance of untrained personnel or without supervision at all. In this study the women who had domicilliary delivery were assisted by relatives mainly (43.8% cases), while TBA's attended only 24.6% of the home deliveries. Probably, the lower number of TBA's in that study area accounted for this finding. However, the Traditional Birth Attendant (TBA's) play very major roles in other places of this country, for example, in rural Bagamoyo in the Coast region (Mbilu,1978) they attend 69% of the home deliveries. In Nigeria the TBA's are more established and play an even bigger role

where they also offer antenatal care to the pregnant women (Oyebola, 1980). It appears, the majority of home deliveries in the study area of Marangu, were not planned or expected as demonstrated by type of attendants who were mainly relatives who happen to have been there at the time of delivery-indeed it is more risky!

The three major factors associated with non utilization of the delivery health facility in the study area were; long distances to the facilities, lack of transport, and money for fare and delivery fee at the hospital.

CONCLUSION:

From this study, the women who had delivered during 1981 at Marangu East demonstrated a high (90.6%) demand for antenatal care. But their frequency of visits to these clinics was low, with an average of four by each mother. This was partly due to their late booking, at these clinics (mode of 24-27 weeks at booking).

The demand for institutional delivery was shown by about two thirds (68.9%) of the women, while the rest one third delivered at home. Attendance to antenatal clinic did not appear to have an obvious positive effect on the demand for institutional delivery services.

Among the factors found to have influenced the demand for modern delivery services were; age, parity of mothers, onset of labour at night and distance to the health facilities - all of which tended to cause a decline of the demand for the facility. This was observed with increasing maternal age, parity and distance to the health facility. But it was not possible to detect the effect of education level except for highest level, and marital status of mothers as regards the demand, probably because of the small numbers involved.

Domicilliary deliveries were attended to, mainly by who-ever was arround at the time of delivery, since relatives attended 43.8% and TBA's only 24.6% of them. The major reasons for non-utilization of the health facility at the time of need were transport, distance and cost.

RECOMMENDATIONS.

A. Short term:

(i) MCH-workers in particular should give more health education to achieve more coverage and motivation of the pregnant mothers. More emphasis should be on the need to attend antenatal clinics, earlier booking and increased frequency of visits. Also mothers in the higher age and parity-groups should be discouraged from domicilliary delivery and cautioned that every labour can be complicated irrespective of its number, hence, there is no question of 'experience'.

(ii) The Regional authorities and villagers should establish delivery services at the Samanga health facility as a matter of urgency since the Rural health centre at Mwika is almost inaccessible to the pregnant women of Marangu East. This can be done on self-reliance basis by the villagers with financial assistance from the Government.

B. Long term:

Since the problems of transport, cost and distance may either take too long or not be feasible, then the Ministry of health should take long term measures to ensure the delivery services are provided by alternatively cheaper and practical means. To that effect, it is suggested that, Traditional birth

attendants (TBA's) and village health workers (VHW's) should be trained to identify the at risk mothers early enough and give advice accordingly. At the moment we do not have enough VHW's and infact in most areas there aren't any. This carde may also be provided with delivery kits to attend urgent deliveries at the mother's homes at night or during the rainy seasons when the rivers are flooded and the roads impassable due to thick mud.

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APPENDIX I.

QUESTIONNAIRE

(Only for mothers who delivered 1st January-31st December, 1981)

Serial No. .....

Part I.

(a) Name of Mother .....

(b) Name of Village ..... Distance from MCH KMS
UNIT
HOSPITAL KMS

(c) Age of mother in years: 15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 +

(d) Parity:-.....

(e) Marital Status: Unmarried .....
Married .....
Devorce/Midow .....

(f) Education: No formal education .....
Primary School education .....
Secondary School or more .....

Part II.

(a) Did you attend ANC-Previous/last preg? YES/card .....
NO .....

(b) Gestational age - first visit to ANC. .....
(months)

(c) Recal at what time of the day did labour pains start in your last delivery; morning .....
Afternoon.....
Evening .....
Past midnight .....

(d) Eventually, where did the delivery take place;
Disp/H.Center .....
Hospital .....
At home .....

(e) If at home, who attended the delivery; TBA .....
Health worker .....
Others .....
Specify) .....

(f) Just after delivery of the child did it cary (alive)

- not cry (dead)

How about the mother? No problem .....

Had problems but not sent to Hospital

.....

Had problems sent/Admitted in HOspital

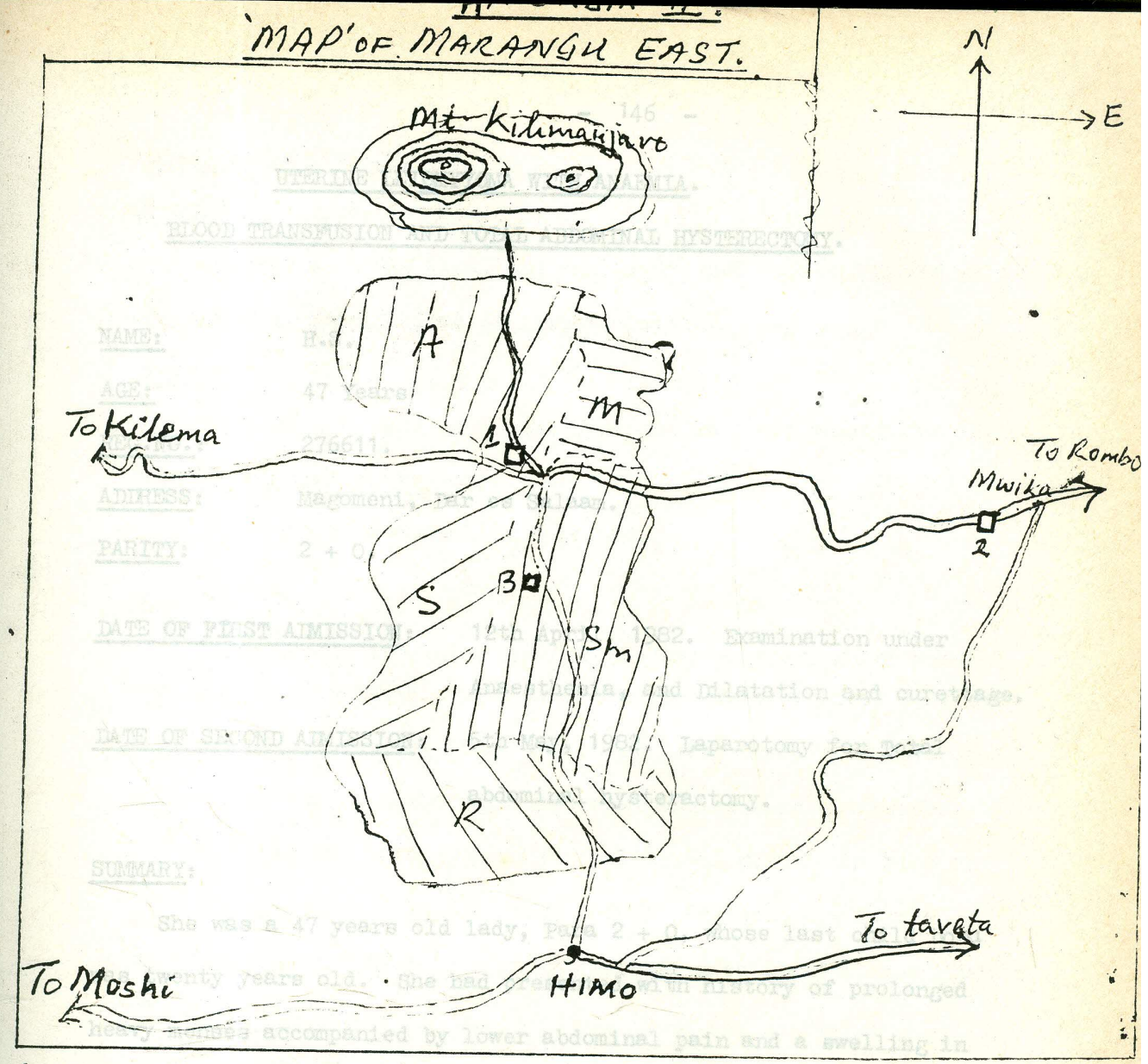
Died.

Part III:

What were the reasons which made you deliver at home

.....

'MAP' OF MARANGU EAST.



KEY.

- Shaded area : Marangu East showing village included in this study.
- A = ARISI Village.
  M = MSHIRI Village.
  S = SEMBETI Village.
  Sm = SAMANGA village
  R = RAUYA Village.
- □ = Health unit (Facility)
  1 : Marangu Hospital.
  2 : Mwika Rural Health Centre.
  3 : Samanga dispensary.

* Not to scale.

UTERINE LEIOMYYOMA WITH ANAEMIA.

BLOOD TRANSFUSION AND TOTAL ABDOMINAL HYSTERECTOMY.

NAME: H.S.

AGE: 47 Years

REG.NO.: 276611.

ADDRESS: Magomeni, Dar es Salaam.

PARITY: 2 + 0.

DATE OF FIRST AIMISSION: 12th April, 1982. Examination under Anaesthesia, and Dilatation and curettage.

DATE OF SECOND AIMISSION: 5th May, 1982. Laparotomy for Total abdominal hysteractomy.

SUMMARY:

She was a 47 years old lady, Para 2 + 0, whose last child born was twenty years old. She had presented with history of prolonged heavy menses accompanied by lower abdominal pain and a swelling in the lower abdomen. On examination, she was found to be pale and had multiple uterine leiomyomata. The anaemia was corrected with blood transfusion, and a total abdominal hysterectomy was performed. Her recovery was unremarkable, and she was discharged on the eighth post-operative day.

History of Present illness:

This patient had presented with history of prolonged menses, lower abdominal pain and a swelling in the lower abdomen for seven months.

She had been well until seven months prior to admission when she noticed a slowly growing mass in the hypogastrium. The mass was was associated with dull pain in the lower abdomen. About the same

PHYSICAL EXAMINATION:

General condition:

She was a middle aged, and well nourished lady. She was pale. There was no pedal oedema or lymphadenopathy.

Breasts:

Both breasts were of normal size and no lumps were palpable.

Cardio-Respiratory Systems:

There was no abnormality detected.

ABDOMEN:

There was an irregular mass on the hypogastrium which was not moving with respiration. The skin over the mass had several native thererapeutic marks but there was no surgical scar. The liver and spleen were not palpable, and the renal angles were not tender.

The mass was arising from the pelvis and was of the size of 20 weeks pregnancy. It was hard, nodular and mobile. It was slightly tender. There was no evidence of free fluid in the abdomen.

PELVIC EXAMINATION:

Speculum examination:

The perenium, vulva and vaginal mucosa were normal. The cervix looked healthy and there was no discharge through the cervical os.

Digital examination:

The cervix was smooth, firm and the cervical os was closed, The uterus was bulky, nodular with a size equivalent to 20 weeks pregnancy. It was multinodular, hard in consistence and mobile though tenderness was elicited on moving it. There were no masses in the fornices.

Provisional diagnosis:

Multiple uterine leiomyomata with anaemia.

time, she developed excessively heavy menstrual flow which was also prolonged and painful. These periods lasted seven to nine days with clots. She also complained of occasional intermenstrual bleeding but she had no symptom of post-coital bleeding or dyspareunia. There was no history of abnormal vaginal discharge. Her micturation was normal, and she had frequent constipation associated with the swelling in the lower abdomen. She had had no fevers, or loss of weight or swelling of the legs in association with the mass.

Previous Gynaecological History:

Her menarche had been at 13 years of age. Her previous menstrual cycles were of 4 days, once a month. The menses were painless and of scanty flow. Her last menstrual period had been on 23rd April 1982. There was no previous history suggestive of venereal diseases.

Obstetric History:

She was Para 2 + 0 with both children living. Her last child was twenty years old. Both deliveries had been full term normal deliveries in hospital. She had no history suggestive of puerperal sepsis.

Previous Medical History:

There was no history of major illness. She had not had any surgical operation.

Family History:

She dinied history of contact with a patient of pulmonary tuberculosis. In her family, there was no history of diabetes mellitus, high blood pressure or uterine Cancer.

Social History:

She was a housewife. She did not smoke cigarrettes. She did not take alcohol.

INVESTIGATIONS:

1. Haemoglobin : 8.6gm/decilitre
2. White blood cell count: Total was 6,000 cells/mm^3.
   Differential was normal.
3. Blood group : 'O' Rh "D" Positive.
4. Blood Urea : 15mg/100 mls.
   Serum creatinine : 0.4mg/100 mls.
5. Mid-stream urine : for sugar was negative and was also negative for Protein.
   Microscopy : Few epithelial cells. There was no leucocytes or red blood cells seen. No casts.
   Culture : No bacterial growth.
6. Stool : No ova or Cyst of parasitic helminths seen.

EXAMINATION UNDER ANAESTHESIA, DILATATION AND CURETTAGE: 14TH APRIL 1982.

The patient was transfused with blood on the day of admission to correct her anaemia. Pre-operative haemoglobin was 10.0gm/decilitre.

Anaesthesia:

Atropine 0.6mg. was given intramuscularly as a premedication. She was then induced with Thiopentone sodium 250mg. intravenously, and she was maintained on Oxygen and Nitrous Oxide using a mask.

When the patient was well anaesthetised, she was placed in the lithotomy position. The perenium was cleaned, drapped with sterile towels and the urinary bladder was catheterised with a metal catheter.

Vaginal Examination:

The external genitalia and vaginal mucosa were normal. The cervix was healthy-looking, smooth, firm and the cervical os was closed. A pap-smear was taken. The uterus was enlarged equivalent to pregnancy of 20 weeks, with a nodular surface. Mobility of the uterus was slighily limited. There were no masses palpable in the fornices.

Dilatation and Curettage:

The cervix was dilated up to Hegar's numbers 8 dilator. Then endometrial curettage was done. Moderate amount of normal-looking endometrial tissues were collected and sent for histopathology.

Pap-smear Results:

Normal smear (Pap I)

Histology Results:

Normal endometrial tissue in secretary phase. No malignant cells seen.

Preparation for Laparotomy:

Her haemoglobin level was 10.3gm/decilitre. The consent for Anaesthesia and operation was obtained from the patient. The abdomen and perenium were shaved, and she was given soap enema the night before the day of operation. One and a half litres of blood were crossmatched and reserved for the operation.

OPERATION: 12th May 1982. Total Abdominal Hystetectomy:

Premedication: She was given Atropine 1mg. intramuseularyl.

Anaesthesia: Induction was done with, Thiopentone sodium 250mg. and soline 50mg. intravenously. A cuffed endotracheal tube was then passed and she was maintained on Nitrous Oxide and Oxygen (50/50).

Procedure:

The patient was placed in moderate Terndelenburg's position. Under sterile condition, the urinary bladder was catheterised with Foley's urethral catheter number 14 and the baloon inflated with 15mls. of sterile water. Then the abdominal wall was cleaned with hibitane solution and flavine in spirit respectively. The abdomen was then drapped with sterile towels.

Incision:

A sub-umbilical mid-line incision extending from the upper border of the symphysis pubis to just below the umbilicus. Abdomen opened in layers as detailed in the introduction.

Findings:

Multinodular uterine leiomyomata held posterioly by thin adhesional bands. The fallopian tubes were also kinked by adhesions. Both ovaries looked normal. No ascitic fluid.

Done:

A self-retaining retractor was inserted, and the bowels were pushed away from the operation cite with two wet abdominal packs with their tails held with artery forceps. Then a myomectomy-screw was deeply inserted into the top-most myoma, and with the help of this screw the uterus was lifted well up. Adhesions were released by blunt dissection.

The round ligaments were held by two clamps on each side, divided between the clamps and transfixed with number 2 chronic catgut. The vesico-Uterine paritoneal reflexion was cut from its upper margins of its loose attachment to the uterus and carried medially. Then the upper portion of the broad ligament was perforated with the help of the index fingers close to the uterus below the attachment level of round ligaments, fallopian tubes and the utero-ovarian ligaments. This apature was enlarged, and the round ligaments and the other two structures were held as two separate pedicles. And to these pedicles, three stout clamps were applied, and divided between the two lateral and the other medial clamps; and in turn transfixed with no.2 chronic catgut. This was repeated on the other side.

While the uterus was still pulled up, the bladder was pushed down to below the level of internal os by blunt dissection using a gauze-covered index finger applied mainly on the midline. By this process the parametrium was also pushed down on both sides. Then the Uterus was pulled strongly upwards and to the right by the assistant, to expose the left uterine vessels. These vessels were clamped and divided at the level of internal os and transfixed with chronic catgut no.2. The same procedure was perfomed on the right side. The posterior peritoneal reflexion was also pushed down until the rectum was freed from the posterior vaginal wall, then the two utero-sacral ligaments were clamped, severed in between the clamps and transfixed.

To the dense basal segments of the broad ligaments, straight Kocher's forceps were applied parallel to the uterine axis very close to the cervix. And this was performed in succession followed by division and ligation. As the vaginal vault was reached a small transverse incision was made on it and in turn extended to the vaginal lateral angles. Then the posterior vaginal wall was cut close to the cervix until the whole uterus was removed. The cut vaginal edges were held by Allisforceps and then the vaginal vault closed by interrupted sutures with chronic catgut. no.2. The first two sutures were mastress sutures at the lateral vaginal angles which also transfixed the stumps of utero-sacral ligament. Haemostasis was ascertained at the closed vaginal cuff. Then pelvic reperitonization was done by opposing the free edges of the utero-vescical and utero-saeral paritoneal flaps.

The abdominal cavity was mopped dry and, the gauze and instrument counts was found to be correct. Then the abdominal wall was closed in layers (as in introduction). The estimated blood loss was 300 mls.

Macroscopic appearance of the uterus; multiple intramural and sub-mucosal fibroids, with few sub-serosal fibroids. The endrometrium looked normal.

Post-Operative care:

1. Injection of Morphine 15mg. intramuscularly 6 hourly for 24 hours.
2. Intravenous fluids: 5% Dextrose 2000mls. in 24 hours.
3. Ampicillin 500mg. intravenously six hourly, until the patient could take oral Ampicillin 500mg. three times a day in a course of seven days.
4. Continous urinary bladder drainage for 48 hours.
5. Monitoring: blood pressure and pulse rate ½ hourly for first 8 hours, then 4 hourly, Temperature, input and output was monitored 4 hourly.
6. Blood transfusion: 1 litre.

First 24 hours Post-operative:

She was in good general condition. Her blood pressure was 110/70mm. mercury, the pulse rate was 88/minute and her temperature was 36.8°C. The urinary output was 1200mls. of clear urine. The lung fields were clear. There was no abdominal distension, and the abdomen was soft but the bowel sounds were absent. There was a slight bloody-discharge per vaginum.

Second to Seventh post-operative day:

The patient remained in good general condition. The blood pressure pulse and urinary output was normal. The chest was clear. The abdomen was soft and the bowel sounds were scanty by the second day. She was allowed to take oral sips and the urethral catheter was removed on the same day. On the third post-operative day, the intravenous infusion was discontinued and the patient was ambulant. Her haemoglobin level was 10.5gm.per decilitre on the

fourth day. All the stitches on the abdomen were removed on the seventh day and the wound had healed well. She had no fever all through.

On the eight Post-operative day:

She was in good general condition. Her bowel habits and micturation were normal. There was no tenderness in the abdomen and the scar had healed. She was discharged and she was given an appointment to attend gynaecology clinic in six weeks time.

Follow-up at Gynaecology Clinic: (2nd July 1982).

She had no complaint, and her general condition was good. There was no problems with her micturation or bowels. She had no history of vaginal bleeding or discharge.

She was not pale. There was no tenderness or mass palpable in the abdomen, and the scar had healed well. There was no vaginal discharge. The vaginal vault was well healed and no pelvic mass was palpable.

Hostology report:

Uterine leiomyoma. The endometrium was normal in early secretory phase. The fallopian tubes showed features of non-specific chronic inflammatory process. There were no malignant cells seen. The patient was discharged from the gynaecology clinic.

COMMENTARY:

Uterine leiomyomata are the commonest tumours of women. They are found in all races and the incidence is estimated to be one in five women over the age 30 years. The tumours are common during the reproductive years but they are rare before the onset of puberty, and almost do not grow after menopause. This is probably explained by the observation that, the tumour's growth is associated with oestrogen stimulation, otherwise the exact pathogenesis is still

obscure. There appears to be a racial factor associated with the occurence of the tumour; because the black woman seems to be more susceptible and their peak age of the incidence is earlier.

Presence of uterine leimyoma also appear to have, a definite association with sterility. While it is accepted that the tumours are commonest in women who have not born children this is not always the case, since they develops despite having children. More often, as was the case in this patient, the tubal and hormonal imbalance factors account for the infertility rather than the presence of the myomata. In these patients, probably the latter factors account for both the infertility as well as the occurence of the myomata. At laparatomy in this patient there was evidence of residual pathology of previous pelvic infection with dense adhesions involving the fallopian tubes. Salpingitis and at times endometriosis are frequently present in association with uterine myomata.

This patient was anaemic due to the heavy bleeding during her menses. The symptom of abnormal endometrial bleeding is perhaps the commonest and usually it takes the course of hypermenorrhoea. The patient had prolonged, excessive menses with shortened internal and occasional intermenstrual bleeding. The submucous leiomyomata which she had, had contributed to this symptom, since the tumours in anatomical locations, such as intramural or subserosal, are rarely associated with abnormal vaginal bleeding. As the submucous myomata grows and enchroaches on the endometrium, the epithelium layer thins over the surface of the projecting tumours. These tumour are also prone to become necrotic thus presenting with haemorrhaggic episodes.

There were no obvious degenerative changes in the leiomyomata removed from this patient to suggest the cause of her symptoms of pain. Although pain is uncommon in such uncomplicated uterine myomata, the pressure effects of the large tumour in the pelvis as well as the pain from the myometrial contractile efforts to expell the submucous myomata may have been responsible. Also as pelvic inflammatory disease, endometriosis or adnexal masses may contribute to the increased lower abdominal pain. This symptom of pain should be taken seriously since it might serve as an warning for another condition co-exsting with the myomata, and thus influence the line of treatment, especially the approach at operation.

Treatment of thiscondition (leiomyoma-uteri) at our centre ranges from conservatie to operative removal. The conservative management is applicabe where the tumour is small and symptomless. These patients are reaured and kept under regular supervision to detect any complicatiowhich might arise. It is not a common practice to give X-rayherapy for this condition at our centre.

This patient was bjected to total abdominal hysterectomy. This treatment was indited because of the large size of the tumour, her aged of ove40 years, she had satisfied her desire for child-bearing, and e tumour was symptomatic (menorrhagia and pain). The ovaries werconserved since they looked normal and the patient had not reaed menopause.

Pre-operativelly tpatient was built-up and attempts done to exclude carcinoma of dometrium which may co-exist with leiomyomata-Uterin. A p-smear was also done. These procedures

are very important since their outcome may influence the decision to operate or not, also on the surgical approach and the extent of surgery. Generally, the morbidity and mortality of the operative treatment is significantly reduced by good pre-operative preparation of the patients.

Most patients with uterine leiomyomata are treated by total abdominal hysterectomy unless there was strong indication for the uterus to be conserved. Myomectomy is performed in young patients who have a possibility of successful pregnancy after operation. This is a disadvantageous form of treatment because of the well established fact of recurrence of the fibroids. This is either from a seedling left in or overlooked at the first operation, or due to the persistence of the predisposing factor in the patient. In some studies, it has been found that, there is a fifty per cent chance of conceiving and carring pregnancy to term in patient who have had multiple myomectomy.

Although dilatation and curretage was performed prior to hysterectomy in this patient, it is not a routine practice here. It is carried out on patients with altered menses or other forms of abnormal vaginal bleeding. Where it is not done, the endometrium is subjected to macroscopic inspection at operation before the abdomen is closed.

CRIMINAL ABORTION
BLOOD TRANSFUSION AND
EVACUATION OF THE UTERUS.

NAME: Miss J.B.K.

REG. NO.: 298032

AGE: 19 years.

OCCUPATION: House-maid

RELIGION: Roman Catholic

ADDRESS: Masaki, Dar es Salaam.

DATE OF ADMISSION: 30th March, 1982

DATE OF DISCHARGE: 2nd April, 1982

SUMMARY.

This was a 19 years old, unmarried house-maid. She presented with history of heavy vaginal bleeding with clots for a short duration, following an amenorrhoea of three months. The history of provoking or interference with the pregnancy was subdued. Clinical examination revealed that she was in haemorrhagic shock. Also with multiple laceration of the cervix and incomplete abortion. Resuscitation with intravenous fluid and blood transfusion was performed. Then the uterine cavity was evacuated surgically. She recovered without complications.

Main Complaints:

Lower abdominal pain

Heavy vaginal bleeding.

all were for six hours prior to admission and followed an amenorrhoea of three months.

History of present illness:

The patient had been well until six hours prior to admission. When she experienced sudden onset of colicky lower abdominal pain. The pain was more severe suprapubically and radiated to the thighs and lower back. This was accompanied with brisky vaginal bleeding with passage of lots of blood clots. She also claimed to have noted a "meaty" lump among clots. She was 12 weeks amenorrhoeic. She also complained of dizziness, neusea and general weakness. There was no history of trauma or fever. Her micturation and bowel opening were normal.

Past gynaecological history:

She had her menarche at 15 years of age. Her cycles were regular, of 4 days after every 28 days, painless and the flow was normal. Her last normal menstrual period was 4th July, 1982. There was no history of abnormal vaginal bleeding or discharge. She had no history suggestive of sexually transmitted diseases. She had been practising rhythm-contraception since her menarche.

Obstetric history: She was a primigravida.

Past medical history: There was nothing of significancy.

Family history:

She had not had contact with a patient suffering from pulmonary tuberculosis. There was no history of epilepsy, diabetes mellitus or hypertension in her family.

Social history:

She had had six years of primary school education. She was not married but had a regular boy-friend. She did not smoke cigarrette but occasionally drank alcohol.

PHYSICAL EXAMINATION.

General examination:

She was a young girl in good nutritional status. She was in pain, afebrile and pale.

Respiratory and Central nervous systems:

There were no abnormalities detected.

Cardiovascular system:

The pulse rate was 100/minute, regular of weak volume. The blood pressure was 90/60 mm. of mercury. There was no cardiomegaly. The heart sounds SI and SII were normal and there was no murmur.

Abdomen:

The abdomen was scaphoid and moving with respiration. There was no surgical scar. The abdomen was soft and both the liver and spleen were not palpable. The renal angles were not tender. There was slight tenderness without guarding on deep palpation over the hypogastrium. There was no mass palpable. Bowel sounds were normal.

Pelvic examination:

The whole perineal area was blood-stained and there was slight blood-oozing from the introitus. On speculum examination, the vaginal mucosa and cervix were not well visualized due to blood clots. Digital examination revealed that; the vulva and vaginal mucosa were normal. The cervix was soft, thick but the surface was irregular. There were products of conception filling the cervical os which was 3 cm. dilated. The uterus was bulky, soft, of the size of 10 weeks pregnancy. It was slightly tender. There was no tenderness or other mass in the fornices.

Provisional diagnosis:

Incomplete abortion, probably criminally induced with haemorrhagic shock.

Decision/Pre-operative management:

It was planned to resuscitate the patient first, then re-examine the cervical lesion, and later evacuate the retained products of conception from the uterine cavity.

Intravenous fluid 2.0 litres of Normal Saline and 0.5 litre of blood were transfused. The blood pressure rose to 110/80 mm. mercury and the pulse rate was 88/minute with good volume. A course of penicillin 2.4 mega units was given six hourly for 24 hours, then Procain Penicillin. Fortified 1.2 mega units once daily was given for 3 days. The perenium was shared and she also consented for the operation.

Laboratory investigation:

1. Haemoglobin: 8.2 gm per decilitre.
2. Blood group: 'O' Rh "D" positive.
3. Urine : was negative for albumin (by Albustix)
   : was negative for sugar (by clinistest tablets).

OPERATION: Evacuation of uterus.

Prelimary procedure and Anaesthesia:

These were done as detailed in case no 5 (secondary post-partum haemorrhage). An injection of ergometrine 0.5 mg. was given intravenously.

Procedure:

The perenium and vagina were cleaned with 1 per cent chlorhexidine solution and draped with sterile towels. A lubricated metal catheter was introduced into the bladder and 150 mls of clear urine removed.

Then a lubricated Auvard's weighted speculum was gently introduced into the vagina. Blood clots in the vagina were removed with a sponge holder. The vagina and cervix were well visualized. There were multiple laceration on the cervix but there was no active bleeding.

There was no foreign body seen. Some placental tissue and membranes were seen at the cervical os. The Auvard's speculum was withdrawn, and the index finger introduced into the uterine cavity. With this, the products of conception were loosened from the uterine wall as the left hand of the operator was applied on the abdomen to stablize the uterus. Thereafter the hand was withdrawn and the speculum replaced. The cervix was gently pulled anteriorly with a volsellum forceps. Consequently the products were removed with an ovum forceps, by grasping and pulling them out of the uterus. This was felt to be inadequate, hence the uterine cavity was curatted with a large sharp curette. There was no more uterine bleeding and uterus was noted to have contrated well. The products removed were macroscopically normal placenta and membranes fragments and were not foulsmelling. They were finally sent for histopathology. The instruments were removed, the vagina and perenium mopped dry with sterile gauze. There was no more bleeding noted and a sterile pad was applied on the vulva.

Histology results:

Fragmented tissue showing chronic villi and decidua.

Post-operative care:

The blood pressure and pulse rate were observed every $\frac{1}{2}$ hour for 6 hours, then 4 hourly for 12 hours. They were normal, and there was no vaginal bleeding. She was transfused with 1.0 litre of blood, and she was also given paracetamol two tablets thrice a day to control pain.

After 12 hours she was reviewed; temperature was 37°C, she was not pale, the abdomen was soft, not tender and there was no mass palpable. There was no vaginal bleeding or discharge. Her micturation was normal.

The following day she was found to maintain a good general condition and was afebrile. Haemoglobin was 10.3gm/decilitre. The cervical lesion had healed well and there was no evidence of sepsis. She was advised on

a more reliable contraception before she was discharged. She was given Ferrous sulphate tablets to use at home, 200mg. twice daily and Folic Acid 5 mg. once daily for 4 weeks. She was also given an appointment for follow-up at the gynaecology clinic, six weeks later.

Follow-up:

She had no complaint. She was in good general health. There was no history of abnormal vaginal bleeding or discharge. She had had her menstrual period after the operation, a week before. The abdomen was soft, no tenderness or mass palpable. There was no abnormality found on pelvic examination. Her haemoglobin level was 13.1 gm. per decilitre. She had made up her mind about contraception, and she promised to have a loop insertion from her nearby Maternal and Child Health Clinic (MCH). She was discharged from the clinic.

COMMENTARY:

Any pregnancy expelled or extracted before the 28 complete weeks of gestation is an abortion even if the foetus is not alive. Alternatively, when gestational age is not known, the fetal weight of 1000 gm or less is classified as an abortus. Indeed abortion is a problem in Dar es Salaam where abortion and its complications are major cuases (50-75 per cent) for admissions into the gynaecological wards of this centre. It is practically impossible to establish the exact incidence of abortion in our community because women can abort without even knowing they were pregnant. This is even more difficult (Lwanga 1979, Donald 1979, Mkini 1977) with criminal abortions, since the patients only present themselves at a hospital when they have life-treatening complications.

In the case presented, she was a teen-age girls, who had persistentntly denied history of the pregnancy being criminally induced. But there was clinical evidence to that effect, and the products were

incompletely expelled. She had also sustained laceration all around the cervix from which she had bled at home to the extent that she was already shocked when she arrived at hospital. The story of interference although commonly subdued, others do reveal it when their conditions worsen. Unfortunately this was not the case with this patient and therefore we were unable to know about the type and nature of the instrument used in this attempt. From her history, the course of events were suspicious. She had claimed that the abdominal pains preceded the vaginal bleeding which is usually the reverse in spontaneous abortion. The traumatic cervical lesion could not be explained by any natural cause, hence its presence was an evidence for the above suspicion. Again, her background socio-economic characteristics as described by several workers (Lwanga, Klein and Karten) had put more weight on the consideration of criminal abortion.

Our observations unlike others, even those patients who have had spontaneous abortions do report to hospital when there are complications. For the cases of criminal abortions, the patients present themselves in poorer conditions or at the edge of death. Thus the serious complications of abortions are usually associated with illegal interference. Most common complications of criminal abortions are trauma leading to massive haemorrhage and infections. Fortunately the latter did not develop in this patient probably because her poor general condition forced her to report here early. Actually in her case the main complication was haemorrhagic shock. This is occasionally brisky or persistent following trauma of the genital tract such as laceration or perforation of the pelvic viscera. She was consequently resuscitated as described before, and the uterus evacuated surgically. This was necessary in order to remove the retained products of conception which could be the nidus of infection, and also this operation controlled

the uterine bleeding. Since the finger is the best and safest "curette", digital evacuation was preferred in this patient. However this was inadequate and as a result the uterine cavity had to be curetted, whereby the large sharp curette was employed. This instrument has less risk of perforating the uterine wall especially when coupled with good uterine contractility as was experienced in this case. This patient was also covered with penicillin, emperically to prevent tetanus. And the cervical lesions did not require stitching, as they were too superficial. Nevertheless, the cervical lesions healed well without sepsis. Apart from haemorrhage the commonest complication is sepsis. In general, post-abortal sepsis accounted for 9.3 per cent of maternal mortality rate in this centre (Mtimavalye 1979). Santamaria(1970) found that about 95 per cent of spetic abortion cases had followed illegal or criminal interference. And of all cases of sepsis, the most forminable complication is septic shock which is nearly always fatal. The other frequently associated traumatic injuries include, uterine perforation bowel or urinary bladder injury.

Complete recovery as occured in this patient is rare. More commonly these patients do end up with permanent pathological residue, hence a high morbidity. Frequently, young girls have had their obstetrical carriers "closed" due to completely or partially blocked follopian tubes resulting from post-abortal sepsis. The common consequences of these lesions are infertility and ectopic pregnancies. Probably the most common morbidity is due to chronic inflammatory disease which causes chronic ill-health in these patients. Occasionally genital fistulae, incompletent cervic or even hysterectomy may be the result of criminal abortions.

There is no doubt that this problem of criminal abortion is on the increase in our community. This is said to be due to several

factors such as; the increasing influx of young people from rural areas into towns, the worsening low socio-economic status, ignorance and inadequate family planning services. It is believed by many workers and so do we, that improvement upon the above mentioned key predisposing factors will reduce the incidence as well as the morbidity from abortion. Also early and aggressive treatment of the condition and its complications should be done more deligently. Of course, these will only minimize the problem while the basic issue of "unwanted pregnancy" is being solved.

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HAEMATOCOLPOS

HYMENECTOMY AND DRAINAGE OF MENSTRUAL BLOOD

NAME: Miss A.A.B.

AGE: 15 years

REG. NO.: 503091

DATE OF ADMISSION: 17th December, 1982

DATE OF DISCHARGE: 23rd December, 1982

SUMMARY

This was a young girl of fifteen years, who was admitted with history of regular lower abdominal pain associated with progressive lower abdominal swelling. Although she had attained puberty, she had not had her menarche. On clinical examination, a diagnosis of haematocolpos was made. Hymenectomy was subsequently performed and the retained menstrual blood drained. She recovered well and on the sixth day she was discharged in good health. She was advised to attend follow-up clinic at the Regional hospital where she was attending school.

History of present illness:

This patient had been referred from Magomeni dispensary in Dar es Salaam with history of regular lower abdominal pain associated with a swelling in the lower abdomen for about six months. She had not had her menarche. The onset of the above complains had been insidious and the swelling had been noted to increase in size, and that this was more obvious during the attacks of pain. The pain had been more severe and persistent for two days prior to admission,

and she experienced heaviness in the perenium. She also experienced dysuria and occasionally constipation during the attacks. She denied history of increased frequency of micturation, or urinary retention, but she was occasionally constipation in association to the above problems.

Gynaecological history:

The growth of pubic hair and breast engorgment had started at the age of thirteen years. There was no history of abnormal vaginal discharge.

Past medical history:

She had no history of major illness. She had not had any surgical operation.

Family history: There was nothing northy noting

Social history:

She was of form-one school girl at Morogoro. Her parents were staying at Dar es Salaam. She was a second born in a family of two daughters and two boys. Her elder sister had her menarche at the age of thirteen years and her menses were regular, and she was unmarried and nulliparous. The patient had not had coitus.

Obstetric history: She was a nullipara.

PHYSICAL EXAMINATION

General examination:

She was a young girl, of good nutritional status. She was not anaemic or febrile, but she was in slight pain. Her blood pressure

was 100/70 mm. mercury. The pulse was 76/minute, regular and of good volume. There was no hirsutism, and the thyroid gland was normal.

Breasts:

They were well developed, and not active.

Cardio-respiratory system: There was no abnormality detected.

Musculo-skeletal and Nervous Systems: They were essentially normal.

Abdomen:

There was a uniform swelling in the lower abdomen. The skin was normal and had no scar. The pubic hair distribution was femanine. There was slight tenderness but not rebound-tenderness over the swelling. Both the liver and spleen were not palpable. There was neither tenderness nor mass in the renal angles. The swelling in the abdomen was arising from the pelvis, and it was smooth, cystic and slightly mobile. Its size was equivalent to 18 weeks gestation. There were no foetal parts palpable or foetal heart heard. There was no other mass, or evidence of free fluid in the abdomen.

Pelvic examination:

She was catheterised and 150 mls of clear urine drained out, but the swelling persisted. The vulva and perineum were healthy and well developed. The vaginal introitus was completely obliterated by a bluish-thin membrane which was bulging out and flactuant.

Rectal examination:

A huge bulging mass was palpable in the vagina but the examining finger could not get above it. There was minimal tenderness - elicited.

Diagnosis/Decision:

In view of the history and clinical findings, a diagnosis of Haematocolpos was made. It was decided upon to do hymenectomy to release the menstrual blood.

Pre-operative preparation:

1. Haemoglobin was 14.0gm/dl.
2. Urine was: negative for proteinuria and sugar.
3. Her parent (father) signed the consent for operation and Anaesthesia.

OPERATION: Hymenectomy:

A short general anaesthesia was given as in case No. 5.

Then the patient was placed in lithotomy position, the perineum cleaned with savlon solution and drapped with sterile towels.

The labia minora were separated by the fingers of the left hand of the surgeon (author). Then with a scapel, a cruciate incision was made over the bulging hymen. There was a gush of chocolate-coloured thick fluid which drained freely (about 700mls). The flaps of the incised hymen were then snipped leaving a wide introitus. Thereafter a sterile pad was applied over the vulva to absorb the blood which continued to ooze. The patient recovered well from anaesthesia and was sent back to the ward.

Post-operative care and progress:

Her general condition post-operativelly was good. The blood pressure, pulse and temperature remained normal. The oozing which was continuing had reduced in volume with time. The abdominal swelling had regressed completely and there was no tenderness. She had no urinary symptoms. On the sixth post-operative day there was no more oozing and on inspection the vaginal introitus was wide open and no abnormal discharge was noted. No digital examination was done. She was discharged and advised to refrain from coital practice for at least two months. She was also given an appointment to attend gynaecology clinic at Morogoro hospital in 4 weeks time (where she was schooling)

COMMENTARY:

This was a case of haemotocolpos due to imperforate hymen. As was the case in this patient, it usually manifests at the age of 14 to 17 years. The classical presentation is; abdominal pain, primary amenorrhoea and interference with micturation. Although in this case the abdominal pain was regular, the majority of cases have irregular pattern of pain.

The diagnosis in this girl was not difficult because of the typical history and clinical findings of the thin almost transparent hymenal membrane. Sometimes, when the vagina is imperforate some distance in its lower part or if there is obstruction in one half of a septate vagina, the diagnosis is difficult (Dewhurst, 1976). It is also important to consider gynatresia among the differential diagnosis, since its treatment is not only difficult but much more couplex. It might require

an abdominal approach to drain the haematometra, and later vaginoplasty. In case of gynatresia, on rectal examination the vagina or haematocolpos is not palpable, and instead the urethra is easily felt anteriorly more obvious if there is a catheter in the urethra.

The treatment procedure for haematometra is usually simple as it just entails just an incision and drainage in a sterile environment. In this patient the flaps of the incised hymen were suipped off to prevent them from getting adhehered together with a subsequent obliteration. Otherwise, it is recommended to strictly do the minimum during the operation. This precaution is taken to minimise the chances of introducing infective agents into such an excellent culture medium (retained menstrual blood). Ascending infection in this condition is a real risk, so much so that, some workers would use chemoprophylactic broadspectrum antibiotics to all patients. During the follow-up for such patient it imperative to exclude persistent haematosalpinx which may necessitate laparotomy and drainage or removal of the fallopian tubes. She was advised to refrain from coital practice soon after the operation for fear that she might develop a severe pelvic inflammatory disease due to the sexually transmitted organisms which is very common in our community.

It is now widely accepted that, fertility and subsequent menstrual history in such patients who have been successfully treated is not significantly different from that of normal women (Dewhurst, 1981).

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RUPTURE OF TUBAL PREGNANCY.

LAPAROTOMY AND SALPINGECTOMY.

NAME: Mrs. M.Z.

AGE: 28 years.

REG.NO.: 288866.

ADDRESS: Buyuni Street, Dar es Salaam.

DATE OF AIMISSION: 5th May, 1982.

DATE OF OPERATION: 5th May, 1982.

DATE OF DISCHARGE: 13th May, 1982.

SUMMARY:

This was a 28 years old housewife, Para 3 + 0, who presented with symptoms of acute abdomen after an amenorrhoea of nine weeks. Examination revealed a very pale, shocked woman, with a very tense and tender abdomen. A diagnosis of ruptured ectopic pregnancy was made. The diagnosis was confirmed at laparotomy and right salpingectomy done. She had an uneventiful recovery.

History of Present Illness:

This patient was referred from Mnazimoja dispensary because she had a sudden onset of abdominal pain, vaginal bleeding, dizziness and a fainting six hours prior to admission

She had been well before the onset of abdominal pain which was severe and stabbing in nature. It was generalized in the lower abdomen. The pain was accompanied by slight vaginal bleeding which was darkish in colour. She also complained of dizziness and had fainted once. She had vomited once. She had an amenorrhoea of nine weeks. There was no history of fever or vaginal discharge associated with the abdominal pain. She denied history of shoulder-tip pains. Her bowel habits and micturation were normal.

Gynaecological history:

Her menarche was at 15 years of age. Her menstrual periods were of 4 days after every 28 days, very painful and of scanty flow. She had her last menstrual period on 1st March 1982. She did not admit to history suggestive of sexually transmitted diseases. She had not used any contraceptive.

Obstetric history:

She was Para 3 + 0. All children were living and the last born was 3 years old. All were full term normal deliveries, the first two were home deliveries. There was no history suggestive of puerperal sepsis.

Past medical history:

She had not suffered a similar illness before. There was no history suggestive of pelvic inflammatory diseases or chronic abdominal pain. She had no history of chronic cough. There was no history suggestive of schistosomiasis. She had not had any abdominal or pelvic surgical operation.

Family and social history:

She was a housewife. There was no history of Tuberculosis contact. There was no history of diabetes mellitus or hypertension in her family.

Physical examination:

General condition:

She was a young woman of good nutritional status. She was in pain and looked weak. There was gross palor. There was no jaundice. Her temperature was 36.5°C. There was no ankle oedema.

Cardiovascular system:

The pulse rate was 108/per minute, regular and of weak volume. Her blood pressure was 90/60mm. mercury. The heart was not enlarged. The first and second heart sounds were normal and no murmurs.

Respiratory system:

There was tachypnoea (of 28 per minute). Breath sounds were vesicular and there were no added sounds.

Central nervous system:

No abnomality detected.

Breasts:

They were normal.

Abdomen:

The abdomen was slightly distended with fullness in the flanks. It was moving with respiration. There was no surgical scar. There was generalized tenderness more marked in the lower abdomen. Rebound tenderness was also elicited over the same area. The liver and spleen were not palpable. Both renal angles were not tender. There was no mass palpable in the abdomen. There was a positive fluid thill and shifting dullness. The bowel sounds were heard and were normal.

Pelvic examination:

The vulva and vaginal mucosa were blood stained but no clots were seen. The cervix was smooth, soft, long with the os closed. Cervical excitation was positive when the cervix was moved to the right side. The uterus and its appendages could not be evaluated well due to generalized pelvic tenderness.

Diagnosis:

Ruptured ectopic pregnancy.

Plan of management:

1. With a large venous canular, blood was taken for urgent blood grouping and cross-matching for 2 litres. Then intravenous infusion with normal saline (2 litres) was given.
2. Half-hourly pulse rate and blood pressure monitoring.
3. Urinary output was monitored one-hourly.

4. Laboratory investigation:

(i) Haemoglobin: 7.0gm/Decilitre.

(ii) Leucocyte count:

Total: 6,000 cells/mm^3.

Differential: Neutrophils 58 per cent.
Lymphocytes 34 per cent.
Eusinophils 3 per cent.
Monocytes 2 per cent.
Basophils 3 per cent.

(iii) Blood group: 'O' Rh "D" positive.

(iv) Urine : Negative for sugar
Negative for albumin.

5. She was prepared for an emergency Laparotomy.

OPERATION: LAPAROTOMY AND RIGHT SALPINGECTOMY, (5th MAY,1982).

Premedication:

Atropine sulphate 0.5mg. was given intravenously.

Anaesthesia:

Induction was done with thiopentone sodium 250 mg. and scoline 50 mg. intravenously. Then she was intubated by a cuffed endotracheal tube and she was maintained with Oxygen and Nitrous Oxide (50/50).

Procedure:

The abdomen was cleaned with Hibitane solution and Flavine in spirit respectively. She was then drapped with sterile towels. The abdomen was opened through a median subumbilical incision (as detailed in the introduction).

Haemoperitoneum was found on opening the peritoneum. There was no offensive odour noticed. The intraperitoneal blood did not appear to be haemolysed and there were few fresh blood clots. The blood from the abdominal cavity was collected with the help of a sterile

spoon and filtered through four-thickness of gauze over a sterile funnel into blood collecting bottles containing calcium citrate. One and a half litres of blood was collected by this procedure and the blood was immediately autotransfused. By then, the ruptured right ampullary pregnancy was visible. The tube was distended, oedematous with an actively bleeding vessel along the ruptured area. The right fallopian tube was picked-up and the bleeder clamped with a Kelly's clamp. The left fallopian tube was inspected and it was found to be kinked by peritubular adhesions. The uterus was slightly enlarged. Both ovaries looked normal.

The affected tube was pulled out of the pelvis and the mesosalpinx was excised with the help of Kelly's clamps which were applied in succession from the lateral end. The cut-edges of the mesosalpinx were sutured with number zero chromic catgut by a continous lock-stiches. Then reperitonization was done. Haemostasis was well achieved. The abdominal cavity was mopped dry. All the gauzes were counted and found to be correct. Then the abdominal wall was closed in layers (as in introduction). The excised follopian tube was sent for histopathology.

Immediately post-operative:

The patient had tolerated the operation well. Her pulse rate was 90 per minute of good volume, and the blood pressure was 110/70 mm. Mercury. She had received 1.5 litres of the autotransfused blood.

Post-operative instruction:

1. Morphine 15mg. intramascularly 6 hourly for 24 hours.
2. Instravenous infusion of 1 litre of Normal saline and 2 litres of 5 per cent Dextrose in 24 hours.
3. Monitoring of Pulse rate and Blood pressure 1 hourly, and urinary output 2 hourly.
4. Blood transfusion (donor blood) one litre.

First 24 hours Post-operative:

Her general condition was good. She was afebrile. Her pulse rate was 86 per minute and the blood pressure was 110/70mm. Mercury. She had had a urinary output of 1000 mls. of clear urine. She had received 2.5 litres of intravenous fluids and 1 litre of blood trnsfusion. The chest was clear. The abdomen was slightly distended, soft and the bowel sounds were scanty. The urinary catheter was removed.

Second and subsequent post-operative days:

Her blood pressure and pulse rate remained normal. By the second day, she had passed flatus and the bowel sounds were normal. The intravenous infusion was discontinued and she was started on oral sips, and she was ambulant. Her haemoglobin level was 10.2gm/decilitre on the fourth day.

She made an uneventiful recovery and on the seventh post-operative day and all the stitches were removed. The wound had healed well. On the eighth day she was discharged and given an appointment for follow-up at the gynaecology clinic after six weeks.

Follow-up: (at Gynaecology clinic):

She was in good general condition and had no complaints. She opened her bowel well and micturation was normal. She had had one normal meastrual period. Her haemoglobin level was 12.5gm/decilitre. The abdomen was soft, and there was no tenderness or mass palpable. The scar had healed well. Pelvic examination revealed that, the cervix and uterus were normal. The left uterine appendages were normal. There was no tenderness or mass palpable in the pelvis.

Histology report:

Rupture tubal pregnancy. No evidence of tuberculosis. The patient was then discharged from the clinic.

COMMENTARY:

Ectopic pregnancy is one in which a fertilized ovum implants in an area other than the uterine cavity. The tubal pregnancy is commonest site accounting for about 90 to 95 per cent of all ectopic pregnancies (Benson, 1978 and Dewhurst, 1976). Oronsaye(1981) reporting about findings by other workers (Douglas, 1963 Lawson and Stewart, 1977) revealed that, ectopic pregnancy is one of the commonest surgical emergency among women, in the tropics. This was also demonstrated at our centre as a major cause of 'acute abdomen' in gynaecology (Mtimavalye, 1978). Pelvic infections which is common in these places is implicated as the most likely predisposing factor.

The manner in which this patient presented is typical. However, ectopic pregnancy may present in a less acute (subacute) form or as a 'silent' ectopic pregnancy. The latter, usually presents with just a localized tenderness in one fornix with or without a palpable mass. On very rare occasions it may be an incidental finding, at antenatal booking, or at laparotomy or at an autopsy for another condition. The subacute form, unlike the acute, can pose a diagnostic problem because of its vague and incoclusive symptoms. However pain of some nature and of variable magnitude is usually the first. There may be a period of amenorrhoea or not at all. There may be vaginal bleeding in most cases but it is a late or a secondaty feature. Also some patients will present with history of syncopal attacks, perineal dyscomfort or pain at daefication (due to blood collection in the cul-de-sac), together with localized tenderness and a mass in the one of the fornices.

In this patient, although pelvic examination was gently performed, it was an uncalled-for procedure. This is risky, because it can provoke more bleeding and consequently worsen the condition of the already shocked patient. Even when it is safely performed, often

times it does not reveal much additional information apart from the generalized pelvic tenderness which is turn limits further evaluation of the pelvic organs.

In cases where the diagnosis is very doubtful, and this is usually in "leaking" ectopics or unruptured, a few investigations may be carried out, although they are of limited value. The investigations which we commonly do in our institution are; serial estimation of haemoglobin level, pregnancy test, culdocentesis, ultrasound, laparascopy and exploratory-laparotomy. A falling trend of the haemoglobin levels is indicative of blood loss, and this is well demonstrate in 'slow-leaking' ectopic pregnancy. Both pregnancy test and culdocentesis are of value when they are positive, but a negative result does not rule out ectopic pregnancy. By the conventional method of pregnancy test, only 40 per cent of the cases are picked. The ultrasound (echoscopy) machine can make an accurate diagnosis by demonstrating the gestational sac in the follopian tube. The intact ectopic pregnancy can be visualized with the laparascope, which can also offer the opportunity to rule out other conditions such as a bleeding corpus luteum and tuboovarian masses. The most specific and practicable diagnostic procedure in our set-up, is exploratory laparotomy when this diagnosis in suspected. A small initial opening on the abdominal wall ("min-laparotomy")is all that is wanted, since it anables the abdominal cavity to be viewed. This procedure establishes the presence or abscence of ectopic pregnancy, and consequently the incision is extended when necessary.

Donor-blood is difficult to get in our place. In these circumstances, autotransfusion is a useful and recommended life-saving procedure. There was no contraindication for the procedure in this patient such as; history suggestive of the heavy bleeding occuring

more than 24 hours prior to operation, or if the intraperitoneal blood is haemolysed or a feature suggestive of infection. If such contraindications are overlooked and autotransfusion carried out, there is danger of haemoglobinuria or septicaemia.

In this patient the right follopian tube was completely removed. In rare instances conservative surgery may be done especially if the other tube is damaged beyond repair or absent, and there is a strong desire for pregnancy. In these cases, salpingostomy or patial salpingectomy may be done. These measures are disfavoured because of their high association with occurence of another ectopic pregnancy.

Pelvic inflammatory disease is associated with at least 40 per cent of ectopic pregnancies (Lawson, 1982) and in the tropics it is the single most contributory aetiological factor (Lawson, 1982 and Pathak,1981). In this patient pelvic inflammatory disease was the most likely predisposing factor as suggested by the findings of peritubular adhesions with kinking of the tubes. There are other less common predisposing factors which either impede or prevent the passage of the fertilized ovum through the follopian tube. These include; endometriosis, excessive or tortuosity of the tube, previous tubal surgery, and absence or inadequate physiological peristalsis of the tubes. Rarely is the ovum fertilized before it is extruded or when it is fertilized later it implants on the ovary.

In the developing countries, pelvic inflammatory diseases has reached an alarming rate, hence the increasing incidence of ectopic pregnancies. In-spite of this, the health facilities are not correspondingly improving. Therefore, we ought to have a high suspicion index for all the women with abdominal pain with or short periods of amenorrhoea.

Also, exploratory laparotomy should be performed without much ado in doubtful cases, because of the lack of diagnostic facilities and more so due to the high hospital-bed pressure. Until when our problems of availability of donor-blood are solved, autotransfusion should still be practiced with a close watchout on the contraindications.

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PELVIC ABSCESS.

ANTIBIOTIC THERAPY AND POSTERIOR COLPOTOMY.

NAME: MRS. L.P.

AGE: 20 Years.

REG. NO.: 124160

REFERRED: From Ruvu Dispensary

DATE OF ADMISSION: 13th June, 1982

DATE OF OPERATION: 13th June, 1982.

DATE OF DISCHARGE: 21st June, 1982.

SUMMARY.

This was a 20 years old woman, Para 1 + 0 admitted with a history of progressive lower abdominal painful swelling, fever and dysuria for five days. When examined she was found to be in pain and febrile. There was tenderness with guarding over a cystic swelling in the lower abdomen. This mass was bimanually palpable from the posterior vaginal fornix into which it was bulging. A diagnosis of pelvic abscess was confirmed by aspiration of pus through the posterior fornix. Drainage of the abscess was accomplished by posterior vaginal colpotomy. The management is discussed.

History of present illness.

This patient was referred from Ruvu dispensary with a five days history of lower abdominal pain, fever, dysuria, and a painful lower abdominal swelling for three days. Her condition worsened despite treatment with penicillin.

The onset of the symptoms had been soon after she had had her last menstruation. The pain was localized in lower abdominal quadrants but later became more marked suprapubically. It was accompanied with fever and difficult micturation. There was slight vaginal discharge, and she complained of "heaviness" in the pelvis and constipation. There was no loin pain or vomiting. She had been treated with injection of Proccaine penicillin at the dispensary without relief.

Menstrual history:

Her menarche was at 14 years of age, and the cycles were 3-4/28 days, regular normal flow. The last menstrual period was 4th June 1982. She had no history of abnormal vaginal bleeding or discharge.

Obstetric history:

She was para 1 + 0. The pregnancy had been uneventiful during the antenatal period. She had a full term spontaneous vaginal delivery at Kibaha Health Centre. There was no history suggestive of puerperal sepsis. She had never used contraceptives.

Past medical history:

She had no history of major illness or operations in the past.

Social and Family History:

No member of her family had suffered from Pulmonary Tuberculosis, Diabetes Mellitus, renal diseases or high blood pressure.

She was a housewife, and her husband was a Captain with the National Service Force. She neither smoked cigarettes nor drank alcohol.

PHYSICAL EXAMINATION

General examination:

She was a young lady of good nutritional status but ill-looking. Temperature was 38° centigrade. She was not pale or jaundiced. The neck was not rigid. There was no lymphadenopathy or peripheral oedema.

Respiratory and musculo-skeletal systems:

There was nothing worthy noting.

Cardiovascular system:

The pulse rate was 90/minute, regular of normal volume. The blood pressure was 100/60mm Mercury. There was no evidence of cardiomegally. Both S_I and S_{II} were normal. No murmurs.

Abdomen:

There was a uniform swelling in the hypogastrium, of the size of equivalent to 16 weeks pregnancy. This mass was very tender, systic and there was guarding over it. It was not mobile. The liver and spleen were not palpable, and there was no tendernes in renal angles. There was no evidence of free fluid in the abdomen.

Vaginal examination:

The external genitalia were normal. The urethral meatus was normal and no discharge could be massaged from the urethra.

Speculum examination:

The vulva and vaginal mucosa were normal. The cervix looked healthy but it appeared pushed anteriorly. There was a bulge in the posterior with an area of induration of the vaginal mucosa. There was a slight mucoid discharge from the cervical os.

Digital examination:

The vulva and vagina were normal. The cervix was smooth, firm and the os was closed. There was generalized pelvic tenderness. There was a mass in the Pouch of Douglas which was tender, cystic and bimanually palpable. There was an area of maximum flactuation over the posterior vaginal fornix. The cervix and uterus were pushed anteriorly by this mass.

Per-rectum examination:

The rectal mucosa was intact and the mass was appreciated in the Pouch of Douglas.

Diagnosis:

Pelvic abscess was suspected and culdocentesis was indicated for confirmation.

Culdocentesis:

The patient was given Pethidine 100 mg. intravenously. Then she was placed in the full dorsal position, and the perenium and vagina were cleaned with 1 per cent solution of chlorhexidine. A Cuscos bivalve speculum was gently introduced into the vagina and opened until the cervix and the bulge in the posterior vaginal fornix came into view. Then with a long sterile large-bore needle on a 10 mls. syringe, the posterior fornix was punctured near the cervix. Aspiration was done, and 2 mls. of thick whitish pus was recovered and sent for culture and sensitivity. The speculum was withdrawn after ensuring that there was no bleeding at the site of puncture.

The diagnosis of pelvic abscess was confirmed and posterior-colpotomy was decided upon for drainage of the pus.

Pre-operative Management:

1. Haemoglobin was 12.6 gm/decilitre.
2. Leucocyte count: Total was 13,680 cells/mm^3.
   : Differential; neutrophils 80 per cent.
   eusinophils 2 per cent.
   lymphocytes 15 per cent.
   monocytes 2 per cent.
   basophils 1 per cent.
3. Urinalysis : there was no protein or sugar in the urine. There were few leucocytes in the sediments; but no casts or red blood cells.
4. Antibiotic therapy: She was started on (i) Crystalline penicillin 2.4 mil intramuscularly 6 hourly, (11) Chloramphenicol 500 mg. 8 hourly orally (iii) Metronidazole 400 mg. thrice (oral) daily.
5. Blood slide for malaria parasites: was negative.
6. The perenium and abdomen were shaved, and she signed the consent for the operation and anaesthesia.

OPERATION: Posterior colpotomy.

Anaesthesia and preparation:

This was done as in the case no. 5 (secondary postpartum haemorrhage).

Procedure:

A Sim's specullum was inserted into the vagina and was used to retract the posterior vaginal wall downwards. The posterior lip of the cervix was gripped with a volselum forceps, drawn upwards and anteriorly. Then a transverse incision (1 cm) was made on the vaginal mucosa at the point of maximum flactuation which was also indurated:

Thereafter a closed sinus-forceps was inserted through the incision. When it had entered well into the cavity of the abscess, it was opened and closed several times in different directions. Thick pus poured out through the incision into the vagina.. Then a finger (index) was introduced into the abscess-cavity to explore was well as to break away the remaining loculi. More pus mixed with blood freely drained out and the mass was greatly reduced in size. Then a large tubular rubber drain was left in-situ, anchored to the edges of the incision with a non-chromicised catgut. Pus had been collected just on opening the abscess, and sent for culture and sensitivity.

Post-operative care:

1. The pulse rate, blood pressure and temperature were monitored 2 hourly for the first 12 hours, thereafter 4 hourly.
2. She continued with parenteral penicillin, and oral metromidazole and chloramphenical.
3. Pethidine 100 mg. intramuscularly 6 hourly for 12 hours. followed by Paracetamol two tablets thrice daily.
4. Oral fluids and feeding was given liberally.
5. The vagina was swabbed regularly and the vaginal pads changed each time.
6. She was nursed in a prop-up position.

Laboratory results: (48 hours).

1. Pus: Gram stain - gram negative bacilli and abundant pus cell were seen.

: Aerobic Culture/Sensitivity - A significant growth of Escherichia coli; sensitive to Ampiclox, Chloramphenical, Gentamicin and Kanamycin. Resistant to Penicillin, Erythromycin.

:Anaerobic Culture: was not done due to a technical problem in the laboratory.

2. Mid-stream Urine: No bacteria grew on the culture media.

Post-operative progress:

The vital signs were normal. Temperature fell steadily to normal by the second day. The abdomen was soft and the tenderness disappered. The mass had regressed almost completely. She continued with chloramphenical and metronidazole after the culture results, but penicillin was stopped. There was no more pus discharged by the fifth post-operative day and the drain had come out on its own on the same day as the holding suture gave way. The uterus and its appandages were normal. There was no mass in the pelvis except for slight induration in the pouch of Douglas where the abscess was evacuated. Her haemoglobin was 12.3 gm/decilitre.

She was discharged on the eighth post-operative day to be seen again in the clinic 4 weeks later.

Follow-up - gynaecology clinic:

She had no complaint. There was no history of fever, dysuria or vaginal discharge. Her bowel habits and micturation were normal. She had had her menses about three week before (1st July 1982), she was not pale, the abdomen was soft and there was no tenderness or mass palpable.

Vaginal examination revealed that; the vulva and vagina were normal, and the post fornix had healed well. The uterus and its appandages were normal, with slight immobility of the uterus. There was thickening in the pouch of Douglas but no tenderness elicited. There was no mass in the pelvis. She was discharged from the clinic.

COMMENTARY.

The pelvic abscess in this patient appeared to have followed an acute attack of pelvic inflammatory disease. This complication is still common in the developing countries unlike in the developed where it is rare. This difference is attributed (Lawson,1977) to poor care, post-abortal and delivery hygiene, and partly due to the high frequency of venereal infection.

In acute pelvic inflammatory disease, gonococcal infection is by far the commonest aetiological factor (Lawson, 1982, Grech 1973, Green 1971). Mixed infection usually follows abortion or delivery (post abortal and puerperal sepsis). Although the acute pelvic infection may develop quickly after the initial gonococcal infection, if may quiesce for sometime, and then errupt following trauma or menstruation (the infection can overcome the resistant uterine cavity during menstruation). The latter seems to have been the case in this patient who developed the acute symptoms of the disease soon after her menses. The disease process in this patient progressed, hence her worsening clinical condition inspite of the treatment she was receiving initially. This seem to have been caused by the superinfection of E.Coli, a more virulent organism. In addition to the general deterioration of the patient's condition, the temperature flactuated and finally the abscess developed and presented as a mass in the pelvis. On admission the diagnosis was not difficult to reach since the clinical presentation was characteristic.

Nearly all cases of acute inflammatory disease are treated conservativelly with antibiotics and in most instances operations can be avoided. However, where the antibiotic therapy is not administered early or is inadequate, pelvic abscess or spreading peritonitis results, thus necessitating surgical intervention. Right from the time of admission, this patient was found to have a large pelvic abscess

which was localized in the pouch of Douglas and was 'pointing' towards the posterior vaginal formix. The aspiration of the posterior formix was of dual purposes. The presence of pus confirmed the diagnosis while it also excluded pelvic haematocoele. The latter which results from a slow leaking tubal pregnancy can be very difficult to differentiate from the former; and the pelvic haematocole is best dealt with through the abdomen rather than the approach used in this case. Also, rectal examination was done to rule out the possibility (which occurs in untreated cases), of the abscess discharging into it, in which case there would have been no need for colpotomy.

This patient continued with oral feeding and medication as well as being ambulant, soon after the operation. These are some of the advantages of this drainage procedure over laparotomy. Nevertheless colpotomy carries few risks of damaging the rectum or adherent loop of bowels in the abscess wall. But we could have resorted to laparotomy if the abscess recurred, or in case of doubtful diagnosis. The added advantage in this approach is that the other gynaecological condition such as appendicular or diverticular abscess can be excluded or dealt with. Also tubal lesions if found could be treated more effectivelly. All the same, this was not the case in this patient therefore laparotomy was not the favourable choice.

In addition to the drainage measure, she was put on antibiotic therapy. The combination of high doses of Penicillin, Chloramphenical and Metronidazole were used as a broad spectrum cover (Cunningham, 1977). The high doses of penicillin were used to cover the gram positive eocci (except penicillinase producing staphylococeal aureus) and gonococci which was probaly inadequately treated at the Dispensary. It was stopped while the other two antibiotics were continued according to the culture results. However, Metronidazole was used imperically to

cover anaerobic organisms due to the nature of organism usually involved in these conditions.

The risk of developing pelvic abscess and spreading peritonitis is reduced tremendously if the acute pelvic inflammatory disease is treated early and adequatelly. And as demonstrated in this case, excellent results are obtained by the relativelly safe and simple drainage procedure of colpotomy, although where doubt exists about the diagnosis one should not hesitate to resort to laparotomy.

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LAPARASCOPIC STERILIZATION.

Name: Mrs. T.K.

Age: 34 years

Reg. No. 178000

Para 9 + 1

Date of admission: 11th February, 1982

Date of discharge: 12th February, 1982

SUMMARY.

Mrs. T.K. was a 34 years grandmultipara who requested for sterilization because she had completed her family. Lapascopic sterilization with fallope rings was performed. The patient was discharged on the same day.

Reason for admission:

This lady was referred to our gynaecology clinic from the Family planning clinic in our hospital. She had requested for sterilization because she had completed her family. She had been on the oral contraceptive pills for 5 years after being on the 'loop' (intra-uterine contraceptive device) for two years. She had the loop removed because she had low backache, which was cured after its removal. She had no problem with the oral contraceptive pill.

Gynaecological history.

She had her menarche at 14 years. Her cycles were 6/28 days, regular, Her last menstrual period was 2nd February, 1982. She had no history of intermenstrual bleeding or postcoital bleeding. There was no history of abnormal vaginal discharge.

Obstetric history.

She was Para 9 + 1. All were full term normal vaginal deliveries. Eight children were alive, one died from a motor accident 5 years ago. She had one 3 months abortion for which she was evacuated. Her last born was 5 years old.

Past medical history.

There was no history of serious illness and she had had no surgical operation.

Family and social history.

No member of her family has suffered from diabetes mellitus, hypertension, heart disease or pulmonary tuberculosis. She was a housewife. Her husband was a lorry dirver with the City Council, Dar es Salaam. The couple had agreed on sterilization. He signed in the patients' file a consent for sterilizing her wife.

Physical examination.

General condition: She was of good nutritional status, not anaemic, and afebrile. There was no ankle oedema. No lymphadenopathy. There was no finger clubbing.

Cardiovascular system.

The pulse rate was 72/minute, regular, and of normal volume. The blood pressure was 110/70 mm. of mercury. There was no cardiomegally and both heart sounds were normal. There was no murmurs.

Respiratory system.

This was essentially normal.

Nervous, and Musculoskeletal system. - was normal.

Abdomen.

The abdomen was scaphoid, and there was no surgical scar. The spleen, liver and kidneys were not palpable. There was no tenderness or mass in the abdomen. There was no umbilical hernia demonstrable.

Vaginal examination.

The external genitalia was normal. The vagina was normal. The cervix was healthy. The uterus was normal sized, anteverted and mobile. The adnexa were normal.

Problem: (Grandmultiparity).

Management.

The patient was booked for laparascopic sterilization in two weeks time. Meanwhile the following investigations were made:

1. Papanicolaou (Pap) Smear:

   With the patient in lithotomy position, a bivalve speculum was inserted into the vagina and held in position. An Ayre's spatula was introduced into the cervical Os and rotated 360 degrees, high up in the endocervical canal. The cervical scrappings were spread on two clean glass slides and quickly placed in a bottle of fixative (a mixture of equal parts of 95% alcohol and ether). The specimen was sent for cytology.

   Results: Class 1. Normal cervical epithelial cells. No evidence of inflammation.

2. The haemoglobin was 12.8 gm per decilitre. White blood cells count was reported as normal.

3. Midstream urine: No sugar, protein or pus cells. No organisms were cultured.

4. Blood urea was 15 mg. per decilitre.

Preparation for operation.

The patient was admitted one day prior operation. She had no complaints and physical examination was normal as described earlier. The perineum was cleaned and shaved.

Operation: Laparascopy - Application of Fallope Rings.

Anaesthesia.

Anaesthesia was induced and maintained as in Gynaecology Case No. 4. The patient was placed in a semi-lithotomy position and legs supported on stirrups. The operating table was tilted approximately 15 degrees of Trendelenburg position. The abdomen, vagina and perineum were cleaned and drapped as explained earlier.

Procedure.

The bladder was catheterised as described in the introduction and 100mls. of Straw coloured urine obtained. On pelvic examination no abnormality was detected. The cervix was grasped with a tenaculum, and a tubal insufflation cannula was inserted into the cervical canal and fixed to the tenaculum so that it could be used to manoeuvre the uterus externally for intraperitoneal visualization of the adnexa.

A small incision (a 2 mm) was made in the skin in the lower rim of the umbilicus and a Verres' needle was inserted while the abdominal wall was lifted up by towel clips applied to the inferior rim of the umbilicus. The needle was connected to the pneumoperitoneum apparatus containing carbon dioxide, the gas pressure read 15 mmHg showing that the needle was properly placed. Two and half litres of carbon dioxide were allowed to flow into the peritoneal cavity, then the needle was withdrawn.

The umbilical incision was enlarged to 1 cm. The skin was held and lifted with the two towel clips while a trocar with a sleeve of the flapper valve model was introduced through the incision and the trocar was withdrawn from its sleeves. The fibreoptic light cable was connected to the laparascope already fitted with forceps with tongs. The laparascope had already been loaded with a fallope ring. Light was turned on, the laparascope was gently inserted into the trocar sleeve at approximately 20 degrees to the abdomen while watching through the eye piece. The gas was connected to the sleeve. The laparascope was held in one hand and the uterus manipulated with the other.

The pelvis was thoroughly inspected. There were no pelvic adhesions. The uterus was normal. The ovaries were healthy. Both tubes were normal. The round ligaments were clearly visible. The tongs of the band applicator were then extended and one tube grasped about 2 cm. from the uterine cornu and brought into the applicator. The ring was then pushed over a knuckle of tube. The tongs were then released, the tube dropped. The laparascope was withdrawn, loaded with another fallope ring and the procedure was repeated on the other tube. There was no bleeding or damaged viscera. The laparascope was withdrawn and gas was evacuated through the trocar sleeves. All instruments were removed. The incision was closed with 3-0 plain catgut subcuticular suture and a small dressing was applied.

Post operative treatment.

The patient was observed in the ward for six hours. The post operative period was uneventiful. She was discharged that evening. Paracetamol tablets were prescribed for pain.

Follow-up:

The patient was seen at the Gynaecology clinic four weeks post-operatively. She had had her menses. The umbilical stab-wound had healed well, and she was happy and in good health.

COMMENTARY:

Laparascopy is distinctly an early twentieth century innovation pioneered by Von Ott, Kelling, and Jacobaeus. Pneumoperitoneum was introduced by Nordentoeft in 1912. However, laparascopy gained prominence in peritoneoscopy ~~after~~ as more technologies were introduced such as; introduction of an external light source transmitted along a quartz rod to the distal end of the laparascope (Fourestier et al 1952), and the more recent innovation of light transmission through a fibreoptic system.

Tubal sterilization by laparascopy was first proposed by Anderson in 1937 and Power and Barnes in 1941. Interest in this method was revived by steptoe, and at the moment it is the most widely employed method in the developed countries. However, laparascopy is used for other indications among which the common ones are : (a) Suspected ectopic (intact) gestation

(b) Investigation of; chronic pelvic pain, Infertility (tubal patency), amenorrhoea (including ovarian biosy), and differential diagnosis of small pelvic mass.

(c) Follow-up of tubal surgery.

(d) Operative; tubal sterilization, removal of inert foreign bodies i.e. (IUCD) intrauterine contraceptive devices, diathermy treatment for endometriosis, harvesting ova for extracorporal fertilization.

As was done in this patient, currently most obstetricians prefer the Fallope ring because of its minimal complications. Other technique employed are; cauterization, coagulation, scissors dissection and coagulation, loop cautery and application of clips.

In this patient the sterilization was a voluntary request from the couple for reasons mentioned earlier. However, this is not common manner in which patients present for this problem. More often, they do so after experiencing an obstetrical catastrophy or other pressing problems (socio-economic) and where ~~it~~ sterilization has been strongly recommended by the doctor. Grandmultiparity is a common indication for this operation as was the case in this patient, due to its well established associated increased risks particularly in our community i.e. anaemia, malpresentations, ruptured uterus, postpartum haemorrhage (Gumodoka, 1981) and hypertension, diabetes, renal diseases and heart diseases. In addition there is an increased perinatal mortality and congenital anomalies in this group of women.

Nevertheless, although this patient benefited from this simple, safe with minimal morbidity method, there are a few complications associated with it. Among them are; haemorrhage, haematoma formation, intestinal perforation, cardio-respiratory embarassement, sepsis, gas embolism and burns. The fallope rings employed in this case avoided the risks of perforation and burns of the structures adjacent to the fallopian tubes. The complications can be minimized if not avoided completely if risk factors are ruled out before performing this procedure. The chief contraindications are; peritonitis, extensive herniation particularly the

umbilical and hiatus type, cardio-respiratory diseases which would ~~be~~ pose a significant risks to general anaesthesia, extensive intraperitoneal adhesions or masses (i.e. ovarian cysts) and also an enlarged uterus more than 14 weeks pregnancy.

With properly applied Fallope rings, the failure rate is very low (0.5% or less). Among its advantage was shown in this case - she walked hom~~me~~ in the same day and there was no morbidity. Ideally, few weeks after this operation, tubal insufflation test should be done whereby a negative result would confirm sterility.

ACUTE PELVIC INFLAMMATORY DISEASE.

ANTIBIOTIC THERAPY.

Name: Mrs. A.K.

Age: 20 years

Marital status: Married

Reg. No. 235261

Date of admission: 13th March, 1981

Date of discharge: 18th March, 1981

SUMMARY.

This was a 20 years old, housewife, Para 1 + 0, who was admitted complaining of severe lower abdominal pain, purulent vaginal discharge and fever for two days. Physical examination revealed there was a tenderness and guarding in the lower abdomen and there was a foul smelling purulent vaginal discharge. A diagnosis of acute pelvic inflammatory was made and was treated with crystalline penicillin, chloramphenicol and metronidazole. She recovered after five days and discharged in good health.

History of present illness.

She was referred from Ilala (a peripheral dispensary) with complaints of severe generalized lower abdominal pain for two days prior admission. The pain was accompanied by fever and foul smelling vaginal discharge. The pain was stabbing in nature and was aggrevated by any body movement. She denied any history of vulvo-vaginal itching associated with the vaginal discharge. She had also vomited twice. There was no history of dysuria but had increased frequency of micturation for one day prior admission. Bowel opening was normal.

Menstrual history.

She had her menarche at 13 years. Her periods were 5 days after every 30 days, moderate flow and painful. The last menstrual period was 6th March 1981. She was not using any form of contraception.

Obstetric history.

She was Para 1 + 0. She had a full term normal delivery in 1980 and the child was living. There was no history suggestive of puerperal sepsis.

Past medical history.

She had had no serious illness before. She denies history of having suffered from venereal diseases before.

Family and social history.

She was a middle-class woman. She did not drink alcohol or smoke cigarettes. There was no history of tuberculosis or diabetes mellitus in her family.

Physical examination.

General condition: She was of good nutritional status. She was in pain, not anaemic nor jaundiced, but she was febrile (38.5°C). She was not dehydrated.

Cardiovascular system.

The pulse rate was 100/minute, regular and of normal volume. The blood pressure was 120/70 mm. of mercury. There was no cardiomegally, and the heart sounds were heard normal. There was no murmurs.

Respiratory system.

There was dyspnoea. The air entry was normal in both lung fields. No added sounds.

Abdomen.

There was no abdominal distension and the abdomen moved with respiration. There were no surgical scars. Guarding and rebound tenderness was elicited over the lower quadrants of the abdomen. There was no renal angle tenderness. Both liver and spleen were not palpable. There was no evidence of free fluid in the abdomen.

Pelvic examination.

External genitalia was normal, but there was a yellowish pus seen at the introtus. Speculum examination revealed purulent discharge from the cervical Os. Pus swab was taken from the Os: urethra and posterior fornix. There were no cervical lesions. Digital examination revealed tenderness of the cervix and fornices. It was not possible to evaluate the uterus and adnexa due to severe pelvic tenderness. There was no bulge in fornices nor was any obvious mass palpated in the pelvis.

Diagnosis: Acute Pelvic Inflammatory Disease with acute pelvic petitonitis.

Investigations.

1. Haemoglobin: 12.6 gm per decilitre

   White cell count: Total 12,580 per cu. mm

   Differential - Neutrophils: 69 per cent

   Lymphocytes: 27 per cent

   Monocytes: 2 per cent

   Eosinophils: 1 per cent

   Basophil: 1 per cent.

2. Blood culture: No organisms were cultured on anaerobic and aerobic media.

3. Mid-stream urine: was negative for protein and sugar, and no organisms were cultured.
4. Blood urea was 18 mg per dl.
5. Serum electrolytes: results were misplaced.
6. Cervical/urethral/vaginal swab:
   i) Wet preparation: Leukocytes^{++}
   ii) Gram stain: Pus cells (abundant)
   Gram negative coccobacilli.
   iii) Culture: Heavy growth of E. coli sensitive to chloramphenicol and gentamycin.
7. Blood slide for malaria parasites was negative.

Treatment.

The following antibiotics were prescribed while waiting for the results (above).

1. Crystalline penicillin 4 mega units six hourly intravenously for 48 hours.
2. Chloramphenicol 500 mg intramuscularly six hourly
3. Metronidazole 400 mg. three times a day (orally).

An intravenous infusion of Normal saline and 5 per cent Dextrose alternately was set up. The following observations were made:-

1. Blood pressure and pulse one hourly
2. Urine output and temperature 4 hourly.

Progress in the ward.

The blood pressure was normal. The pulse remained high for the first 36 hours. Thereafter it dropped to normal. The temperature was 39°C for the first twenty four hours. Thereafter it dropped stepwise and was normal on the third day. Urine output

was normal throughout. After 48 hours, when the results of both blood culture and pus swab were available, crystalline penicillin was stopped. Chloramphenicol and metronidazole were continued. On the third day, when the temperature and pain had settled, the patient was reviewed.

General condition.

She was ill looking. She was not anaemic. Temperature was 37.5°C. The abdomen was soft. There was slight tenderness in the lower quadrants of abdomen. There was no palpable mass.

Pelvic examination.

The cervix was closed, still tender on excitation. The uterus was normal sized, retroverted, tender and of limited mobility. There was no tubo-ovarian mass. She made good progress and she was discharged on the sixth day on chloramphenicol and flagyl to be reviewed at the Gynaecology clinic.

Follow up.

She was seen at the Gynaecology clinic four weeks later. She was in good general condition. Abdominal examination revealed no abnormality. On vaginal examination; the cervix was healthy. A cervical swab was taken and a papsmear taken. The uterus was normal sized, retroverted, with limited mobility. There was no tenderness. There was parametrial induration. There was no tubo-ovarian or other pelvic mass.

Cervical swab results.

Gram stain - Pus cell^{+} and

Culture - no organisms isolated.

Pap smear results.

Normal epithelial cells and few granulocytes. No atypical cells seen. Conclusion: Pap 1.

Commentary.

Pelvic inflammatory disease is a term used for inflammation of a wide range of pelvic structures, including; sulpingitis, salpingo-oophoritis, parametritis or endometritis, pelvic obscess and pelvic peritonitis. This disease is common in the tropics where the acute form pose a major gynaecological problem. At Muhimbili Medical Centre, it accounts for 16.1% of all gynaecological admissions (Mtimavalye, 1979).

Pelvic inflammatory disease is usually a result of ascending infection from the lower genital tract as a; direct spread from neibouring structures such as appendix, endogenous spread through the cervix which in most cases is a secondary or by an opportunist organisms complicating pueperium or abortion, and exogenous - mainly sexually transmitted but accasionally introgenic via the cervix in cases of intra-uterine contraceptive devices or induced abortions. Of all the aetiological factors, gonococcal infection is by far the commonest in our population as reported by serveral workers (Grech 1973, Rendle-short 1967, Lawson 1982). In Kampala, Uganda, gonococcal infection accounted for 36% of all patients with acute pelvic inflammatory diseases in 1973 (Grech). Mixed infections of aerobic and anaerobic organisms are of recent, found to be common following the introduction of better anaerobic culture technique. Apart from gonococci the other organisms responsible especially in postmenstrual, postabortal or puerperium include the coliforms, anaerobics (bacteroides,

anaerobic streptococci and clostridia species), staphylococci and beta-streptococci. Occasionally, tuberculous endometritis or salpingitis is encountered.

In this patient, who presented with acute symptoms just after her menses, gonococcal infection was high in the list of possible aetiological factors. The culture results however revealed E. coli. Gonococcal infection is not easy to rule at first time of examination, thus the rationale of including high doses of penicillin in our treatment which would cover the other grami positive cocci, with an exception of penicillinase producing staphy aureus. Ampicillin or tetracycline could have offered the same coverage as chloramphenicol but they were not available. Thus, chloramphenicol was used as a broad spectrum drug which was also indicated by culture results. The potential danger of agranulocytosis associated with this drug do not seem to be important in our population.

Attempts to isolate and identify the aetiological factor is of prime importance. In this patient several specimens were taken since in case of gonococcal infection more than one pelvic structure may be involved and thus taking specimen from all these structure increases the chance of pick up rate.

Chemotherapy in the acute stage of the disease plays an important role. The treatment should be started early and in high doses as well as the appropriate drug. This should is the key principle of treatment. This was done in this patient, hence the good results obtained. In case of delayed or inadequate treatment as is usually the case in the majority of patients who are treated at the peripheral dispensaries, recovery is delayed and is followed

by permanent scaring of pelvic organs. Among the common complication of this disease are: pelvic abscesses, pyosalpinx or hydrosalpinx and in severe cases; generalized peritonitis or septicaemia which are fatal. The end result of the ill-treated patients is chronic pelvic inflammatory disease in which case the patient will chronically complain of infertility, pain and may be predisposed to ectopic gestations.

Prevention is the only sure measure to institute if we are to reduce the prevalence of this disease. This will range from controlling the escalating sexually transmitted disease, improved obstetrical care to prevent puerperal sepsis, early detection and aggressive treatment of post-abortal or pelvic infection from other causes. Finally, all both lay and medical workers should be educated about the proper use of antibiotics so that they are not misused.

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VESICO-VAGINAL FISTULA.

SUCCESSFUL REPAIR.

NAME: O.K.

AGE: 22 years.

REG.NO.: 289035

TRIBE: Mnyamwezi

ADDRESS: Tumbi, Dar es Salaam.

DATE OF ADMISSION: 20th September, 1982

DATE OF OPERATION (REPAIR): 30th September, 1982.

DATE OF DISCHARGE: : 28th October, 1982.

SUMMARY:

This was a 22 years old primipara, who had a fresh still birth following an obstructed labour at home ending in a Caesarean section. She developed a mid-vaginal vesico-vaginal fistula from the 10th puerperal day. She was'cured'six months later by a successful surgical repair. Some relevant aspects about the causes, management and prevention of this condition are discussed.

History of present illness:

This patient was admitted from our gynaecology clinic with complaint of continuous urinary incontenence for six months. She had started leaking urine on the 10th post delivery day of her previous delivery in which she had a fresh still birth by caesarean section in this centre. She had been in labour for about 30 hours at her home village before she was taken to Kibaha Health Centre and in turn to Muhimbili Maternity Unit. The membranes had ruptured a day before delivery. No instrumental vaginal delivery was attempted. She could not recall the weight of the baby but she was told that the baby was big. She had no history suggestive of

pueperal fever or would sepsis. She had been kept on a continous urethral catheter drainage for twenty days after the operation. Despite that, some urine was dribbling per vaginum as mentioned above. She had no history of lower limb pains or difficult in walking. There was no history of faecal incontenence.

Obstetric history:

She was a primipara. The pregnancy had uneventifully progressed to full term. She made only two visits to her near-by antenatal clinic.

Previous medical history:

There was nothing contributory.

Gynaecological history:

Her menarche had been at 13 years of age. The periods were regular 3 days for every 30 days and the flow was moderate. She had not resumed her menstruation since delivery. She had not been on any contraception, and she had not had coitus after dellivery.

Family history:

There was no member of her family who had pulmonary tuberculosis, Diabetes Mellitus or high blood pressure.

She had no formal education. She got divorced due to the urinary incontinence and she was therefore staying with her parents. She neither smoked nor drank alcohol.

PHYSICAL EXAMINATION (on Admission):

General contion:

The patient was young, stocky built and 146cm. tall. The walking gait was normal. She was afebrile and not pale. The Blood pressure was 110/70 mm. mercury and the pulse rate was 72 per minute, regular of good volume.

Cardio-respiratory systems:

Were essentially normal.

Musculo-skeletal systems:

The lower limbs had normal muscle power, reflexes and sensation. The rest of the systems was normal.

Abdoemn:

The abdomen was not distended and soft. There was a well healed subumbilical median scar. The liver, spleen and kidneys were not palpable. There was no tenderness over the renal angles. There was no intra-abdominal mass.

Vaginal examination:

The perenium was wet and there was a strong smell of urine. The skin over the vulva, perenium and thighs was mildly excoriated.

Speculum examination:

The patient was placed in a left lateral position. A Sim's speculum was used to retract backwards the posterior vaginal wall, and consequently a small defect on the anterior vaginal wall about 1 cm. was visualized. There was clear urine flowing from it into the vagina. A sterile pipette was introduced through the fistula to collect a urine specimen for culture and sensitivity tests. The cervix was also visualized and was normal looking.

Digital examination:

The vagina was not stenosed and could easily admitt two fingers, and the walls were soft and there was minimal induration around the fistula. The cervix was long firm and smooth surfaced. The uterus was of normal size, anteverted and mobile. There was no pathology in the fornices. Per rectum examination revealed normal rectal mucosa, and the external and internal anal sphinters were normal.

Diagnosis:

Vesico-vaginal fistula due to pressure necrosis.

Plan of management:

1. Laboratory investigations.
2. Examination under Anaesthesia (Preliminary) to: (a) ascertain position and size of fistula, and laxity of surrounding tissue, (b) note presence of fibrosis and fixity to surrounding structures, (c) determine position most suitable for repair, and dye test (with methyleneblue) if the fistula is not obvious.
3. Surgical repair of the fistula.
4. To administer urinary antiseptic or antibiotic a week before the surgical repair and continued after the operation.

Laboratory investigations:

1. Haemoglobin was 12.0gm/dl.
2. White blood cell: Total was 5,500 cells/mm^3.
   Differential was normal.
3. Erythrocytse sedimentation rate: 10 mm. in first hour.
4. Urine (pipette specimen): was negative for albumin and sugar.
   : there was no pus cell or schistosoma ova.
   : there was no bacteria grown on culture media.
5. Blood urea : 20 mg.per cent.
   Serum cretinine : 0.4 mg. per cent.
6. Stool: there was no ova or cyst of parasitic helminths seen.
7. Intravenous urography : was normal and no renal calculi seen.
8. Blood group : 'O' Rh "D".

Examination under Anaesthesia: (23rd September 1982).

The patient was given general Anaesthesia as in case No-5-----, and was cleaned with savlon solution.

There was mild excoriation of the skin over the vulva, perenium and thighs, and clear urine was dribbling from the introitus of the

vagina. The external urethral meatus looked normal. The vagina was spacious and there was minimal fibrosis. Whth the help of Sim's speculum retracting the posterior vaginal wall downwards the fistula was identified with a blunt-ended probe. The fistula was a transverse mid-vaginal fistula measuring about 3cm x 2 cm. The edges were mobile and it was not fixed to the posterior surface of the pubis. The urethra was catheterized and found to be patent. The cervix was long, firm and its surface was smooth. The uterus and its appandages were normal, and there was no mass in the pelvis. The rectal mucosa was normal.

Conclusion: A small mid-vaginal vesico-vagional fistula which could best be repaired vaginally in the "knee-chest" position.

The diagnosis, possible treatment methods and outcome were communicated to the patient.

Pre-operative management:

The urine test for glycosuria and protenuria was negative. Her haemoglobin was 12.1gm/dl. The blood pressure was 110/70 mm. of mercury. One litre of blood group 'O' Rh "D" was crossmatched and reserved for the operation.

Her chest was clinically clear. The abdomen and pereneum were shaved and the night before the operation she was given a soap enema. In the morning of the day of operation she was given Atropine 0.6 mg. intramuscularly as premedication, she had signed the consent for anaesthesia and operation.

OPERATION:

Anaesthesia and Positioning:

The patient was given Thiopentone sodium 250 mg. intravenously for induction, intubated with a cuffed endotrached tube and maintained on Nitrous oxide, Oxygen and Ether. She was put under intermittent positive

pressure ventilation. Thereafter she was turned to the knee-chest position with a pillow and a cotton roll under the chest and pubis respectivelly. And the bed was tilted so that the head was slightly downwards.

Procedure:

The vulva, perenium and vagina were cleaned with savlon and flavin in spirit. The labia were anchored with stitches to the thighs. Then a Sim's speculum and Daever's retractor were inserted into the vagina and used to retract the posterior and lateral vaginal walls.

Mobilisation of the bladder; The area around the fistual was infiltrated with 5 mls of dilute adrenaline solution (1:10,000) which was injected into the vaciso-vaginal space to separate the bladder from the vaginal wall. Then a circular incision was made perpedicularly around the fistula about 15cm. from the edges. Thereafter, through this, the vaginal wall was separated from the bladder wall along the already created cleavage plane by the infiltration. This mobilisation of the bladder was made sufficiently (1.5cm.) to allow two layer suture of the bladder wall without tension. During this procedure there was minimal resistance encountered as the fibrosis was not much.

Repair of the bladder defect; This was began by sutdring with extra-chronic catgut No.2/0 in a roundbodied half-circle atraumatic needle. The sutures were interrupted and were made through the bladder wall but not through the mucosa. Then the bladder was tested for "water-tightness" by introducing about 120 mls. of methylene blue solution through a rubber urethral catheter. The closure was water-tight. A second layer of interrupted sutures (with the same type of stich) was made in a manner that by taking the bladder wall again along the first suture line, the former line was obliterated and therefore reinforcing it. Both the suture lines were applied without tension. Finally the vaginal layer was closed with chromic catgut No. 2/0 by interrupted sutures. There was no

bleeding sites noted. A Foley's catheter No. 14 with its baloon inflated, was anchored on the right thigh, and connected to a sterile plastic urine bag. Clear urine was flowing well into the bag. Then a sterile pad was applied over the vulva after removing the stitches which anchored the labia and mopping the perineum dry. The intravenous fluids was running at a rate of 30 drops per minute to give more urinary output.

Post-operative care:

1. Intravenous fluids, 2 litres of 5 per cent Dextrose and 1.0 litre of Normal saline per 24 hours. She was also allowed to take plenty of oral fluids when she has full recovered from anaesthesia.
2. Blood pressure, pulse rate and respiration were monitored 2 hourly for the first 12 hours, thereafter every 4 hours.
3. Continuous bladder drainage for 14 days, and any unsatisfactory urine flow (Bloody or rate) to be reported to the surgeon as a matter or urgency. Input and output were monitored 2 hourly.
4. Pethidine 100 mg. 6 hourly was given intramuscularly to control pain, 6 doses.
5. She continued with sulphadimidine 1 gm. 8 hourly as prescribed before.

Post-operative progress:

Her general condition, blood pressure and temperature remained normal. The urine was slightly blood stained for the first 12 hours, but thereafter it was clear and the output was satisfactory. There was no vaginal bleeding or discharge.

On the 14th post-operative day, a catheter specimen of urine was sent for culture and sensitivity before the catheter was removed. She was instructed to micturate frequently, say 2 hourly for three days in order to train her bladder. There were no pathogen found in the urine. Then 10 days after the catheter was removed she was subjected to the

test of cure, whereby she was examined vaginaly in the same position of repair under light anaesthesia. The bladder was filled with coloured solution through a catheter as discribed earlier. There was no leakage. Her haemoglobin was 12.8 gm/dl and the blood urea level was normal.

She was then discharged with the following instructions; (1) to abstain from sexual intercourse for at least three months, (2) to attend antenatal clinic early once pregnant (3) that all her subsequent deliveries should be in hospital.

COMMENTARY:

Vesico-vaginal fistula is a very troublesome and depressing disease a woman is liable to suffer from. The patient may become emanciated and depressed and she seeks solitude, and in most cases she evades society due to the penetrating smell of urine which emanates from her. In Tanzania this is a major urological problem. As evident in this case, this condition is a common sequel of poor obsterical care (prolonged labour) which is still true in most developing countries.

The fistulae following labour may result from direct injury or pressure necrosis which the latter was the case in this patient, and for the majority of fistulae seen in the poor populations. The pressure necrosis was a result of long and difficult labour on account of disproportion between the pelvis and the presenting part in this patient. Sometimes malpresentation may be the causative factor. And, as exemplified in this case, the necrosed area sloughs away between the 3rd and the 10th day of puerperium unlike in the case of direct injury in which the incontenence manifests itself almost immediately after delivery. The direct injuries may also follow clumsy operative vaginal deliveries such as ventous extraction, forceps delivery or symphysiotomy. None of these were employed in this case. Likewise, there was no evidence that the fistula was a result of the caesarean section. Generally,

this obstetrical complication is contributed by several interrelated factors. The major contributors include; lack of health facilities, transport, poor socio-economic status, and the high prevalence of contracted pelvis (Gunaratne et al. 1982) in our female population. But sometimes ignorance on the part of the patient as was the case here, may play a major role. That is to say if the mothers are less motivated about utilization of the available health facilities, they manifest as in this case, by showing less or no demand for the services.

The commonest type of fistula resulting from obstructed labour is the juxta-urethral fistula, but in this patient the relativelly rare type (mid-vaginal) of fistula was presented. In the former, the bladder neck and the proximal urethra are involved. The lesion is also commonly fixed to the posterior surface of the pubis. This feature has a direct bearing on the difficulties encountered during operative treatment. As shown in this patient, the minimal fibrosis and lack of fixity contributed much to the aesiness and also to the success of the repair. Nevertheless, for excellent results to be achieved, the initial measures instituted after delivery should be fully practised, by ensuring continous bladder drainage and the use of urinary antiseptics or antibiotic cover from the beginning. This type of treatment offers spontaneous healing of small fistulae and reduces the sizes of the large ones significantly. There are also a few other factors governing success of the surgical repair as advocated by several experienced surgeons on this subject matter (Moir, 1967 and Lawson, 1967) include; good nursing care, correct surgical technique with suitable instruments, an experienced hand and good care of post-operative catheterization.

In this patient, there were no complications, hence the success of the repair as was demonstrable during the test of 'cure! It is regarded by most surgeons that when the fistula is closed, the patient is cured.

This appears logical since this is often the most pressing problem. But, to the patient, there is a lot more to be gained including her social status quo which is lost due this condition. This is actually our experience, which is evident by the number and nature of questions we receive from the patients when they are ready to be discharge from Hospital. On this basis, Coetze and Lithgrow (Alinakhu, 1974) suggested the criteria of cure in this condition as follows:-

(a) Full continence with ability of bladder to hold at least 170 mls. of urine.

(b) There should be no dyspareunia.

(c) There should be no stress incontinence

(d) There should be no traumatic amenorrhoea.

(e) The patient should be able to bear children (not vaginally).

This case demonstrates the catastrophic outcomes of pregnancy which was un-attended to, at delivery. This patient lost a full term baby after an operative delivery with its well known risks in our place, and even acquired the deplorable pathology. These are all preventable with good obstetric care which in this case was not beyond her reach. It was clearly shown in this patient that she was not motivated to demand for these services, probably for several reasons. Ignorance was a major factor. On the other hand, although she did not state clearly, it is likely that there are alternative delivery services offered at her village to which she preferred. Mbilu, (1981) in his research in this patient's rural area, found that only 31 per cent of the pregnant mothers had utilized the delivery health facilities, and that the rest depended on the Traditional birth attendants. This patient did attend the antenatal clinic only twice and that's why she had to be re-educated and motivated to do better next time. Had she attended well, she should have been pick-up as a risk patient and hence referred to the appropriate centres for planned delivery. Since prevention was too late for the

frist pregnancy, she was told of the sequence of events leading to the pathology she had after the last delivery and that she should report back for antenatal care and delivery in the next pregnancy. She was planned for elective caesarean section in her subsequent pregnancy.

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BARTHOLIN'S ABSCESS.

MARSUPILIZATION.

NAME:	Miss. A.A.K.
AGE:	24 years.
REG. NO.:	30029
PARITY:	0 + 1. Abortion
DATE OF ADMISSION:	18th July, 1982
DATE OF DISCHARGE:	22nd July, 1982.

SUMMARY:

This was a case of a 24 years old unmarried, maid at a store of beer, who presented with history of recurrence of a very painful swelling on the left labia for six days. A Bartholin's abscess was diagnosed and E. coli cultured from the pus. She recovered well with Marsupilization and antibiotics. The management of this condition is discussed.

History of present illness:

The patient was admitted with history of insidious onset of pain and swelling of the left labia for six days prior to admission. The pain and swelling were progressive and for the last two days before admission, she was completely incapacitated. There was also history of low grade fever and slight yellowish vaginal discharge accompaning these symptoms. There was no history of vaginal or perineal ulceration or trauma precceding the swelling. Her micturation and bowel habits were normal, but there was history of dyspareunia.

Previous gynaecological history:

She had had her menarche at 13 years of age. The cycles were regular, normal flow with periods of 5-6/28 days. There was history of dysmenorrhoea. Her last menstrual period was 8th July 1982. She gave history of a similar swelling but less painful and smaller in size on the same labia, about nine months before, which subsided with treatment injections of penicillin. She had no history of abnormal vaginal discharge or bleeding. She had not been on any contraception.

Obstetric history:

She had not delivered, but had had a spontaneous abortion at three months of pregnancy for which the uterus was evacuated about a year ago. There was no history suggestive of post-abortal sepsis.

Past medical and surgical history:

She had had appendicectomy 3 years before, which healed without sepsis. She had no history of gynaecological operation apart from the evacuation. There was no history of any other major illness.

Family and social history:

She had had a primary school education, and worked as a maid with a store of beer! She was unmarried and had no permanent male partner. She drank 2-4 bottles of beer daily, but she was not a smoker of cigarettes.

PHYSICAL EXAMINATION

General examination:

She was a young lady of good nutritional status. She was in pain, febrile (38.2^{o}C) but she was not pale or jaundiced. There was no neck-stiffness or lymphadenopathy. Her pulse rate was 48/minute, regular of good volume, and the blood pressure was 110/70mm.mercury.

Cardio-respiratory and central nervous systems:

These were essentially normal.

Abdominal examination:

The abdomen was scaphoid and was moving with respiration. There was a well healed Gridiron incision scar. The abdomen was soft non-tender. The liver, spleen and kidneys were not palpable, and there was no mass palpable in the abdomen.

Pelvic examination:

An ovoid swelling was seen on the lower half of the left labium majus. It's size was 4 x 3 cms; and the skin over it was shiny and tense. There was no evidence of injury on the perineum. The swelling felt hot, flactuant, extremely tender and the tissues around were induratted. The right labium looked normal and slight yellowish discharge was seen at the introitus. Further vaginal examination could not be done due to the tenderness. There was no discharge per urethra. Swabs-specimens were taken from the urethral meatus and rectum. The Batholin's duct orifice could not be identified due to tenderness.

Diagnosis: Bartholin's abscess:

Plan of management:

(a) Laboratory investigations

(b) Marsupilization of the Bartholin's abscess.

Laboratory investigation:

1. Haemoglobin : 12.2gm/decilitre.

2. Leucocyte count : total was 9,000 cells/mm^3.

differential was:- neutrophilis 70 per cent

- Eusinophilis 3 per cent

- Lymphocytes 25 per cent

- Basophilis 2 per cent

3. V.D.R.L. : negative

4. Urine : urinalysis was normal

5. Pas swabs (Urethral, Rectal): Insignificant growth of staphylococcal -(contaminant).

Pre-operative preparation:

The patient was given morphine 15 mg intramuscularly to control pain and was also given 4.8 mega units of Procaine Penicillin Fortified intramuscularly. The perineum was shaved. She signed the consent for anaesthesia and operation.

OPERATION: Marsupilization.

Anaesthesia:

As in case No.....10..... (Examination under anaesthesia for endometrial carcinoma).

Procedure:

The whole perineum was cleaned with savlon solution and thereafter drapped with sterile towels. Two Allis forceps were applied anteriorly and posteriorly over the swelling. Then an eliptical incision of about 2 cms. was made through the vaginal and abscess wall. A very thick, yellowish white purulent material drained with a gush. A pus swab was taken for bacteriology and drug-sensivity. The pus was squeezed out and the cavity explored with the index finger. There were no loculations and all the pus was evacuated. Then the lining of the abscess was sutured to the vaginal skin with interrupted chronic catgut No. 00. By that procedure, the abscess was everted and haemostasis was well achieved. The cavity was packed with gauze soaked in flavine-in-spirit.

Bacteriology results; A heavy growth of E.coli was cultured. It was sensitive to Tetracycline and chloramphenical.

Post-operative care:

1. Pethidine 100mg. intramuscularly 8 hourly (4 doses).
2. Monitoring of blood pressure, pulse rate and vaginal bleeding ½ hourly for the first 6 hours, thereafter 4 hourly. All were normal and temperature was declining.
3. Tetracycline capsules 500 mg. 8 hourly for 5 days.
4. Daily perineal bath with savlon in warm water.

Post-operative progress:

On the first post-operative day, her general condition was good, the temperature was 37°C and both blood pressure and pulse rate were normal. The abdomen was soft, and non-tender. The vulval lesion was clean with its stoma wide open. The oedema of the surrounding tissues was resolving. By the third day she had improved quite well and she could walk comfortably. Her bowel habits and micturation were normal. She was then discharge on the next day with an appointment to outpatient clinic in 4 weeks time.

Follow-up:

She was in good general health. She had no complaint and there was no history of bleeding or discharge from the wound. Physical examination revealed, a shallow depression with well healed edges on the left labium majus. There was no sign of inflamation. The pelvic organs were normal.

COMMENTARY:

This case had demonstrated the acute infection of the vestibular gland of Barthiolins. This is a very frequent condition during the active sexual life of women. In this case, the notorious tendence of recurrence of this disease due to inadequate treatment is also demonstrated.

The causative organisms are multiple, but the common isolated bacteria are; E.coli (as was the case in this patient), staphylococcal aureus, anterococci and N. gonorrhoea. In our population the gonoccoccal infection is rampant and is a major causative organism in pelvic imflammatory disease. And it is not uncommon for Bartholins gland to be involved with this organism. In this patient, although this particular organism was not looked for, its presence was seriously suspected on the basis of its endemicity in our population and her predisposing low socio-economic status. She was therefore given a high dose of Penicillin on admission to combart this infection. Later she was changed to the appropriate antibiotics according to culture results.

It is true that this disease may resolve with antibiotic therapy alone as was the case in this patient when she had the first similar lesion. Sometimes, the abscess bursts spontaneously and it becomes quiescent for a few months before recurrence. Even when managed surgically by incision and drainage or marsupilization techniques, which if they are not adequately performed, recurrence may also occur. This patient received a definitive treatment of marsupilization. This is the treatment of choice for both the Bartholins abscess as well as cysts. It is preferred to excision of the whole gland. This method offers a number of advantages over the other methods. It is simple to perform, and haemorrhage is minimal and controllable, thus post-operative haematoma on the site is rare. The hospital-stay is also short, since a patient may even need to spend only 24 hours. It is also claimed that the gland may still be functional. This is an advantage particularly in cases where the contralateral gland had been operated on before and is non-functional, therefore the potential risk of dry-dyspareunia is reduced with

the second operation. This patient was checked daily to ensure the stoma of the operated area was open because if it gets sealed-off then recurrence is bound to occur.

This disease does not appear to decline in our population where pelvic infection is still rampant and may actually be on the increase. The treatment offered to the majority of the patients with bartholins abscess is still unsatisfactory as evidenced in this patient. Hence, there is need to emphasize and teach the medical workers in the peripheral health institution to perform this simple surgical procedure.

CARCINOMA OF THE ENDOMETRIUM.

RADIOTHERAPY, TOTAL ABDOMINAL HYSTERECTOMY

AND BILATERAL SALPINGO-OOPHORECTOMY.

NAME: Mrs. B.G.H.

AGE: 50 years.

REG.NO.: 214445

TRIBE: Mngoni

ADDRESS: Ralli Sisal Estate, Tanga.

PARITY: 5 + 0.

DATE OF ADMISSION: 2nd September, 1981.

DATE OF OPERATION: 11th November, 1981.

DATE OF DISCHARGE: 8th January, 1982.

SUMMARY.

This was a 50 years old woman, who presented with history of postmenopausal vaginal bleeding and discharge for eight months. On examination she was found to be obese, pale and the uterus was enlarged. After curattage, a diagnosis of a Well differentiated Adenocarcinoma of the endometrium was made. She received combined treatment of radiotherapy, and total hysterectomy and bilateral salpingo-oophorectomy. Both types of treatment were well tolerated. The aetiology and management of this condition is discussed.

History of present illness:

This patient had been referred from Muheza District Hospital. Her presenting symptoms were, postmenopausal vaginal bleeding and discharge for eight months. She also complained of lower abdominal pain for four months.

She was apparently well until eight months prior to admission when she noticed the onset of unprovoked and painless irregular vaginal bleeding. The flow was scanty with occasional passage of blood clots. This was also associated with episodes of watery vaginal discharge which was at times foulsmelling but not associated with itching. In the last four months, these symptoms were accompanied with cramping lower abdominal pain, radiating to the lower back. She also noticed that she had developed general body weakness, dizziness, palpitation and weight loss. She denied history of difficult in breathing, chronic cough or swelling of the lower limbs. Micturation and bowel habits were normal.

Gynaecological history:

She could not recall her age at menarche. The periods had been of 3 days every month, painful and the flow was scanty. There was no history of intermenstrual bleeding or post-coital bleeding as far as she could recall. There was no past history of gynaecological operation. She had not used oral contraceptives. She was 5 years postmenopause, and her perimenopausal period had been unremarkable.

Obstetric history:

She was para 5 + 0, with four living children. Her last born was 15 years old. All her pregnancies and deliveries had been uneventiful. She could not recall the birthweights of her children.

Past medical history:

She had no history suggestive of renal disease, hypertension or diabetes mellitus. There was no history of previous surgical operation and she had not had any major illness before. She was not on any regular medication.

Family history:

There was no history suggestive of bleeding-tendency, uterine cancer or tuberculosis in her family.

Social history:

There was nothing contributory.

She was apparently well until eight months prior to admission when she noticed the onset of unprovoked and painless irregular vaginal bleeding. The flow was scanty with occasional passage of blood clots. This was also associated with episodes of watery vaginal discharge which was at times foulsmelling but not associated with itching. In the last four months, these symptoms were accompanied with cramping lower abdominal pain, radiating to the lower back. She also noticed that she had developed general body weakness, dizziness, palpitation and weight loss. She denied history of difficult in breathing, chronic cough or swelling of the lower limbs. Micturation and bowel habits were normal.

Gynaecological history:

She could not recall her age at menarche. The periods had been of 30days every month, painful and the flow was scanty. There was no history of intermenstrual bleeding or post-coital bleeding as far as she could recall. There was no past history of gynaecological operation. She had not used oral contraceptives. She was 5 years postmenopause, and her perimenopausal period had been unremarkable.

Obstetric history:

She was para 5 + 0, with four living children. Her last born was 15 years old. All her pregnancies and deliveries had been uneventful. She could not recall the birthweight of her children.

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She had no history suggestive of renal disease, hypertension or diabetes mellitus. There was no history of previous surgical operation and she had not had any major illness before. She was not on any regular medication.

Family history:

There was no history suggestive of bleeding-tendency, uterine cancer or tuberculosis in her family.

Social history:

There was nothing contributory.

PHYSICAL EXAMINATION.

General examination.

She was an elderly lady and obese. She was pale and her temperature was 36.9°C. There was no peripheral oedema or lymphadenopathy.

Breast:

The breast were atrophic and there was nothing pathological noted

Respiratory system:

Air entry to both lungs was normal and there were no added sounds.

Cardiovascular system:

The pulse rate was 74 per minute, with sinus rythm and of normal volume. Her blood pressure was 110/80 mm. of mercury. The heart sounds were normal and there were no murmurs.

Musculo-skeletal system:

There was no abnormality detected.

Abdomen:

The abdomen was not distended but there was an obvious bulge on the hypogastrium. There were no surgical scars, There was no tenderness elicited over the abdomen. Both the liver and spleen were not palpable. The renal angles were not tender. The hypogastrial mass was arising from the pelvis and its size was equivalent to a 16 weeks pregnancy. It was smooth, soft and mobile. There was no demonstrable free fluid in the abdomen.

Pelvic examination:

Speculum: There was no discharge at the introitus. Both the vulva and vagina were atrophic but there was no lesion seen. The cervix was long, the os was closed and the epithelium was normal.

Digital: The vulva and vaginal mucosa were normal. The cervix was long, firm and smooth surfaced. The uterus was felt to be globular, smooth, soft with a size of 16 weeks pregnancy. It was freely

mobile and its appandages were not palpable. There was no tenderness or other mass palpable in the pelvis.

Rectal examination

The rectal mucosa was felt to be free. No mass was palpable in the cull-de-sac.

Provisional diagnosis:

In view of the history of postmenopausal vaginal bleeding and discharge in the abscence of any local lesion and a bulky soft uterus; endometrial carcinoma was highly suspected. Clinical staging was: 1.

Laboratory investigations:

1. Haemoglobin : 11.0gm/decilitre.
2. Leucocyte count : Total was 6,800 cells/mm^3.
   Differential was normal
3. Platelet count : 600,000/mm^3
4. Serum urea nitrogen: 20mg/100 mls.
   Serum Creatinine : 0.5mg/100mls.
5. Blood group : 'AB' Rh "D" Positive
6. Liver function tests: Total Bilirubin was 0.6mg/100 mls.
   : SGOT was 5 i.u/litre
   : SGPT was 6 i.u/litre
   : Plasma Alkaline phosphatase 4 iu/litre
   : Total plasma protein 4gm/100 mls.
7. Fasting blood sugar: 77mg/100 mls.
8. Mid-strein urine specimen: for protein was negative.
   for sugar was negative
   Microscopy : there were no leucocytes, cast or red blood cells. Few epithelial cells.
   Culture : no bacterial isolated.
9. Chest X-ray: Normal film. No metastatic lesions.

Examination Under Anaesthesia and Fractional Curattage:

Before this procedure, the anaemia had been corrected by blood transfusion and the haemoglobin level was then 13.0gm/decilitre. The other prepations of the patient and the Anaesthesia were performed as in case No 1 (Uterine myoma).

Findings: There was no discharge. The vulva and vaginal mucosa were normal. The cervix was long, firm, smooth and did not bleed easily on touch. The uterus was bulky, soft, smooth and anteverted. It was freely mobile. Its cavity was sounded to about 14 cm. It was freely mobile, and its appandages were palpably small. There was no other mass in the pelvis.

Done: (a) Pap-smear was taken

(b) Then, with a small sharp curatte, four curattage specimens were obtained from the endocervix, isthmus, fundus, and anterior and posterior uterine surfaces. respectivelly. These were labelled and sent for histopathology accordingly.

Results:

(A) Cytology (Pap-smear):

Few benign squamous cells and scanty leucocytes.

No malignant cell seen.

(B) Histology (Fractional curattage):

Endocervical specimen: very few benign squamous and columnar epithelial cells.

Isthmal specimen : scanty columnar cells-benign. No malignant cells. Plenty of red blood cells.

Fundal specimen : Normal endometrial tissue infiltrated with adenocarcinomata cells. The cells look well differentiated.

Corporeal specimen : Normal endometrial tissue mixed with scattered adenocarcinoma cells.

Diagnosis: Adenocarcinoma of the endometrium.

Plan of management: Combined therapy.

1. Pre-operative intracavitary irradiation, followed after six weeks with
2. Total hysterectomy, and bilateral salpingo-oophorectomy.
3. Post-operative external irradiation.

Pre-operative irradiation:

This was given as an intracavity irradiation from our Cobalt 60 source. She received a total dose of 4000 rads. The programme of irradiation was that; 1000 rads were given as a single dose weekly for 4 weeks. The treatment was well tolerated. Laboratory investigations after the therapy were;haemoglobin 11.8gm/decilitre, total white blood cells count was 5,200 cells/mm^3 and platelet count was 550,000/mm^3.

LAPAROTOMY: Total abdominal hystrectomy and bilateral salpingo-oophorectomy.

Pre-operative preparation, Anaesthesia and Procedure:

These were performed as detailed in case No....1.... (Uterine leiomyomata). She was given oral Metronidazole 400 mg. thrice daily for three days prior to the operation day.

Findings:

There was no ascitic fluid in the abdominal cavity. The uterus was uniformly enlarged, smooth, soft and of normal colour. The rest of the pelvic viscera looked normal. The uterine appandages were atrophic but otherwise normal looking. There were no palpable pelvic lymph-nodes. Palpation of the liver, diaphragm, omentum and Para-Aortic nodes revealed no pathology.

Done:

The operative procedure in this case was essentially the same as in the case of Uterine leiomyomata (case No 1). But in this case, the strong clamps were applied lateral to the ovaries, onto

the infludibulo-pelvic ligaments. Then these structures were severed between the clamps and in turn the stumps on each side to ascertain safe haemostasis. Again another exception from the procedure in case No. 1 was that, in this patient the bladder anteriorly and peritoneum posteriorly were pushed further-down to expose more of the vaginal walls. Then the uterus was removed en-block with about 3cm. of the vaginal cuff ("a mini-vaginal cuff"), as well as both uterine appandages. The ureter were re-identified at the end of the procedure and were found to be safe. The vagina was closed without drainage. The operation was well tolerated by the patient.

Macroscopic findings of the removed uterus when cut-open revealed that; the growth was localized at the fundus but the depth of myometrial involvement was about two thirds of the wall.

Immediate post-operative care:

This was done as in the case No. 1 (Uterine leiomyomata); and there was no problem encountered.

Post-operative progress:

The patient maintained normal blood pressure, pulse rate and urinary output. The chest was clinically clear and the abdomen was soft. By the third post-operative day, she had the intravenous drip discontinued and she was ambulant. On the seventh post-operative day all the stiches were removed and the would had healed well. Her haemoglobin level was 12.0gm/decilitre.

Post-operative radiotherapy:

This treatment was instituted three weeks after the operation. Pre-treatment laboratory investigations were; haemoglobin was 12.0gm decilitre; the total leucocyte count was 5,800/mm^3 and there was no bacteria grown from the mid-stream urine specimen. The platelet count was 530,000/mm^3.

The irradition was again given from the Co^{60} source for both external and intravaginal irradiation. The total dose received was 4000 rads. The programme was that; half of the dose was given intravaginally to the vaginal vault whereby 1000 rads were given weekly for two weeks. The other 2000 rads were given in fractionated doses of external irradition of 200 rads daily for 4 days a week. During the course of this treatment the patient developed watery diarrhoea and vomiting (irradiation sickness) which were treated symptomatically for five days. Apart from this she tolerated the treatment well. Her haemoglobin level was 11.4gm/dl. and leucocytes count was 5,000/mm^3.

She was then discharged and given an appointment to attend our gynaecology clinic after 2 months.

Follow-up:

She was in good general condition and she had no complaints. There was no history of vaginal bleeding or discharge. Both her micturation and bowel opening were normal.

On examination, she was not pale and there was neither periphery oedema nor lymphadenopathy. The chest was clear. The abdomen was soft, with the scar well healed and there was no mass palpable. There was no evidence of free fluid in the abdomen. The vagina was slightly stenosed but there was no abnormal discharge. The vaginal mucosa was normal and the vault was normal. There was no mass palpable in the pelvis. On rectal examination, the rectal mucosa was found to be free add intact, and there was no blood stain on the examining finger.

Her haemoglobin level was 13.5gm/dl., and the leuccocytes count was 6,600 cell/mm^3. The blood urea Nitrogen and serum creatinine were 20mg/100 mls. and 0.4mg./100 mls. respectivelly. There was no metastatic lesion seen on the chest X-Ray film.

Conclusion: She had tolerated very well the combined therapy instituted and that there were no demonstrable metastases or recurrences. She was advised to come back for follow-up six months later.

COMMENTARY:

The observed low incidence of endometrial carcinoma in our population appears to be more apparent than real, which explains the relative difference of the incidences between the temperate and the tropics. The main possible contributory factors are, under-reporting, short life-expectancy and high panty in our population. The cervical cancer is the commonest which probably overshadows the endometrial cancer. At our centre the endometrial cancer accounted for less than 3 per cent (1976) and 5 per cent (in the first seven months of 1979) of all gynaecological malignancy admission (Mgaya, 1979). This is a disease of the menopausal women, with the peak prevalence at 50 to 60 years of age, and only occasionally under 35 year of age. The obese, hypertensive and diabetic woman appears to be more predisposed (Garnet, 1958) to this disease. Also the incidence of this condition is three times as high in nulliparous as parous women (Benson 1976).

Hitherto, the aetiology of cancer of the endometrium has not been well established. Recent research interests are centered arround a disturbance in endocrine haemostasis, although the precise nature remains to be defined. The classical clinical profile of the patients with endometrial cancer is; relative infertility, obesity, impaired glucose tolerance (increased incidence) and disturbed menstrual function. This has for long suggested a basic abnormality in the hypothalamic-pituitary-ovarian hormonal inter-relationship. Among these, Oestrogen has been implicated most in several hypothesis as a causative factor. It has been proved to induce cellular growth and proliferation in target

organs which bear oestrogen receptors in their cellular cytoplasm (Johansson et al. 1981). These receptors are abundant in the uterus, ovary and breast whereby they are produced under the influence of unopposed oestrogen (Lucas, 1974, Johansson 1981), and seem to determine the sensitivity of the end organs to the hormone. There is ample evidence that, oestrogen unopposed by progesterone causes endometrial cancer in animals (Johansson, 1981) while it causes atypical proliferation in human (Lucas 1974). Further evidence was shown by Gusberg (1967) that, in human unopposed oestrogen activity can produce more and adenomatous hyperplasia, and varying degree of anaplasia including invansive adenocarcinoma. Women with polycystic ovariam syndrome and oestrogen secreting tumours have a higher incidence of endometrial cancer. It is also known that women with the constitutional features most commonly associated with endometrial carcinoma, namely, ageing, impaired fertility, and abnormal glucose tolerance curves and obesity, produce most oestrogens (oestrone) in extra-glandular sites from androstenedione. Nevertheless, we can't implicate oestrogen as a direct cause since most the evidences are more or less circumstantial, thus the actiology still remains unclear.

The clinical diagnosis in this patient was confirmed histologically to be a highly differentiated adenocarcinoma of the endometrium. The generally accepted primary treatment of endometrial carcinoma is surgery. But there is also a wide variation of opinions about the place, type and extent of surgery as well as the degree of adjuvant radiotherapy. This patient received both surgical and irradiation therapy. This combined therapy has now emerged to be superior even for the early stages and there is very sound scientific bases in support of the concept. On one hand the FIGO clinical staging has proved to be not ideal for as indicator of treatment because the pre-operative findings have poor correlation with real extension of the disease. The lymph mode involvement,

the depth of myometrial invasion as well as the histological grading have now been shown to be more accurate prognosticators of treatment. Less (1978) found that the positive node incidence is a very accurate indicator of the stage of the disease. In addition, several workers (Roman et al. 1967, Dede et al. 1968, Lewis 1970) have shown that, in addition to the depth of myometrial invasion being a good prognostic indicator, there is a direct correlation with gland involvement and with tumour cell differentiation. And the less differentiated tumours are more likely to invade deeper and metastisize. Homesley et al.(1977) found that stage I and II of this disease with deep myometrial invasion have more likelihood of parametrial and lymph node involvement. Just as in the case of FIGO clinical staging, these other prognosticating indicators of treatment are not available to the surgeon pre-operativelly. Therefore, we have to depend on the statistical information and act accordingly before the operation. Thus the basis of combined therapy used in this patient.

The role of radiotherapy in the combined treatment is well established and the regimens differ as a matter of preference. This patient, she received pre-operative irradiation to minimise the spillage of malignant cells at the operation as well as to reduce the tumour mass, a concept advocated by several workers (Surwit 1981, Gusberg 1970, Underwood 1977). This was followed with surgery six weeks later. At laparatomy the depth of myometrial invasion indicated the need for post-operative radiotherapy although the lymph node involvement was not demonstrable. This treatment was preferred to the more extensive (radical) surgery which is usually associated with high morbidity and mortality. Here the external irradiation from our cobalt ^{60} source was directed to the potential sites for recurrences such as the vaginal vault, pelvic floor and pelvic lymph nodes. In this patient intravaginal irradiation was given to

treat the vaginal vault which is a notorious site of recurrence. The results of treatment in this case were excellent as there was no complication or recurrence noted up to the time of follow-up.

There was no indication of hormonal therapy in this patient but it is known that it can be an adjuvant to surgery as well, in which progesterone or other progestagens are used. Large doses of progestogen used in recurrence and metastatic diseases have brought dramatic regressions such as complete clearing on X-Ray of large deposits.

From the majority of the series about this condition, the data of follow-up and mortality is inadequate. However it is claimed that the main cause of death in patients with endomatrial cancer is the abdominal spread of the tumour accounting for about 15 per cent of all patients, or 50 per cent of those dying with tumour (De Muelenaere,1976).

Despite this threatening out look of the condition, the combined therapy still holds a demonstrable evidence of efficacy. There is a lot more to be clear known about the aetiology and treatment in regard to the extent of spread of the disease. Of course earlier detection would add to the efficacy of the combined therapy.

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LONG GYNAECOLOGICAL COMMENTARY

THE INCIDENCE, PRESENTATION AND TREATMENT OF ECTOPIC PREGNANCY AT MUHIMBILI MEDICAL CENTRE IN 1982

S U M M A R Y

From 1st January to 31st December 1982, ninety two patients were treated for Ectopic pregnancy at Muhimbili Medical Centre. The incidence was 1:283 deliveries (0.35%). Women who had been pregnant or delivered at least once showed a higher incidence, which increased with age and parity. Severe abdominal pain, irregularity of vaginal bleeding or amenorrhoea and evidence of intra-abdominal bleeding were the commonest features on admission. Aetiological factors could not be substantiated, although pelvic infection appeared to play a major role. Delay in patients reporting to hospital, making the diagnosis and instituting surgical treatment was clearly shown. Autotransfusion appear to have a definite role to the chronic inavailability of banked blood. Most of the patients had simple salpingectomy with good results.

INTRODUCTION

Ectopic pregnancy is potentially one of the most critical emergencies in gynaecology. In some developing countries it is found to be one of the commonest surgical emergency among women (Stewart 1967, Douglas 1963). It is also a major factor in the mortality due to pregnancy and child birth (Dewhurst, 1981).

The incidence of ectopic pregnancy varies among communities, being highest in the less developed and poor communities. In United Kingdom it is in the order of 1 per 300 mature intra-uterine pregnancies and it reaches the extremes in the West Indies 1 per 28 (Douglas 1963). In Africa, the incidence is also very high as reported in Benin city, Nigeria 1 per 43 (Oronsaye, 1979) and our incidence at Muhimbili Medical Centre was 1 per 250 mature intra-uterine pregnancies in 1976 (Hospital figures). Ectopic pregnancy also accounted for 24.7% of all laparotomies performed in 1979 in this hospital. Indeed it is an important disease entity in our place.

The varibility of the incidence from one community to another is said to be dependent on the presence of the predisposing factors for this condition. Pelvic inflammatory disease is deeply implicated as a major predisposing (aetiologic) factor by several workers (Stewart, 1967, Lawson 1982), and in some populations gonococcal salpingitis is the commonest predisposing factor. Pelvic inflammatory disease is a very common condition in our community as reported by Mtimavalye (1979), the acute form accounted for 16.1 per cent of all gynaecological admissions at this Centre.

There is very little data about ectopic pregnancy in our place, although it quite prevalent, and the associated pelvic infection factor is even more prevalent. Thus this disease entity which also carries lethal potential risks, is of special interest to us; hence its worthiness to be studies prospectivelly.

In broad terms the objectives of the study were to determine: the incidence of ectopic pregnancies; the characteristics of the women by their age, parity and marital status; evidence of predisposing factors; frequency of cardinal symptoms and signs; location of gestation, and treatment and outcome.

Methodology and Materials:

This was a prospective detailed analysis of all patients admitted and treated for Ectopic pregnancies in the Gynaecology wards at Muhimbili Medical Centre between 1st January to 31st December, 1982.

Apart from the information recorded in the patient's case notes, interviews were conducted by the author, with the patients to fill-in the gaps of missing information. This was done sometimes post-operatively whenever it was thought most convenient for the patient. These patients were followed-up from day of admission untill they were discharged. But few patients who were admitted with another diagnosis for sometime before ectopic gestation was suspected, their duration of stay commenced from the time the right diagnosis was made.

All the collected information was entered into a special sheet of paper (see appendix I).

RESULTS

I. CHARACTERISTICS OF WOMEN TREATED FOR ECTOPIC PREGNANCIES AT MUHIMBILI MEDICAL CENTE IN 1982.

Table 1(a):

Distribution of patients according to their age groups and parity

Age Group (Years)	PARITY					Total	%
	0	1	2	3	4+		
15 - 24	11	5	3	4	1	24	26.1
25 - 34	3	4	10	22	19	58	63.0
35 or more	1	1	1	2	5	10	10.9
TOTAL (%)	15 (16.3)	10 (10.9)	14 (15.2)	28 (30.4)	25 (27.2)	92 (100)	

(i) The total number (N) of patients treated for Ectopic pregnancy at Muhimbili Medical Centre in 1982 was 92. During the same period, 26,001 deliveries were made in this Hospital.

The incidence of ectopic pregnancy was therefore 1 per 283 mature intra-aterine pregnancies (or 0.35%).

The rate of ectopic pregnancy among all gynaecological admission of 1982 was 92/3341 (2.8%).

(ii) The ages of the patients treated for Ectopic pregnancy ranged from 15 to 40 years, with the highest age group between 25 to 34 years (active reproductive age).

There was an increasing trend of the prevalence of ectopic pregnancy with increasing parity and age. Nulliparous women formed only 16.3% of all patients, whereas 77 (83.7%) of the patients had been pregnant or delivered at least once.

Table 1(b):

Distribution of patients according to age and their marital status

Age Group (Years)	MARITAL STATUS		
	Married	Unmarried	Widow/Divorcee
15 - 24	17	7	0
25 - 34	44	5	9
35 or more	6	1	3

N = 92

From the summarized marital status of the patients in table 1(b), there was no difference in the incidence of ectopic pregnancy between the unmarried and the divorcee or/widow. However, the highest incidence was in the married group.

II. CLINICAL PRESENTATIONS OF THE PATIENTS TREATED FOR ECTOPIC PREGNANCIES.

Table 2(a):

Main symptoms with their frequency on admission

Symptom	Occurence	%
Abdominal pain	89	96.7
Amenorrhea/delayed menses	83	90.2
Fainting/Dissiness	70	76.1
Vaginal bleeding	55	59.8
Shoulder-tip pain	33	36.0

N = 92

The most constant symptoms were; severe abdominal pain, a period of amenorrhea (or delayed menses) and fainting or dizziness episodes.

55 (59.8) of all the patients had history of vaginal bleeding of varing degrees associated with the symptoms at the time of admission.

Table 2(b):

Main signs with their frequency on admission

Signs	Occurence	%
Anaemia	88	95.6
Abdominal distension	83	90.2
Shifting dullness	69	75.0
Hypotension	63	68.5
Vaginal bleeding	43	46.7

N = 92

Most of the patients had evidences of having had a significant intra-abdominal haemorrhage as shown by the most frequent signs; Anaemia, evidence of haemoperitoneum and hypotension.

Table 2(c):

Distribution of patients according to their periods "diagnosis - laparotomy" in hours.

Period (hours)	No. (%)
2 or less	8 (8.7)
3 - 4	35 (38.0)
5 - 6	22 (24.0)
7 - 8	12 (13.0)
9 or more	15 (16.3)
Total (%)	92 (100)

NB: Time of diagnosis to laparotomy was considered from when the ectopic gestation was suspected (even before confirmation by a senior doctor) to the time the laparotomies started.

From table 2(c), it is obvious that there is a significant delay between when the diagnosis is made to the time the laparotomy is done. Only 8.7% of the patients had been operated upon within 2 hours of the diagnosis. The majority 62.0% of the operations were done between 3 to 6 hours after diagnosis.

Among the obvious reasons for the delay were:

1. Delayed clinical confirmation of the diagnosis by a senior doctor who also conducts the operation.
2. Awaiting for availability of a theater - especially in the morning hours of working-days when most of them are occupied. During the emergence hours, there is shortage of anaesthetists and or nursing staff for several theaters to run at the same time in case there are several emergence operations.

III. FINDINGS AT LAPAROTOMY

1. Table 3:

Location of gestation

Location	No. Cases	%
Cornual Interstitial	9	9.8
Isthmus	11	12.0
Ampulla	50	54.3
Fimbria	21	22.8
Abdominal	1	1.1
Total	92	100

Note: (1) Fimbria (included infundibulum)

(2) One case was a twin gestation at the tube and intra-uterine. She eventuall aborted the intra-uterine gestation 3 days after removal of the tubal gestation.

(3) There was a single case of intra-abdominal gestation, which was attached to the broad ligament with its main blood supply from the omentum which surrounded it.

Of all the tubal gestations, 48 (52.7%) were located on the right fallopian tubes.

The lateral 1/3 sites of the tubal pregnancies accounted for 77.1% of all sites.

2. Apart from the ectopic gestation the other obvious tubal and pelvic pathology was noted, particularly evidence for previous pelvic infection and congenital malformation of the tubes.

In 9 cases this observation was not noted. Of the remaining 83 patients, in 39 (47.0%) of them there was evidence of previous pelvic infection, and in 10 (12.0%) congenital anomalies (unspecified) of the tubes were observed. But in (41.0%) 34 cases there was none of the above findings and the pelvic reproductive organs were noted to be normal.

IV. TREATMENT

1. Table 4:

Distribution of patients according to surgical treatment performed

Treatment	No. Cases	%
Salpingectomy alone	70	76.1
Salpingo-oophorectomy	13	14.1
Others	9	9.8
Total	92	100

NB: The 9 case, included; patients who had had in addition to salpingectomy for the tubal gestation, the other ovary or tube had to be removed for one reason or another unrelated to the primary problem.

All 13 patients who had salpingo-oophorectomy, their ovaries could not be conserved for techinical reasons such haemorrhage and dense adhesions.

The commonest treatment (surgical) offered was salpingectomy of the affected tube. None of the involved tubes were conserved.

2. Distribution of patients according to the type of blood replacement within 72 hours of laparotomy:

(i) 38 (41.3%) patients received donor's blood alone (quantity not worked out)

(ii) 33 (35.9%) patients had both autotransfusion and donor's blood.

(iii) 16 (17.4%) patients had autotransfusion alone.

(iv) 5 (5.4%) patients had neither autoftransfusion nor donor's blood within the period mentioned above.

Note: Donor's blood was requested for all patients from the time the diagnosis of ectopic pregnancy was made.

- As shown above, banked blood was available for 71 (77.2%) cases.
- In 16 (17.4%) patients, banked blood was not available at all and the patients lives were "saved" by autotransfusion.
- In 5 cases, autotransfusion was not applicable and neither was banked blood available for the first 72 hours of operation.
- Most of these patients had to stay in hospital longer (after the wounds were healed) to get blood transfusion, while others received total dose inferon (TDI).

(i) History of previous Pelvic infection (with the past 5 years): - 48 (52.2%) of the 92 patients gave a positive history (included puerperal, post-abortal sepsis; pelvic infection unrelated to gestation , and post-operative pelvic infection).

- Among the 48 patients with positive history of previous pelvic infection, in 30 (62.5%) of them, had evidenceof previous pelvie infection at laporotomy.

(ii) Previous ectopic pregnancy:

- This was positive in 5/92 (5.4%) of all patients, and this was the rate of repetetive ectopic gestation in this study.

- None of these was located on the stump of the homolateral tube.

(iii) Previous abortion(s):

- This was positive in 28 (30.4%) of cases. History about post-abortal sepsis could not be obtained.

(iv) Previous surgery: Abdominal or pelvie including dilatation and curattage for any reason.

- this was positive in 21 (22.8%) of cases.

- evidence of pelvie adhesion was found in 10 of these patients.

(v) Tuberculosis contact:

- Positive history of TB - contact in 5 (5.4%) of cases.

- None of the patients had suffered from tuberculosis.

VI. MORTALITY

There was no death among all patients treated for Ectopic pregnancy at Muhimbili Medical Centre in 1982.

D I S C U S S I O N

From the present study, the incidence of Ectopic pregnancy at Muhimbili Medical Cente in whole year of 1982 is established as, 1:283 deliveries (or 0.35 per cent). This is about 13% increase of incidence since 1976 in this Centre, when it was 1:250 deliveries. The rate of ectopic pregnancy is on the increase in other places as well. In Nigeria where the rate is comperativelly very high, the rate has increased from 1.9% in 1979 to 2.31% as reported by Oronsaye (1979) and Oronsaye et al (1981) respectivelly. However, in the world the incidences of this condition show a wide variation. In the United States the rate is 0.25% (Douglas, 1976), in Zambia 0.6% (Lucas, 1970) and it goes as high as 3.5% in Jamaica (Douglas, 1963). There seems to be an apparent similarity between the incidences of Muhimbili Medical Cente and that of United Kingdom 1:300 (Dewhurst, 1981). This has to be interprated with a degree of caution since the populations and socio-economics of these two places are different. In the case of Muhimbili where hospital delivery is still low the denominators biases the calculated proportion.

Characteristics of the Patients:

Some major aspects of the characteristics (age, parity, marital status) of the patients treated for ectopic pregnancy in this study are summarized in tables 1 (a) and (b). The highest incidence (83.7%) of ectopic pregnancy was observed among the women with 'active reproductive status'. This was also the observation in the Nigerian study 81% as reported by Oronsaye (1981) as well as in Zambia by Lucas (1970). Interestingly, the incidence of ectopic pregnancy in the nulliparous women in this study (16.3%), and in other African countries such as Zambia 18.8% (Lucas, 1970), in Nigeria 9.8% (Akingba, 1975) and 10% in Benin City, Nigeria (Oronsaye, 1981); all present lower incidence compained to rates the often reported rates in the Caucasian, which goes as high as 30% (Blanch et al, 1967). Consequently, the incidence is higher in the women who have become pregnant or delivered before the ectopic gestation. This view is also evident in other series. Also, from table 1(a) and (b), the incidence seems to increase with increasing age and parity of the patients. Similar view was also advocated by Kleiner and Roberts (1967) in their series. The implications of these observations are not straight forwards. Nevertheless, there could be a factor associated with pregnancy (i.e. post abortal or puerperal sepsis) which is acquired in the due course, hence predisposing these women to ectopic pregnancy.

Predisposing aetiologic factors:

It is self-evident that ectopic gestation is due to implantation of the fertilized ovum in an abnormal site of which over 95% occurs in the fallopian tube. It is debatable whether the tube offer a particular anticement to the ovum to implant or whether the ovum's passage is delayed untill it is in the stage of implantation or it merely chooses the nearest site. Most evidences so far favours the second mechanism as the commonest. Chronic pelvic inflammatory disease initiated by gonorrhoea has long been accepted as the most important underlying factor in the establishment of tubal pregnancy, as reported in several series (Douglas et al 1976, Lawson, 1982, Pathak 1971, Grech 1973). In this study, however, no conclusive facts could be made due to the small numbers involved and lack of control groups. All the same, there was a positive history of previous pelvic infection (from any cause) obtained in 52.2% of the patients. This is close to 56% reported by Bobrow (1962). Again no conclusion could be drawn about the relationship of this history of pelvie infection with evidence for that at laparotomy (section II).

Both specific and non-specific infections (ie., post abortal, puerperal and post-operative sepsis) resulting into serosal adhesions about the tubes and knuckling of the tube are also claimed to significantly predispose for ectopic gestations. These conditions are very prevalent in Africa and other developing countries in general as advocated by several workers (Pathak 1971, Mtimavalye 1980). This is a result of the poor and inadequate treatment of

these conditions in the respective communities. Pathak (1971) and other workers believe that the incidence of ectopic pregnancy has increased since the introduction of antibiotics. Tuberculosis, and congenital anomalies of the fallopian tubes were not critically analysed in this study, but they play a major role as aetiological factors. Likewise, intra-uterine coutraceptive devices, and tubal surgery are of recent been implicated, but these practices are still insignificant in our population.

Clinical presentation:

The clinical course of tubal pregnancy varies with the mechanism of termination and site of implantation. The general features also depend on whether the tubal pregnancy is intact or not, and if ruptured, then it depends on the severity as regard haemorrhage that has occured. The clinical features found on admission in this study are summarized in tables 2(a) and (b). The most constant symptoms were; severe abdominal pain (96.7%), bleeding irregularity or amonorrhoea (90.2%) and fainting or dizziness (76.1%). From the listed main signs noted on admission one fact is realized that, most of the patients presented to hospital or were only diagnosed when the ectopic pregnancy had ruptured and a significant haemorrhage had occured. Indeed there were delays in reporting to hospital as well as making the diagnosis. Not withstanding (from table 2(c)) there was futher appaling delay in instituting the definitive treatment-surgery. Only 8 (8.7%) cases were operated upon within two hours

of the diagnosis, while 62% cases were treated within 3 to 6 hours. 15 (16.3%) had to stay for 9 or more hours from the time the di diagnosis of ectopic pregnancy was suspected to the time the laparotomy was done. Among the obvious reasons for the delay is the shortage of staff (Doctors and Theater staff), poor system of informing the senior doctor to review the patients and in turn to perform the operation. In a number of times the theater could not handle multiple emergencies at one given time for variable number of reasons. Indeed, this leaves a lot to be desired, thus some urgent considerations into this problem need to be done to alleviate the appaling situation.

In this study (table 3) the right tube predominance (52.7%) was also realized as found in other series (Douglas 1963, Grant 1962, Sandmire 1959). It is believed to be associated with the local inflammatory process of the appendix.

Treatment:

The prompt handling of a patient with ruptured ectopic pregnancy may be just as life-saving as the operation itself. As mentioned above, the delay, aggrevates the general condition and therefore adverselly affect the initial treatment of fluid and blood replacement. Lack of blood transfusion or inadequate supply of donors blood as summarized in section IV, (2), complicates the outcome of this condition. Thus, as believed by the author in this study, these factors multiplied the morbidity shown in this study

in terms of prolonged "hospital-stay". Likewise, it is clear that, Autotransfusion shall continue to play a life-saving role in our treatment of ectopic pregnancy. At the same time, we must be on the lookout for the complications of this procedure as highlighted by Mati (1974). Anaemia in these patients should also be investigated for as in cases where the cause is not so obvious.

The operative treatment of choice in our centre is salpingectomy. We believe in doing the minimum surgery possible under the circumstances and condition of each individual case. Removal of an ovary was performed only where there was a strong indication for another condition or where it could not be avoided technically.

There was no mortality in this study.

Conclusion and suggestions:

1. The incidence of ectopic pregnancy in Muhimbili Medical Centre is comperativelly lower than in other African countries.
2. Women with active reproductive status has show a higher indidence, while the nulliparous have a lower incidence than is seen in the caucasian.
3. Pelvic infection (past specific and non-specific) still appears a major risk factor. More elaborate studies are required to verify this issue and to draw-up preventive measures.
4. The majority of the cases are diagnosed in the terminal stages after several "haemorrhages" has occured. More 'suspicion' should be instilled in our minds and especially at the peripheral

dispensaries where the patients are seen first before their tubal pregnancies rupture.

5. A serious consideration and improvement of our patients care (diagnosis and treatment) to reduce the 'delay' associated with this condition.

6. The community should be educated so that the delay to report to hospital is minimized, and to improve the spirit of donating blood to our Centre.

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