CASE RECORDS AND COMMENTARIES PRESENTED FOR THE AWARD OF THE DEGREE OF MASTER OF MEDICINE (OBSTETRICS AND GYNAECOLOGY)

UNIVERSITY OF NAIROBI

SUBMITTED

BY

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NOVEMBER, 1988.

DECLARATION

This is to certify that all the cases presented here were treated and operated upon by me under the supervision of the senior members of the Department of Obstetrics and Gynaecology at the Kenyatta National Hospital, Nairobi. That the long commentaries in Obstetrics and Gynaecology are my original work, and have not been presented for a degree in any other University.

Signed ----------

Dr. Celina C.M. Mbwiria,
MB.Ch.B. University of Nairobi,
November, 1988.

This is to certify that Obstetrics cases number 3, 6, and 9 and Gynaecology cases number 4, 5 and 7 were managed by Dr. C.M. Mbwiria under my supervision and guidance.

Signed ----------

29.6.89

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KENYA.

This is to certify that Obstetrics cases Nos. 1, 7, 11, 13, 15 and Gynaecology cases Nos. 8, 9. 12, 14, 15 were managed by Dr. Celina C.M. Mbwiria under my supervision and guidance at Kenyatta National Hospital, Nairobi.

Signed ----------

29.6.89.

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This is to certify that Obstetrics cases Nos. 2, 4, 14, 17 and Gynaecology cases Nos. 1, 3, 6, were managed by Dr. C.M. Mbwiria under my supervision and guidance.

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This is to certify that the Obstetrics long commentary was done in the Department of Medical Microbiology by Dr. Celina C.M. Mbwiria under my supervision and guidance.

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DEDICATION

This book is dedicated to my loving daughter Kanana whose love, noise, laughter and tears have given me happiness, sometimes anxiety, and most of all the strength and inspiration during this final lap of the course.

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At fifteen year retrospective review of cancers of the female genital tract and cancer of the female breast; examining the trend in time and the relationship of each cancer in regard to each other.

INTRODUCTION.

Kenyatta National Hospital, formerly King George vi Hospital, was initially built to cater for the colonial military personnel and the indigenous people during the colonial period. It stands now as an integrated body and runs as a parastatal institution. It was found necessary to split it from its parent Ministry of Health in an attempt to improve the running of the Hospital.

It is the largest Hospital in the Country and is said to be one of the largest Hospitals in the African Continent. It functions as the National referral Hospital and as a Provincial Hospital for the Nairobi area. Plans are under way to make this institution solely a referral Hospital.

The Hospital consists of an ultra-modern ten storey structure with extensions for out-patient, and laboratory facilities. The tower block contains 38 wards each ward with 32 beds with total bed capacity of about 2000 beds.

The obstetrics and gynaecology unit is housed in the ground floor and the first floor. The gynaecological oncology ward is housed on the first floor of the old building next to the radiotherapy Department.

Kenyatta National Hospital is involved in the training of all cadres of medical personnel, including doctors, nurses, clinical officers, and paramedical personnel. It provides under-graduate and post-graduate training for doctors. It works closely with the Nairobi University, the Kenya Medical Research Institute and the Ministry of Health.

CASUALTY DEPARTMENT

The casualty department handles all the emergency conditions brought into the Hospital. It handles all the acute gynaecological emergencies and most of the gynaecological admission pass through here. Such conditions include abortions of all types, pelvic inflammatory diseases, ectopic pregnancies, pelvic abcesses etc. It also handles all the unbooked obstetric emergencies and most of the admissions to labour ward pass through here. It is equipped with facilities to, assist delivery, do speculum examinations and for transferral of preterm infants to the new born unit.

It also acts as filter area and refers patients with not too acute problems to the appropriate consultant clinics.

GYNAECOLOGY CLINIC

This is run on firm bases. It deals with all the chronic gynaecological problems. These includes, symptomatic uterine fibroids, menstrual disorders, vesical

vaginal fistulae, genital prolapse infertility and follow up of post-operative patients, etc.

Patients are booked as referrals from the city Council clinics and from other departments of this Hospital. Patients are examined and are worked up for various therapies. Papanicolaou smears are done routinely on all patients.

RAHIMTULLA WING

This section of the Hospital was initially built for the Asian Community during the colonial period. Today it is used as a theatre for Dye-laparoscopy and interval tubal-ligation. Patients are treated as day cases. Those patients who develop complications and can not go home, are admitted to the gynaecology wards for further observation.

WARD NO. 6

This is the gynaecological emergency ward. It is housed on the first floor of the tower block. It is manned by a team of Doctors consisting of the consultants, senior registrars, senior house officers, and the Interns. All the acute gynaecological emergencies are treated in this ward. Patients with carcinoma of the cervix are first admitted to this ward before they are transferred to the radiotherapy unit after they are worked up.

WARDS NOS. 4 & 5

These wards are referred to as the gynaecological cold wards. All the patients admitted to these wards are for planned operations. Both wards contain 34 beds each. These beds are divided according to the firms. The beds are divided between the three firms, with firm I beds being in ward 5, firm III beds in ward four and firm II beds in ward 4 and ward 5.

The patients admitted to these wards are usually from the gynaecology clinic and the referrals from other Hospital. Every firm has an operation day once in a week.

POST NATAL CLINIC

This clinic is carried out every Friday morning. The patients come 6 weeks after delivery. They are patients who had caesarean section in this unit. Also all patients who have been followed up in our antenatal clinic are required to attend this clinic. Inquiry is made about establishment of lactation, resumption of menstruation and on the welfare of the baby. Physical and pelvic examination of the patients is done. Patients are counseled on family planning methods. Papanicolaou smears are taken on the highly parous and elderly women.

OBSTETRICAL CARE

Antenatal Clinic

The antenatal clinic is conducted as a booking and follow up clinic. All the bookings are done on the Monday mornings on firm bases. There are three firms and every firm books on every third Monday. It operates as a clinic for high risk cases. Patient that qualify for booking include:-

- Primigravidae:- teenage, short or elderly.
- Previous caesarean section.
- Previous repeated abortions.
- Previous history of intrauterine fetal deaths.
- Previous history of abnormal babies.
- Grandmultiparity, that is, para 5 and above.
- History of post-partum or antepartum haemorrhage.
- History of hypertensive diseases in pregnancy.
- Patients with rhesus incompatibility.
- patients with medical diseases like diabetes, heart disease, anaemia, etc.

Patients are referred from the various City Council Health Centres, and from other departments in the Hospital, and also from other hospitals.

On the booking day, detailed personal, medical, and obstetrics history is taken and recorded on the antenatal card. Maternal weight and blood pressure measurements are taken. Urinalysis is done to exclude proteinuria and

and glycosuria. The patient's blood is taken for blood group, serology and haemogram. The patients are then examined by the senior house officers who inquire on further relevant history and perform a thorough physical examination.

After this those that require admission are sent to the wards and those who do not are given appointments for follow-up. The follow-up clinics are conducted on firms bases and every firm has a clinic day once a week. The patients are seen four weekly up to 28 weeks gestation, then two weekly until 36 weeks after which they are seen weekly until delivery.

PELVIC ASSESSMENT

This is done routinely at 36 weeks on the following patients:-

- All primigravidae
- All patients with one previous caesarean section scar.
- All patients with persistent breech presentation where external version is unsuccessful.

The assessment is made clinically in the primigravidae, and both clinically and radiologically for the other two categories of patients. All the primigravidae are given trial of labour despite the pelvic findings. Patients with one previous caesarean section and a true conjugate of

10.5 cm or more are given trial or scar. Those with less are electively delivered by repeat caesarean sections.

The patients with breech presentation and a true conjugate (TC) of 11.5 cm or above are given trial of breech. Those with less are done elective caesarean section.

AMNIOCENTESIS

At 37 completed weeks amnicentesis is done on the following patients:-

- All patients with persistent breech and a TC of less than 11.5 cm.
- All patients with one previous caesarean section and a TC of less than 10.5 cm.
- All the patients with more than one previous caesarean section.
- Amniocentesis is also done on patients with postdates.

Rarely amniocentesis is done at 16 weeks on patients with history of repeated abnormal babies like anencephaly, microcephaly, etc. It is also done on patients with rhesus isoimmunization first at 28 weeks and then at 34 weeks gestation.

The procedure is carried out as follows:- The procedure is explained to the patient and the need to it. She accepts and is instructed to empty the bladder.

She is put on supine position and fetal heart rate is noted. The suprapubic area is then cleaned with spirit. The area is then draped with sterile towels. The hands are gloved with sterile gloves. The presenting part is then dislodged from the pelvic brim and supported with left hand, while a puncture is made perpendicularly in the midline two centimetres from the pubic symphysis Amniotic fluid is then drawn from the pool of fore waters. The procedure is relatively easy and successful most of the time because in our environment most heads do not engage until about the time labour starts.

The fetal heart rate is taken immediately after the procedure and 30 minutes later. Meanwhile the patient is instructed to lie in the left lateral position.

Amniotic fluid is tested for surfactant by the shake test. If surfactant is positive, the patients are admitted for elective operative delivery or induction in cases of post-datism.

ADMISSION PROCEDURE

Two categories of patients are admitted to the obstetrics unit. They are those in labour and those who are not in labour. They all pass through the labour ward admission desk.

They are clerked by the houseman. Those who need delivery or have other complicating problems are admitted

to the labour ward where they are evaluated by the senior house officer on duty. Those that do not have urgent conditions and are not in labour are admitted to the antenatal wards where they are evaluated by senior house officers in those wards.

FIRST STAGE OF LABOUR

The patients have already been seen by the attending house officer. The senior house officer reevaluates the patients by taking history and a thorough physical examination, after which he confirms or forms a new diagnosis and institutes the proper management. The labouring patients are monitored through a partogram. The foetal well being if monitored through the half hourly observation of the foetal heart rate. Maternal well being is monitored through the pulse rate, blood pressure and temperature measurements.

The progress of labour is monitored by frequency and force of contractions, the descent of the presenting part and the cervical dilatation.

The first stage of labour is made up of ten rooms each of which contains one bed. Each bed may be occupied by more than one labouring patient at one time.

THE SECOND STAGE OF LABOUR

The second stage of labour is made up of 3 delivery rooms each of which contains two delivery beds and a

resuscitaire. Each delivery bed has facilities for placing the patient in lithotomy position if need be. The resuscitaire contains facilities for warming the baby, suction and oxygen delivery. The patient is said to be in second stage of labour when she has, the urge to bear down, the presenting part is not palpable above the pelvic brim and the cervix is fully dilated.

She is wheeled to the second stage of labour. The midwife conducts all the normal deliveries. Breech deliveries and operative vaginal deliveries are done by the senior house officers.

THE INTENSIVE CARE ROOM (ACUTE ROOM)

It contains 3 beds although a fourth may fit in when need arise. All the severe obstetrics emergencies are handled in this room. They include, severe pre-eclampsia, eminent eclampsia, Eclampsia, Congestive cardiac failure, cardiac disease in labour, all manner of obstetric shock etc. It is equipped with facillties to monitor and deal with all these problems.

OPERATIVE DELIVERIES

These include caesarean sections, vacuum and forceps deliveries and symphisiotomy. The last two are not practiced in this unit.

ELECTIVE CAESAREAN SECTION

This is a planned delivery. The lung maturity has been confirmed and about two pints of blood is available. The condition is explained to the patient and the consent is obtained. She is sedated and starved from the midnight. On the morning of the operation the pubic hair and the suprapubic and paraumbilical areas are shaved. She is premedicated with atropine sulphate 0.6 mg half hour before theatre.

In theatre the patient is placed on the theatre table in supine position. Aseptic catheterization is done and the catheter left in situ. The surgeon and the assistant scrub for about 5 minutes with an antiseptic soap or lotion. They gown themselves with sterile gowns and the hands are gloved. At this time the scrubbed nurse is ready with sterile instruments, swabs and antiseptic lotion. The patient's abdomen is then cleaned with antiseptic lotion and swabed with spirit or coated with iodinated lotion. The area is then draped with sterile towels. At this time the patient is put under anaesthesia. Thiopentone sodium is used for induction, while scoline and pavlon are used for paralysis. Anaesthesia is maintained with oxygen and nitrous oxide.

The abdomen is normally opened through the subumbilical midline incision. Sometimes a Pfannesstiel incision is made. Abdominal packs are used on either

side of the uterus to keep the intestines away and to prevent the uterine contents from spilling into the peritoneal cavity. Vesicouterine peritoneum is lifted with a blunt forceps and a transverse incision is made through it. This and the bladder are reflected downwards.

A transverse semilunar incision is made on the lower segment in the following way. A transverse incision about 2 cm is made on the uterine muscle and deepened until the membranes are reached and liquor escapes or until the foetus is seen. With two fingers of the left hand separating the lower uterine segment from the presenting part, curved scissors are used to extend the incision laterally curving it upwards. One direction is dealt with first, then the other direction until the opening is adequate to allow delivery of the head. The hand is then gently inserted into the uterine wound below the foetal head. The head is then gently eased through the uterine incision and that of the abdominal wall. This is made easier by the assistant applying fundal pressure. After the head is delivered, the rest of the body is delivered the usual way. With the baby lying between the mother's thighs the umbilical cord is doubly clump and cut between clumps. The baby is given to the mid-wife. After the delivery of the baby the anaesthetist gives intravenous ergometrine 0.5 mg. The placenta is delivered either manually or by controlled cord traction. Chromic Catgut No.2 is used for closure of the uterus in two layers.

Number one is used for repair of peritoneum. The abdomen is then cleaned with a sponge on a holder. It is also closed in layers with chromic catgut number one to the peritoneum, number two to the rectus sheath and silk number two to skin. Mattress stitches are used for skin closure.

Reversal of anaesthesia and extubation are finally done and the patient is taken back to the post-natal ward. All babies born by caesarean section are evaluated by the paediatrician. If they have no problem they are taken to the mothers.

If post operative period is uneventful, stitches are removed on the 7th day and the patient is discharged home and advised to attend post natal clinic after six weeks.

In classical caesarean section all the procedure is similar to the one described for lower segment section except for the following details. The uterine muscle of the upper segment is incised vertically in the midline of its lower half. The delivery of the foetus is usually much easier than that through the lower segment and is best achieved by breech extraction. The incision is closed in three layers as the uterine wall is much thicker. There is no separate visceral peritoneum to close over the uterus so the operation is completed by closure of the peritoneal cavity and abdominal wall as described for lower segment operation.

Vacuum Extraction

Vacuum extraction is done on patients with prolonged second stage. It is also done on patients with cardiac disease in second stage and also patients with pre-eclampsia. Patients with severe foetal distress who are fully dilated and the head is at most two fifths up, an assisted vacuum delivery is done to facilitate an immediate delivery. In all vacuum extractions, the head of the baby should never be more than two fifths above the pelvic brim.

The procedure is carried out in the following way. The patient is placed in the lithotomy position. With the surgeon scrubbed and gowned, the vulvo-perineal area is cleaned and draped with sterile towels. The perineal area is injected with procaine hydrochloride or zylocaine 0.5%. Pudendal block is sometimes used and it is done by injecting local anaesthesia at the area of Ischial spines. The lumber puncture needle is preferrably used and is either introduced through the vagina or injected subcutaneously. After the local anaesthesia is achieved, a generous mideo-lateral episiotomy is done. Meanwhile, the vacuum apparatus is connected together. The vacuum cup is applied as posteriorly as possible on the presenting head. It should be placed on the occiput. The assistant then creates the vacuum using the vacuum pump while the surgeon makes sure that maternal tissues are not sucked into the vacuum cup. The creation of vacuum should be

done slowly over 5 minutes by which time a good caput has formed in the cup. All this time the patient is advised not to bear down during the application of the cap.

In the patients with pre-eclampsia or cardiac disease, the surgeon waits for a contraction and then puts traction pressure on the vacuum cap. Two applications of traction pressure are enough to effect delivery. In a patient with fetal distress, bearing down is encouraged as the surgeon puts traction pressure and one contraction with the patient bearing down, is usually adequate to effect a delivery. The direction of the traction pressure is initially downwards until the occiput slips out of the lower margin of the symphysis pubis. The pressure is then directed upwards. By this time the whole head is born and the vacuum pressure is released and the cup removed from the foetal head. The rest of the body is then delivered followed by delivery of the placenta and membranes. In patients with pre-eclampsia and cardiac disease, ergometrine is not given because of its vasoactive effects. All other patients are given ergometrine after the birth of the anterior shoulder. The episiotomy is then sutured in layers and haemostasis achieved.

Third Stage of Labour

Active management of third stage of labour begins with the administration of ergometrine at the delivery of anterior shoulder. Third stage of labour extends from the delivery of the infants body to the delivery of the placenta. The placenta is then allowed to separate. Separation of the placenta is evidenced by a gush of blood and lengthening of the umbilical cord. The uterus also becomes firmly contracted and the shape becomes globular. Delivery of the placenta is then effected by Brandt-Andrews modified technique. With the kidney dish placed against the perineum to receive blood, placenta and membranes, gentle traction is applied on the cord while the other hand is placed on the abdomen and pressed between the fundus and the symphysis pubis. The fundus is elevated and the placenta is delivered from the vagina. The placenta and the membranes are then examined for completeness.

Usually most of the placentae separate within 5 minutes of delivery of the foetus. If placenta has not separated in 30 minutes to one hour after delivery of the foetus, then it is said to be retained and requires manual removal. In our set up this is usually done in theatre under general anaesthesia. The patient is placed in lithotomy position. The surgeon is scrubbed gowned. The vulvo-perineal area is cleaned and draped. The hand is introduced into the vagina gently. The uterus is

then explored with fingers and the placenta identified an attempt at separation is made taking care no forceful separation is attempted against unusual resistance.

Repair of the episiotomy

Episiotomy repair is done immediately after the third stage of labour. The surgeon usually the same person who conducted the delivery, is already scrubbed, gowned and wearing gloves and face mask. He cleans the vulva and perineum with antiseptic lotion. The area is then draped and examination of the vagina and cervix to rule out any lacerations and tears is made. A sterile gauze pack is introduced into the vagina to block away the slight oozing from the uterus. This exposes the apex of the episiotomy. The episiotomy is then sutured in layers with a continuous catgut No. 1 applied to the vaginal mucosa. Interrupted catgut No 1 sutures are used to repair the levator ani muscle. The skin is then approximated by interrupted chromic catgut number one care being taken to bury the knots. Good haemostasis is achieved and the gauze in the vagina is removed and the area swabed with antisceptic lotion. Final examination is done to ensure satisfactory repair has been achieved.

Syntocinon Augmentation:

Syntocinon augmentation is used in the first stage of labour in patients with poor progress secondary to inadequate uterine contractions or inco-ordinate uterine action. The abnormality is therefore only in powers.

The passage should be normal as shown by an adequate pelvis, the passenger (foetus) should not be too large, and presentation and position of the presenting part should be normal. There should be no evidence of foetal distress like meconium stained liquor or foetal heart abnormalities. The abnormalities of labour progress are based on the appearance of progress as shown in the partogram. The cervical dilatation in normal labour occurs at a rate of one centimeter per hour in a primigravida and 1.2 cm per hour in a multigravida. There should also be progressive descent of the presenting part as the uterine contraction become stronger by intensity and frequency. In absence of the above then syntocinon augmentation is found necessary.

Augmentation is carried out in the following manner:- In primigravida patient and the primipara patient, 5 units of syntocinon are added to 500ml of 5% dextrose. In para 2 up to para 4 patients 2.5 units of syntocinon are added to 500ml of 5% dextrose. There are no syntocinon pumps in our unit and therefore the infusion is controlled by drops per minute. Therefore the infusion is started by giving 10 drops of the solution per minute. The drops are increased by 10 drops every 30 minutes to a maximum of 60 drops. Good contractions are usually achieved before 60 drops are attained. As well as the use of syntocinon, narcotic analgesia is used at the same time especially in inco-ordinate uterine action. When

the patient is para 5 and above, then caesarean section is preferrable.

Syntocinon is also used for induction of labour in conjuction with surgical induction. In doing this, the above outlined guidelines are followed.

1. TWIN, PREGNANCY IN A PATIENT WITH A PREVIOUS CAESAREAN SECTION SCAR IN LABOUR: EMERGENCY CAESAREAN SECTION: LIVE BABIES

Name	- Mrs F.N.	LMP	- 17.11.87
Age	- 23 years	EDD	- 24.8.88
Parity	- 1 + 0	Date of Admission	- 6.8.88
Ip. No.	- 786972	Date of Discharge	- 13.8.88

Presenting Complaint.

The patient was admitted through the Casulty Department with complaints of labour pains for four hours. She had no drainage of liquor or vaginal bleeding.

History of Present Pregnancy

The patient had attended antenatal clinic at Murang'a Hospital but the antenatal card was not available. She had been admitted in Murang'a Hospital earlier during the current pregnancy with anaemia and was transfused with 3 pints of blood. The gestation at the current admission was 37^{+} weeks.

Obstetrical and Gynaecological History

She was para 1 + 0 and the last delivery was a twin delivery where the first twin was delivered by spontaneous vertex delivery and the second twin was delivered through a caesarean section. Both babies were alive and well. She had menarche at the age of 14 years followed by

regular painless periods of 28 day cycles. The blood flow was moderate in amount and last 3 to 4 days. She had never used contraceptives in her life time.

Past Medical History:

There was none contributory.

Family and Social History:

The patient was a married housewife who lived in Murang'a District. She came to visit her husband in Nairobi from time to time. The husband worked as a Policeman and was stationed at Kileleshwa Police Post where he also lived. The patient had been visiting her husband when she went into labour. She had no history of major familial diseases. However, her mother had one twin delivery while her mother-in-law had delivered twins two times. Her husband was a twin.

Physical Examiantion:

The patient was a young lady in good general condition. She was mildly pale and had mild ankle oedema. She had a blood pressure of 110/70 mmHg, a temperature of 37^{o}C and a respiratory rate of 18 per minute.

Her respiratory, cardiovascular and central nervous systems were within normal limits.

Abdominal Examination:

The uterine size corresponded to a term uterus and was grossly distended. Multiple foetal parts and two foetal poles were felt. The first foetal pole was cephalic and the second breech and both were easily palpable. One foetal heart was easily heard and the rate was 140 per minute and was regular. The other foetal heart was not heard with a foetal scope. She was having one contraction in 10 minutes lasting about 20 seconds.

Vaginal Examination:

The patient had normal external genitalia. The cervix was soft, 1.5 cm long and the os was dilated by 4 cm. The membranes were intact and there was no cord presentation. The pelvis was clinically adequate.

Diagnosis:

An impression of twin pregnancy in a patient with previous caesarean section scar in active labour was made.

Management:

The decision to perform an emergency caesarean section was made. The condition was explained to the patient and she signed an informed consent. Blood was taken for grouping and crossmatching, and two pints of compatible blood were available 45 minutes after the request. An intravenous line was started and maintained

with 5% dextrose 500ml. The abdominal and pubic areas were clean shaved. The patient was then premedicated with atropine sulphate 0.6 mg intramuscularly stat. She was wheeled into the labour ward theatre on 6.8.88 at 3.30 p.m. where two live female babies were delivered, first one by vertex and the second one by assisted breech delivery. The first twin weighed 2950 gms while the second twin weighed 3500 gms. Both babies scored 10 in one minute and 10 in 5 minutes. The placental weight was 1020 gms and the total blood loss was estimated as 1200 mls. She was transfused with two pints of blood intra-operatively.

Post-operative Period:

Recovery from anaesthesia was uneventful. The patient was on intravenous fluids consisting of normal saline 500 ml alternating with 5% dextrose 500 ml 6 hourly for the first 24 hours after which oral sips were started. She was given antibiotic cover in the form of ampicillin 500 mg intramuscularly 6 hourly for the first 24 hours followed by ampicillin capsules in the same dosage. On the third post-operative day, blood was taken for a full haemogram and the haemoglobin level was 7.6 gm/dl, haematocrit ratio was 22.6% platelets were 453 x 10^9/L. There were no malaria parasites seen in the peripheral film. The patient was put on haematinics consisting of iron tablets 200 mg 8 hourly and folic acid tablets 5 mg once a day.

On the 7th day post-operative day, the wound had adequately healed and the patient had made an excellent recovery.

All stitches were removed and the patient was discharged home with instructions to attend post natal clinic after 6 weeks and to take the babies to the maternal and child health care clinic for immunization. She was also advised on diet rich in minerals, vitamins and proteins and to continue with the haematinics.

Post-Natal Clinic:

The patient was seen at the post-natal clinic on the 9.9.88. She was in excellent health. Her blood pressure was 130/80 mmHg and she was not pale. She had well established lactation and was breastfeeding her babies who were in perfect health. Her uterus was well contracted and well involuted and she had not resumed menstruation. Both the patient and her husband were counselled on contraceptive use but were not decided on whether or not to use contraceptives. They agreed to abstain from sexual intercourse until when they could decide on contraception. Check haemoglobin was done and haemoglobin was 10 gm/dl. She was given more haematinics and was advised to go to the family planning clinic when they had decided to use contraceptives.

Comments:

Morbidity and mortality are increased appreciably in pregnancies with twin foetuses and therefore such pregnancies should be treated as high risk ones (1,2, 3). The high perinatal morbidity and mortality is caused by the many complications associated with twin pregnacny. Such complications included, abortion, lowbirth weight, prematurity, congenital malformations, foetal-foetal haemorrhage, hypertension, maternal anaemia, placental accidents, cord accidents, and complicated labour etc (1, 2).

Most twin pregnancies result from fertilization of two separate ova forming dizygotic or fraternal twins while 1/3 of the twins result from a single fertilized ovum forming a monozygotic twin or identical twin. The incidence of monozygotic twin is constant world wide irrespective of race, heredity, age, parity and therapy for fertility. On the contrary, the incidence of dizygotic twin varies from place to place with the highest incidence found in the black women and the lowest incidence found among the oriental women (1, 2, 3, 4). The highest incidence has been reported from Nigeria with rates of up to 1:22 deliveries in some parts, as compared to incidences of 1:84 reported from Britain and America (1, 3, 4).

It has been found that in twining, the genotype of

the mother is more important than that of the father. Twins have been observed to occur more commonly in women who were themselves twins or had siblings who were twins. Where the males are concerned, the husband who is a twin or has siblings who are twins has a high chance of producing twins than the general public (1, 2).

The patient presented has siblings that were twins while her husband himself was a twin. Her mother-in-law had delivered twins two times. It is not surprising therefore that the patient's first delivery was a twin followed by the current delivery which was also a twin. The zygosity of the previous twins was not known, however, the present twins were most likely dizygotic. The twins had separate placentae and separate foetal membranes. The strong family history is also suggestive. Dizygotic twining is transmitted through an autosomal dorminant gene. The babies' blood groups were not done because the surgeon did not take cord blood emmediately after delivery. This can however be done later in life.

It has been found that women with high parity of 3 and above and older women of 35 to 40 years have higher chances of producing twins (1, 2). Our patient was quite young and of low parity but she had a strong family history.

Although twin pregnancy is known to be high risk,

the diagnosis is not made until labour occurs in about 50% of patient (1). In most cases this is attributed to lack of antenatal care either because of ignorance or lack of availability of such a facility (1, 3, 4). The patient presented is a case in point. She was admitted to our hospital in labour and although she gave history of having attended a peripheral hospital, she had no antenatal attendance card to verify this. Diagnosis is usually clinical in about 75% of cases. Diagnostic aids include sonography, radiological examination, and biochemical test of chorionic gonadotrophin and fetal proteins. The diagnosis in our patient was made clinically on admission.

In management of patients with twin pregnancy, alot of attention should be paid towards reduction of the associated high perinatal morbidity and mortality. This can be achieved through preventing premature deliveries by providing adequate antenatal care, delivering the affected babies at appropriate intervals, eliminating fetal trauma during delivery and by providing expert neonatal care. Such conditions are difficult to effect in most developing countries mainly because of lack of resources. In Kenya however, the right steps are being taken in the implementation of primary health care program. It is hoped that through this program, the high risk patient will be reached and referred to the centres with adequate facilities and personnel.

The mode of delivery adopted depends on the presentation, maturity of the fetuses, and presence of any other maternal complication. In Kenyatta National Hospital, twin pregnancy with one or more other maternal complications almost always means a caesarean section. The patient presented had a previous caesarean section due to a retained second twin. Caesarean delivery was therefore the best management for her and this was done with good results. Our patient also exhibited some of the complications of twin pregnancy namely, anaemia and postpartum haemorrhage. She needed blood replacement and was transfused with two pints of blood. Even then she was still anaemic and needed haematinic supplimentation.

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2. RHESUS NEGATIVE IN A PRIMIGRAVIDA - VAGINAL DELIVERY

Name	-	Miss G.M.	LMP	-	6.3.87
Age	-	24 years	EDD	-	13.12.87
Ip. No.	-	865814	Date of Admission	-	8.12.87
Parity	-	0 + 0	Date of Diacharge	-	11.12.87

Presenting Complaint:

The patient was admitted at 7.30 a.m. with history of labour pains since 10.00 p.m. She had no drainage of liquor or vaginal bleeding.

Present Pregnancy:

The patient was booked at the Kenyatta National Hospital Antenatal Clinic at 35 weeks gestation. The reason for booking was primigravida. She had made a total of four visits. The uterine size corresponded to the dates throughout. Blood pressure at booking was 110/70 mmHg and remained normal during the visits.

Obstetrical and Gynaecological History:

She was para 0 + 0. She had menarche at 14 years of age. The periods were regular, of normal flow lasting 3 - 4 days and cycles of 28 days.

Past Medical History:

She had never been hospitalized for any kind of illnesses. She had never been transfused and had never donated blood.

Family and Social History:

She was single and worked as a beautician. She never drank alcohol or smoked cigarettes. There was no family history of major illnesses.

Antenatal Investigations:

1. Height 5' 3"
2. Haemogram - Hb - 12.5 gm/dl.
   PCV - 35.1%
   Platelets - adequate.
3. Blood group B Rhesus - negative
4. Serology - negative
5. Indirect coombs test - Negative.

Physical Examination:

She was in fair general condition, was afebrile and had no pitting leg oedema. Blood pressure was 110/70 mmHg, pulse 84 per minute, respiratory rate was 18 per minute, temperature 36.5^{o}C. Central nervous system, respiratory system and cardiovascular system were within normal limits.

Abdominal Examination:

The uterine size was term, the baby was presenting by the head in a longitudinal lie. The head was 3 parts above the pelvic brim. She was having one moderate contraction in 10 minutes lasting more than 20 seconds.

The foetal heart rate was 140 per minute and was regular. There were no other abdominal masses.

Vaginal Examination:

The external genitalia was normal. Vaginal walls were healthy and warm. The cervix was placed anteriorly, fully effaced and dilated by 4 cm. The membranes were intact and the pelvis felt adequate. Artificial rupture of membranes was done and clear liquor was obtained. The lower uterine segment was stretched. The position of the head was left occipital anterior.

Diagnosis:

Primigravida with rhesus negative in established labour.

Management:

Patient was started on half hourly partogram. She was given analgesia with pethilorfan 100 mg intramuscularly and was put on an intra-venous drip consisting of 5% dextrose 500 ml to run in 6 hours. She was nursed in left lateral position. Blcod was taken for grouping and crossmatch because she was a primigravida having a trial of labour. The Paeditrician was informed to be available when delivery was eminent. Cord blood was to be taken and anti 'D' 250 mg would be given if the baby's blood group turned out to be Rhesus positive.

Intrapartum Period:

Labour progressed well. She picked up contractions and the fetal heart rate remained within normal limits. The vital signs also remained within normal limits. The patient was reviewed at 11.30 a.m. and the fetal head was found to be one fifth above the brim. The foetal heart rate was 140 per minute and was regular. The cervix was 8 - 9 cm dilated and there was no caput or moulding. Delivery was expected in an hour's time.

At 12.05 p.m. the patient was delivered of a female baby by spontaneous vertex delivery. The baby's birth weight was 3450 gms and apgar score was 10/1, 10/5, 10/10. The placenta and membranes were delivered complete by controlled cord traction. Placenta weight was 600 gms and looked grossly normal. Ergometrine was given 0.5 mg stat intramuscularly after the birth of the anterior shoulder. Cord blood was taken and submitted to the laboratory for analysis. The baby was taken to the nursery for observation. The following day after delivery, the report of cord blood had come back. The baby was blood group B - Rhesus negative like the mother. Anti-D was therefore not necessary. Both baby and the mother were discharged home on the third day.

Post-Natal Clinic

The patient was seen after 6 weeks in the post natal clinic. The baby had had the initial immunizations. The

mother had established adequate lactation and was breast feeding the baby. She had not resumed menses yet. The uterus was well contracted and involuted. She was counselled on contraceptives and agreed to use the coil.

She was then taken to the family planning clinic and insertion of lippes loop was done.

Comments:

The patient presented was a primigravida who had no previous history of blood transfusions or abortions. She had no knowledge of her blood group status. She had not been exposed to isoimmunization and indirect Coombs test was negative. She was delivered of a normal female baby who was Rh-negative.

Rhesus isoimmunization occurs when red blood cells containing Rhesus (D) antigen enter the circualtion of a woman who does not posssess the antigens. She develops antibodies against the Rh-antigen.

This may occur in mismatched transfusions. other factors which may cause fetal maternal transfusion are at delivery of an ABO compatible Rhesus positive baby when separation of the placenta results in fetal placental bleeding (1, 2).

It was shown that approximately 50% of normal deliveries have measurable transplacental haemorrhage during or immediately after delivery. About half of these will have 0.1 ml or less of fetal blood transfusion. Less than 1% will have more than 5 ml of fetal blood and only 0.2% will have transfusion with greater than 30 ml of fetal blood (1, 2, 3).

Other predisposing condition for fetal maternal

transfusion are caesarean section, manual removal of placenta, twins, traumatic delivery, stillbirth of undetermined etiology, bleeding during pregnancy, amniocentesis, and manipulations in cephalic version.

Most women do not develop circulating titres of anti Rh. 'D' antibodies without exposure to Rh-positive erythrocytes. However a few cases of naturally occuring Rh-antibodies have been reported. The mechanism for their occurrence in an unexposed individuals is unknown. It is thought that, it could result from either a genetic anormally or previous exposure to Rh-antigens in vaccines derived from human serum,or even maternal fetal transfusion during birth of the current mother (grandmother theory).

The patient presented had no sentization or exposure and indirect coombs test showed that she did not develop natural sensitization.

The incidence of Rhesus negative population in Kenya is not known. Kasili (4) in unpublished work observed a prevalence rate of 3-4%. Mulandi (5) showed an incidence of 4.1% of all deliveries at Kenyatta National Hospital. In Tanzania the incidence rate was found to be 3.5% of all pregnant mothers (6).

There are racial differences in the distribution of Rh. 'D' negativity. It is less frequent in American black

individuals (7 - 8%) than among white Americans with an incidence of 13%. About 99% of American Indians, Chinese and other Asiatic peoples are Rh.(D) positive while the Basques have the highest Rh. 'D' negative people with an incidence of about 34%. There is no apparent differences in distribution as regards to sex (1, 2).

In Kenya Rhesus isoimmunization carries high perinatal mortality 26.9% and a high abortion rates 17.5% (7). The risk of sensitization after the first ABO compatible Rh-positive baby is 7 - 8%, the second is 15 - 15%.

Normally fetal cells are seen in maternal circulation as early as 8 weeks gestation. In the first trimester fetal red cells are seen in approximately 7% of the pregnant women, 16% in the second trimester (1, 2). The first Rhesus positive pregnancy is at low risk of developing erythroblastosis fetalis. The patient presented had her first baby who was Rh-negative.

Diagnosis of isoimmunization is made by doing an indirect coombs test in the antenatal clinic. It measures the levels of anti Rh-D antibodies in the maternal serum, done in dilutions, increasing titres show active isoimmunization. Titres below 1:16 are associated with low mortality. Bilirubin spectrophotometry is very useful in predicting fetal outcome also in indicating intervention

in accordance with Liley's graph.

In this hospital amniocentesis for spectrophotometry is usually done between 28-30 weeks initially since nothing much can be done before this in our set up. There after, depending on the titres it can be repeated in one to four weeks. Surfactant test is also done on the amniotic fluid.

In the patient presented, it was not necessary to carry out amniocentesis as hers was a first pregnancy with no history of exposure to isoimmunization, and indirect coombs test was negative.

The objective of management is to deliver as mature a foetus as possible without allowing too severe compromise to occur in utero. Amniotic fluid analysis in conjuction with ultrasound scanning will permit the obstetrician to deliver the affected foetus at optimal time.

In this patient education was necessary on the possible outcome of future pregnancies. It is necessary to check blood group and type of the spouse so as to predict the likelyhood of getting Rh-positive babies in future. It was not possible in this case as the patient was not certain that she would be married by the father of the child.

She was however advised to start antenatal clinic early next time she become pregnant.

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3: FOOTLING BREECH PRESENTATION EMERGENCY CAESAREAN SECTION LIVE BABY

Name	-	Miss M.M.	LMP	-	14.3.87
Age	-	19 years	EDD	-	21.12.87
Ip. No.	-	859972	Date of Admission	-	3.11.87
Parity	-	0 + 0	Date of Discharge	-	10.11.87

Presenting Complaint:

She was admitted through Casulty department at 4.20 a.m. with history of labour pain since 6.00 p.m. She had no history of vaginal bleeding or drainage of liquor.

History of Present Pregnancy:

She had not attended any antenatal care. her last menstrual period was 14.3.87. Gestation by dates at admission was 33 weeks.

Obstetrical and Gynaecological History:

She was para 0 + 0. She had menarche at 13 years. She had painful regular periods repeatign every 22-24 days. The flow was moderate and last 5-6 days. She gave no history of contraceptive use.

Past Medical History:

Not contributory.

Family and Social History:

She was single, and was unemployed. She stayed in Nairobi with her relatives. She gave no history of major family illnesses.

Physical Examination:

She was a young girl in fair general condition. She was not pale, was afebrile and had no pitting leg oedema. She was not jaundiced.

The pulse was 88/min, regular, good volume. Blood pressure 110/70 min, temperature 36^{o} C. Respiratory rate 20/min.

Cardiovascular system, respiratory system, central nervous system were within normal limits.

Abdominal Examination:

Uterine size corresponded to term uterus. The foetus lay longitudinally with breech presenting. Fetal heart rate was 140/min and was regular. She was having three strong contractions in 10 minutes lasting about 40 seconds. There was a descrepancy between dates and fundal height. Most likely she did not now the last menstrual period.

Vaginal Examination:

She had normal external genitalia. The cervix was

fully dilated with a foot at the introitus. The sacral promontory was easily felt and the ischial spines were prominent. Thick meconium stained liquor drained from the vagina. There was no cord prolapse.

Diagnosis:

Footling breech in a primigravida with contracted pelvis in advanced labour.

Management:

Decision was made to do emergency caesarean section and the patient was prepared. Blood was taken for group and crossmatch and two pints of blood were requested. An intravenous line was started and maintained with 5% dextrose 500 ml to run 6 hourly. She was meanwhile, nursed in left lateral position and was advised to refrain from bearing down. The condition was explained to the patient and she signed an informed consent. She was premedicated with atropine sulphate, 0.6 mg intramuscularly before she was taken for operation. She was wheeled into the theatre at 6.00 a.m. A live female baby was delivered through a caesarean section by breech extraction. The operation was carried out as outlined in the introduction. Birth weight was 2980 mgs and the apgar score was 9/5 and 10/5.

Post Operative Period:

Recovery from anaesthesia was uneventful. The patient was put on intravenous fluids for 24 hours until she had adequate bowel sounds. Analgesia was provided with pethidine injection 100 mg 8 hourly for 24 hours then she was started on oral medication counsisting of ampicillin capsules 500 mg 6 hourly for 7 days and panadol tablets 2 three times a day. On the third post-operative day, check haemoglobin was 10.5 mg/dl. On the seventh post-operative day all stitches were removed and the wound was healed. She was discharged with instruction to attend postnatal clinic after 6 weeks. She was instructed to take the baby to the maternal and child health clinic for initial immunization in two weeks time.

Postnatal CLinic:

She was seen at the postnatal clinic after 6 weeks. She was in good general condition. She was not pale. Abdominal wound was well healed. She had not resumed her periods. The uterus was normal sized. She had established lactation and the baby was breastfeeding well.

She was counselled on contraception and she accepted to use the pill. She was referred to the Family Planning Clinic for procurement.

Comments:

Breech presentation poses a management dilemma to the obstetrician. This is because of the complications related to breech delivery. Such complications include high perinatal morbidity and mortality, low birth weight from prematurity, growth retardation or both, prolapsed cord, placenta praevia, fetal abnormalities, uterine anomalies, multiple fetuses and operative intervention (1, 4).

The incidence of breech presentation at term is about 3.2% (1). Njuki (1981) showed an incidence of 3.5% of all deliveries at Kenyatta National Hospital. The Nairobi birth survey showed an incidence of 2.7 (6).

There are three types of breech presentations, the frank breech, the complete breech and the incomplete breech. The incomplete breech is one in which one or both feet or knees are foremost in the birth canal (2). Footling breech occurs more commonly in the primigravida.

The patient presented was a teenage primigravida and she had a footling breech. Due to the high perinatal mortality related to the vaginal delivery of the breech, there is a tendency to do caesarean section more frequently in patients with breech presentation. Westin (1977) devised a breech scoring system to try and summate the influence of risk factor upon fetal loss (3). He

gave a score of 0-2. The factors he considered were pelvic diameters, estimated birth weight, presentation, the cervix and pelvic floor, and previous deliveris. According to the scoring system, the best outcome would be expected in patients with large pelves, estimated birth weight of between 2000- 3500 gm, a presentation which is frank breech, the cervix being ripe in a relaxed pelvic floor and the patient may have had uncomplicated breech delivery. The maximum score is 20. It is suggested that in a patient with a score of 12 or more vaginal delivery may be attempted. The presented patient was a primigravida with a footling breech, a small pelvis and estimated birth weight of about 3000 gm. The breech score in this patient was very poor. Caesarean section was the right management for her. She however tried to deliver at home and she had no previous antenatal record. It is possible that, had she not arrived in hospital in good time, the pregnancy would have been terminated in catastrophic manner.

In our unit the perinatal mortality due to breech is 2.5 times that in cephalic presentation (Johnston et al, (1980). In our environment it is obvious that most patients do not seek medical advise when pregnant and come to hospital if at all, when in labour. However, right steps are being taken in the adopted primary health care program. It is the hope of every obstetrician that through this program, the high risk antenatal mothers will be screened and referred to the specialized persons for proper management.

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4. PREVIOUS CAESAREAN SECTION WITH PREMATURE RUPTURE OF MEMBRANES AT 38 WEEKS, EMERGENCY CAESAREAN SECTION, LIVE BABY

Name	-	Mrs. F.W.	LMP	-	29.1.87
Age	-	28 years	EDD	-	5.11.87
Ip. No.	-	856907	Maturity	-	38 weeks
Parity	-	1 + 0	Date of Admission	-	26.10.87
			Date of Discharge	-	3.11.87

Presenting Complaint:

She was admitted at 7.10 a.m. from home with history of draining liquor for two hours. She had gone to the bathroom where she noticed sudden gush of clear liquor draining. She also had slight backache.

History of Present Pregnancy:

She had been booked to our antenatal clinic due to history of one previous caesarean section scar. She had made a total of two attendances. Gestation at booking was corresponding to 37 weeks.
Erect lateral pelvimetry was requested for and was done. The findings were inlet 10.7 cm, midcavity 11.9 cm and outlet 10.5 cm. She had been planned for a trial of scar.

Past obstetrical and Gynaecological History:

She had menarche at 14 years and her menstrual cycles

were regular repeating every 28-30 days. She was para 1 + 0. The previous delivery was at term by caesarean section due to cephalopelvic disproportion. The baby was alive and well.

Past Medical History:

There was nothing of significance.

Social History and Family History:

She was married and worked as a typist. She lived in Nairobi with her family. She did not take alcohol or smoke cigarettes. She had no family history of major illnesses.

Physical Examination:

She was in fair general condition, not pale or jaundiced. Temperature was 36^{o}C and she had no pitting leg oedema. Blood pressure was 110/70 mmHg, pulse was 84/min.

Respiratory system, cardiovascular system and central nervous system were normal.

Abdominal Examination:

The uterine size corresponded to 38 weeks gestation. The baby was laying longitudinally in cephalic presentation. The head was five parts above the pelvic brim. The foetal heart rate was 136 per minute and was regular. There were

no uterine contractions palpated. There were no other abdominal masses.

Vaginal Examination:

She had normal external genitalia and vaginal walls were normal. There was a pool of liquor in the posterior fornix. The cervix was soft, 2 cm long, central and was admitting a finger. The pelvis was clinically adequate.

Diagnosis:

Premature rupture of membranes at 38 weeks gestation with previous caesarean section, not in labour.

Management:

Decidion was made to perform emergency caesarean section and the patient was prepared as usual. Blood was taken for grouping and crossmatch and two pints were requested. An intravenous line was instituted and maintained with 5% dextrose 500 ml to run at 6 hours. She was premedicated with atropine sulphate 0.6 mg intra-muscularly half hour before the operation. She was wheeled into the labour ward theatre at 11.00 a.m.

Emergency Caeserean Section:

She was put in supine position and bladder was catheterized asceptically. Clear urine was obtained and the abdomen was cleaned with an antiseptic solution and the area was draped with sterile towels. The patient was

then put under anaesthesia and lower uterine segment caesarean section was performed the usual way as described in the introduction. A live female infant was delivered whose birth weight was 2400gms and scored 8 in one minute and 10 in five minutes. Blood loss was about 400 ml. She did not need transfusion. Placenta was grossly normal and weighed 500 gms.

Post -operative period:

Recovery from anaesthesia was uneventful. She was put on intravenous fluids in the form of 5% dextrose 500 ml alternating with Normal saline 500 ml 6 hourly for the first postoperative day. She was put on intravenous injections of ampicillin 500 ml 6 hourly for 24 hours to be reverted to capsules when she resumed oral feeding. Analgesia was provided with pethidine 100 mg 8 hourly for 24 hours and later she was given paracetamol tablets.

Bowel sounds were normal on the second post-operative day. Intravenous fluids were stopped and she was started on oral sips and oral medication. The vital signs remained stable and on the third post-operative day, she had established lactation. Check haemoglobin was 10.2 gm/dl, haematocrit 32.4%.

On the seventh post-operative day all stitches were removed and the wound was well healed. The patient was

discharged home with the baby. She was instructed to take the baby to the maternal and child health care clinic after two weeks and to attend the post-natal clinic after six weeks.

Post-natal Clinic:

She was seen at the post-natal clinic on the 16.12.87 and was found to be in good general condition. She was not pale. Lactation was well established and the baby was breastfeeding well. The baby had the initial immunizations done. The uterus was well involuted and was about normal sized. She was counselled on contraception and she accepted to use the pill. She was referred to the family planning clinic for procurement.

Comments:

Prematue rupture of membranes is defined as rupture of chorioamnion before the onset of labour irrespective of gestation (1, 2). The patient presented had rupture of membranes before onset of contractions. This is a patient who had a previous caesarean section and clinically and radiologically assessed adequate pelvis. She had been planned for a trial of scar after going into spontaneous labour. She never went into spontaneous labour and was done caesarean section twenty hours after rupture of membranes.

Prolonged rupture of membranes is defined as rupture of chorioamnion 24 hours or more before the onset of labour (1).

Aetiology of premature rupture of membranes is unknown. Associated factors include genital infection, coitus in the at least one week before rupture, low social economic status and dietary deficiency of ascorbic acid (3). The patient presented had no clinical evidence of infection. She was well nourished and history of frequency of coitus was not obtained.

The management of premature rupture of membranes before 36 weeks is expectant. The use of antibiotics, tocolytics and steroids in these cases is controversial (2). If it occurs after 36 weeks of gestation and labour

does not occur in 12 hours, the patient is then induced with oxytocin unless there is a contraindication like breech presentation and transverse lie. If induction fails then caesarean section is indicated (2).

The patient presented had premature rupture of membranes after the 36 weeks. She did not go into labour for 20 hours after rupture of membranes. oxytocin stimulation was not considered in this patient despite the fact that she had an adequate pelvis. This is because oxytocin is not used in patients with previous scars in this unit. If the patient were to be put on oxytocin, she would have required very close monitoring and the facility for this is not available in terms of personnel and equipment.

Studies have been done elsewhere to show that there is no contraindication for oxytocin use in patients with previous caesarean scar who have been selected for a trial of labour.

Clark et al (4) studied 836 patients who had had one or more previous caeserean section and were considered for vaginal delivery. He found that of the patients allowed trial of labour 78% achieved vaginal delivery. Horenstein et al. (5) found that of 292 patients undergoing trial of scar, 19.9% received oxytocin. The indication for oxytocin use was either induction or

augmentation of labour. He did not find any increase in uterine dehiscence in the oxytocin group. In other study, Anderson et al, (5) studied uterine contractions in patients in labour occurring spontaneously, in response to oxytocin, and in response to prostaglandin F_2 alpha. The mean distribution of peak uterine activity and duration of contractions were similar in the three groups.

Horenstein et al. (5) observed that the great concern about use of oxytocin in patients with previous caesarean section is understandable. But patients with one previous caesarean section who undergo trial of labour, the judicious use of oxytocin appears to be safe (5).

The patient presented had only one caesarean scar and had been planned for a trial of labour. She may have benefited from oxytocin stimulation had we been equiped to do so.

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5. FACE PRESENTATION WITH LEFT MENTAL POSTERIOR POSITION AND CONTRACTED PELVIS

Name	-	Miss B.W.	EDD	-	6.9.86
Age	-	18 years	Para	-	0 + 0
Ip. No.	-	844189	Date of Admission	-	16.8.87
LMP	-	29.11.86	Date of Discharge	-	23.8.87
			Height	-	4' 8"

Presenting Complaint:

She was admitted through casulty at 3.00 p.m. with history of labour pains for one day. She complained of draining liquor for about 12 hours.

History of Present Pregnancy:

She had not attended any antenatal care clinic.

Obstetrical and Gynaecological History:

She was para 0 + 0. Her LMP was 29.11.86, EDD 6.9.87. Maturity at admission was 37 weeks. She had menarche at 15 years. She had regular periods with dysmenorrhoea and normal flow. She had no history of contraceptive use.

Past Medical History:

This was not contributory.

Diagnosis:

Short primigravida with face presentation in left mental posterior position and contracted pelvis.

Management:

Decision for Emergency Caesarean section was made. Blood for group and crossmatch was drawn and two pints of blood were requested. An intravenous line of 5% dextrose 500 ml to alternate with Hartmans solution 500 ml 4 hourly till resumption of normal hydration status then 6 hourly was started. The patient signed an informed consent. She was premedicated with atropine sulphate 0.6 mg intramuscular injection stat before theatre. She was then wheeled to threatre at 3.45 p.m.

In theatre bladder was catheterized aseptically and clear urine was obtained. The abdomen was then cleaned and draped with sterile towels. The patient was then put under general anaesthesia. The abdomen was opened in layers through the lower midline incision. Lower uterine caesarean section was performed and a live female baby was delivered. Birth weight was 2200 gms and the baby scored 7 at 1, 9 at 5 and 10 at 10 minutes. The baby had marked oedema of the face and was taken to nursery for further observations. The uterus and the abdomen were closed appropriately. Blood loss was 350 ml. The placenta weighed 520 gms and was complete.

Post Operative Period:

Reversal of anaesthesia was incomplete. The reason for this was not immediately obvious. The patient needed respiratory support and was transfered to ICU for that. She made rapid recovery in ICU and was discharged from there fully awake 12 hours after admission.

Investigation:

At the Intsntive Care Unit (ICU)

Blood pH - 7.5

PCO_2 - 2.67 KPQ

PO_2 - 16.93 KPQ

HCO_3 - 15 mmol/L

Na+ - 130 mmol/L

K+ - 4.6 mmol/L

BUN - not done

PCV - 51%

In the post natal ward the patient made rapid uneventful recovery. On the third post-operative day, check haemogram was done and the report showed Hb of 15.5 gm/dl. Haematocrit ratio of 44.1% platelet count of 293×10^9/L.

On the seventh day, all the stitches were removed. The wound was well healed and dry. The patient was discharged home together with the baby. She was advised to take the baby to the maternal and child health care

clinic after two weeks for initial immunization. She was advised to attend post natal clinic after six weeks.

She never turned up for post natal clinic.

Comments:

Face presentation occurs when the head is hyperextended so that the occiput is in contact with the fetal back and the chin is the reference part.

The incidence of face presentation is low. Obstetrical statistical co-operative identified a frequency of 0.2%. Pritchard et al. (1) at Parkland Memorial Hospital found an incidence of 0.3% (1, 2).

Diagnosis lies on vaginal examination though abdominal finding may be suggestive. On vaginal examination the distinctive features are the mouth, nose , the malar bones, and the orbital ridges (1, 2).

The aetiology of face presentation is multifactorial generally stemming from any factor that favours extension or prevents flexion of the head. Extension of the head occurs most commonly in contracted pelvis, large foetus, multiparous with pendulus abdomen, marked enlargement of the head, anencephalic fetuses and prematurity. Hellman et al (3) found that among 141 face presentation studied 39.4% had pelvic inlet contraction.

The patient presented was a small primigravida with a small pelvis.

The mechanisms of labour in these cases consists of

the cardinal movements of descent, internal rotation and flexion and the accessory movements of extension and external rotation.

Mento anterior position in an adequate pelvis often results in a spontaneous vaginal delivery. This is because as the head comes out of the distended perineum it is born by flexion. The presenting mental bregmatic diameter is equivalent to the biparietal diameter of 9.5 cm in vertex delivery. The mechanism of labour is similar to that of the vertex delivery except that the second stage may be prolonged because face bones do not mould.

Mento-posterior position provides all the grave problems associated with face presentations. In an adequate pelvis about 20-30% the chin rotates forwards when it reaches the pelvic floor. When rotation fails, then caesaren section is necessary.

As mentioned earlier one of the frequent causes of extension of the head is contracted pelvis. Therefore, most of the face presentation will also have contracted inlet. For these the mode of management is immediate caesarean section. The patient presented had two main factors against her labour progress. She had contracted pelvis, and the baby presented by mentoposterior which was persistent. She was delivered by emergency caesarean

section. The patient was also unmarried teenage primigravida. She therefore needed to be counselled on contraceptive use. Unfortunately for her she did not turn up for the postnatal clinic where the advise is best given.

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6. CORD PROLAPSE: LIVE BABY.

Name	-	Mrs. F.W.K.	LMP	-	Not known
Age	-	40 years	EDD	-	Not known
Ip. No.	-	861429	Date of Admission	-	8.11.87
Parity	-	4 + 0	Date of Discharge	-	16.11.87
Gestation	-	38 weeks.			

Presenting History:

She was admitted through the Casualty Department at 5.20 p.m. with history of labour pains for six hours. She gave no history of drainage of liquor or vaginal bleeding.

Obstetric and Gynaecology History:

She was para 4 + 0. Her first delivery was in 1963 and her last delivery was in 1980. All her deliveries were by spontaneous vertex delivery and all occurred at home. All babies were live and well. She had menarche at the age of 14 years. She had oligomenorrhoea and she stayed for long periods without menstruation. She had no menses since her last delivery which was five years before. She had no history of contraceptive use and had not been investigated for infertility.

Past Medical History:

This was not contributory.

History of Present Pregnancy:

She had not attended any antenatal care clinic during this pregnancy.

Family and Social History:

She was a married housewife. She had no formal education and she did not drink alcohol or smoke cigarettes. She gave no family history of major illnesses.

Physical Exmaination:

She was in good general condition. She was not pale, was afebrile and had no pitting ankle oedema. Her blood pressure was 120/70 mmHg, pulse rate 84/min, respiratory rate 20/min, and temperature 36^{o}C. The Respiratory system, central nervous system, cardiovascular system were all normal.

Abdominal Examination:

Uterine size corresponded to term uterus. The fetus presented with head in a longitudinal lie. The head was 5/5 above the pelvic brim. The foetal heart rate was 140/min and was regular. She was having two strong contractions in 10 minutes lasting 20-40 seconds.

Vaginal Examinaiton:

She had normal external genitalia. The cervix was fully effaced and was 8 cm dilated. The membranes

were bulging and there was no cord presentation. The pelvis was adequate. Artificial rupture of membranes was performed and meconium stained liqour was obtained.

At this time diagnosis of multigravida in established labour with meconium stained liquor was made and she was managed as follows:- Intravenous drip consisting of 10% dextrose was started to run in 6 hours. Blood for group and crossmatch was drawn in anticipation for a possible caesarean section. She was nursed in the left lateral position. Fetal heart rate was observed quarter hourly before, during and after a contraction.

She was to be reviewed in one hour if delivery had not taken place.

At 7.00 p.m., the patient was noted to he lying in a pool of meconium stained liquor. On examination the head was still 5/5 above the pelvic brim. The foetal heart rate was 132/min regualr. Vaginal examination showed thick meconium draining from the introitus. There were loops of cord in the vagina. The head could be dislodged with ease. The cervix was still 8 cm dilated.

Diagnosis:

Cord prolapse.

Management:

She was immediately put in a deep Trendelenburg's position. The baby's head was dislodged from the pelvic brim and a nurse was assigned to hold it so that it does not engage. Decision to do emergency caesarean section was made and the patient was prepared as usual. The patient then signed an informed consent. She was then premedicated with intramuscular injection of atropine sulphate 0.6 mg stat before theatre. The patient was taken to theatre where she was put under general anasthesia.

Lower segment caesarean section was done and live male infant was delivered whose birth weight was 3500 gms and apgar scored was 10 in 1 minute and 10 in 5 mimutes. Placenta weighed 500 gms and blood loss was 450 ml. She did not need blood transfusion.

Post Operative:

The mother was started on intramuscular injection of ampicillin 500 mg 6 hourly for 48 hours. She was reverted to ampicillin capsules 500 mg orally for five days. She was on intravenous fluids consisting of 5% dextrose 500 ml to alternate with Hartman solution or normal saline 500 ml 6 hourly until she resumed oral feeds. The patient had good bowel sounds and was passing flatus on the first post operative day. She was started on oral sips and the intravenous fluids were discontinued.

She was given intramascular pethilorfan 100 mg 8 hourly for 24 hours after which she was started on oral paracetamol tablets 1 gm 8 hourly for 6 days.

Post-operative haemoglobin was measured on the third day and was 11.5 gm/dl, Haemotocrit 33%.

All stitches were removed on the seventh day post-operative. the wound was well healed and she was discharged home with the baby. She was instructed to attend postnatal clinic after 6 weeks and to take the baby to the maternal child health clinic after two weeks for immunization.

The mother never turned up for the post natal clinic.

Comment:

Cord prolapse is a serious complication for the foetus, the occurrence of which is facilitated by imperfect adaptation between the presenting part and the pelvic inlet. Unless prompt delivery is accomplished, fetal death results from compression of the cord between the presenting part and the margin of the pelvic inlet (1).

It occurs when the cord descends into the birth canal in front of the presenting part. The most frequent presentation is when the cord is found in the vagina after ruptured membranes as was in this case or the cord may be found protruding from the introitus. Other presentation are where cord is felt through the intact membranes preceding the presenting part (cord presentation), presence of the cord besides but not below the presenting part (occult prolapse (1, 7).

The incidence of cord accident varies from place to place. Cushner (2) found a combined incidence of 0.43%. In Nairobi, Mati et al. (3) found an incidence rate of 0.8% and a prevalence of one in every 200-300 deliveries.

The predisposing factors include abnormal presentation like transverse lie, breech presentation especially with flexed lower limb's when the risk is trebbled, cephalo-pelvic disproportion, polyhydra-aminos and

prematurity (1, 7).

Numerically breech presentation is the single most common cause of cord prolapse accounting for 40-50% of cases (4). Other causes include amniotomy and abnormalities of the cord especially a long cord (> 75 cm) (1, 2, 4).

In the patient presented, the head was five fifth above the pelvic brim although she was having adequate contractions. The cervix was 8 cm dilated and was loosely applied to the presenting part. The position of the head was difficult to assess. It is possible that there was cephalo-pelvic disproportion due to malposition of the head. The cord prolapse was diagnosed on the second review of the patient. This could have been caused by a gush of meconium stained liquor probably during a contraction. Cord prolapse contributes 2.3 % of perinatal mortality at Kenyatta National Hospital.

Cushner (2) found that cord prolapse occurred primarily during labour, fetal survival was adversely affected by prolonged time interval between rupture of the membranes and diagnosis, prolonged interval between diagnosis and delivery, and absence of procedures to alleviate pressure on the cord from the presenting part. Small birth weight was another adverse effect. Prognosis is comparatively better for cord presentation (2).

In this patient, the diagnosis was made at 7.00 p.m. and the baby was delivered at 7.30 p.m. The time interval between diagnosis and delivery was therefore short.

The current practice is to deliver the infant as soon as possible by vaginal delivery if possible or by emergency caesarean section. Vaginal delivery is indicated in a situation where the cervix is fully dilated, the pelvis is adequate for the foetus and the presenting part is rapidly descending. Such situations occur very rarely.

In this patient vaginal delivery could not be possible and the baby was quite big (3500 gm) and the possibility of there being presence of cephalo-pelvic disproportion.

Foetal prognosis is improved markedly in early diagnosis of cord presentation and prolapse and immediate delivery of the infant. It is therefore mandatory to perform a vaginal examination soon after rupture of membranes or when patient complains of liquor drainage during labour.

After the diagnosis, the management depends on the state of the baby and the cervix. if the fetus is dead as may be shown by absence of foetal heart and non pulsatile cord, the patient is allowed to labour. The

mainstay of treatment in this case is to try and achieve vaginal delivery. In cases of severe cephalopelvic disproportion, caesarean section may be indicated.

If the fetus is alive and delivery is not emminent, the patient is put in deep Trendelenbury position. The presenting part is dislodged from the pelvic brim and pressure is exerted suprapubically to aleviate pressure on the cord. An emergency caesarean section is then performed.

If the cervix is fully dilated and the head is descending then vaginal delivery may be achieved by assisting with a vacuum extracter in case of vertex presentation or by use of forceps on the after coming head in the breech presentation.

The case presented, had cord within the vagina, she was put in deep trendelenburg position and caesarean section facilities were immediately available.

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7. CARDIAC DISEASE GRADE III IN PREGNANCY, TERM ASSISTED VACUUM DELIVERY

Name	-	Mrs. F.N.	LMP	-	3.11.85
Age	-	26 years	EDD	-	10.8.86
Ip. No.	-	659141	Maturity at delivery	-	41+ weeks.
Parity	-	2 + 0			

Presenting History

She was admitted from the antenatal clinic where she had presented as a referral from the cardiac clinic. She was at 24 weeks gestation. She complained of palpitations and dyspnoea on mild exertion for six weeks. She had no chest pain and was not coughing. This was the first time she had presented to the cardiac clinic.

Past Obstetrics and Gynaecological History:

She was para 2 + 0. Both babies were by assisted vacuum deliveries and were alive and well. Last delivery was 1985. Her menarche was at 15 years of age. She had regular period every 28 to 30 days lasting 3 - 4 days.

Contraceptive History:

She used contraceptive pill (microgynon) from 1980 to 1982. She stopped because blood pressure was rising. She used IUCD (Lippes loop) from 1982 to 1984

which she stopped because of want of pregnancy.

Past Medical and Surgical History:

She had never been hospitalized for any medical or surgical problem. She did not give any history of having had sore throat any time of her life.

Family and Social History:

She was married and lived with her husband in Nairobi. She worked as a casual worker with Nairobi City Commission. She did not smoke cigarettes or drink alcohol. There was no family history of chronic illnesses in the family.

History of Present Pregnancy:

Her problems started at twenty four weeks gestation when she complained of headache, epigastric pain, palpitations and dysponoea on mild exertion. She was seen at the cardiac clinic where she was evaluated by the Cardiologist. She was found to have aortic valve disease, the lesion being aortic regurgitation and aortic stenosis but mainly aortic regurgitation. She was then referred to our antenatal clinic. She was admitted to the lying in ward for bed rest and stabilisation of her cardiac state.

Physical Examination:

Her general condition was fair. She was comfortable at rest. She was not pale, was afebrile and did not have

pitting pedal oedema or sacral oedema. The temperature was 36°C and she did not have a raised jugular venous pressure.

Respiratory System:

Respiratory rate was 20/min. Air entry was good bilaterally and there were no added sounds. The throat and tonsils were not inflamed.

Cardiovascular System:

Her blood pressure was 110/70 mmHg, and pulse rate 80/min. Pulse was sinus but collapsing in nature. A pan-systolic mummur was heard best at the aortic area. There was a systolic thrill and the apex beat was at the fifth intercostal space in the mid-clavicular line.

Abdominal Examination:

The uterine size corresponded to 24 weeks gestation. There was no hepatomegally or splenomegally. Fetal movements were felt.

Vaginal Examination:

Was not done as there was no clinical indication.

Diagnosis:

Cardiac disease grade III due to aortic regurgitation and aortic stenosis at 24 weeks gestation.

Management:

She was admitted to the lying in ward for assessment of her cardiac status by a Cardiologist. She was also to get in-patient care through out this pregnancy, delivery and immediate puerperium. Bed rest was provided in the propped up (Semi-Fowler's) position. She was continued on anti-failure treatment started at the cardiac clinic, made up of 0.25 mg digoxin once a day, frusemide 40 mg tablets once a day and Slow-K/2 tablets once a day. Her vital signs were recorded four hourly.

Assessment by the Cardiologist placed her in cardiac grade III. She was put on oral haematinics consisting of ferrous sulphate 200 mg 8 hourly and folic acid 5 mg once a day. Weekly investigations were carried out to monitor any deterioration in her cardiac condition.

Investigation:

1. Full blood count:

Haemoglobin	11.1 gm/dl.
Packed cell value	34%
MCHC	32
White blood cell count	3.9 x 10^9/L.
Neutrophils	68%
Lymphocytes	30%
Eosinophils	2%

2. Blood group : - A Rhesus positive

3. Kahn test negative.

4. Midstream specimen of urine (MSSU):- no growth.

5. Stool for ova/cyst - negative

6. Blood urea and electrolytes:

Na+ - 139 mmol/L

K+ - 1 mmol/L.

BUN - 2.2 mmol/L

Ca++ - 2.25 mmol/L

Her cardiac condition remained stable. She was evaluated every day for any sign of deterioration. Repeat investigations were all within normal limits.

On 29.7.86 at 36 weeks of gestation, pelvic assessment was done by digital vaginal examination. The findings were as follows:- The external genitalia was normal. Sacral promotory was not tipped. Ischial spines were not prominent. Sacral curvature and pelvic outlet were adequate. The size of the baby at this gestation was estimated to 3 kg. The pelvis was declared adequate and the patient was to await spontaneous labour if presentation remained cephalic.

On 23.8.86 at 6.30 a.m. the patient complained of labour pains. She was 41 weeks and 6 days by dates. On examination she was in good general condition. Blood pressure was 120/70 mmHg and a pulse rate of 84 per minute. She was having two uterine contractions every 10 minutes lasting more than 20 seconds. The fetal heart rate

was 140 per minute and regular. The presentation was cephalic in a longitudinal lie and the head was 3/5 above the brim. Vaginal examination revealed normal external genitalia. The cervix was fully effaced and was dilated 6 cm. The membranes were intact and after ruling out cord presentation, artificial rupture of membranes was done and clear liquor obtained. Position of the head was left occipital posterior with no evidence of obstruction. She was allowed to labour in the semi-fowler's position. She was given intra-muscular injection of frusemide 80 mg and ampicillin 500 mg for prophylaxis. She was given subcutaneous morphine 15mg. She was monitored as per partogram.

Cardiac resuscitation tray was checked and kept ready. It contained digoxin, frusemide, morphine, aminophilline, hydrocortison, etc. The patient was to have assisted vacuum delivery during 2nd stage.

Labour progressed rapidly and at 9.30 a.m. she was at second stage of labour. She was prepared for assisted vacuum delivery. A medial lateral episiotomy was done after infiltration with local anaesthetic. The vacuum cup was applied on the baby's occiput and an assisted vacuum delivery was done as explained. A male baby was delivered who weighed 3200 gms and scored 10 at 1 minute and 10 at 5 minutes. The placenta and membrane were delivered easily by controlled cord traction.

Placental weight was 650 gms and was anatomically normal. Total blood loss was 200 ml.

Post Delivery:

She was observed half hourly in the labour floor intensive care room for 24 hours. During this period her condition remained stable and she was transferred to lying - in ward to continue antibiotics and further observations for 10 more days. The period was uneventful and together with her baby, she was discharged home in good general condition. She was instructed to attend post-natal clinic after six weeks. She was to continue with cardiac clinic. Her haemoglobin before discharge was 11.5 gm/dl, and other blood parameters were normal.

Post-Natal Visit:

She attended post-natal clinic six weeks latter. She and her baby were in good condition. The breasts were active and the baby had received the initial immunizations. She was advised on family planning and she opted for natural method. She was sent to the family planning clinic for further coaching of the method.

Comment:

The incidence of heart disease in pregnancy varies from region to region (1, 4). The rheumatic heart disease is the commonest in our set-up while it is minimal in the industrialized nations.

In Kenyatta National Hospital, the incidence of heart disease in the patients admitted in the labour ward was found by Sequiera et al (5) and Ngoka (3) to be 0.5% while Ngotho (2) found it to be o.66%.

The commonest lesion is mitral valve disease which is closely followed by aortic valve disease (2, 3, 5, 6). Our patient had aortic regurgitation. The symptomatology of dyspnoea, chest pain, oedema, easy fatigability and palpitation occurs in about 50% of normal pregnant women. Cardiomegaly, chest crepitations and arrhythmias which are cardinal signs of congestive cardiac failure may be found in pregnant women without a cardiac lesion. Ejection systolic murmurs are also quite common in pregnancy (1, 2, 3, 4).

However, if these signs and symptoms occur outside pregnancy then they are almost diagnostic of heart disease. Diastolic murmurs in pregnancy are significant (1). Our patient had not been diagnosed as having heart disease when she was non-pregnant. Therefore it is not surprising to find that she had used pills and intrauterine

devices for contraception before. It would also appear from history that she had no cardiac symptoms during the previous deliveries.

Diagnostic procedures like electrocardiography and radiography may be inconclusive in pregnancy. Furthermore, radiography is undesirable in pragnancy.

Ideally, pregnant cardiac patients should be seen at each antenatal visit by both an obstetrician and a cardiologist. The patient should have a thorough cardiac assessment at the earliest possible time in pregnancy (1, 5, 6, 7). Our patient was admitted at 24 weeks gestation as it was also the time of first contact in the present pregnancy. Patients with cardiac grade III and IV in pregnancy need to be admitted at the earliest possible time. These patients apart from cardiac evaluation also need bed rest and survaillance for any complications. Anaemia, pulmonary oedema, cardiac arrhythmias and congestive cardiac failure should be anticipated, and looked for during hospitalization. If any develops,it should be treated early and vigorously (1, 7). Our patient did not develop any of these complications.

Pre-labour pelvic assessment is mandatory as trial of labour in a cardiac patient is undesirable (1, 7). Our patient had an adequate pelvis. The Semi-Fowler

position used in our patient is the best in cardiac patients, especially if they are in labour, if patients are left to lie flat they will develop orthopnoea and sometimes pulmonary oedema.

Assisted 2nd stage of labour may be necessary esepcially in patients with cardiac disease grade III and IV. However, the second stage of labour in patients with cardiac disease may be very rapid (1, 7). Our patient had a very short second stage in which she was assisted with a vacuum extraction.

Antibiotic cover during labour and early peurperium is necessary as was in our patient. This antibiotic therapy prevents infection endocarditis during this high infection risk period (1, 7).

In the first two weeks post-partum there is a rapid change, of haemodynamics from the pregnant to non-pregnant state. During this period patients are bound to have higher complication rates and it is therefore necessary that they stay in hospital under surveillance for at least ten days. This period may be longer depending on individual patients.

The prognosis of cardiac disease in pregnancy is good if the patients get medical attention during pregnancy (5, 7).

The incidence of cardiac disease in pregnancy may be reduced if streptococcal pharyngitis is treated early and completely to avoid the complication of rheumatic heart disease (1, 4, 5, 6, 7).

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8. CARNEOUS (RED) DEGENERATION OF UTERINE FIBROIDS IN PREGNANCY

LAPAROTOMY AND MYOMECTOMY

Name	-	Miss M.A.	LMP	-	28.3.87
Age	-	25 years	EDD	-	7.12.88
Parity	-	0 + 0	Date of Admission	-	31.5.88
Ip. No.	-	898500	Date of Discharge	-	7.7.88

Presenting Complaint:

The patient admitted through the Casualty department as a referral from Pumwani Maternity Hospital. She complained of sudden onset of severe abdominal pain. The pain was continuous in character and had started since 7 a.m. of the admission day. She did not have any vaginal bleeding or drainage of liqour. There was no history of trauma.

History of Present Pregnancy:

She had not started attending antenatal clinic yet. The gestation on admission was 14 weeks.

Obstetrical and Gynaecological History:

She was para 0 + 0 and had menarcheat the age of 14 years. Her menstrual periods were regular and normal. She had no dysmenorrhoea and had never used contraceptives.

Past Medical History:

She never had any major illnesses and had never been hospitalized before. The patient had not had any gynaecological examination before this illness.

Family and Social History:

She was unmarried and was studying midwifery at the Pumwani Maternity Hospital. She did not drink alcohol or smoke cigarettes. There were no familial chronic illnesses.

Physical Examinaiton:

The patient was in pain but she was not pale and was afebrile with a temperature of 36^{o}C. She had no pitting leg oedema and had no jaundice or cyanosis. She had no peripheral lymphnode enlargement.

Her blood pressure was 100/60 mmHg, the pulse was 96 per minute, and the respiratory and the central nervous systems were within normal limits.

Abdominal Examination:

The abdomen was distended and there was an irregular tender mass corresponding to 24 weeks gestation. The mass felt firm and was more tender in the right side than the left side and appeared to be arising from the pelvis. There was no evidence of free fluid in the

peritoneal cavity and the spleen and the liver were not palpable.

Pelvic Examination:

Her external genitalia was normal and the vaginal walls felt warm and moist. The cervix was soft, long and the os was closed. The uterus appeared to be continuous with the abdominal mass and was tender. There was no blood or discharge on the examination finger.

Investigations:

1. Haemogram - Hb - 12.2 gm/dl.
   haematocrit - 35.1%
   platelets - 489 x 10^9/L.
   Blood slides - no malaria parasites seen.
2. Blood group O 'D' Positive.
3. Serology - Negative
4. Blood urea and electrolytes
   K+ - 4.3 mmol/l.
   Na+ - 132 mmol/l.
   BUN - 2.7 mmol/l.
5. Midstream specimen of urine - no growth obtained.
6. Pregnancy test in dilutions - Positive 1:32.
7. Pelvic ultrasound report - The uterus appears bulky with an intra-uterine pregnancy about 12 weeks size. Fetal cardiac activity is demonstrated. There is also a large mass at the fundus of the uterus which is

quite vascular and is suggestive of hydatidiform mole. A degenerating fibroid can not be ruled out.

Diagnosis:

An impression of degenerating uterine fibroid in early pregnancy with a possibility of invasive mole was made.

Management:

Decision to observe the patient for a few more weeks was made. She was put on bed rest and analgesia was provided with two panadol tablets 8 hourly . Close observation of the patient was maintained. Two weeks after admission the mass was noted to have progressed quite rapidly and it measured about 34 weeks at the time. The pain was getting worse necessitating administration of intramuscular pethidine. A repeat ultrasound was suggested but not done because of the tenderness over the abdomen. Decision to perform an exploratory laparotomy was made and this was explained to the patient. An informed consent was obtained and 4 pints of whole blood were requested for to be available on the operation day. She was prepared for laparotomy the usual way and was wheeled into the operating theatre on the 22.6.88 at 1.05 p.m. Induction of anaesthesia was done using Thiopentone sodium 250 mg and scoline 80 mg intravenously. Nitrous oxide 4 litres, oxygen 3 litres and Halothane 0.5% were used to maintain the state of anaesthesia

Muscular paralysis was provided by the use of pavlon 6 mg intravenously. After catheterization, the abdominal toilet was done and the area was drapped with sterile towels. The abdomen was then opened in layers through a right paramedian incision. The uterus was found to be gravid corresponding to 16 weeks gestation. There was a multinodular fibroid about 22 weeks size on the fundo-anterior surface of the uterus. It was highly vascular, adherent to the anterior abdominal wall and had a wide thick pedicle. Both ovaries and tubes were grossly normal and there were no pelvic adhesions. The fibroid was dissected off using blunt dissection clamping and ligation. Haemostasis was achieved. The fibroid weighed one kilogram. Exploration of the abdominal cavity showed that there were no other masses. The abdomen was then closed in anatomical layers after instruments and swabs count were reported correct. Total blood loss was estimated 500 ml. She did not require immediate blood replacement. Anaesthesia was reversed by the use of atropine sulphate 1.2 mg and neostigmine 2.5 mg intravenously given at 2.45 p.m. Reversion of the anaesthesia was complete the patient was further observed in the main theatre observation ward after which she was transferred to the antenatal ward.

Post Operative Period:

She was put on intravenous fluids consisting of Hartman's solution alternating with 5% dextrose 500 ml

each 6 hourly. Antibiotic cover was provided with ampicillin 500 mg intra-muscularly four times a day and she was given pethidine 100 mg 8 hourly for analgesia for 48 hours. She was also put on Ventolin 4 mg 8 hourly. On the second post-operaive day, the patient had established good bowl action and she was started on oral sips and oral medication. The vital signs remained normal and the only pain she had now was that at the operation site. On the third post-operative day, blood for haemoglobin was taken and it was found to be 11.7 gm/dl. Her recovery was quite rapid and on the 7th post-operative day all stitches were removed. The wound had healed well and she was discharged home. We would have liked to follow this patient up in our antenatal clinic but she had finished her studies at the Pumwani Maternity Hospital and had nobody to stay with in Nairobi. She was to go back to her home in Kakamega and we gave her a letter to take to the doctor who will look after her. Our opinion was that she be delivered electively by caesarean section since the myomectomy involved the fundus. The letter we gave her was to that effect.

Comment:

Carneous degeneration of uterine fibroids is a condition unique to the pregnancy state. It is a relatively rare condition considering that fibroids are very common in females in the reproductive period (1, 2, 3). During pregnancy the uterine fibroids hypertrophy and may grow to enormous sizes. They regress spontaneously during the peurperium. Uterine fibroids as big as the foetal head during pregnancy regressing to the size of the pea at peurperium have been reported in literature (1, 2).

Corneous degeneation occurs as a result of venous thrombosis and congestion with interstitial haemorrhage in the hypertrophied myoma. The degenerative changes cause pain and localized tenderness (1, 2, 3,4).

The patient usually presents with acute onset abdominal pain of variable severity. She may have low grade fever and blood picture may show leukocytosis. On examination there is an irregular mass arising from the uterus which may be flactuant and locally tender. The uterus is unproportionately enlarged out of proportion with the gestational period.

The diagnosis is made on clinical presentation and findings. The aids to the diagnosis is achieved by the ultrasound. Differential diagnosis include, hydatid-form mole, pelvic abscess, ovarian cyst, appendicular masses

etc. The ultrasound helps in differentiating these problems.

Once diagnosis has been made the management adopted is variably conservative (1, 2, 3, 4).

Bedrest with analgesia is the preferred treatment. Pain may sometimes be severe enough to require narcotic analgesia. In most instances the pain will stop spontaneously within ten days of onset (4).

In some patients the pain does not cease and the fibroid continues to grow. This is what happened in the patient presented. When this occurs surgical removal of the fibroid may be done. This should be done when conditions are optimum. That is, blood is available and an experienced gynaecologic surgeon and anaesthesiologist are available. After srugery the patient may be put on tocolytic drugs for two weeks or more depending on response . If the fundus of the uterus is interfered with as in this case, then it is advisable to deliver the patient electively by caesarean section.

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9. SHOULDER PRESENTATION WITH ARM PROLAPSE

EMERGENCY CLASSICAL CAESAREAN SECTION

LIVE BABY

Name	-	Mrs. K.W.	LMP	- 28.2.87
Age	-	27 years	EDD	- 7.12.87
Ip. No.	-	861054.	Date of Admission	- 11.11.87
Parity	-	5 + 0	Date of Discharge	- 18.11.87

Presenting Complaint:

She was admitted at 1.00 p.m. through Casualty Department with complaints of labour pains since 9.00 p.m. the previous day. She was not draining liquor and had no vaginal bleeding.

Presenting Pregnancy:

She had attended a city council clinic for antenatal care but did not have the attendance card with her. The LMP was 28.2.87. Gestation at admission was 36 weeks.

Obstetrical and Gynaecological History:

She was para 5 + 0. All her deliveries were normal vaginal deliveries. All the babies were alive and well. She gave no history of contraceptive use. She had menarche at 14 year of age. Her periods were normal with cycles repeating every 28 days. The flow was moderate lasting 3 - 4 days and was painless.

Past Medical History:

She had never been hospitalized for any major illnesses.

Family and Social History:

She was a married housewife. She stayed with her husband in Nairobi. There was no family history of major illnesses. She did not take alcohol or smoke cigarettes.

Physical Examination:

She was in fair general condition. She was not pale, was afebrile and had no pitting leg oedema. She had no jaundice but had mild dehydration. Pulse rate was 76/min, blood pressure 120/80 mmHg, temperature 36^{o}C and respiratory rate 20/min. Central nervous system, cardiovascular system and respiratory system were all within normal limits.

Abdominal Examination:

The uterine size corresponded to 36 weeks gestation. The uterus was tense making it difficult to palpate for the foetal poles. She was having three strong contractions, in ten minutes lasting more than 40 seconds. She was tender over the uterus. Fetal heart rate was 132/min regular and it was heard easily paraumbilically.

Vaginal Examinaiton:

She had normal external genitalia. The vaginal walls were normal. The cervix was 6 centimeters dilated. Membranes ruptured during the examination and clear liquor was obtained. The arm prolapsed into the vagina and the pelvis was adequate.

Diagnosis:

Shoulder presentation with arm prolapse in grand-multipara.

Management:

Decision was made to perform a caeserean section and the patient was prepared. An intravenous line was set up and maintained with 5% dextrose alternating with Hartman's solution 500 ml each 6 hourly. Blood was drawn for gouping and crossmatch and two pints of blood were requested for. While awaiting operation the patient was nursed in the left lateral position. The patient signed an informed consent and she was premedicated with atropine sulphate 0.6 mg intravenously stat before operation. She was wheeled into the labour ward operating theatre at 2.10 p.m. The bladder was catheterized and clear urine was obtained. Fetal heart was listened to and the tones were good.

The abdomen was cleaned and draped with sterile

towels. The patient was then put under general anaesthesia, and the abdomen was opened in the anatomical layers.

Findings:

The uterus had formed a pathological ring at the level of the junction of lower segment and the upper segment. Most of the fetus was enclosed fundally. The uterus was term and foetal pole could not be delineated easily. The lower segment was very vascualr and poorly formed.

Done: A longitudinal incision was made approximately in the midline of the uterus. The baby was lying in the right dorso-anterior position. A male baby was delivered by breech extraction and the birth weight was 3520 gms. The baby scored 10 in one minute and 10 in 5 minutes. The placenta was anterior and low lying. The uterine incision was made through the placenta for some length. It was delivered immediately after the delivery of the foetus manually. The uterus was repaired as explained in the introduction.

Post Operative Period:

Recovery from anaesthesia was uneventful. She was put on intravenous fluids consisting of 5% dextrose 500 ml to alternate with Normal saline every six hours

for 24 hours. Analgesia was provided with pethilorfan intramuscular injection 100 mg 8 hourly for 24 hours. She was put on injection ampicillin 500 mg 6 hourly until she was able to take oral feeds when she was reverted to capsules. She needed transfusion and was transfused with two pints of blood.

The condition of the patient remained stable and on the second day post-operatively she had adequate bowel sounds. The abdomen was soft, she was started on oral sips and intravenous fluids were discontinued. She was put on oral medication and the injections stopped. On the third post-operative day blood was taken for check haemoglobin, urea and electrolytes. The results were as follows:-

Haemoglobin	-	9.8 gm/dl.
Haematocrit	-	29.1%
Blood group	-	O Rhesus positive.
Na^+	-	136 mmol/l
K^+	-	4.6 mmol/l
BUN	-	1.9 mmol/l

Haematinics consisting of Ferrous sulphate 200 mg 8 hourly and folic acid 5 mg daily were added to the prescription.

On the seventh post-operative day, all the stitches were removed and she was discharged home. She was instructed to attend postnatal clinic after 6 weeks and

to take the baby to the maternal and child health care clinic after two weeks for initial immunization. She was put on haematinics and was advised on diet.

Post-natal Clinic:

She never turned up.

Comment:

Shoulder presentation occurs when the long axis of the fetus is approximately perpendicular to that of the mother. The head is in one iliac fossa while the breech lies in the other (1, 2). It is the most unfavourable of all foetal lies (2). The most frequent position is dorsal anterior. Of the dorso anterior the left dorso anterior is the commonest. The patient presented had a right dorso anterior position.

The incidence of shoulder presentation is about 0.3% (1, 2, 3, 4). The factors which favour the occurrence of shoulder presentation include, grandmultiparity, hydramnios, arcuate or septate uterus, contracted pelvis, placenta preavia, and prematurity (1, 2, 3).

The patient presented had grandmultiparity and an anterior placenta praevia. In most cases predisposing factors are not isolated.

The diagnosis of transverse lie is often made on inspection of the abdomen which is unusually wide from side to side and the uterus is shortened vertically. Confirmation is done by palpating the foetal poles in either iliac fossa. Before onset of labour, the conclusive diagnostic feature on palpation is the emptiness of the lower pole of the uterus (1, 2). It was difficult to elicite these signs as the patient was very tender on palpation.

Management of transverse lie depends on when the patient presents. If the patient is seen before or early in labour external version may be attempted. Before this is done predisposing factors like placenta praevia and cephalopelvic disproportion etc., should be excluded. If the patient presents in late labour and the foetus is alive, then caesarean section is the treatment of choice. In situations where patient presents in late labour with a dead foetus one has a choice of either performing a caeserean section or doing a destructive operation like decapitation. The patient presented came in established labour with a live foetus and caesarean section was the management of choice. In this unit most people advocate caesarean section for a dead foetus than a destructive operation. This is probably because the associated complications, e.g. perforated uterus, outweigh the benefit. In extreme prematurity and in macerated foetus, vaginal delivery may occur. This is achieved in three main ways, either by spontaneous version, by spontaneous evolution or by birth with baby double up (partus conduplicator carpore).

In performing the caeserean section, a low transverse incision into the uterus may lead to difficulty in extraction of a fetus entrapped in the body of the uterus above the level of the incision. A vertical incision is therefore generally favoured (1, 2, 3). The patient was delivered through a vertical incision through the uterus.

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SECOND POST-PARTUM

10. HAEMORRHAGE DUE TO RETAINED PRODUCTS OF CONCEPTION AND SEPSIS

Name	-	Mrs. M.A.	LMP	-	27.8.84
Age	-	34 years	EDD	-	4.6.85
Ip. No.	-	866049	Date of Admission	-	6.5.85
Para	-	8 + 0	Date of Discharge	-	15.5.85.

Presenting Complaint:

She was admitted through the casualty department with history of heavy vaginal bleeding for one day. She also gave history of dizziness and feeling faint for the same period. The symptoms occurred one week after delivery. She had delivered preterm at home a baby who died later of sepsis and prematurity.

Past Obstetric and Gynaecology History:

She was para 8 + 0. All were spontaneous vertex deliveries. The first delivery occurred in 1965 and the last delivery on 26.5.85 at 34^{+} weeks gestation. She had one living child. All the others died of measles during infancy except the last born who died in neonatal period because of sepsis and prematurity.

She had menarche at 16 years of age. The menstrual

cycles were regular repeating every 28 days and of moderate flow lasting 3 - 4 days. She had no dysmenorrhoea and had no history of contraceptive use.

Past Medical History:

This was not contributory.

Family and Social History:

She was a married business woman. She did not drink alcohol or smoke cigarettes. There was no family history of major illnesses.

Physical Examination:

She was in a fair general condition and was very pale. She was afebrile and had no pitting leg oedema. The breasts were normal. Blood pressure was 110/70 mmHg, pulse 76/min, temperature 35.9^{o}C., respiratory rate 20/min.

Cardiovascular system, respiratory system and central nervous systems were within normal limits.

Abdomina, Examination.

Abdomen was soft, tender suprapubically, and had no abdominal masses.

Vaginal Examinaiton:

She had normal external genitalia, and normal vaginal walls. The cervix was soft, short and the os was

open, admitting a finger. Minimal products of conception could be felt. The adnexia were tender and pouch of Douglas was free. The uterus was 10 weeks size, tender, firm and there was foul smelling bloody discharge on examination finger.

Diagnosis:

Secondary post-partum haemorrhage due to infected retained products of conception.

Management:

Intravenous line was instituted at casualty and maintained with 5% dextrose alternating with normal saline 6 hourly. Blood was drawn for grouping and cross-match and two pints of blood were made available.

The patient was started on broad spectrum antibiotics in form of gentamycin injection 80 mg intramuscularly twice daily and ampicillin 500 mg intramuscularly four times a day. The decision was made for evacuation of the uterus. The patient signed an informed consent and she was premedicated with intramuscular atropine sulphate 0.6 mg stat ½ hour before theatre.

Examination under anaesthesia and evacuation of the uterus:

The patient was put under general anaesthesia and then placed in lithotomy position. Vulvo-vaginal toilet was done and the area was draped with sterile towels.

The bladder was catheterized and a little clear urine was obtained. Digital examination showed normal external genitalia, cervix was firm in consistency and the os admitted a finger. Adnexa and pouch of Douglas were free. Auvards speculum was then gently inserted into the vagina. The vaginal walls looked normal with no tears or lacerations. The cervix was parous and hyperaemic at the os.

Evaculation was achieved using ovum forceps and blunt curretage. Necrotic material and moderate curretings were achieved. The material was submitted for history to rule out trophoblastic disease. The uterus was finally explored and found to be empty of products of conception. Intra-operatively there was minimal bleeding. Intra-muscular injection of ergometrine 0.5 mg was given.

Post-operative Care.

Recovery from anaesthesia was uneventful. She needed transfusion and was given three pints of blood. She was continued on broad spectrum antibiotics for seven complete days. The vital signs remained normal.

Post transfusion haemoglobin was 10.0 gm/dl. Pregnancy test was negative. histology report of the endometrial curretings showed features consistent with retained products of conception. There was no evidence of trophoblastic disease.

The patient was discharged on 15.5.85 well.

Comment:

Post partum haemorrhage (PPH) is defined as loss of more than 500 mls of blood after deliverly. If it occurs within 24 hours of delivery it is referred to as primary PPH and if it occurs thereafter during the peurperium as secondary PPH (2). The patient under discussion had secondary PPH.

Four groups of factors may lead to PPH. These include trauma to the genital tract, failure of blood vessels at the placental site to be compressed due to myometrial hypotonia, retained products of conception as was the case with the patient presented and finally coagulation defects which may be acquired or congenital (3). More so and particularly with secondary PPH it is important to have at the back of the mind the possibility of trophoblastic disease and hence rule out the same as was done in the patient.

A patient having PPH requires rapid resuscitation and institution of appropriate management to avoid catastrophic eventuality which might occur. It has been found that 25% of all maternal deaths caused by pregnancy related haemorrhage are due to PPH (4). Other causes include abruptio placenta, placenta praevia, ectopic pregnancy, abortion and ruptured uterus (4). The cause of action taken in the management of this patient was so done with the aforementioned as the guiding principles and hence the commendable outcome. Patient resuscitation

measures and replacement of the lost blood where applicable are the key issues. Removing the cause of bleeding is as important as instituting preventive measures in situations where a patient is likely to develop PPH e.g. twin pregnancy, polyhydramnios, prolonged labour, grand multiparity and general anaesthesia situations where one is better advised to manage third stage of labour actively (3). Inspection of the placenta and membranes for their completeness after all deliveries is equally important. Indeed if the latter was done the patient under discussion could not have been re-admitted.

In some situations where haemorrhage is uncontrolable by the routine procedures intramuscular or intramyometrial prostaglandins have been found handy (1). Our patient did very well with resuscitative measures, uterine evacuation and intramuscular ergometrine and antibiotics.

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11. SUCCESSFUL TRIAL OF SCAR.

Name	-	Mrs. C. M.	LMP	-	Not known.
Age	-	26 years	LD	-	1985
Ip. No.	-	866850	Date of Admission	-	16.11.87
Parity	-	2 + 0	Date of Discharge	-	17.11.87

Presenting Complaint:

The patient was admitted to the antenatal ward with a history of querry post-term; not in labour.

History of Present Pregnancy:

She was booked for the antenatal clinic at about 34 weeks gestation because of one previous scar. She had made a total of eight attendances. Ultra-sound scan done at booking showed a BPD equivalent to 34 weeks gestation. She started feeling foetal movements at the beginning of June 1987. Therefore estimated gestation at admission was 42^{+}. Post-term was decided on history of first foetal kicks and ultra-sound findings.

Obstetrics and Gynaecology History:

She was para 2 + 0. She did not have menstrual periods since her last delivery. The last delivery was in June 1985. The first baby was born by caeserean section due to cephalopelvic disproportion. The second

baby was a successful trial of scar. All the babies were alive and well. She had menarche at 14 years. She had regular periods repeating every 28 days. The flow was moderate lasting 3 - 4 days and was painless.

She was still breastfeeding when she discovered that she was pregnanct.

Past Medical History:

This was not contributory.

Family and Social History:

She was married and worked as a nurse at the hospital. Her husband worked as a teacher and they lived in Nairobi. her father was a diabetic. She did not take alcohol or smoke cigarettes.

Physical Examination:

She was in good general condition and had no pallor, jaundice or peripheral lymphadenopathy. Blood pressure was 120/70 mmHg., pulse 80/min, respiratory rate 18 per minute and temperature 36.5^{o}C.

Respiratory system, cardiovascular system and central nervous system were all within normal limits.

Abdominal Examination:

She had a lower midline scar from previous surgery.

The uterine size corresponded to term uterus. The foetus was in cephalic presentation in a longitudinal lie. The head was 4/5 and the foetal heart rate was 140 per minute regular. She had no contractions.

Vaginal Examination:

She had normal external genitalia. The cervix was 1 cm long soft and the os was 3 cm dilated, and was centrally placed. The pelvis was adequate.

Diagnosis:

Post-term in a patient with previous caesarean section scar.

Investigations:

1.	Haemogram	-	Hb 11.1 gm/dl.
2.	Blood group	-	0 Rhesus 'D' positive
3.	Kahn test	-	Negative
4.	Height	-	5' 2"
5.	ELP - True conjugate	-	10.5 cm.
	Mid cavity	-	12.5 cm.
	Out let	-	12.0
6.	Surfactant test	-	1:2 positive
7.	Random blood sugar	-	5 mmol/l.

Management:

Decision was made for surgical induction of labour since she had a good cervical score. She was given very

light diet the midnight prior to induction and an enema in the morning. Blood was taken for grouping and crossmatch and two pints of blood were requested for. She was then wheeled to the labour ward at 8 a.m. Artificial rupture of membranes was done and the lower uterine segment was stretched. Clear liquor was obtained and there was no cord prolapse. The patient was then monitored through the partogram. Special attention was paid to the pulse rate, the character of the uterine contraction and scar tenderness. Blood pressure was also closely monitored. The patient was put on intravenous drip of 5% dextrose solution, 500 ml to run in 6 hours.

Progress of Labour.

The labour progressed rapidly and at 1.09 p.m. The patient was delivered of a female baby whose birth weight was 3000 gm and scored 10 in one minute and 10 in 5 minutes. The placenta was deliveed completely with membranes by controlled cord traction. Placental weight was 600 gm and looked grossly normal. Ergometrine injection 0.5 mg was given intramuscularly after delivery of arterior shoulder. Blood loss was 200 ml. The baby was examined by the Paeditrician. She was found to be normal and had no features of post-term infants.

Examination of lower uterine segment:

With patient still in lithotomy position, intravenous pethidine injection 100 mg was given. The gentle digital

examination was done to explore the lower uterine segment. This was done beginning anteriorly, the previous scar was felt and was intact. Lateral and posterior sides were also intact. The cervix was examined and was found to be intact with no lacerations. The vaginal walls were intact. A right medio-lateral episiotomy had been performed and this was sutured under local anaesthesia. Blood pressure post delivery was 110/70 mmHg, pulse 84 per minute, respiratory rate 18 per minute.

On the second post-delivery day the patient was discharged home well, together with the baby. She was instructed to attend post-natal clinic after 6 weeks and to take the baby to the Maternal and Child Health Care clinic after 2 weeks for initial immunizations.

Post-natal Clinic:

The patient was seen on 8.1.88. She was in good general condition. She was not pale and had no special complaints. She had well established lactation, and was breastfeeding the baby. The uterus was normal sized and well involuted and contracted. She had not resumed menses. She was counselled about contraceptive use and she opted for the natural method. The baby had received initial immunizations and was doing well.

Comments:

In patients with caesarean birth a trial of labour under certain circumstances is becoming a reasonable alternative to routine repeat caesarean section. The rate of successful vaginal delivery in reported series have ranged from 39% to 85% (1). However, contraversy about permitting a trial of labour in patients with previous uterine scars continues to abound. A major reason for the failure to endorse trial of labour as a reasonable alternative to routine repeat caesarean section, is the fear of uterine rupture with its potentially catastrophic consequences. Several reports have suggested that uterine dehiscence rates are affected by such factors as amniotomy, number and type of previous uterine incisions, birth weight of infant and oxytocin administration (3).

While uterine rupture is rare in the developed world it is met quite frequently in the developing countries. Trivedi et al (1968) attributed this to, previous uterine scars, inadequate antenatal care and supervision in labour floor and injudicious manipulations by untrained attendants. Since that time, conditions have improved quite markedly. However, the effects this has had on the problem is an increase in uterine scar dehiscence. Walton (4) observed that as long as a woman with previous uterine scar is allowed to labour, there will be a risk of that scar rupturing. Therefore selection of patient in the antenatal period and adequate monitoring of labour will substantially

reduce its incidence and consequences.

In this unit Walton (2) devised a criteria for allowing trial of scar. It concluded the following:-

- The patient must have one lower segment caesarean scar and no uterine rupture.
- The true conjugate radiologically assessed should be 10.5 cm. or more. Clinical pelvimetry should be applicable in absence of radiography.
- Patient should not have any other complication whether medical or obstetrical.

They had success rates of 73.9% using this selection criteria. The patient presented had been antenatally assessed and satisfied the criteria set down by Walton. She had a successful trial of scar and was discharged home well.

Studies done elsewhere (3) have showed that the number of previous caesaren sections, the existence of previous unknown kinds of scar and infant birth weight appear to have little if any prognostic significance for uterine rupture. It was concluded that patients with previous scars, can undergo a trial of labour provided that preparations are made for immediate intervention if necessary.

In this unit Walton's criteria for selecting patient for trial of scar is used.

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12. SEVERE ANTEPARTUM HAEMORRHAGE DUE TO CONCEALED PLACENTA ABRUPTIO: FRESH STILLBIRTH VAGINAL DELIVERY

Name	-	Mrs. P.K.	LMP	-	15.2.87
Age	-	38 years	EDD	-	22.11.87
Ip. No.	-	858414	Date of Admission	-	27.10.87
Parity	-	6 + 0	Date of Discharge	-	1.11.87

Presenting Complaint:

The patient was admitted complaining of abdominal pain, following a fall on the bathroom after feeling dizzy. She also gave history of having felt dizziness and had fallen a few minutes before onset of pain.

History of Present Pregnancy:

The patient was booked at Kenyatta National Hospital Antenatal Clinic at a gestation of 26 weeks. The reasons for booking were grand multiparity and previous history of hypertensive disease in pregnancy. The uterine size corresponded with gestation by dates throughout. The booking blood pressure was 130/70 mmHg and remained normal throughout. During the last two visits, she had complained of lower backache but no abnormality was noticed.

Obstetrical and Gynaecological History:

She was para 6 + 0 and had five living children.

The third born had died in infancy due to diarrhoea and vomiting. She had hypertensive complications in four of her pregnancies for which she had induction when foetal lung maturity was confirmed. She had menarche at 14 years of age. Her periods were regular of moderate flow and repeated every 28 - 30 days. Her LMP was 15.2.87 and EDD was 22.11.87. Maturity at admission was 36^{+} weeks.

Past Medical History:

This was not contributory.

Family and Social History:

She was married and worked as a teacher. She lived in Nairobi with her family. There was no family history of major illnesses. She did not drink alcohol or smoke cigarettes.

Physical Examination:

The patient was ill looking. She was markedly pale. She had moderate bilateral pitting ankle oedema. She was not dehydrated and was not jaundiced. Temperature was $36.1^{o}C$.

Respiratory system and central nervous system, had no abnormalities found.

Cardiovascular System:

She had a pulse rate of 110/minute which was weak. Blood pressure was 100/60 mmHg. No other abnormalities were found.

Abdominal Examination:

The uterine size was term. The abdomen was tender and woody hard. Fetal parts were not felt either by palpation or ballotment. Fetal heart was absent. No contractions were palpated.

Vaginal Examination:

A speculum examination was done. She had normal external genitalia. The vaginal walls were normal. The cervix looked grossly normal. It was 1 centimeter long, centrally placed and was dilated by 4cm. The membranes were seen bulging through the os. The pelvis was adequate.

Diagnosis:

Severe concealed abruptio placenta with intra-uterine fetal death.

Ingestigations:

Antenataly:

1.	Haemogram	-	Hb - 10.7 gm/dl
			PCV - 31.6%
			Platelets - 201 x 10^9/l
2.	Sereology	-	Negative

3. Blood group - A Rhesus 'D' positive

Immediate:

1. Urinalysis - Sugar ++
   - Protein +
2. Blood Sugar - 5.5 mmol/l
3. Blood slide - Negative for malaria parasites
4. Red-side clotting time 5 minutes
5. Blood urea/electrolytes - Na^+ - 136 mmol/l
   - K^+ - 4 mmol/l
   - BUN - 3 mmol/l

Management:

Patient already had a patent intravenous line which had been started at admission. Blood had been drawn for group and crossmatch and four pints of fresh blood requested. Two pints of blood were available within 45 minutes of the request.

Blood pressure, pulse rate and respiratory rate were observed half hourly. Artificial rupture of membranes was done and blood stained liquor obtained. Sweeping of the lower segment was done. The lower segemnt was also stretched. She was started on syntocinon drip of 2.5 units in 500 ml of 5% dextrose to run initially at 10 drops per minute. This was to be increased by 10 drops every 30 minutes until 60 drops or establishment of strong contractions. She was to be observed as per partogram. Blood

transfusion was also started at the same time. She was put on input output chart.

After two hours of this management the blood pressure was noticed to be rising. At this time it was 140/100 mmHg. The pulse was now stronger though still rapid at 100 per minute. Patient was sedated with diazepan 10 mg intravenously stat and to continue at 6 hourly intervals. She was to have intravenous injection of hydrallazine 20 mg stat if blood pressure reached a diastolic of 110 mmHg and above.

She was transferred to the labour ward intensive care room.

Daily esbach was requested and set up. She was to have assisted second stage with vacuum extraction.

Labour progressed rapidly. She was delivered of a female fresh still birth 5 hours after onset of induction. She was assisted by vacuum as planned. The placenta was delivered by controlled cord traction. There was a large retroplacental clot of about 250 ml. The placenta weighed 650 gms and had multiple infarcts on the maternal side. The foetal side was normal. The baby weighed 3250 gms and showed no gross abnormalities. Syntocinon was continued for two hours longer after which the uterus was noted to be well contracted. Ergometrine was not given.

Estimated over-all blood loss was 1000 ml. She was transfused a total of 2 pints of relatively fresh blood.

Immediate Post-partum Period:

Post delivery the patient remained in a stable state. Immediate observations were blood pressure 170/110 mmHg. She was given hydrallazine injection 20 mg IV intravenously as a stat dose and sedation was continued. The blood pressure came down on this regime and was within normal in twenty four hours of delivery. Her urine output was good throughout. Esbach result was below two grams. Because of her parity and the high reccurrence rate of abtruptio placenta, the patient was counselled on sterilization which she accepted. She consented together with her husband and bilateral tubal-ligation wad done on the third post operative day. She was discharged home on the 6th post delivery day well. Post delivery Haemoglobin was 10.5%.

Post Natal Clinic:

The patient was seen at the post natal clinic six weeks later. She had already resumed periods. The minilap scar was well healed. The uterus was normal in size. The breasts were normal and not active.

Comment:

Abruptio placenta is described as premature separation of the normally situated placenta. In concealed placenta abruption, the bleeding is trapped between the placenta and the uterine wall or between the membranes and the uterine wall. Sometimes it may find its way into the amniotic cavity (1, 2).

This patient presented with grade III concealed placenta abruption. This is the severest form of placenta abruption characterized by,

- sudden onset abdominal pain
- no vaginal bleeding.
- tender woody hard abdomen.
- impalpable fetal parts.
- dead foetus
- symptoms of haemorrhagic shock (1,3).

This patient had all the above characteristics. The findings of about normal blood pressure in a patient who had bled that much was not surprising in this case. It is probable that the patient had developed hypertension prior to the onset of the condition. This is supported by the the fact that blood pressure rose as the condition stabilized necessitating sedation and hydrallazine therapy. Blood pressure therefore may be deceptive and could not be relied upon as a monitor of the state of shock.

The actual aetiology of abruptio placenta is not known. A number of theories have been put forward. It is known that in the last trimester, there is degradation and necrosis of the decidua near its junction with the trophoblast. If this process becomes pronounced vascular channels loose their support and collapse leading to bleeding and clot formation. If bleeding is sufficient enough, it leads to poor myometrial contraction and hence further bleeding causing further separation of the placenta and so on.

Another theory is the interference with venous return from the uterus as may occur from occlusion of inferior vena cava by the gravid uterus. This causes increase in intervillous space pressure which, if sufficient enough, may cause placental separation. Also, maternal decidual arterioles may be weakened by hypertensive vascular changes leading to rupture of the vessels and bleeding (1, 2).

Other than the above outlined theories, there are factors which are positively associated with abruptio placenta. Pritchard et al. (5) found that 50% of their patients had either hypertension or pre-eclampsia. Our patient had pre-eclampsia as shown by the fact that she had hypertension, oedema and proteinuria. Other factors were, trauma either external or from short cord. This patient had external trauma in the sense that she had a

history of a fall. Abruptio placenta is also associated with high parity. The patient presented was a grand-multipara. Other factors include polyhydramnios and previous placenta abruption.

Abruptio placenta has been found to have a very high reccurrence rate. Pritchard (1970) found a reccurrence rate of 1:18 while Peterson (1979) found reccurrence rate of 1:6. This indicates that subsequent pregnancies should be treated as high risk. Folic acid deficiency, alcohol consumption, excessive smoking and snake bite have all been implicated. Naeye (2) showed that smoking causes excessive decidual necrosis and that abruptio placenta is commoner in women who smoked during pregnancy.

The true incidence of the disease is not known. This is because most of mild degree bleeds pass unnoticed. It is not all the time that one finds a retroplacental clot (1, 2, 3). However, the reported incidence is 0.4 - 3.5% of all pregnancies. Kirima (4) found that abruptio placenta constituted 1.1% of all cases of antepartum haemorrhage at Kenyatta National Hospital.

Abruptio placenta is associated with perinatal mortality of between 5% and 15% and accounts for 15 - 25% of all perinatal deaths in the United States of America (1, 2).

Abruptio placenta is associated with increased

maternal mortality due to haemorrhage shock. The degree of anaemia and shock may not correlate the amount lost vaginally.

10% of cases with severe placenta abruptio will develop DIC. 20% of patients with DIC secondary to abruptio placenta will develop uterine atony refractory to oxytocin (couvelaire uterus) (1, 2, 3).

The goal in these patients is to try and achieve vaginal delivery. However, if the foetus is alive and shows signs of distress, caesarean section would be indicated. In the over all management of these patients massive transfusion with fresh blood may be necessary.

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13. SEVERE ANAEMIA IN THIRD TRIMESTER OF PREGNANCY IN TEENAGE PRIMIGRAVIDA.

Name	-	Mrs. F.W.	LMP	-	30.7.88
Ip No.	-	958669	EDD	-	6.5.89
Parity	-	0 + 0	Date of Admission	-	6.5.39
Age	-	17 years	Date of Discharge	-	27.4.89

Presenting Complaint

The patient was admitted through casualty department with complaints of general weakness of body, breathlessness and palpitations for two weeks. She did not have headache or joint pains.

Past Medical History

There was none contributory.

Obstetrical and Gynaecological History

She was para 0+0 and had menarche at the age 14 years. She subsequently had regular menstrual cycles of 3 to 4 days every 30 days. The flow was normal and she did not have dysmenorrhoea. Her last menstrual period was 30.7.88 and expected date of delivery was 6.5.89. Her gestation at admission was 36 weeks.

History of Present Pregnancy

She attended antenatal clinic in a peripheral health

centre. The record of the antenatal visits was not available. However, she gave history of having been treated with haematinics.

Family and Social History

She was married and lived with her husband at Ongata Rongai in the outskirts of Nairobi. She was mainly a house wife while her husband worked as a capenter in the nearby town. She did not drink alcohol and never smoked cigarettes. She had no family history of major illnesses or family history of twins.

Physical Examination

She was a young lady in fair general condition. She had marked pallor and had bilateral pitting oedema. She was afebrile, was not jaundiced and did not have peripheral lymphnode enlargement. The breasts were normal.

Respiratory System

All the lung field were clear with no ronchi or Crepitations. Respiratory rate was 18/min regular.

Cardiovascular System

The pulse rate was 90/min full volume and regular while the blood pressure was 120/70 mmHg. There was a functional systolic mummur heard best at the apex. There was no evidence of cardiac enlargement and the jugular

venous pressure was not elevated.

Abdominal Examination

The abdomen was uniformly distended and soft. The uterine size was 34 weeks and the baby was in breach presentation in a longitudinal lie. Fetal heart rate was 144/min regular. She had no contractions. There was no hepato-splenomegally and there was no evidence of free fluid in the abdomen.

Central nervous system

No abnormality detected.

Diagnosis.

An impression of anaemia in pregnancy at 36 weeks in a teenage primigravida was made.

Investigations.

1. Haemogram	-	Haemoglobin	-	5.6 gm/dl
	-	Haematocrit	-	18.7%
	-	MCV	-	53.2fl
	-	MCHC	-	30.0 gm/dl
	-	WBC	-	9.8×10^9
	-	RBC	-	3.5×10^{12}
	-	Plts	-	350×10^9

2. Blood slide - No malaria parasites seen

3. Haemoglobin electrophoresis - HbAA

4. Peripheral blood film - severe iron deficiency anaemia.

5. Liver function tests
   - Total protein - 53]
   - Albumin - 27] g/dl
   - Billirubin - 11]
   - Alkaline phosphatase- 2.9KAU
   - SGOT & SGPT - not done

6. Blood group - "O" Positive

7. Stools
   - Ova of hookwarm seen
   - no cysts or larvae. No accult blood.

8. Urea and electrolytes
   - BUN - 1.8]
   - Na^+ - 143] mmol/l
   - K^+ - 4.1]
   - Cl^- - 102]
   - UA - 323.9] mmol/l
   - Creat - 64]
   - Ca^{++} - 1.81]

9. Kahn test - VDRL negative

10. Urinalysis - normal findings, no bacterial growth

Management.

Decision to transfuse with at least 4 units of packed cells was made. This was to be done under cover of frusemide intravenous injection in a dose of 40 mg stat at the onset of the transfusion. The blood was to be infused slowly for at least 4 hours. The frusemide injection

was to be repeated in 8 hours as long as the transfusion was carried out. The patient was to be covered with chloroquin tablets at the onset of the transfusion. Meanwhile she was started on lemivazole (Ketrax) in a standard dose of 3 tablets stat and 3 tablets on the following day. She was also started on oral haematinics consisting of folic acid 5mg once a day and ferrous sulphate 100mg three times a day. A diet rich in minerals and vitamins was prescribed for her. Such a diet included leafy green vegetables, meat, eggs, liver, bone marrow soups, beans, fish and fruits etc. On 24.4.89 blood was checked and Hb was 10.1gm/dl and haematocrit 30.2%. The patient went into spontaineous labour on 26.4.89 and delivered a female infant with birth weight of 2800gms. She was discharged on 27.4.89 well with the baby. She was instructed to attend postnatal clinic after 6 weeks and to take the baby for immunization. She was given oral haematinics and was advised to continue with the above prescribed diet.

Postnatal Clinic.

She was seen at Post natal Clinic on 9.6.89 and she was in good general condition. She had not started menses and was breastfeeding the baby. The baby had already had initial immunizations. The patient was not pale and check haemoglobin was 10.5 gm/dl. Her uterus was well contracted. She was counselled on contraceptives and she accepted to use the pill. She was advised also to maintain her dietary intake.

Comments:

The patient presented had two high risk conditions, that it, anaemia in pregnancy and teenage pregnancy, both of which are associated with high maternal and perinatal morbidity and mortality. The World Health Organization definition of anaemia is haemoglobin concentration in peripheral blood of 11g/dl or less in developed countries , 10g/dl or less in the developing countries (1). The definition of a teenager according to WHO is any person within 13-23 years (2). Our patient was aged 17 years and the initial haemoglobin was 5.6g/dl.

Anaemia is the commonest medical condition complicating pregnancy. The incidence of anaemia is variable and depends on factors like race, food practices and use of supplemental haematinics (3, 4, 5). Mati in Kenyatta Hospital found haemoglobin rage of 2.9 and 9.9g/dl with a mean of 7.5g/dl in anaemic pregnant women and an incidence of 4.3% (5). In the Nairobi Birth Survey the incidence of anaemia in pregnancy was 1.6% which is much lower (6). In a rural area Sinei, et al. found an incidence of 7.4% (7).

The causes of anaemia in pregnancy are multiple. These include deficient diets, worm infestation, haemolytic condition, blood loss from any cause and conditions causing malabsorption of haematinics. The commonest type of anaemia in our set-up is the megaloblastic type

resulting from haemolysis caused by malaria parasitaemia. Mati (5) found that 32.8% of anaemic patients had malaria parasitaemia while Sinei et al (7) found one third of the anaemic patients had malaria parasitaemia. Mati also found that 4.3% of the anaemic patients had ankylostoma duodenale in their stool. It would appear from these studies that the commonest cause of anaemia in pregnancy in our set up in haemolysis resulting from malaria parasilization of the red cells. However, other factors like hookwarm infestation a play major role(5). Our patient had iron deficiency anaemia and ankylostoma duodenale were isolated from her stool.

Anaemia in pregnancy has also been associated with teenage pregnancy. In the Nairobi Birth Survey, the incidence of teenage pregnancy was 18.6%. The teenagers were found to have high rates of anaemia in pregnancy than the older women. The teenage mothers tend to have poor antenatal care and have malnutrition etc. Our patient though a teenager was married, but she faced all the complications seen in other teenage pregnant women.

Management of anaemia in pregnancy is guided by the severity, the gestation of the pregnancy and the cause of anaemia. Our patient was classified as having severe anaemia and blood transfusion was necessary to forestall the possible pregression to congestive cardiac failure. Packed cells are recommended but in abscence of this

whole blood is given under cover of fast acting diuretic like frusemide. Other people have used exchange transfusion whereby blood is continously removed while the packed cells or whole blood is being transfused. The aim is to create negative blood volume so that the heart is not overloaded. A full pint of blood with a good haemoglobin concentration increases the haemoglobin concentration of the anaemic blood by about 1g. If possible transfusion should aim at increasing the haemoglobin level to 10gm during the third trimester. The patient is then maintained with haematinic therapy.

Patients with moderate anaemia, that is Hb between 6gm - 10gm, may be managed with haematinics and haemoglobin is expected to increase by about 0.5 to 1g per week. They are then followed up weekly by haemoglobic checks. Meanwhile the cause of anaemia is treated. In the case of our patient, she was given levimazole tablets for two doses. The stool tests were to be repeated after 3 weeks. She was also advised on wearing shoes while walking through the fields.

Anaemia in labour carries a high mortality due to the inevitable blood loss and the patients require blood transfusion regardless of the stage of labour (1). Our patient had already been transfused and her Hb before onset of labour was 10.1gm/dl. She went into spontaineous labour and delivered a normal female infant weighing 2800gms by spontaineous vertex delivery. Blood loss at delivery was 150ml.

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14. HYPERTENSIVE DISEASE IN PREGNANCY AT TERM

MECONIUM STAINED LIQUOR: - EMERGENCY

CAESAREAN SECTION

Name	-	Mrs. M.M.	LMP	-	20.6.87
Age	-	31 years	EDD	-	27.3.88
IP. No.	-	872213	Date of Admission	-	16.3.88
Parity	-	2 + 0	Date of Discharge	-	24.3.88

Presenting Complaint:

She was admitted from the booking clinic because of hypertension at 38 weeks gestation.

Present Pregnancy:

She had no previous antenatal care. She was admitted at 32 weeks gestation because of anaemia in pregnancy and was transfused two pints of blood. During the previous admission she was advised to book antenatal clinic for follow up but never managed until this late date. The gestation at second admission was 38 weeks.

Obstrical and Gynaecological History:

She was para 2 + 0. During the last delivery she was induced because of hypertensive disease in pregnancy. All her babies were alive and well. She had menarche at 14 years of age and had regular periods of 28 days cycles. The flow was moderate lasting 3 - 4 days and was painless.

She used the Lippes Loop for contraception fron 1983 to 1985. She terminated because of want of pregnancy.

Past Medical History:

She was admitted at Kenyatta National Hospital, Ward 27 in 1985 due to severe hypertension. She was followed up in the medical outpatient clinic for the condition. She had no other major illnesses.

Family and Social History:

She was married and worked as a nurse at Kenyatta National Hospital. She did not take alcohol or smoke cigarettes. She had no family history of major illnesses.

Physical Examination:

She was in good general condition. She was not pale, was afebrile and had no pitting leg oedema. Blood pressure was 160/110 mmHg, pulse 84 per minute, respiratory rate 20 per minute.

Cardiovascular System:

Both heart sounds were normal. There was no evidence of cardiac enlargement. Respiratory system and central nervous system were within normal limits.

Fundoscopy:

Nothing abnormal was found.

Abdominal Examination:

Uterine size corresponded to term fundus. The foetus lay longitudinally in a cephalic presentation. She was not having any contractions. Fetal heart rate was 140 per minute regular. The head was five fifths above the pelvic brim.

Vaginal Examiantion:

Her external genitalia were normal. Cervix was soft, two centimeters dilated, 1:5 cm long and was centrally placed. Pelvis was adequate.

Diagnosis:

Hypertensive disease in pregnancy at term not in labour.

Investigations:

Anterior

Haemogram	-	Haemoglobin	-	10.0 gm/dl
	-	Haematocrit	-	30%
Blood group	-	A Rhesus 'D' positive		
MSSU	-	No growth, no proteinuria, no glucosuria.		
Serology	-	Negative.		
Urea/Electrolytes				
Na+	-	135 mmol/l		
K+	-	4.0 mmol/l		
BUN	-	2.5 mmol/l		

Liver function test
- alk. phosp 8.9 KA units
- Total proteins - 52 gm/l
- Alb - 38 g/l
- Blood slide - No malaria parasites seen.

Management:

Decision was made to perform amniotomy with a view to induce the patient. This was done and the liquor was found to be meconium stained. The patient was then prepared for emergency caesarean section the usual way. An informed consent was obtained and blood was taken for grouping and crossmatching. Two pints of blood were requested for and were made available at the time of operation. She was wheeled into the operation theatre at 4.45 p.m. and a lower uterine caesarean section was performed. A live female baby was delivered whose birth weight was 3200 gms and scored 9/1 and 10/5 minutes.

Post operative Period

Recovery from anaesthesia was uneventful. She had normal bowel sounds on the second post-operative day. She was started on oral medication and oral sips. Intravenous fluids were discontinued. On the third post-operative day check haemoglobin was 9.5 gm/dl and the patient was put on oral haematinics. Blood pressure had stabilized between 130/90 and 120/80 mmHg after delivery.

On the seventh post operative day, the patient had adequately recovered. All stitches were removed and the wound was well healed. The patient was discharged home with instructions to attend the postnatal clinic after 6 weeks, to continue with the medical outpatient clinic and to take the baby to the maternal and child health care clinic after two weeks for initial immunization.

Past Natal Clinic:

The patient availed her self to the clinic on 22.4.88. She was in good general condition. She was not pale and had no oedema. Her blood pressure was 120/80 mmHg. She had well established lactation and had not started her periods. The uterus was well contracted and involuted and was normal sized. She was counselled on contraception. Because of her blood pressure status she opted for bilateral tubal-ligation. She was issued with the tubal-ligation consent form and was instructed to go to Rahimtulla Wing for booking of the operation to be performed as a minilaparotomy.

The baby was doing well and had had the initial immunization.

Comments:

Hypertension is defined as a diastolic blood pressure of at least 90 mmHg or systolic pressure of at least 140 mmHg, or a rise in diastolic pressure of at least 15 mmHg or in systolic pressure of 30 mmHg. These blood pressures must be manifested on at least two occasions 6 hours or more apart (1, 3, 4).

Pre-eclampsia is the development of hypertension with proteinuria, oedema or both induced by pregnancy from 20th week of gestation or earlier in hydatiform mole.

Chronic hypertensive disease is defined as the presence of persistent hypertension of whatever cause, before the 20 week of gestation in the absence of hydatidi-form mole or extensive molar change (1).

The patient presented had hypertension in the sense that blood pressure was 150/90 at admission. She could be classified in the group of chronic hypertensive disease because she was a known hypertensive patient and during her pregnancy she neither had proteinuria or oedema.

The above classification was by the Committee of Terminology of the American College of Obstetricians and Gynaecologists. However, Rubin (2) observed that research into and management of hypertensive disorders in pregnancy

have been plagued by lack of uniformity in definition and classification.

The etiology or chronic hypertension in most instances is not well known. The associated factors include, renal vascular disease, renal and urinary tract infection, coarctation of the aorta, pheochromocytoma, polycystic kidney disease, and diabetic nephropathy. The patient presented had none of the above associated factors.

Hypertensive disease can take several causes. The disease can continue to be stable, or progress to pre-eclampsia and eclampsia. The patient remained stable during most of her antenatal period until the time of admission when she was noted to have high blood pressure. She had no oedema or proteinuria. On the same day she was found to have blood pressure of 180/120 mmHg. This was so even on repeat 30 minutes later. Hense she had developed pregnancy aggravated hypertension. The patient had already been planned for expedite delivery.

Uncomplicated hypertension in pregnancy has been assocaited with beneficial perinatal outcome (4). MacGillivray (1967) found that babies of mothers with blood pressure of 140/90 mmHg without proteinuria tended to be larger than those of normo-tensive morthers. These babies also tended to have less perinatal mortality rates (Nelson, 1955). The patient presented had hypertension in

her previous pregnancies. Her babies' weights were 3950 gm, 3800 gm and lastly 3500 gm. These weights are way above the mean birth weight of 3250 gms in this country.

Management of hypertensive disease in pregnancy depends on the severity of the disease and the gestation at presentation. An association has been observed between chronic hypertension and intrauterine fetal death in midtrimester but the most serious risk is the predisposition to pre-eclampsia (1, 2, 3). Treatment must therefore be instituted as soon as recognition of the problem has been made.

The mode of management varies from place to place. In this unit, patients with blood pressure of 140/90 mmHg are admitted to the antenatal ward for bed rest and for observation of any deterioration in the renal function.

If the patient is at a gestation around 37 weeks, surfactant test is done and delivery planned depending on surfactant result. If the disease is severe at this gestation then expedite delivery is advocated with or without surfactant test. In situations where the gestation is below 36 weeks, the patients are treated on bed rest and sedation. If the blood pressure remains stable and there is no oedema and/or proteinuria the patient is usually allowed home to continue bed rest and

to be seen at the antenatal clinic weekly. If the blood pressure rises and the gestation is far from term, then antihypertensives are used to try to bring the pregnancy of term. The patient at this time needs in-patient management. The antihypertensive drugs used in this unit include methyldopa (aldomet), hydrallazine, propranolol and sometimes reserpine. Methyldopa is the drug of choice for long term management. Hydrallazine is used short term to control very high blood pressures. This patient was admitted on the first visit to the clinic. She was then at term. She needed expedite delivery because her blood pressure was very high (180/120). She had meconium stained liquor which showed that the foetus was in jeopardy had the gestation continued. The hypertensive state was having a deliterious effect on the baby. She was advised to appear early for antenatal clinic next time she becomes pregnant. But fortunately she opted for sterilization and this was arranged to be done at interval at the R/Wing. Meanwhile she was to use the lippes loop for contraception.

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15. DIABETES IN PREGNANCY WITH PREVIOUS CAESAREAN SECTION, ELECTIVE CAESAREAN SECTION LIVE BABY:

Name	-	Mrs. F.M.	LMP	-	23.12.85
Age	-	29 years	EDD	-	30.9.86
Ip. No.	-	79623	Date of Admission	-	3.7.86
Parity	-	2 + 0	Date fo Discharge	-	18.8.86

Presenting Complaint:

Patient was admitted to the ward from the booking clinic where she presented with history of previous caesarean section scar, previous neonatal death and overt diabetes mellitus on lente insulin. She was admitted at 33 weeks gestation for conversion to soluble insulin.

Obstetrical and Gynaecological History:

She was Para 2 + 0. The first delivery was 1981 at Thika Hospital where she was delivered by caesarean section because of failure of trial of labour due to a big baby. The birth weight was 4.7 kg. The baby was alive and well. The second delivery was in 1985 by spontaneous verted delivery at Thika Hospital. She had prolonged second stage and the baby was delivered flat and died within 10 minutes of delivery. The birth weight was 4.6 kg. She had menarche at 15 years and her menstrual cycles were regular repeating every 28 - 30 days. She had

normal flow with no dysmenorrhoea and had never used contraceptives.

Past Medical History:

The patient had been admitted to Thika Hospital in November, 1985 with a history of polydypsia, polyuria and generalized body weakness. Urine and Blood Sugars were tested and were high. She was diagnosed as a case of diabetes mellitus and she was managed on diabetic diet and lente insulin. Up to the time of admission she was on that regime.

Family and Social History:

She was married and worked in Thika town as a clerk. She lived in Thika with her family and she had no family history of diabetes, hypertension or any other major medical illnesses. She did not drink alcohol or smoke cigarettes.

Physical Examiantion:

She was in good general condition, was not pale and was afebrile. She had no pitting leg oedema and her blood pressure was 110/70 mmHg pulse 88 per minute. Respiratory rate 20 per minute and temperature $36^{o}C$.

Respiratory system, cardiovascular system and central nervous system were all within normal limits.

Abdominal Examination:

The uterine size was 32 weeks corresponding to the dates. The baby lay longitudinally in cephalic presentation. The foetal heart rate was 140 per minute and was regular. The head was five fifths above the pelvic brim and she had a lower midline abdominal scar from the previous surgery. There were no abdominal masses palpated and there was no abdominal tenderness.

Diagnosis:

Insulin dependent diabetes mellitus in pregnancy at 33 weeks gestation.

Management:

The patient was started on the following regime:-

- She was put on a strict diabetic diet.
- Regular blood sugar serials were to be done at twice weekly intervals.
- She was put on a diabetic chart which involved urinalysis three times a day for the length of time the patient stayed in hospital.
- She was given soluble insulin 8 units intramuscularly before meals.
- She was planned for elective caesarean section at 37 completed weeks or early if there was evidence of foetal compromise.

Investigations:

1. Haemogram - Haemoglobin 13.5 gm/dl
   - Haemotocrit 39.2%
2. MSSU - No growth obtained, no glycosuria, no proteinuria.
3. Seriology - Negative
4. Blood group - A Rhesus positive
5. Stool for ova/cyst - Nil
6. Random blood sugar 9.5 mmol/l
7. First serial blood sugar
   - 6 a.m. - 6.0 mmol/l
   - 11 a.m. - 4.4 mmol/l
   - 3 p.m. - 6.2 mmol/l
8. Blood urea and electrolytes
   - Na+ - 131 mmol/l
   - K+ - 4.4 mmol/l
   - BUN - 3.8 mmol/l

The patient was given soluble insulin before breakfast, lunch and supper. The dose of insulin was adjusted according to the blood sugar levels. By 35 weeks gestation the patient was well controlled on 8 units before meals. Glycosuria most of the time was nil or trace. Other blood parameters remained normal and there was no bacteriuria. Fundoscopy at 35 weeks gestation was reported normal with no evidence of retinopathy. The uterine size corresponded to dates throughout and foetal movements remained

normal. Ultrasound at 34 weeks showed no gross congenital abnormalities.

Amniocentesis was carried out on 20.8.86 at 38 weeks gestation. The liqour was clear and the surfactant test was 1:1 positive and 1.:2 positive. She was to have an elective caesarean section. She was explained of the need to do this and she signed an informed consent. Blood was drawn for grouping and crossmatch and two pints of compatible whole blood was available. Patient was starved from midnight. The morning dose of insulin was not given and fasting blood sugar was taken. The patient was then started on a drip of 5% dextrose with four units of soluble insulin added to the drip. Patient was wheeled to the labour ward theatre at 3.00 p.m. on 21.8.86. A lower uterine segment caesarean section was performed and a live male infant was delivered at 3.20 p.m. who scored 10/1, 10/5 and 10/10 minutes. The birth weight was 4080 gms and the baby was taken to nursery for further observations.

Post Operative Period:

Immediately after surgery the patient was managed in the labour ward intensive care room where blood sugar was checked at two hourly intervals until the condition was stable. On the second day post-operatively patient was brought back to the postnatal ward in a stable state. She had good bowel sound and she was started on oral

sips. Insulin drip was discontinued and she was reverted to injections of soluble insulin. Close monitoring of blood sugar state was continued. On the 5th post-operative day the patient could feed fairly well. She was now put back on 10 units of lente insuline oncea day. The baby had been brought from nursery well on the third day of birth. On the 7th post-operative day the patient had made full recovery and the stitches were removed. The wound was well healed and dry. She had no glycosuria and blood sugars were normal. She was discharged to attend postnatal clinic after 6 weeks at Thika hospital. She was to take the baby to the maternal and child health care clinic after two weeks. She was given consultation to be followed up at the diabetes clinic. She was also advised to start antenatal clinic early during the next pregnancy.

Comment:

An optimal outcome in pregnancy complicated by diabetes can only be achieved if the highest standard of diabetic control is attained. Despite improvements in medical and obstetric care over the past five decades, which have brought down the loss in diabetic pregnancy to under 5% in most good centres, significant perinatal morbidity persists and congenital malformations remain a cause of increased perinatal morbidity (1, 3).

The precise cause of several of these complications remain unknown, although foetal hyperglycemia, and hyperinsulinemia seem to be the principle factors. The increased adposity present in the infant of the poorly controlled diabetic woman partly results from excessive fetal insulin secretion. Hyperinsulinemia has also been cited as a cause of delayed pulmonary maturation. Other morbidity including hyperbilirubinemia hypoglycaemia, and polycythaemia have also been related to poor maternal glycemic control (3). There is increasing evidence to show that Congenital Malformations are related to inadequate control during early embryogenesis.

The patient presented was first seen at 33 weeks of gestation which was quite late. She had become a frank diabetic six weeks after the birth of her second born child who died early in the neonatal period. Although she gave no family history of diabetes, it is possible that she had gestational diabetes during the previous two

pregnancies. Both babies had macrosomia defined as birth weight equal or greater than 4.5 kg. her first baby weighed 4.7 kg at birth while the second baby weighed 4.6 kg at birth.

In our environment, patients tend to start antenatal clinics late. However, in high risk patient like the one presented it is the duty of the medical practitioner to advise her on the need to start antenatal follow up early.

A program of patient care may be developed best if the risk to the patient and her infant are first considered. The quality of maternal control is probably the most important consideration in assessing the perinatal risk (2). Pedersen et al (1974) observed that prognostically bad signs of pregnancy, especially Keto - acidosis, pyelonephritis, pregnancy induced hypertension and poor clinic attendance or neglect were more associated with unfavourable out come (1, 4).

The patient presented was placed in Whites classification B. She was 29 years old and had become diabetic one year before and she had no retinopathy.

Treatment regimens that emphasize physiologic glucose control have been shown to minimise perinatal losses dramatically and lower the incidences of macrosomia and neonatal hypoglycaemia.

In this unit, diabetics are admitted on first detection. Calss A patients are managed as out patients on diet alone and repeated fasting blood sugar measurements.

All the others are admitted and controlled on soluble insulin and are monitored by serial blood sugars analysis. Delivery is usually achieved by the end of 37 completed weeks. This is because, as was shown by White, sudden intrauterine death tends to occur as the pregnancy approaches term, especially after 36 weeks gestation. In this patient surfactant was positive at 38 weeks and delivery was effected by caesarean section. because of the previous caeserean section.

Good control of blood sugar during labour reduces the incidence of neonatal hypoglycaemia. Low dose infusion of insulin coupled with 2 hourly blood sugar determination is the management adopted in this unit. Insulin requirements fall in the post-partum period and the dose is adjusted according to the blood sugar values. This patient was originally on lente insulin and she was put back on it when blood sugars had stabilized.

Post-partum care includes advise on contraception. She declined to have tuboligation as she had only two living children and she opted for the natural methods. The other methods recommended are barrier methods and progestogen - only pill. Combined oral contraceptives increase the risk of thromboembolism, particularly if

there is vasculopathy. They may also cause carbohydrate metabolism derangements. IntraOuterine contraceptive devices may increase the risk of pelvic infection.

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Obstetric long Commentary

A cross-section comparative study examining the relationship between prematurity and sexually transmitted diseases.

Summary:

This was a cross-sectional comparative study conducted at the Pumwani Maternity Hospital between 1.10.85 and 30.11.85. A total number of 116 preterm cases and 173 term controls were studied for evidence of sexually transmitted diseases. Cervical specimen were obtained from both the cases and controls and cultured for various sexually transmitted diseases (STD). The isolation rates of Neisseria gonorrhoea organisms was 15.5% for the cases and 8.1% for the controls. This difference was not significant statistically. Isolation rate of Chlamydia trachomatis was 8.6% for the cases 11.0% for the controls and the difference was not significant. Haemophillus organisms were isolated at a rate 2.5% in the cases and 3.5% in the controls. Group B Streptococcus were isolated at a rate of 15.5% in the cases while in the control they were seen in 9.8% of the patients. The difference was not significant. M. hominis was isolated more frequently in the controls (30.6%) than in the cases (10.3%) and the difference was significant. U. urealyticum was 17.2% in the cases and 18.6% in the controls.

There were no differences in the age, gravidity, and duration of labour between the cases and controls. There was however, a difference in marital status with the cases having more single women than the controls. There were also differences in the length of ruptured membranes with the cases having 20% with premature rupture of membranes as

opposed to the controls all of whom did not have premature rupture of membranes. The age, marital status and length of ruptured membranes did not show any positive correlation with STD isolation.

INTRODUCTION

Preterm delivery particularly in gestation less than 36 weeks, causes considerable perinatal morbidity and mortality. Although premature delivery itself is the single most important reason for poor fetal and neonatal outcome, infection is often a major problem both for the infant and for the mother (1). Studies done in this hospital have shown that prematurity is a major cause of perinatal morbidity and mortality (2, 3, 25, 26).

While the aetiol gy of preterm labour is not known for many cases, sexually transmitted diseases have highly been associated (4). Sexually transmitted diseases are known to influence pregnancy through two main routes of spread, the haematogenous and the ascending routes. Haematogenous infection include cytomegalovirus, Treponema pallidum, genital herpes simplex, and human papilloma virus. Manifestations of fetal infections by these organisms depend on gestation at which infection occured. Therefore, abortion, stillbirth, prematurity, congenital disease and persistent postnatal infections have been described following infections with these organisms (4).

Ascending infections result in chorioamnionitis, funitis, and placentitis. Chorioamnionitis is highly associated with increased incidence of intrapartum fever, prolonged rupture of membranes and premature labour (4).

Ascending bacterial infections are thought to cause preterm labour in a number of ways. Vaginal flora bacteria have been found to have high phospholipase A_2 activity. This activity is thought to trigger labour through postaglandin synthesis from native amniotic membranes. The contractions thus produced cause preterm labour and delivery. This has been supported by the finding of increased immunoglobulins in a percentage of preterm babies. Endotoxins and endogenous pyrogens also cause premature labour by inducing production of PGE_2. Other possible causes are those that relate to reduced membrane collagen causing weakening of the membranes and hence premature rupture of membranes (PROM) and the subsequent labour. Advancing gestation and ascorbic acid deficiency are known to be associated with amnion collagen deficiency. Decreased collagen especially levels of type III has been found in preterm membranes. Type III collagen is preferentially degraded by granulocyte elastase. This hints that leucocyte infiltration of the fetal membranes following bacterial colonization cause relative depletion of type III collagen and eventual rupture of membranes and therefore preterm labour.

Some of the organisms which are associated with preterm delivery are sexually transmitted. Such organisms include Neisseria gonorrhoea (GC), Chlamydia trachomatis (Ct), Haemophilus species (HSP), group B streptococcus (GBS), Mycoplasma Homnis (Mh) and Ureaplasma urelyticum (Uu)

The reported prevalence of gonococcal infection among pregnant women today shows wide geographical variations ranging from 0.6% or less to 7.6% determined by differences in the population studied (1, 3, 4, 7).

More than one researcher has described, besides overt amnionitis and puerperal infections, an association between cervical carriage of GC, premature rupture of membranes and prematurity. Pregnancy has been reported to be a risk factor for disseminated gonococcal infection (8). Studies have been done to analyse the relationship between antepartum GC infection and the course of late pregnancy. It was shown that women who had positive cultures for GC were more likely to have premature labour and/or prolonged rupture of membranes (4, 10, 11, 12). Sarrel and Pruett (9) reported a clinical spectrum of hospitalized patients with Gonococcal infection diagnosed during pregnancy. He found that the bulk of the patients presented with septic abortion, premature rupture of membranes, preterm labour, and cervicitis or vaginitis. Other symptoms included postpartum fever and salpingitis in first trimester while a few were asymptomatic (10).

Handsfield et al. (12) found a strikingly high incidence of preterm labour and chorioamnionitis in women whose infants had demonstrated orogastric cultures positive for gonorrhoea. Other factors associated with high gonococcal infection and hence prematurity include, low

social economic status, frequent coitus during pregnancy, age, and marital status etc.

Chlamydia trachomatis (Ct) causes a number of clinical syndromes in women. These include, non gonococcal urethritis, Cervicitis, bartholinitis, salphingitis, and perihepatitis. It also causes amnionitis, post abortal and post-partum endometritis (14).

Ct has recently been recognized as one of the most prevalent genital pathogen in pregnant women. Cervical carriage has been reported as high as 23% in U.S.A. black patients (14). Increased rates of still birth and neonatal deaths in Ct positive women has been reported (15). Martin and King (16) found a significant association between antepartum maternal Ct infection and the subsequent prematurity and perinatal mortality.

Group B streptococcus (GBS) has been recognised as a neonatal pathogen for over 25 years. It has been found to cause post caesarean section endometritis. It has also been highly associated with low birth weight, preterm delivery and PROM (1). Joan and Regan et al (17) demonstrated a high incidence of PROM and preterm delivery in women colonized with GBS.

Mycoplasma organisms, that is, Mycoplasma hominis and Ureaplasma urealyticum have been linked with pregnancy complications such as abortion, amnionitis, placentitis,

and funitis (1, 4). Generally Mycoplasma hominis has been most closely associated with endometritis and salpingitis while ureaplasma urealyticum is more associated with amniotic fluid infection, chorioamnionitis and low birth weight. Vaginal isolation rate in pregnancy have been found to be 50% for M. Hominis and 80% for U. urealyticum. It is, therefore, extremely difficult to demonstrate a causative relationship between an infrequent disorder such as preterm labour and an organism that is present in 50-80% of the population.

One can conclude therefore, that solid link has not been delineated between the mycoplasma organisms and prematurity (1). U. urealyticum has been linked to histopathologic findings of chorioamnionitis and to low birth weight (4, 19). Chorionamnionitis by itself is highly linked with prematurity and perinatal morbidity and mortality (19, 20). Other bacteria recovered from amniotic fluid in cases with acute chorioamnionitis include, Haemophilus species, enteric gram negative rods, strict anaerobes such as bacteroids species, fusobacterium etc.

Coitus during pregnancy is another factor that is very highly linked with PROM and preterm labour. Rayburn and Wilson found that the most frequent causes of preterm labour was PROM. Further, they found that patients with preterm labour had an 80% higher incidence of coitus in the week preceeding delivery than the controls (22).

Other studies have shown that spontaneous rupture of membranes before onset of labour increased two fold in those patients with coitus and orgasm. Further, it was demonstrated that patients using condoms from the 32nd week until delivery had significant reduction in the incidence of chorioamnionitis and hence reduction in preterm birth (23, 24).

Objective of the study:

To find out whether there is any relationship between preterm birth and sexually transmitted diseases (STD).

Subject and Methods:

The study was carried out at Pumwani Maternity Hospital from 1st October, 1985 to 30 November, 1985 covering a period of two months. Pumwani Maternity Hospital is the largest delivery hospital in the City of Nairobi and caters for almost all the pregnant women attending Nairobi City Council Antenatal Clinics. Only patients with City Council antenatal cards are allowed to deliver in the hospital.

Subject selection:

All mothers who delivered preterm infants at the hospital within the above specified period were studied. Mothers who delivered preterm babies at home and were subsequently admitted to the hospital were also included.

Definitions:

The case definition of preterm infant was gestation $\geq$ 20 weeks and $\leq$ 36 weeks also birth weight $\geq$ 500 gms and < 2500gms. Term infant was defined as an infant delivered at gestation equal or greater than 37 completed weeks.

Exclusion Criteria:

1. All mothers delivered by caesarean section or by induction of labour for any reason other than preterm rupture of membranes.
2. All patients with preterm delivery who refused consent to participate in the study.
3. Where infant died before estimation of gestational age.
4. Cases where mother had left the post natal ward.

Selection of the controls:

1. All women with term deliveries who had been recruited for the on going ophthalmia neonatorum study formed the control group.
2. Only those who delivered within the normal working hours, that is, between 8.00 a.m. and 5.00 p.m. were included.

Exclusion criteria for the controls:

1. Mothers who ended up with caesarean section.
2. Mothers who delivered outside the working hours as stated in the inclusion criteria.

Based on the above criteria 116 study cases and 173 controls were studied.

Procedure:

Study cases were selected Monday to Friday mornings by reviewing all infants admitted during the previous 24 hours to the new born nursery. All the babies were examined and the gestational ages estimated. Those meeting the criteria were enrolled and the wards where the mothers stayed were noted. The mothers were then followed up in their respective wards and were interviewed and specimens were taken. The controls were recruited as explained in the selection criteria and were interviewed and specimens taken from them.

On all the cases and controls, information was collected concerning other risk factors and evidence of infection in the mother and the infant. The following information was recorded down.:-

- age
- marital status
- gravidity
- parity
- history of pregnancy and non-pregnancy related medical conditions.
- coitus in the last two weeks of pregnancy.
- initial obstetrics event e.g. contractions, rupture of membranes, or vaginal bleeding.

- duration of labour and duration of rupture of membranes.
- blood pressure on admission and temperature.

The following specimen were then taken from the patient:-

Blood was drawn for serology for chlamydia trachomatis and mycoplasma species. Sterile Colgi swabs were used to obtain the cervical specimen. The specimen were taken within the immediate postpartum period, that is within 24 hours after delivery. This was done for the cases. In the controls specimens were taken immediately after delivery which occurred within the working hours of the study personnel.

The cervical specimens were obtained in the following way:- Three colgi swabs were introduced into the cervical canal through a blind bimanual examination. The three swabs were treated as follows:- One swab was put into the transport media for chlamydia trachomatis. The transport media consisted of sucrose phosphate buffer. The specimens were then packed with ice to keep cool during transportation from the hospital to the laboratory. One swab was used for direct plating on the blood agar, chocolate agar and Thayer-martin made plates. The outer swab was put into the liquid enriched media for mycoplasma and ureaplasma isolation.

In the laboratory, the following was done:-
The innoculum on the Thager-Martin, chocolate and blood agar plates were spead u sing a sterile standardized loop. All innoculated plates were incubated anaerobically for 48 hours. After this period of incubation the colonies were counted and the organisms were identified. The specimen for Chlamydia trachomatis isolation were incubated with MacCoy cells at $37^{O}C$ for 72 hours. The MacCoy cells were obtained from the kidneys of baby hamster. These cells were pre-treated with cycloheximide, a glutaramide antibiotic which reduces the metabolic activity of eukaryotic cells. Immunofluorescence tests were then done to show the chlamydial inclution bodies which appeared as sharply defined yellowgreen mass not attached to the nucleus. Special liquid media were used to isolate the mycoplasma hominis and Ureaplasma urealyticum. Their presence in the liquid media were demonstrated by the colour change of a pH indicator. Mycoplasma hominis metabolizes orgnine, via ornithine with production of ammonia. Ammonia causes increase in the pH resulting in colour change of the medium from pink to purple. Ureaplasma urealyticum breaks urea to ammonia causing similar pH rise and therefore the colour change of the liquid media. Colonies were then isolated from the positive liquid medium through further processing of the media.

Results:

As shown in table 1, the age range was from 14 years to 40 years. The study group was younger by two years. The mean age for that group was 22.4 years and the mode was 20 years while for the control population the mean age was 24.7 years and the mode 22 years. This difference was, however, subjected to chi square test and was found not to be statistically significant.

The same table shows that most of the population in both groups were 29 years and less with the majority being at the age group 20 - 24 years. Therefore, 86.2% of the cases and 89.5% of the controls were below 29 years of age. The same table shows that 28.4% of the study group were teenage while 24.9% of the control group were teenage. The difference, however, was not significant $P>0.05$.

Table I: Age Distribution

Age Group	Cases	%	Controls	%
< 15	0	0	1	0.5
15-19	33	28.4	42	24.3
20 24	44	37.9	79	45.7
25-29	23	19.9	33	19.0
30-34	8	6.9	10	5.9
35-39	1	0.9	5	2.5
40-44	0	0	3	1.7
Not known	7	6.0	0	0
Total	116	100	173	100

Over all there were more single mothers in the cases than in the controls. As shown in table 2 and 3 37(31.9%) out of 116 cases were single while in the controls 32(18.5%) out of 173 cases were single. This difference was statistically significant with $p<0.01$. However, the distribution of marital status by age group was similar for both groups. Nearly all the single mothers in both cases and controls were aged between 15 years and 24 years. Therefore, 31(83.8%) out of 37 single mothers in the cases were aged between 15 and 24 years while 27(84.4%) out of 32 single mothers in the controls were aged 15 years to 24 years. The cases and controls were therefore similar in the age distribution of the marital status. The fact that the cases had an overall majority of single mothers, did not seem to have any correlation with the isolation of STD. As far as distribution of single teenagers was concerned, there was no difference between the two groups. As shown in table 4, 20(54.0%) out of 37 single mothers in the cases were teenagers while 16(50%) out of 32 single mothers in the controls were teenage.

There were no differences in gravidity in both controls and cases. As shown in table 5, most of the population for both groups were of low parity.

Table 2: Marital Status

	Married	%	Single	%
Cases	75	64.7	37	37.9
Controls	141	81.6	32	19.6

Table 3: Marital Status by Age Group.

	Study Group		Control Group	
Age group in years	Married	single	Married	Single
<15	0	0	1	0
15-19	14	20	25	16
20-24	36	11	70	11
25-29	22	3	30	3
30-34	6	3	9	1
35-39	1	0	5	1
40-44	0	0	1	0
Total	116		173	

Table 4: Gravidity Distribution

Gravidity	study group	%	Control group.	%
1	44	38.0	74	42.8
2	22	19.0	29	16.7
3	14	12.1	20	11.6
4	13	11.2	16	9.2
5	3	2.6	10	5.8
6+	13	11.2	17	9.9
Not known	7	6.0	7	4.0
Total	116	100	173	100

There were similarities in gravidity in the cases and controls. Most of the population was gravida 3 and below constituting 71.1% of the control group and 67.1% of the cases.

Table 5: Duration of Labour in hours

Time Interval (Hours)	Cases	%	Controls	%
0 - 5	18	15.5	9	5.2
6 - 12	52	44.8	88	50.9
13 - 18	39	33.6	42	24.3
19 - 24	7	6.1	8	4.6
25+	0	0	1	0.6
Not known	0	0	25	14.4
Total	116	100	173	100

There were no differences in the duration of labour. As shown in table 5 all patients in both groups had delivered by 24 hours of onset of labour. It is shown that 91(78.3%) out of 116 cases and 130(75.1%) out of 173 controls had labours that last between 6 hours and 18 hours.

Table 6: Duration of ruptured membranes

Time Interval (Hours)	Cases	%	Controls	%
0 - 11	65	56.0	138	78.0
11 - 23	21	18.1	3	1.7
24 - 35	8	6.9	0	0
36+	13	11.2	0	0
Not known	9	7.8	32	18.5
Total	116	100	173	100

There were differences in the duration of ruptured membranes in the two groups. As shown in table 6, 43(18.5%) out of 173 controls the initial obstetric event was not stated. However, in 141(81.5%) out of 173 the initial obstetric event was contructions. There were no controls with premature rupture of membranes. In all the controls membranes ruptured within 24 hours of the onset of labour and labours terminated within 24 hours. 21(19.5%) out of 107 cases with known initial obstetric event, had premature rupture of membranes. The largest recorded time interval was 273 hours. 9(7.8%) out of 116 cases the initial obstetric event was not stated. In 86(80.4%) out of 107 cases had contractions as the initial obstetric

event. The difference in premature rupture of membranes was found to be significant with $x^2 = 14.08$ and $P<0.001$.

Table 7: Distribution of the infections (STD) in both study and control groups.

STD	Cases	%	Controls	%
GC	18	15.5	14	8.1
CT	10	8.6	19	11.0
HSP	3	2.6	6	3.5
GBS	18	15.5	17	9.8
Mh	12	10.3	53	30.6
UU	20	17.2	32	18.6
Total STD	81	69.7	141	81.6

Table 7 shows over all frequency of STD in both the cases and controls. GC was more frequently isolated in the cases than the controls at rate of 15.5% in case as opposed to 8.1% in the controls. The difference, however, was not significant. Group B streptococcus (GBS) was also isolated

more commonly in the cases than the controls but the difference was not significant. Chlamydia trachomatis was isolated in the controls more commonly but the difference was not significant. The isolation rate of haemophillus species was very infrequent for both groups. For reason not quite clear, mycoplasma hominis were isolated more commonly in the controls than in the cases. The difference was statistically significant with $P<0.01$. On overall there were 81(69.8%) STD infections in the cases and 140(81.5%) STD infections in the controls. The difference was not statistically significant.

There was no difference in age group isolation of STD in both the cases and the controls as shown in tables 8 and 9. Most of the infections were isolated in the age group between 15 years and 29 years as shown by the fact that 74(63.8%) STDs out of 116 cases and 124(71.6%) STDs out of 173 controls occurred in this age group. It is the age group which constituted the majority in study population.

Table 8: Distribution of STD in the case and by the age group.

STD	Sujects	GC	CT	GBS	HSP	Mh	Uu	%	Total
<15	0	0	0	0	0	0	0	0	0
15-19	34	9	1	4	1	5	2	25	73.5
20-24	47	5	4	7	0	6	11	33	70.2
25-29	25	0	3	7	2	2	2	16	64.0
30-34	9	3	2	0	0	0	0	6	66.7
35-39	1	0	0	0	0	0	0	1	100
Total	116	10	18	18	3	13	15	81	69.8

As shown in tables 8 and 9, the distribution of STDs was similar in all age groups. In the study group there were a total of 81 STDs isolated forming 69.8% of the total population. In the control there were 140(69.8%) STDs out of 173 as shown in figure 9. The compares well with the finding in the cases.

Table 9: Distribution of the control population by STD and by age group.

STD	Subjects	GC	Ct	GBS	HSP	Mh	Uu	Total	%
<15	1	0	0	0	0	1	0	1	100
15-19	42	4	3	6	2	9	9	33	78.6
20-24	79	4	8	10	2	21	13	58	73.4
25-29	33	3	3	0	1	16	10	33	100%
30-34	10	2	2	1	0	3	0	8	80
35-40	8	2	1	1	0	3	0	7	87.5
Total	173	15	17	18	5	53	32	140	80.9

Table 10: Distribution of the cases and controls according to STD and marital status.

	Cases		Controls	
STD	Married	Single	Married	Single
Gc	8	10	8	6
Ct	4	9	15	3
GBS	13	4	13	4
HSP	4	2	7	1
Mh	8	4	42	11
Uu	15	1	29	6
Total	52	25	111	31

As shown in Table 10, there were similarities in isolation rate of the STD with regard to marital status in the cases and controls except in the case of mycoplasma hominis which was isolated more in the controls than the cases.

Table 11: Distribution of the study population by STD and by duration of ruptured membranes.

Duration in Hours	Subject	GC	Ct	GBS	HSP	Mh	Uu	Total	%
0-11	60	9	0	11	1	7	15	43	54.4
12-23	28	8	4	1	2	3	4	22	26.7
24-35	12	0	2	2	0		0	4	5
36-47	3	0	2	0	0		0	2	3
48-59	5	0		0	0			0	0
60-71	8	0	3	0			1	4	5
72+		1		0	0	2	1	4	5
Total	106	18	8	17	3	12	21	81	100

Duration not stated = 10

As shown in Table 11 there was no relation between the duration of rupture of membranes and the isolation rates of the various STD. This is shown by the fact that 43(54.5%) out of 81 infections occurred in patients who had ruptured membranes for 11 hours or less, while 14(18%) out of 81 infections were isolated in patients who had ruptured membranes for 24 hours or more.

Comments:

From this study, it is obvious that sexually transmitted diseases (STD) are quite common in the community studied. Neisseria gonorrhoea was isolated quite commonly in both the cases and the controls. The isolation rates were 18(16%) out of 116 in the cases and 14(8%) out of 173 in the controls. The difference was not significant. Other studies done in Kenyatta Hospital have showed a prevalence rates ranging from 1.2% to 5% (25, 26). Brunhan and Holme et al (4), noted that the reported prevalence of N. gonorrhoea in pregnancy varied from 0.6% to 7.6% depending on the community studied. Reports from the United States of America have shown that N. gonorrhoea recovery rates were highest in young non-white un-married mothers of low social economic status.

In our study it is shown that 9(50%) out of 18 positive Gc cultures in the cases occured in the age group between 15 - 19 years while in the controls only 4(26.7%) out of 15 positive occured in the same age group. The difference was not significant. In considering marital status 10(55.6%) out of 18 positive cases occured in the sigle patients while 6(40%) out of 15 positive controls occured in the married patients. The difference was not significant.

Pregnancy has been reported to be high risk factor for disseminated gonococcal infection. In upto 40% of women in some series of disseminated gonococcal infection.

studies have been pregnant. The risk is increased where there is pharyngeal colonization with N. gonorrhoea. In our study, all the patients were asymptomatic and there were no cases of disseminated gonococcal infection. This is possibly because oral sex in an African Community is rare and therefore pharyngeal colonization is rare. However, further studies are necessary to prove this belief.

There was no positive correlation between premature rupture of membranes and N. gonorrhoea isolation. In the cases 17(94.4%) out of 18 positive occured in patients who did not have ruptured membranes while in the controls all the patients had intact membranes before onset of labour.

There were no significant differences in isolation of chlamydia trachomatis both in the cases and controls. Chlamydia trachomatis has been reported to be a common pathogen in the genital tract of sexually active women. Some studies have reported cervical carriage rates ranging from 5% to 23% during pregnancy (14, 15, 16). In this hospital prevalence rates ranging from 7.5% to 15.9% have been reported (25, 26). In our study, isolation rate of C. trachomatis in the cases was 8.6% while in the controls it was 11.0%. There was therefore no significant difference in the two groups.Single marital status and young age

are said to be the major demographic correlates of chlamydial infection in pregnant women. In our study the distribution of chlamydia infection was uniform throughout the age groups both in the cases and controls. There was no difference in the occurrence of chlamydia infections as far as marital status was concerned. However, 5(63%) out of 8 positive chlamydia cultures in the cases occured in patients with premature rupture of membranes . Although this would tend to indicate an association between C.trachomatis and premature rupture of membranes, it does not compare well with 19 positive cultures which occured in the control group all of whom had intact membranes before on set of labour. The study therefore did not show any association between prematurity and chlamydia isolation.

Group B-streptococcus was isolated at a rate of 18(16%) out of 116 cases and 17(10%) out of 173 controls and the difference was of no statistical significance. It has been reported that group (B) streptococcus colonization of the cervix at the time of parturition is significantly correlated with premature rupture of membranes and a threefold increase in preterm delivery at less than 32 weeks gestation. Other studies have shown that isolation rates are high in younger women less than 20 years of age and are highest during the proliferative phase of menstrual cycle and are the same for pregnant and non-pregnant women.

In our study only 4(22.2%) out of 18 positive group 'B' streptococcus cultures occured in age group 15 - 19 while 6(33.3%) out of 18 positives occured in teenagers in the control group.

Considering the frequency of group B streptococcus (GBS), there was no major difference between the cases and the controls. There were 18(16%) positive cultures in the study group as compared to 17(10%) in the control group (Table VI). For both groups, however, married women had high isolation rates than the non-married group. This was shown by the fact that of the 18 positive cultures in the study group 13(72%) were in the married class. This compares very well with 13(76%) positive cultures seen in married women of the control group.

The association of GBS and the causation of perinatal morbidity and mortality has been well documented for a long time. Its rate in the causation of post caesarean section sepsis and puerperal morbidity has been studied. It has been shown in other reports that isolation rates of GBS are high in young women less than 20 years of age and are highest during the proliferative phase of menstrual cycle and are the same for pregnancy and non-pregnant women.

Cervical carriage rates are known to remain roughly the same in all trimesters (4). Regan et al (1981)

reported that GBS colonization of the cervix at the time of parturition was significantly correlated with premature rupture of membranes and a threehold increase in preterm delivery at less than 32 weeks gestation.

As noted above most of the positive cultures occured in married women which does not agree with the reported findings elsewhere. However, 33.3% of the positive cultures in the cases occured in patients who had premature rupture of membranes remote from term.

Isolation of GBS was not influenced by the duration of rupture of the membranes (Table 11). This has been shown by the fact that 12(66.7%) of positive cultures in cases occured in patients whose membranes ruptured intrapartum between 0 - 24 hours.

Genital mycoplasma have been incriminated in the causation of post abortal sepsis, postpartum fever, chorioamnionitis and low birth weight. One problem with studies on these organisms is that isolation rates are so high that differentiation between colonized and non colonized patients is extremely difficult. Some studies have reported isolation rates of upto 50% of mycoplasma Hominis and 80% of ureaplasma urealyticum. Miller and Pastorec noted that no solid link has yet been delineated between mycoplasmas and preterm labour. However, ureaplasma urealyticum has been linked to preterm labour.

In this study there were 12(10%) positive culture of mycoplasma hominis in the cases while isolation rates in the term delivery group was 53(31%). The difference is quite obvious (Table 8). On comparing the different age groups one finds that the distribution is quite similar in both controls and the cases. Almost all positive cultures occured in the age group between 15 years and 29 years. The married population was more affected in both groups than single patient. This was shown by the fact that 8(66.7%) out of 12 positive in the cases were married. This compares fairly well with 42(79%) out of 53 positive in the control group who were married. Again length of ruptured membranes did not have a positive correlation with isolation of M. hominis in the sense that 56% of positives occured in patients whose membranes ruptured intrapartum. Only two patients with premature rupture of membranes had positive M. hominis culture. This study therefore has failed to show any significant association between mycoplasma hominis and preterm birth.

Isolation of ureaplasma urelyticum showed no significant differences in both the cases and the control group. Isolation rates were 17% in the cases which compared well with 18% in the control group. Distribution among the different age groups was similar. Again, most positive cultures occured in the married class. Although

50% of the positive cultures in the cases occured in patients with premature rupture of membranes, all the positives in the controls occured in patients who did not have premature rupture of membranes. This study has therefore not shown any positive correlation between preterm birth and ureaplasm urealyticum isolation.

Short Comings of the study:

This was a cross-sectional study and follow up was not made to find out if there were any changes in the peurperium in regards to sexually transmitted diseases. A longitudinal study is therefore needed.

Conclusions.

1. Further studies are required to study the influence of various demographic factors on sexually transmitted diseases and preterm labour.

2. Longitudinal studies in this field are necessary.

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1. INCOMPLETE ABORTION

EVACUATION OF THE UTERUS

Name	-	Mrs. J.W.	LMP	-	17.1.85
Age	-	24 years	Amenorrhoea	-	15+ weeks
Ip. No.	-	688607	Date of Admission	-	6.5.85
Parity	-	2 + 0	Date fo Discharge	-	9.5.85

Presenting Complaint:

The patient was admitted through the Casualty Department with a history of vaginal bleeding and lower abdominal pain for one day. She had expelled some products of conception at home and she denied any history of interference.

Obstetrical and Gynaecological History:

She was para 2 + 0 and all her babies were alive and well. Her previous deliveries were by spontaneous vertex delivery at full term. She had menarche at 14 years of age and had had regular painless periods lasting 3 - 4 days in cycles of 26 - 28 days. The flow was moderate in amount. Her last delivery was two years before and she had never used contraceptives in her life time.

Past Medical History:

There was none contributary.

Family and Social History:

The patient was a married housewife staying in Nairobi with her husband. The husband worked as a casual labourer in the Nairobi Industrial Area. There was no history of familial illnesses and she neither drunk alcohol nor smoked cigarettes.

Physical Examination:

She was a young woman in a fair general condition. She was not pale and was afebrile with a temperature of 37^{o}C. She was not jaundiced and had no pitting leg oedema. She had a blood pressure of 120/80 mmHg, pulse rate of 84 per minute, and a respiratory rate of 20 per minute.

The respiratory, cardiovascular and central nervous systems were within normal limits.

Abdominal Examination:

The abdomen was soft but tender in the suprapubic area. The liver and the spleen were not palpable. There were no other abdominal masses palpated.

Vaginal Examination

The external genitalia were normal and the vaginal walls were normal with no lacerations. The cervix was soft and the os was 3 cm dilated. The uterus was tender

and corresponded to 12 weeks gestation. There were no palpable masses in the adnexa or pouch of Douglas. Products of conception were felt in the uterine cavity and there was slight vaginal bleeding.

Diagnosis:

An impression of incomplete abortion was made.

Management:

The decision to evacuate the uterus was made and the patient was prepared for it. She was started on tetracycline capsules 500 mg four times a day. The condition was explained to her and she signed an informed consent. She was premedicated with intramuscular atropine sulphate injection 0.6mg stat half hour before the operation. She was wheeled into the theatre on 9.5.85 at 11.35 a.m. The patient was then placed on the operating table and was sedated with intravenous injections of pethidine 100 mg and diazepam 10 gm stat. She was placed in lithotomy position and vulvo-vaginal toilet was done. Bladder catheterization was done obtaining 100 ml of clear urine. A digital examination done confirmed the above findings. An Auvard's speculum was introduced into the vagina giving a good view of the cervix. A Vulsellum forceps was used to hold the anterior lip of the cervix. The uterine cavity was then completely evacuated using an ovum forceps and blunt curretage. Moderate amounts of products of conception were obtained. The uterine cavity was then explored and

was found to be intact and empty. Ergometrine 0.5 mg injection was given intramuscularly. The uterus was well contracted and there was no more bleeding.

Post Operative Period:

Recovery from sedation was uneventful and she was discharged on the following day on antibiotic and analgesics. She was instructed to attend the gynaecology clinic after two weeks for check up.

She was seen in the gynaecology clinic two weeks later. Her general condition was good and she was not pale. She was advised on contraception but declined to use any method and she was advised to start antenatal clinic early during the next pregnancy.

Comments:

Incomplete abortion is defined as partial expulsion of the products of conception, usually the foetus with retention of parts of the placenta and/or membranes at a gestation equal or less than 28 weeks (2). Currently however, abortion is taken to mean expulsion of products of conception at a gestation equal or less than 20 weeks and a foetal weight equal or less than 500 gm (6). The patient presented had an abortion at 15+ weeks gestation but the weight of the foetus was not known.

The aetiology of abortion is multifactorial. It is well known that most of early spontaneous abortions are caused by genetic abnormalities of the conceptus. Late abortions are associated with infectious diseases especially those that are sexually transmitted, maternal medical diseases, uterine abnormalities, and drug ingestion, etc. However, the single most common cause of abortion is induced abortion (1, 5, 7, 8). It has been noted that the incidence of abortions in most developing countries is very high and has attained the proportions of a serious public health problem. It was found that, in Kenyatta National Hospital, abortions constitute about 60% of all acute gynaecological admissions. It was also found that about 65% of all patients admitted with abortions had some evidence of interference. Such evidence included sepsis, lacerations of the genital organs and positive history (1).

Induced abortions were found more commonly in the single adolescent girls (1). Similar findings were reproted in Nigeria, where 61% of the induced abortions were in adolescent girls who were either in primary or secondary schools (5).

The patient presented was a 24 year old married lady who had other children. She had no evidence of sepsis and there were no lacerations on the genital organs. The possibility of induced abortion was ruled out by the lack of evidence and the fact that even on the follow up visit, she declined to use contraceptives because of want of pregnancy. The cause of the abortion in this patient was therefore not known.

In developing countries abortions are known to cause high morbidity and mortality while in the developed countries morbidity and mortality from abortion have been markedly reduced. This is attributed to the fact that in most developed countries abortions are legalized so that they are widely performed by qualified personnel without the fear of prosecution. In most developing countries, induction of abortions are illegal and punishable by law.

However, despite this illegal abortions are performed by untrained, incompetent, non-medical persons, whose unreliable aseptic techniques and dangerous methods

jeopardize lives of the pregnant girls (5). Makokha found that 43.4% of maternal deaths were due to sepsis and over half of these deaths were due to post-abortal sepsis (3).

Other complications of incomplete abortion include, haemorrhage, haemorrhagic shock, chronic pelvic inflamatory disease, pelvic abscess, infertility due to tubal blockage, habitual abortions and premature deliveries. To avoid the above complications incomplete abortions are treated promptly and vigorously. Treatment involves the use of broad specturm antibiotic cover. This was the treatment used in our patient. In patients whose blood loss is marked treatment of shock and blood replacement may be needed. Our patient had minimal blood loss and was not in shock. She did not need blood transfusion.

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2. UTERINE FIBROIDS, MENORRHAGIA,

TOTAL ABDOMINAL HYSTERECTOMY

Name -	Mrs. R.M.	Parity -	0 + 1
Age -	28 years	Date of Admissionn -	1.7.88
Ip. No. -	886822	Date of Discharge -	4.8.88

Presenting Complaint:

The patient was admitted from gynaecology Clinic. She had been referred to this clinic from a City Council Clinic with history of progressive abdominal swelling for 3 years. She also complained of menorrhagia and severe dysmenorrhea for a similar period.

Obsterical and Gynaecological History:

She was par 0 + 1. She had an abortion in 1978 at 3 months gestation after which an evacuation was done. She had menarche at the age of 17 years. She had regular periods lasting 4 days in 28 day cycles. She had never used contraceptives.

Past Medical History:

This was not contributary.

Social and Family History:

She was married and worked in their small shamba at Kitui. The husband worked as a welder in Nairobi.

She gave no family history of major illnesses. She did not smoke cigarettes or drink alcohol.

Systemic Enquiry:

She had no urinary, gastrointestinal, central nervous or cardiovascular symptoms.

Physical Examination:

She was in good general condition. She was not pale, was afebrile and had no pitting leg oedema. Blood pressure was 110/60 mmHg, pulse 84/min good volume, temperature $36^{o}C$, and respiratory rate 20/min.

The central nervous system, cardiovascular system and respiratory system were within normal limits.

Abdominal Examinaiton:

There was a mass arising from the pelvis about 24 weeks in size. It was smooth mobile and non-tender. The liver and spleen were not palpable. There was no evidence of free peritoneal fluid in the abdomen.

Vaginal Examination:

The external genitalia was normal. On speculum examination, the vaginal walls were healthy and the cervix appeared healthy. A papanicolaou smear was taken. On digital examination, the cervix was firm, long and the os was closed. The mass was continuous with cervix and

moved easily on the same side of the cervix. The size corresponded with the abdominal findings. There was no tenderness in the adnexa and the pouch of Douglas was free.

Diagnosis:

Large uterine fibroids with menorrhagia and dysmenorrhea.

Management:

She was planned for total abdominal hysterectomy.

Investigations.:

1. Papanicolaou smear
   - Class I.
   - no candidiasis
   - no trichonomiasis.
2. Haemogram
   - Hb - 13.5 gm/dl
   - Haemotocrit - 41.6 gm/dl
   - WBC - 7.1×10^9/l
   - RBC - 5.0×10^{12}/l.
3. Urea and electrolytes.
   - K+ - 4.7 mmol/l
   - Na+ - 135 mmol/l
   - BUN - 2.5 mmol/l
4. Midstream specimen of urine.
   - normal biochemistry
   - microscopy - no bacterial growth.

5. Blood Group "O"

6. IVP was not done.

Pre-operative Preparation

The patient was explained the nature of her illness and the possible mode of management. The fact that, after the operation, her obstetric career would be over was gently explained to her. She then signed an informed consent. Blood was taken for grouping and crossmatching and two pints were available at the day of surgery. She was starved from midnight. The abdomen and pubic areas were shaved. She was premedicated with intramuscular injection of 50 mg pethidine and 0.6 mg of atropine sulphate ½ hour before theatre. She was wheeled into the operating theatre on 27.7.88 at 9.30 a.m.

Total Abdominal Hysterectomy:

under general anaesthesia and the patient in supine position, aseptic catheterization was done and clear urine was obtained. Examination under anaesthesia confirmed the earlier findings. The vagina was then painted with methylene blue dye. The abdomen was cleaned and drapped with sterile towels. It was then opened in layers through a right paramedian incision. A self retaining retractor was introduced and the intestines were packed away from the operation site with warm wet gauze-rolls. A myomectomy screw was applied on to the

uterus. The uterus was then delivered through the incision wound. The round ligament on the left side was doubly clamped with long straight artery forceps and cut between the clumps. The left posterior leaf of the bread ligament was undermined using the index finger until the avascular area was exposed posteriorly below the ovarian ligament and artery and fallopian tube. These were doubly clamped and cut between the clumps. Chromic number two suture was used to put transfixing stitches first on the left round ligament then on the stump containing the ovarian ligament and ovarian vessels with good haemostatis. This procedure was repeated on the right side. The bladder was pushed down anteriorly from the cervix using swab on a sponge holder. Posteriorly, the uterosacral peritoneum was incised and also reflected down using a mounted swab.

Using straight long artery forceps the uterine vessels were doubly clamped and incised on the left side. Chromic cutgut number two was used to put a transfixing stitch. The cardinal ligaments were also resected and transfixed. The procedure was repeated in the right side. The cervix was now palpable through the vaginal wall.

Two tissue clamps were applied onto the anterior vaginal fornix and the vaginal cavity was entered. The cervix was then circumcised from the vagina through the cervical vagina cleavage. Long straight artery forceps

used to hold the edges of the vaginal vault.

The vaginal vault was repaired securing the angles with chromic No. 2 stitch. The middle was repaired with two matress stitches with ends left to anchor the vault to the pelvis. Pelvic peritonization was done starting at one side first and putting a pulse string suture. This buried the stump with ovarian vessels and the round ligament stump. The middle was repaired by approximation of utero-sacral peritoneum. At this point the vault was transfixed by tying the peritonizing stitch with vault stitch. A pulse string stitch was applied to the remaining side. Haemostatis was achieved. Abdominal cavity was inspected and there was no oozing.

Abdomen was closed in layers after swabs and instruments were counted and reported correct. Blood loss was about 500 ml.

The uterus was cut and it contained multiple intramural fibroids. These and the cervix were sent for histological analysis.

Post Operative Period:

Post operative period was uneventful. She did not need blood transfusion. She was maintained on intravenous fluids consisting of Hartman's solution 500 ml to alternate with 5% dextrose 6 hourly for the first 24 hours. Analgesia

consisted of intramuscular injection of pethidine 100 mg 8 hourly for 48 hours. She was covered with ampicillin injection 500 mg 6 hourly for the first 24 hours. On the 2nd post operative day she had normal bowel sounds and she was put on oral ampicillin capsules 500 mg 6 hourly for 7 days and paracetamol 2 tablets 8 hourly for 7 days.

She made rapid recovery. The wound was well healed on the 7th post operative day. Post operative haemoglobin was 11.5 mg/dl.

Histology Reprot:

Histology showed normal cervix and simple leiomyomata. She was discharged home well to be seen at the Gynaecology Clinic after 6 weeks.

Comments:

Uterine fibroids are the most common uterine tumours. It is estimated that about 20% of all women over 35 years of age have uterine fibroids (1). The patient presented was unusual in the sense that she was very young, only 28 years of age.

Uterine fibroids for unknown reasons occur at least 3 times more common in the black than in the white women (1, 2). Usually they are not a clinical problem before puberty and should not grow after menopause. They range in size from microscopic lesions to enormous masses weighing more than 45 kg. They usually occur in uterine corpus but may be found in the cervix, round ligament, or broad ligament. The presented patient had myomas in the corpus.

The cause of leiomyomas is not known. They sometimes have been found to be hormonal responsive (1, 2, 3). Some studies have shown higher concentrations of oestrogen receptors in the myomas than in the surrounding myometrium (1). They are known to increase in size during oestrogen therapy and in pregnancy. They are known to decrease in size and even disappear after menopause.

Microscopically, uterine fibroids consist of non-striated muscle fibres arranged in interlacing bundles of varying size running in different directions. Individual

cells are spindle shaped and have elongated nuclei.

Uterine myomas are classified by anatomical location. They can therefore either be submucous, intramural or subserous. The patient presented had intramural fibroids.

Symptomatology of uterine fibroids is variable. Most are asymptomatic. The symptoms depend on location, site, size, state of preservation and whether the patient is pregnant or not. Wanjala (4) found that 57.7% presented with pain while 54.7% presented with menorrhagia. Benson (1) notes that 30% of patients presented with abnormal uterine bleeding. Our patient presented both with abnormal uterine bleeding and abdominal pain and swelling. Other symptoms include pressure symptoms, infertility in about 2 - 10%. Our patient was infertile.

Wanjala found that 70% of the patients studied were either nulliparous or of low parity. Our patient was para 0 + 1. Other patients may present with spontaneous abortions. It is estimated that spontaneous abortions occur 2 - 3 times more frequently in the patients with myomas than in the patients without. The patient presented had abortion at least once.

Diagnosis of uterine myomas is usually clinical through a bimanual uterine palpation. However, laboratory and radiological tests that aid in the diagnosis and

management of problem include:-

- Total blood count.
- Anaemia of iron deficiency may be found as a result of chronic blood loss. Erythrocytosis may be found the reason for which is not yet clear.
- Soft tissue x-ray may show soft tissue which may contain calcifications.
- Intravenous pyelogram - may be of great importance in work up for pelvic masses. It may be essential at operation to know the anatomic position and number of ureters and kidneys.
- Hystero salpingography may also be useful in patients where myomectomy is indicated.

Our patient did not have x-ray taken. This is because the clinical diagnosis was obvious. Although intravenous pyelogram might have been useful, it is not routinely done in this unit. This is because of the high cost involved and sometimes the material to perform the test are often missing.

The choice of treatment depends upon the patients age, parity, size, location and preservation of the leiomyomata. For our patient the treatment of choice was total abdominal hysterectomy with preservation of the ovaries. Although this patient was very young myomectomy was impossible because of the large size of the myomas. Had she come earlier, myomectomy would have been the treatment of choice.

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3. BILATERAL BENIGN CYSTIC TERATOMA

TOTAL ABDOMINAL HYSTERECTOMY WITH BILATERAL SALPHINGOOPHORECTOMY

Name	-	Mr. C.I.	Parity	-	9 + 3
Age	-	70 years	Date of Admission	-	19.8.87
Ip. No.	-	844759	Date of Discharge	-	29.9.87

Presenting History:

She was admitted from the casualty department with history of dysuria and occasional vaginal bleeding. She had noticed something coming down through the vagina as she strained to pass stool or urine. It then reduced spontaneously

Obstetrical and Gynaecological History:

She was Para 9 + 3. Her last delivery was twenty years before and she had been post menopausal for over 15 years. She had menarche at 16 years of age and had normal periods which were painless.

Past Medical History:

This was not contributory.

Family and Social History:

She was married and lived in Meru with her family. She used to drink local beer. She did not smoke cigarettes

but used tobacco snuff. She gave no family history of major illnesses.

Physical Examination:

The patient was an elderly lady in good general condition. She was not pale, was afebrile and had no pitting leg oedema. She was not jaundiced and had no lymphnode enlargement.

Her blood pressure was 100/50 mmHg, pulse rate was 72/min, temperature was 36.8^{o}C, and respiratory rate was 20/min.

Her respiratory system, cardiovascular system and central nervous system were within normal limits.

Abdominal Examination:

The abdomen was soft and not tender. There was a cystic mass arising from the pelvis more in the midline about 14 weeks size. The mass was not tender, was quite mobile and smooth in consistency.

Vaginal Examination:

The external genitalia was normal. There was an obvious cystocele on the anterior vaginal wall. The cervix descended downwards to mid-vagina on straining. The cervix was healthy. The uterus was smallish and retroverted. There was a mobile suprapubic mass separate from the

uterus measuring about 10 x 10 cm, smooth and non tender and appeared cystic. There were no other lesions or evidence of bleeding observed.

Investigations:

1. Haemogram
   - Haemoglobin - 13.0 gm/dl
   - Haematocrit - 35.5
   - WHite cell count - 3.6 X 10^9/l
2. Blood urea/electrolytes
   - Na^+ - 135 mmol/l
   - K^+ - 4.5 mmol/l
   - BUN - 5 mmol/l
3. Pap Smear - Pap Class II with no trichomona, no candida
4. Pelvic ultrasound - Bulky uterus with a low echo mass within it. A cystic mass with debri seen in the left adnexa measuring 9 X 10 cm.
5. Blood group - O Rhesus "D" negative.
6. Chest x-ray - Normal findings.

Diagnosis:

First degree uterine prolapse with cystocele and ovarian cyst - ? demoid cyst.

Management:

This patient presented with multiple problems. Decision was made to deal with the problems in stages

starting with the most urgent problem. It was therefore necessary to deal with the ovarian cysts first. The patient was therefore prepared for the operation. Also because she was an old patient and considering the probability of developing cancer of the uterus and cervix, it was found necessary to remove the uterus for which she signed an informed consent. She was starved from midnight of the previous day. On the day of operation that is 14.9.87, she was premedicated with atropine sulphate injection 0.6 mg and pethidine 50 mg intramuscularly half hour before theatre.

The Operation:

She was wheeled into the operation theatre on the 14.9.87. She was placed on the operation table in supine position. She was then put under general anaesthesia. Vulvovaginal toilet was done and then bladder catheterized. Clear urine was obtained. Pelvic examination confirmed the earlier findings.

The abdomen was then cleaned and draped with sterile towels. The abdomen was opened in layers through a subumbilical midline incision.

Findings:

The uterus was atrophic and normal looking.

- A large left ovarian cyst measuring 20x10x10 cm with an intact capsule.

- A large right ovarian cyst measuring 10x10x10 cm with an intact capsule.
- There was no ascites.

Done: - Total abdominal hysterectomy and bilateral salpingo-oophorectomy. The hysterectomy was performed the usual way as explained in another case elsewhere in this book. Haemostasis was well achieved. Abdomen was closed in anatomical layers. The specimen was taken for histology.

Post -Operative Period:

Recovery from anaesthesia was uneventful. She was put on half hourly observations of vital signs until she was fully awake. Intravenous fluids consisting of normal saline 500 ml alternating with 5% dextrose 500 ml every 6 hourly was given. She was started on intramuscular ampicillin injection 500 mg 6 hourly until she was allowed oral feeding when she was started on oral medication. Analgesia was provided with intramuscular injection of pethidine 100 mg 8 hourly for 24 hours.

On the second post-operative day, bowel sounds were normal. She had passed flatus and the abdomen was soft. Parenteral medications and fluids were discontinued and the patient was started on oral sips and oral medications.

On the third post-operative day, blood was taken for check haemoglobin. The patient progressed well and on the seventh post-operative day she was fully recovered and all

the stitches were removed.

Post-operative haemogram showed haemoglobin of 12.3 gm/dl. Haematocrit 35.8, white cell count 14.3 gm x 10^9/l.

Histology report showed a normal cervix, endometrium showed features of benign hyperplasia with a benign polyp. The myometrium was normal and both tubes were essentially normal. Both ovaries had dermoid cysts containing keratin in the lumen. The patient was discharged on 21.9.87 to be seen in the gynaecology clinic after 6 weeks so that arrangements could be made for readmission for repair of the cystocele.

She was seen at the gynaecology clinic on the 24.3.88. She had no complaint. She had no genital prolapse and did not complain of dysuria. She is still being seen in the clinic every twice a year. If the cystocele recurrs then she can have repair.

Discussion:

The patient presented was 70 years old and was postmenopausal for about 15 years. She had benign cystic teratoma (dermoid cysts). Dermoid cysts are some of the commonest benign ovarian lesions. They may be discovered at any time in a woman's life. Malkasia et al. (1976) found the mean age of discovery to be 42.6 years, and that 28.6% of patients were postmenopausal (1).

The incidence of benign cystic teratoma is variable. Ojwang (2) found that, at Kenyatta National Hospital, these tumours made up 21.1% of all ovarian tumours and 71.7% of all benign ovarian tumours. Denis et al. (3) made similar observations.

Dermoid cysts are usually symptom-less and are normally discovered on routine examinations or on patients who present with different problems. Occasionally acute accidents such as torsions and rupture may occur particularly in pregnancy (1). These cysts occur in both ovaries in 10-12% of cases (1, 4).

This patient had bilateral dermoid cysts. The aetiology of benign cystic teratoma is not known. It is theorised that they develop from the ovum as a result of parthenogenesis. This means a disorderly attempt by the ovum to produce an embryo without being fertilized. In the benign teratomas the tissues that develop appear to be those normally found in the cranial end of foetus,

that is, the hair, skin, teeth cartilage, and nervous tissues (4).

The dermoid cysts are heavy and for some reasons often come to lie in the uterovesical pouch of the peritonium. They are seldom larger than 12 cm diameter.

It is possible that in this patient, who was post-menopausal and highly parous, had genital prolapse and cystocele due to pressure from the ovarian cyst to the weak pelvic floor.

Complications of these tumours include torsion, as mentioned above, which occurs in 16.1% of cases. It is precipitated by any factors that alter intra-abdominal pressure like defaecation, micturation or any other vigorous physical activity. The clinical picture may be mistaken for any condition causing acute abdomen. Other complications include development of epidermoid cancer from squamous epithelium and development of struma ovarii from the thyroid tissue.

Management of this condition is usually surgical. In young patients an attempt should be made to preserve some ovarian tissue. In post-menopausal women pelvic clearance may be necessary as the risk to develop malignant tumours is very high.

This patient had hysterectomy and bilateral salpingo-oophorectomy.

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4. *BILATERAL BARTHOLINS GLAND ABSCESSES*

MARSUPIALIZATION

Name	-	Mrs. E.W.	Ammenorrhoea	- 15 weeks
Age	-	22 years	Date of Admission	- 15.4.88
Ip. No.	-	890202	Date of Discharge	- 16.4.88

Presenting Complaint:

She was admitted through casulty department with history of painful swelling of the vulva for four days. She also gave history of having been raped by several people in the previous evening prior to admission.

Obstetrical and Gynaecological History:

Her last menstrual period was 15.12.87. She had ammenorrhoea of fifteen weeks. She was para 1 + 0. She had menarche at 15 years of age. She had regular painless menstrual flow. She gave no history of contraceptive use.

Past Medical History:

She had never been hospitalized for any major illness.

Family and Social History:

She was a married housewife who lived in Nairobi with her family. She used to smoke and drink alcohol but stopped both habits willingly during the pregnancy period.

Examination:

Her general condition was fair. She was not pale, and was not dehydrated. Blood pressure was 110/70 mmHg, temperature 36.6^{O}C, pulse 86 per minute, and respiratory rate 20 per minute. Central nervous system, cardiovascular system, respiratory systems were normal.

Abdominal Examination:

Abdomen was soft, not tender, uterine size was 16 weeks. No foetal movements were felt. There were no other masses.

Vaginal Examination:

The left labia minora and majora were grossly swollen with inflammatory oedema and were very tender. The bartholins abscess was pointing in the mid section medially and ruptured spontaneously during examination. The right labia had an inflammed cystic swelling measuring 2 x 3 cm. She had no inguinal lymphadenopathy.

Diagnosis:

Bilateral bartholins gland abscesses in pregnancy.

Management:

Patient was prepared for marsupialization in theatre under general anaesthesia. She signed an informed consent. She was premedicated with atropine 0.6 mg intramuscularly half hour before theatre.

Marsupialization:

She was put under general anaesthesia and then placed in lithotomy position. Vulvo-perineal toilet was done with antseptic solution and the area was draped with sterile towels. The bladder was catheterized and clear urine was obtained. Vulval examination confirmed the previous findings. Pelvic examination confirmed presence of pregnancy. A two centimeter incision was made longitudinally along the mucocutaneous junction just outside the ring. The incision was deepened into the abscess cavity and about 15 ml of foul smelling purulent material drained. The abscess cavity was cleared with antiseptic solution. The everted edges of the abscess surrounding cut edge of the vulval skin. Interrupted stitching with No. 2 zero chronic catgut on atraumatic needle was done.

The same process was repeated on the other side. There was minimal blood loss. Packing of the cavities was not necessary as there was minimal blood loss.

Post Operative:

Patient was observed half hourly until she was fully awake. She was put on amoxil capsules 500 mg 8 hourly for seven days and paracetamol 2 tablets 8 hourly for seven days . She was discharged on the following day post operative to be seen at the gynaecology clinic after two weeks. She never turned up for the clinic.

Discussion:

Bartholins abscess is one of the commonest infective lesions of the vulva. It's aetiology is associated most commonly with gonococcal infections. It has also been known to be caused by E. Coli, staphylococcus, streptococcus faecalist, trichomonas vaginalis and other pyogenic organisms (1). Gonococcal organisms have been isolated from 33.5% of patients with bartholins abscess(2).

Sometimes a bartholins cyst may be secondarily infected resulting in a bartholins abscess.

In Kenyatta National Hospital, Mumia (2) found that the condition accounted for 1.7% of all the gynaecological emergency admissions. He further found that 55% of patients with bartholins abscess were pregnant.

The usual presentation is one of painful progressive vulval swelling and induration that my be severe enough to interfere with ambulation.

Most of lesions that involve these glands are inflammatory although neoplastic lesions have been reported. Most of the abscesses are preceeded by bartholinitis which causes obstruction of the duct by the oedema and subsequent *accumulation of inflammatory secretion in the gland which becomes infected (1). Ductal obstruction may occur* following trauma, episiotomy or during colporrhaphy.

The patient presented was pregnant and she had gradual swelling of the vulva within four days. She had history of rape but exhibited no clinical evidence of trauma although the ordeal could have made things worse.

Diagnosis of bartholins abscess is usually clinical. Although various modes of treatment have been used the most rewarding treatment has been marsupialization of the edges of the abscess cavity to the surrounding vulval skin. Other treatments include incision, excision, and enucleation. Word Catheters have also been used with good results (1, 2, 3, 4).

Marsupialization is the mode of treatment used in this unit. Advantages of this method over the others include the fact that it is an extremely simple operation, haemorrhage is minimal and easily controlled it is an alternative to incision and drainages, post-operative stay in hospital need not be more than 24 hours, and that some functional activity may be regenerated supplying lubrication to the vagina (4).

Reccurrence rates after marsupialization in this unit is 3% per year. As a great percentage is associated with pregnancy, treatment should be immediate to minimise antepartum and post-partum morbidity that may result from it.

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5. PELVIC ABSCESS: LAPAROTOMY AND DRAINAGE

Name	-	Mrs. E.M.	LD	-	1984.
Age	-	23 years	LMP	-	29.5.88
Parity	-	2 + 0	Date of Admission	-	24.6.88
Ip. No.	-	782537	Date of Discharge	-	8.7.88

Presenting Complaint:

The patient was admitted through the gynaecology clinic as a referral from the Kenyatta National Hospital staff clinic. She complained of lower abdominal pain and abdominal swelling for a period of one month. The abdominal swelling was rapidly progressing. She also complained of loss of appetite and fatigue. The abdominal swelling was preceeded by lower abdominal pain for which she was being treated at the staff clinic.

Obstetrical and Gynaecological History:

The patient was para 2 + 0 and she had one living child. The last baby died in infancy due to measles injection. She had menarche at 14 years of age followed by regular periods of 21 days cycles. The blood flow was moderate in amount lasting about 4 days and was painless.

Past Medical History:

There was none contributory.

Family and Social History:

She was a married lady who stayed at Kilimani Police Station with her husband. The patient worked at the Kenyatta National Hospital as a domestic staff while her husband worked as Policeman attached to the Kilimani Police Station. She gave no family history of any major illnesses. She did not drink alcoholic drinks or smoke cigarettes.

Physical Examinaiton:

The patient was a young lady in a fair general condition. She was not pale, was afebrile and had no pitting leg oedema. She was not jaundiced and had a temperature of 37.2^{o}C. Her blood pressure was 100/60 mmHg, the pulse rate was 88 per minute and the respiratory rate was 20 per minute.

The cardiovascular, respiratory and central nervous systems were within normal limits.

Abdominal Examination:

There was a mass arising from the pelvis which was cystic and non-tender and was about 28 weeks size fundus. The rest of the abdomen was soft and there were no other palpable masses.

Pelvic Examiantion:

She had normal external genitalia. The cervix was firm, posteriorly palced, long, and the os was closed.

Both adnexa were full with the mass and the uterus was difficult to delineate due to the mass. The anterior formix was tense and full and there was tenderness on manipulation. The pouch of Dauglas was also tense and full and there was brownish mucopurulent discharge on the examination finger.

Investigations:

1. Haemogram
   - Haemoglobin - 11.1 g/dl
   - Haematocrit - 33.7%
   - WBC Count - 7.2×10^9/l
   - ESR - 50 mm/hr.
2. Blood urea/electrolytes:
   - K^+ - 3.9 mmol/l
   - Na^+ - 150 mmol/l
   - BUN - 3.9 mmol/l
3. Liver fucntion tests:
   - Total proteins - 76. g/dl
   - Alb. - 35 g/dl
   - Billirubin - 12 mmol/l
   - Alk. Phophatase - 4.1 K.A.U.
4. Pregnancy test - Negative
5. Ultrasound report - Uterus appears normal in size, shape, and echo pattern. A large low echo mass is seen arising from the pelvis measuring about 18x15 cm.
   ? ovarian tumour.
6. Blood group B - 'D' - positive.

7.	HIV Test	-	HTLV negative
8.	Pap Smear	-	Pap Class I.

Diagnosis:

A working diagnosis of a fast growing ovarian tumour was made.

Management:

Decision to perform urgent laparatomy was made and the patient was prepared for it. She signed an informed consent and two pints of compatible blood were ordered to be available on the day fo surgery. She was wheeled into the operating theatre on 29.6.88 at 9.00 a.m. At laparotomy a huge encysted pelvic abscess which ruptured during manipulation was found and about 2½ litres of liquid pus was evacuated by suction. The anterior wall of the abscess cavity grossly looked like ovarian tissue and part of it was taken for Histopathological examination. There was no communication of the abscess with the rest of the peritoneal cavity. The abscess cavity was cleaned with Rifocin and the remaining cavity edges were marsupialized. A corrugated drain was left in the abscess cavity and the abdomen was closed in layers with interupted chronic catgut No. 2 to the rectus sheath and silk to skin. About 2ml of pus was sent for Culture and Sensitivity.

Post Operative Period:

Reversion from anaesthesia was uneventful and the

patient was taken back to the ward after she was fully awake. She was provided with intravenous broad spectrum antibiotic cover consisting of flagyl infusion 500 mg 8 hourly for 48 hours, ampicillin 500 mg 6 hourly for 48 hours, and gentamycin 80 mg 8 hourly for seven days. She was put on pethidine 100 mg intramuscularly 8 hourly for 48 hours and she was on intravenous fluids consisting of Hartman's solution 500 ml alternating with 5% dextrose 500 ml 6 hourly until resumption of oral feeding.

On the second day post operatively, she had established good bowel action and therefore was started on oral feeds and oral medication. On the third post operative day, blood was taken for post operative haemoglobin which was found to be 10.5 gm/dl. The drain was not draining much and was removed. She made rapid recovery and the vital signs remained normal throughout. Stitches were removed on the 7th post operative day and she was discharged home on the 9th post operative day. She was instructed to attend gynaecology clinic after 6 weeks for check up and for histology report. She was seen at the gynaecology clinic on 16.8.88. She was in good general condition and the wound had healed well. The abdomen was soft and there was no tenderness or palpable masses.

The histology of abscess was reported as:- This piece of tissue 6.5x3 cm on histology shows a wall of

non-specific abscess. No ovarian tissue seen. Pus swab report - no growth obtained. The definitive diagnosis therefore was that of pelvic abscess.

The patient was then discharged from the clinic on antibiotics.

Comments:

Pelvic abscess is a diagnosis made quite frequently at Kenyatta National Hospital. Most of the pelvic abscesses occur following evacuation of incomplete abortions. Pelvic abscess formation is one of the more dramatic distinguishable and deadly sequele of pelvic infection. Pelvic inflammatory disease is also very common forming about 20% of all admissions in the acute gynaecology unit (1,2). Another factor closely related to pelvic abscess formation is intrauterine contraceptive device. It has been found that about 2-4% patients with intrauterine device develop febrile morbidity which leads to pelvic abscess formation (3,4).

The patient presented did not have an intrauterine contraceptive device IUCD) and she did not have any history of a recent abortion. However, although the history was not forthcoming, she may have had pelvic inflammatory disease. This is inferred from the fact that pelvic inflamatory diseases are commonly encountered in our unit. However, the most common diagnosis made is that of incomplete abortion.

The organism associated with pelvic abscess formation include Neisseria gonorrhoea, E. Coli, bacteroids species

group B-streptococcus, mycoplasma organisms and chlamydia Trachomatis. In most instances culture of the pus will reveal the offending organisms, while in a lesser percentage no organisms are isolated. This was the case in the presented patient.

Presentation of a patient with pelvic abscess is usually very stormy. The patient complains of very severe pelvic pain and lies supine with the knees folded. She has high fever which may be swinging in nature. The pulse rate is high beyond 100 per minute and is usually bounding and may sometimes be thready in cases of endotoxic shock. Peripheral blood film shows leucocytosis and endocervical swab culture may reveal the offending organism. Our patient was peculiar in the sense that she had no fever and did not have severe constitutional symptoms. This could be because she worked in the hospital and was attending the staff clinic. She probably got inadequate treatment and therefore the symptoms were not quite so severe. The other factor is that the abscess was well encupsulated. This could also explain why the culture of pus was sterile.

In the treatment of patients with pelvic abscess most people advocate parenteral administration of broad-spectrum antibiotics for 24 hours before surgery is attempted. Also effort is made to correct the hydration status of the patient in the build up for surgery. Most patients show improvement on antibiotic and on conservative measures some of the abscesses resolve completely. In

this unit, most patients who do not show any response or the response is slow, a laparotomy and pelvic washout is done. In some centres colpotomy and drainage is first done, if there is no response then laparotomy and pelvic washout is done.

In our patient laparotomy and pelvic washout was done and the patient did very well. She was seen in the gynaecology clinic six weeks after surgery and was well.

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6. SECONDARY INFERTILITY BILATERAL FIMBRIAL BLOCK, BILATERAL SALPINGOSTOMY

Name	-	Mrs. O.M.	LMP	-	14.4.85
Age	-	33 years	Date of Admission	-	11.4.85
Parity	-	1 + 0	Date of Discharge	-	23.5.85
Ip. No.	-	147309.			

Presenting Complaint:

She was admitted through the gynaecology clinic where she had complained of inability to conceive for 10 years.

Obstetrics and Gynaecological History:

She was Para 1 + 0 and had no living child. Her last delivery was in 1969 who died in the neonatal period. She had menarche at 15 years and had irregular periods, with oligomenorrhoea. She had no history of contraceptive use.

Past Medical History:

She had no history of major illnesses. She had no history of in-appropriate lactation.

Family and Social History:

She was a married housewife and lived with her husband in Nairobi. She gave no history of major illnesses.

There was no history of mumps, tuberculosis or genital infection. She had been married since 1973. Her husband worked as a guard with the Ministry of Transport. He had two children with another wife, the last born being about two years old.

Physical Examination:

She was in good general condition with a tendency to obesity. She was not pale and was afebrile and had no bilateral ankle oedema. Blood pressure 110/70 mmHg, pulse 84/min, temperature 36^{o}C. Respiratory system, cardiovascular system and central nervous systems were normal.

Abdominal Examination:

She was Obese, had a laparoscopy scar and no masses or tenderness were elicited. She had well developed breasts with no galactorrhoea.

Vaginal Examination:

External genitalia was normal. Cervix was healthy. Uterus was normal in size, anteverted and mobile. There were no adnexal masses and the pouch of Douglas was free. There was no vaginal discharge on examination finger.

Investigations carried out in the gynaecology clinic:

1. Haemogram - Haemoglobin - 13.1 gm/dl
   Haematocrit - 40%
2. Blood group - O Rhesus Positive

3. Kahn test - negative

4. Papanicolaou smear of the cervix:

Class I with no trichomoniasis or candindiasis.

5. Seminalysis: Volume - 2.5 mls.

pH - 8.0

Count - 200 x 10^6/ml

Motility - 55% progressive active motility.

Morphology - 80% normal forms.

6. Hysterosalpingogram.

Normal uterine cavity. Tubes not outlined probably due to cornual block or tubal spams.

7. Dye laparoscopy on 27.9.84

Pneumoperitoneum of about 2½ litres of CO_2 was introduced. Good view of pelvis obtained through laparoscope. Uterus was normal sized. Pouch of Douglas was free of adhesions. Right tube was normal looking with fimbrial block. Right ovary was normal. Left tube was normal with slightly distended fimbrial end. Left Ovary had a follicle. On dye instilation both tubes filled but no spill bilaterally. Endometrial curretings were taken for histology and for tuberculosis culture.

Report:

Histology showed scanty curretings with features

in keeping with hormonal imbalance. Tuberculosis culture showed no mycobacterium isolated.

Pre-operative investigations and preparation:

1. Haemogram
   - Haemoglobin - 12.9 gm/dl
   - Haematocrit - 39 %
2. Urea and electrolytes:
   - Na^+ - 135 mmol/l
   - K^+ - 4.4 mmol/l
   - BUN - 4.1 mmol/l

The patient was then explained about her condition and the type of surgery she was to undergo. She signed an informed consent. On the day of the operation (15.5.85) the patient was premedicated with 0.6 mg of atrophine and 50 mg of pethidine intramuscularly half hour before theatre.

Laparotomy and bilateral salpingostomy:

The patient was put under general anaesthesia and asceptic catheterization was done obtaining little clear urine. Examination under anaesthesia confirmed the earlier findings. Vaginal toilet was then done and the vagina was parked with sterile gauze to elevate the uterus.

The abdomen was cleaned and draped with sterile towels. Abdomen was then opened in layers through a lower midline incision.

Findings:

The uterus was normal sized. Both ovaries were normal. Both tubes were free but terminally blocked and appeared clab-chaped with a hydatid or Morgagne on each tube.

Cuff Salpingostomy:

The uterus was elevated by use of Chromatic catgut number two stitch to the fundus. Fine diathermy was used to open each clubbed end of the tube through a cruciate incision. The opened mucosal layer of the tubes were everted and rolled over the serosa. Monofilament nylon sutures number 6/0 were used to secure the cut edges to the tubal serosa with good haemostasis. A drip of normal saline was used to continously drip over the operation site to prevent accumulation of blood and blood clots. The abdomen was finally washed with normal saline and about 250 ml of normal saline was left in the pouch of Douglas to prevent further clot formation and future adhesions. The abdomen was then closed in layers in the usual way.

Post Operative Management:

The patient was observed half hourly in the recovery ward until she was fully awake after which she was taken back to the gynaecological ward. She was continued on intravenous fluids of 5% dextrose 500 ml to alternate with Hartman's solution 500 ml to run 6 hourly until she resumed good bowel action. Analgesia was provided with 100 mg pethidine intramuscularly 8 hourly for 48 hours. She was put on ampicillin injection 500 mg intramuscularly every six hours until she started to take orally when she was reverted to capsules for seven days. On the second day post operative bowel sounds were normal, she had passed flatus. Intravenous fluids were discontinued and she was started on oral sips and oral medicament.

On the 3rd post operative day, check haemoglobin was 13.0 gm/dl. She did well post operatively and all stitches were removed on the seventh post operative day. The wound was well healed and she was discharged to attend gynaecology clinic on the 9.7.85.

Gynaecology Clinic Visit:

She was seen on 9.7.85 in the clinic. She was in good general condition and had no complaints. She had been amenorrhoic since the time of the surgery. Pregnancy test was requested for and bloods were taken for Hormonal assay.

Pelvic examination was normal and a possibility of using fertility drugs after reports of the above investigations was entertained. The patient was counselled appropriately.

Comments:

Infertility may be tragic in any Society. It is particularly so in rural Agrarian Societies in which economic survival, social status, and welfare in old age depend upon children. It most directly affects the female partner who is generally considered responsible in matters of reproduction. For her, failure to conceive may mean a ruined life. Pharmacopea of every traditional healer, witch, and magician is packed with charms and medications designed to restore fertility to the infertile (1).

Infertility is defined as failure to conceive after a year of co-habitation and exposure to pregnancy (1). Either the husband or the wife or both may be responsible although women will often shoulder the blame.

The prevalence of infertility world wide is between 5 - 15%. The World Health Organization scientific group on Epidemiology of infertility estimate that, infertility rate may be as high as 30% in sub saharan countries. In Kenyatta National Hospital, about two thirds of the patients attending gynaecology clinic complain of infertility (2, 3). Kenya is reported to have one of the highest birth rates in the world. Ironically, it has a very high rate of infertility which is a major public health concern (5).

The causes of infertility were many and can be either female or male in origin. They can be classified as cervical factors, tubal factors, ovulation defects, implantation defects and male factors (1, 3). In Kenya the single most common cause of infertility is tubal blockage. This occurs as a result of pelvic inflammatory diseases (1, 2, 3, 4). Mati et al (2) found that 76% of females with primary infertility had bilateral tubal occlusion. He also found that of those female with infertility due to tubal blockage, all had evidence of proceeding pelvic inflammatory disease. Similar results were found on studying females with secondary infertility. 73% of these women had bilateral tubal blockage and all showed evidence of pelvic inflammatory disease (3). Pelvic inflammatory disease is therefore the most common cause of tubal occlusion and therefore infertility. The patient presented had both tubal factors and hormonal factors affecting her fertility.

A number of organisms are associated with pelvic inflammatory disease. The most blamed organism is Neisseria gonorrhoea. Carty et al (4) observed that the incidence of gonorrhoea in Kenya and other East African countries was high. He found that gonococcal infection was responsible for acute pelvic inflammation in 75% of the patients. This suggested that the primary lesion in the pathogenesis of ectopic pregnancy and infertility was in the majority gonococcal salpingitis.

In recent years other organisms have been associated with causing pelvic inflammatory disease and therefore infertility. These organisms include Chlamydia trachomatis, mycoplasma species Haemophilus species and group B streptococcus. It was found that the most common cause of salpingitis in Sweeden was Chlamydia trachomatis, responsible for 40-60% as compared with gonococcal salpingitis which was responsible for about 15 - 18% of the disease (6). Other associated factors include intrauterine contraceptive device (IUCD), Post partum and post abortal sepsis.

The patient presented had secondary infertility and had bilateral, terminal tubal occlusion. She had not used any contraceptives. She gave no history of previous pelvic inflammatory disease. It is possible that she may have had post-partum sepsis as she had unexplained neonatal death. The presence of chronic or acute pelvic inflammatory disease at some time could not be ruled out.

As far as male factors are concerned, Mati, et al in 1979 showed that only 48% of specimens were normal in all parameters (5). The spouse of the patient presented had two children by another wife. The last born was only two years old. Seminalysis revealed normal findings.

In this unit the couple is investigated as a unit. It takes two of the opposite sex to make a baby. It is the practice in the unit to evaluate, all the patients

complaining of infertility, through history and physical examination. The appropriate type of investigations are then carried out. Papanicoloau smear is routinely done to screen out dysplastic changes. Hysterosalpingogram (HSG) is done on all the patients. In those patients complaining of mentrual disorders, other investigations are done including, hormonal assaying, visual fields x-ray of the pituitary fossa. Our patient had such investigation done. The results were not available at the last visit. Husbands are screened for abnormalities of the seminal fluid. After the results of these investigations, decision is made to do dye laparoscopy. This investigation determines those who will benefit from further surgery in cases of tubal pathology. In cases where, no pelvic or hormonal pathology is found, the patient is referred to the special infertility clinic or for further investigation which include post-coital test, etc.

The patient presented showed evidence of tubal pathology on HSG which was confirmed by dye laparoscopy. It was thought that she would benefit from further surgery. Tubal surgery is indicated in patients with

- Minimal involvement of the tubes.
- Few peritubal adhesions causing Kinking of the tube.
- Fimbrial occlusion shown by dye swelling up the tube at hydrotubation.

The patient satisfied the above criteria and salpingostomy was done. She had not achieved pregnancy by the last time she was seen at the gynaecology clinic. Silber, J.S. (1980) reported pregnancy rate of 50 - 80% after microsurgery of the tube. In this unit, facility for microsurgery is unavailable and success rates are low. Laucitsen et al (7) found pregnancy rates of only 10% on repeat tuboplasties using microsurgery. He further found that 84% of patients with repeat tuboplasties showed at least one patent tube at post operative HSG.

This emphasized the fact that surgical restoration of tubal patency does not necessarily imply restoration of function. Function may be lost due to mucosal lesions such as flattening of folds and deciliation most of which are not reversible.

In our environment, infertility is a great problem. Efforts must be made at public health education in prevention and/or early adequate treatment of sexually transmitted diseases. Illegal abortions should be discouraged.

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7. RUPTURED AMPULLARY ECTOPIC PREGNANCY

LEFT PARTIAL SALPINGECTOMY

Name	-	Miss A.K.M.	LMP	-	1.3.88
Age	-	35 years	Amenorrhoea	-	8 weeks
Parity	-	0 + 0	Date of Admission	-	29.4.88
Ip. No.	-	892929	Date of Discharge	-	6.5.88

Presenting Complaint:

The patient was admitted through the casualty department with a history of sudden onset of abdominal pain since 11.00 a.m. of the day of admission. She also complained of fainting attacks and a cold-sweat. She had no history of vaginal bleeding.

Obstetrical and Gynaecological History:

She was para 0 + 0. Her last menstrual period was 1.3.88. therefore she had an amenorrhoea of 8 weeks. She attained menarche at 15 years of age. The periods were regular bleeding for 3 to 4 days every 28 - 30 days and of moderate flow. She had no dysmenorrhoea and had not used any contraceptives.

Past Medical and Surgical History:

She had never been hospitalized before for any illness. She had never been treated for venereal disease.

Family and Social History:

She was divorced because of inability to conceive. She worked as a housemaid. She did not take alcohol or smoke cigarettes.

Physical Examination:

She was in a fair general condition. She had moderate pallor and was afebrile with a temperature of 35.5^{o}C. She had no pitting leg oedema or jaundice.

Cardiovascular System:

The pulse rate was 106 per minute, regular and of low volume. Both heart sounds I & II were heard and were normal.

Respiratory System:

The respiratory rate was 28 per minute not laboured. The air entry was normal and equal on both sides. There were no added breath sounds.

The central nervous system was within normal limits.

Abdominal Examiantion:

The abdomen was distended suprapubically. There was tenderness and guarding over the area with rebound tenderness. There were no palpable masses. Shifting

dullness was demonstrable in the flanks.

Pelvic Examination:

The external genitalia were normal. The cervix was nuliparous,long and the os was closed. Cervical excitation test was positive bilaterally and the adnexas were very tender. The pouch of Douglas was full and there was fullness in the vesico-uterine pouch. The size of the uterus was difficult to delineate due to tenderness. There was bloody discharge on the examining finger.

Abdominal paracentesis was done in the left iliac fossa with patient lying supine and slightly turned towards the left side and 2 ml of altered non-clotting blood was obtained.

Impression:

A diagnosis of ruptured ectopic pregnancy was made.

Management:

The patient was planned for an emergency laparotomy. Blood was taken for grouping and crossmatch and an intravenous line was started with 5% dextrose 500 ml alternating with normal saline 500 ml every six hours. The condition was explained to the patient and she signed an informed consent and was prepared for the operation.

She was premedicated with atropine sulphate 0.6 mg intramuscularly half hour before being taken to the theatre.

Laparotomy:

Patient was put under general anaesthesia. In semilithotomy position, vulvo-vaginal toilet was done and the bladder was catheterized, obtaining clear urine. Examination under anaesthesia confirmed the earlier findings. The uterus was about 8 weeks in size and there was an illdefined mass in the left adnexa measuring about 5x5 cm.

The patient was now put in supine position. Abdomen was cleaned and draped with sterile towels and then opened in layers through a lower midline incision.

Findings:

Haemoperitoneum consisting of old and fresh blood clots measuring about 500 ml were evacuated. There was a ruptured ampullary pregnancy in the left fallopian tube with products of conception extruding into the pelvic cavity. Blood was oozing from the ruptured site.

A haemostatic clump was applied on the tube and the mesosalpinx proximal and distal to the ectopic preganncy to stop the bleeding. Blood clots were evacuated and blood was sucked out. Partial salpingectomy was

performed and haemostasis achieved. The total blood loss was estimated to be 500 ml. The ovaries on both sides were normal and healthy. The right tube had fimbrial adhesions but looked grossly normal, the uterus was slightly bulky but grossly normal. The abdomen was cleaned with normal saline. It was then closed in anatomical layers.

Post-Operative Period:

Recovery from anaesthesia was uneventful. She was given 5% dextrose 500 ml alternating with normal saline 500 ml 6 hourly for 24 hours. Analgesia was provided with pethidine injection 100 mg intra-muscularly hourly until she resumed oral feeds when she was put on ampicillin capsules, for a total of 7 days.

On the second post-operative day she had normal bowel sounds and was passing flatus. She was started on oral sips and oral medication. Intravenous fluids were discontinued. Vital signs remained stable, throughout the period of observation.

On the third post operative day the patient was up and about. A check haemoglobin done on the 3rd day was 10.5 gm/dl. She was discharged home, on the seventh post operative day after removal of the stitches: to come back to the gynaecology clinic.

She was seen in the gynaecology clinic after 3 months. She was in good general condition. She was not pale and had had her menses.

Comments:

Ectopic pregnancy is potentially the gynaecologist most critical emergency. 95% of ectopic pregnancies occur in the tube. Other sites include the ovary, broad ligament, elsewhere in the peritoneal cavity. It may also occur in the uterus:- Intra-mural, cervical, or rudimentary horn of the uterus (1, 2, 3, 4).

The patient presented had ectopic pregnancy in the left fallopian tube.

The incidence of ectopic pregnancy varies from place to place depending on the community studied. In the United Kingdom an incidence of 1 per 300 - 1000 intrauterine pregnancies has been reported while in the West Indies an incidence of 1 per 28 intrauterine pregnancies has been reproted (1, 2, 3). In Kenya, Maley and Auma reported an incidence of 1 per 132 births (5). Mwathe reported an incidence of 4 - 5 per week at the Kenyatta National Hospital (7).

The aetiology of ectopic pregnancy is multifactorial but the commonest cause is chronic inflammatory disease that has involved the tube. Gonococcal salpingitis and tuberculous salpingitis have been reported as frequent factors assocaited with ectopic pregnancy (1, 2, 3). Maley and Auma (6) found that 35% of ectopic pregnancies in their series had associated inflammatory disease. They

development (1, 3, 4).

The presented patient had a left ampullary ruptured ectopic.

The diagnosis of ruptured ectopic pregnancy is essentially clinical. There is usually a sudden onset of acute abdominal pain and the patient may have amenorrhoea of five weeks or more. This may be followed by syncope. Walton and Were (4) found that majority of patients with ruptured ectopic pregnancies presented at a gestation of 5 - 8 weeks. 2% had no history of amenorrhoea, 27% had amenorrhoea of 9 - 12 weeks and only 6% had amenorrhoea of 13+ weeks.

The patient presented had amenorrhoea of 8 weeks and presented with typical symptoms of ruptured ectopic.

The management of ruptured ectopic pregnancy is an emergency laparotomy. The aim is to stop the bleeding as fast as possible and blood replacement if necessary.

In this unit the hospital stay depends on the post operative condition of the patient. Most are discharged on the third post-operative day. Other centres have reported an average hospital stay of about 4 - 8 days. Loffer (5) reported good results of outpatient management of ectopic pregnancies. Patients without complication had a maximum hospital stay of between 3 to 6 hours, the time it took the patient to recover adequately. The

majority of the patients, however, had unruptured ectopic and only one had ruptured ectopic. In our set up where patient seek medical attention late diagnosis of unruptured ectopic is very infrequent. The outpatient management of ectopic pregnancy may not be realized in the very near future in this set up.

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8. CARCINOMA OF THE OVARY STAGE IV: TOTAL ABDOMINAL HYSTERECTOMY + BSO AND PARTIAL OMENTECTOMY

Name	-	Mr. H.H.	LMP	-	24.8.88
Age	-	50 years.	LD	-	1981.
Parity	-	9 + 1	Date of Admission	-	15.8.88
Ip. No.	-	914847.			

Presenting Complaint:

The patient was admitted through the casualty department as a referral from Wajir District Hospital. She complained of a painful progressively growing lower abdominal swelling for two years. She had no menstrual irregularity.

Obstetrical and Gynaecological History:

She was para 9 + 1 and had only two living children. Most of the other children died during infancy due to unknown causes. Her last delivery was seven years ago and the baby died at two years after a febrile illness. Her menarche was at 16 years of age after which she had normal regular painless menstruation. Her menstrual cycles were of 28-30 days and the blood flow was moderate in amount and last 5 days.

Past Medical History:

There was none contributory.

Family and Social History:

She was a married housewife who lived in Wajir District with her family. Her husband worked as a business man at Wajir town. She did not drink alcohol or smoke cigarettes and had no family history of major illnesses like tuberculoses or diabetes.

Physical Examination:

Mrs. H.H. was in a fair general condition. She was not pale and was afebrile with a temperature of 36^{o}C. She did not have pitting leg oedema and the lymphnodes were not enlarged. She had no jaundice or cyanosis. Her blood pressure was 120/70 mmHg, pulse 92 per minute and a respiratory rate of 22 per minute.

The cardiovascular system, the respiratory system and the central nervous systems were within normal limits.

Abdominal Examination:

There was a cystic non tender mass about 22 weeks size arising from the pelvis. The mass was freely mobile and there was no evidence of free peritoneal fluid. The liver and the spleen were not palpable. There were no other abdominal masses.

Pelvic Examination:

Her external genitalia were normal and the vaginal

walls had septic sports. There was a mild degree of cytocoele. The cervix appeared grossly normal, was firm and the os was closed. The uterus was normal sized and was separate from the mass. The adnexa and pouch of Douglas were free.

Investigations:

1. Haemogram - Hb - 14.1 gm/dl
   - Haemotocrit - 40.5%
   - Platelets - 242 x 10^9/L
2. Blood urea and electrolytes
   - Na^+ - 130 mmol/l
   - K^+ - 4.3 mmol/l
   - BUN - 4.7 mmol/l
3. Pap smear - Class II.
4. HIV test - Eliza Negative
5. Ultrasound report: - There is a mass of mixed echo pattern arising from the pelvis more to the right with septations and debri within it, ovarian tumour.
6. Pregnancy test - Negative.
7. Blood group O 'D' positive.

Diagnosis:

An impression of malignant ovarian cyst was made.

Management:

Decision to perform a laparotomy was made and the patient was prepared the usual way. An informed consent was obtained and two pints of compatible blood were requested for and were available during the day of surgery. She was premedicated with atropine sulphate 0.6 mg and pethidine 100 mg intramuscularly half hour before the operation. She was wheeled into the operation theatre on 26.9.88 at 9 a.m. and was put under general anaesthesia. The abdomen was opened the usual way and a large ovarian cyst about 15x15 cm in diameter was found. The capsule of the cyst appeared intact. There were tumour seedlings in the periotoneal cavity and the liver and the omentum were both involved. The para aortic nodes did not appear enlarged and there was minimal ascites. After abdominal exploration, total abdominal hysterectomy and bilateral salpingo oophorectomy plus partial omentectomy was done. Haemostasis was acheived and the abdomen was closed in layers after instruments and swabs counts were reported correct. The tissues were sent for histopathological analysis.

Post Operative Period:

She had uneventful post operative period and the haemoglobin was 12.8 gm/dl. The wound had healed well by the seventh post operative day and all stitches were removed. History of the tissues was reported as:-

Left ovary - mucinous cystedenocarcinoma of borderline neoplastic potential. Right parametrium and omentum show metastatic deposite of pseudomyxoma peritonii.

The definitive diagnosis was cystadenocarcinoma of borderline potential (pseudomyxa peritonii) of the ovary stage IV.

The decision to start the patient on chemotherapy was made and the patient was transferred to the gynaecologic oncology for the therapy. She was to be started on alkeran 1 mg/kg body weight once a month for one year. A second look operation may be necessary depending on the response to the drug.

Comments:

In the developed countries ovarian cancer is the number one killer of women among all the gynaecological cancer. This is thought to be because most of the ovarian tumours are discovered late when the prognosis is poor (2, 6).

In the developing countries including Kenya, the whole range of ovarian tumour pathology is encountered but the frequency is much less in Sub-Sahara Africa than in the developed countries (1, 2). In Kenya ovarian carcinoma is the third most common female genital tract malignancy after carcinoma of the cervix and choriocarcinoma (2).

Many aetiologic factors have been associated with ovarian neoplasms and these include industrial chemicals for example talc and asbetos, low parity and high social class. Pregnancy and oral contraceptives have been suggested but the evidence is not conclusive. The patient presented was para 9 + 1 and had never used contraceptives.

The clinical presentation of ovarian tumour is as variable as the tumours themselves. All age groups are affected. Although in Kenya the gonadal stromal tumours are more common in peri-menopausal period, our patient had mucinous cystadenocarcinoma and she was perimenopausal

(1, 2). About 30-40% of the patients complain of abdominal swelling which may or may not be associated with pain. This is well illustrated in our patient who noticed a pregoressively growing abdominal swelling over a period of 2 years. Vaginal bleeding abnormality is another mode of presentation. Definitive diagnosis is usually made at laparotomy as was the case with our patient.

Diagnostic aids include, ultrasonography, computerized axial tonography, laparotomy, immunodiagnosis, fetal and tumour associated antigens.

Mucinous tumous account for 15% of all primary ovarian carcinomas and only about 10% are bilateral. The rest are found unilaterally (6). Less than 20% of ovarian mucinous tumours are malignant. Among these, half of them are of borderline malignancy. Our patient belonged to this group.

The management of the disease is by total abdominal hysterectomy and bilateral salpingo-oophorectomy. This is done both as a curative and diagnostic procedure. Otherwise as much debulking of the tumour as possible is done. After surgery, chemotherapy or radiotherapy may be given to the patient. In our set up, cytotoxic drugs, that is, melphalan has been used very effectively in a dose of 1 mg per kilogram body weight monthly for one year. This is the mode of management which was applied to our patient.

While on chemotherapy, blood haemogram is done before and after the drug is given to detect any evidence of myelodepression or leukaemoid reaction. The prognosis for these patients is usually good with reported 5 year survival of between 50 - 90& (2, 6).

Prevention of ovarian tumours is not possible at present. Effort should be made towards early diagnosis and early treatment. This requires for both the physician and the patient to have a high suspicious index. Although tumour markers are available, none is specific for ovarian tumours. Unless improvement on early diagnosis is done, ovarian carcinoma is going to be the leading cause of death in women for a long time.

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9. GRAND MULTIPARITY MINILAPAROTOMY

BILATERAL TUBOLIGATION

Name	-	Mrs. M.W.	Parity	-	6 + 0
Age	-	35 years	Admission	-	5.11.86
Ip. No.	-	781800	Discharge	-	5.11.86

Presenting Complaint:

She was booked to the Rahimtulla Wing Clinic as a referral from the post-natal ward for interval surgical sterilization. She had requested to have BTL as she felt she had had enough children. She had no other complaints.

Obstetrical and Gynaecological History:

She was para 6 + 0. All the children were alive and well. The previous deliveries had been uneventful. She had not resumed menstruation after the last delivery, which was on 19.4.86, as she was still breastfeeding. She attained menarche at 15 years of age. She had had regular periods lasting 3-4 days with cycles of 28 to 30 days. The flow was normal and painless. She used the pill (microgynon) from 1981 to 1985. She discontinued because she developed hypertension. She conceived before she thought of starting another method.

Past Medical and Surgical History:

There was nothing contributory.

Family and Social History:

She was a married housewife. She had no family history of major illnesses. She did not smoke cigarettes or take alcohol. She lived with her husband and children in Nairobi.

Physical Examination:

She was in a good general condition, not pale, was afebrile with a temperature of 36^{o}C and had no pitting leg oedema. The pulse rate was 80 per minute, blood pressure 130/80 mmHg, and respiratory rate 20 per minute.

The cardiovascular, respiratory and central nervous systems were within normal limits.

Abdominal Examination:

The abdomen was soft, not tender and no masses were palpated.

Pelvic Examination:

She had normal external genitalia. Vaginal walls were normal. Cervix looked healthy on speculum examination; and a papanicoloau smear was taken. The uterus was normal sized and anteverted. The cervical os was closed. The uterus was freely mobile. The adnexae and pouch of Douglas were free.

Impression:

A diagnosis of grand multiparity for interval sterilization was made.

Investigation:

-	Papanicoloau smear	- Calss II
		- No Trichonomas seen
		- No candida albicans seen
-	Urinalysis	- Normal findings. There was no urine sugar or proteins.

Preparation for Interval Tuboligation:

The patient and her husband had been counselled on the method while in the postnatal ward. The emphasis was put on the irreversibility of the method and the fact that other sexual functions would not be affected. They did not want any more children. They had accepted the method and given informed consent for surgical sterilization. She was booked for operation on 5.11.86. She was instructed on the procedure to follow prior to admission. She was to starve from the midnight, and shave the lower abdomen, the mons pubis and the perineum. She was advised to report for the operation accompanied by somebody to escort her home after the surgery.

She reported promptly on 5.11.86 with an escort.

She had observed the instructions given earlier on. She was examined by the surgeon who found that she was in good general condition and all the systems were normal. She was explained the procedure again and she gave consent for administration of the anaesthetic agents. She was premedicated with intramuscular injection of atropine sulphate 0.6 mg half hour before being taken to the theatre.

Operation:

She was placed in supine position on the operating table. She was sedated with pethidine 100 mg and diazepan 20 mg intraveously. She was then placed in lithotomy position. The abdomen was cleaned and a vulvo-vaginal toilet done using aseptic procedure. The vulval area and the abdomen were draped with sterile towels. The bladder was catheterized and the uterine manipulator inserted and fixed to the volsellum forceps. The volsellum had been placed on the anterior lip of the cervix. The assistant used the uterine manipulator to elevate the uterus which made a bulge suprapubically. This area was infiltrated with procaine hydrochloride from the skin inwards. The area corresponded to about 2 cm from the pubic symphsis. A 3 cm transverse incision was made and deepened until the rectus sheath was visible. The abdomen was then opened in the usual way. With the assistant using the manipulator to elevate the uterus, a hook was used to fish out the right tube. The

tube was sprinkled with procaine hydrochloride. It was lifted to form a loop. Using chromic cat-gut number one on a round bodied needle tuboligation was done by tying the proximal and distal parts separately then together. The redundant loop was excised. The procedure was repeated on other side. The method used was Pomeroy's method. Both sides were re-examined for evidence of bleeding. Haemostasis was well achieved. The abdomen was closed in layers and the wound dressed.

She was sent to the recovery ward and three hours later she was fully awake. Vital signs were normal. She was discharged home to come back seven days later for the review and removal of stitches. On the seventh day after operation the wound had healed nicely and she was in excellent condition. She had not resumed menstruation as she was still breastfeeding. The stitches were removed and she was discharged from the clinic.

Comments:

Sterilization of a woman usually refers to a surgical procedures designed to prevent the union of the spermatozoa and the ovum. They may be directed to the uterus, tubes, or the ovaries. Primary sterlization procedures are usually done on the fallopian tubes. However, steriliza-tion may result from any operation that removes any or all of the other internal genital organs. Such operations would include total hysterectomy, bilateral oopherectomy or bilateral salpingectomy for any reason other than sterilization (1). The presented patient had primary sterilization done on the fallopian tube.

Sterilization of a patient as a deliberate operation is always a serious decision, and any surgeon who performs this operation is advised to observe procautions similar to those taken when terminating a pregnancy. Similar motives and similar indications frequently exist (2).

It is the duty of the obstetrician and gynaecologist to provide adequate counselling. This may be done through the intermediary of the hospital family planning officer, or the patient's general practitioner (2).

In this unit, counselling is provided by the family planning officers to those patients who are not pregnanct and who seek advise from family planning clinics. It is also provided by the obstetrician attending the patient

during the antenatal period. The matter is raised at the antenatal clinic and the method is explained to the patient. She is given the consent form which has been read for and explained to her. She goes home with the form and is advised to discuss the matter with the spouse or relevant relatives. If there are any more questions, she is advised to bring the spouse or the relatives during the next clinic visit so that they can be counselled together. With a signed consent form the operation is done soon after delivery. The obstetrician also provides counselling during the immediate postpartum period in situation where patients did not attend the antenatal clinic but came to the hospital only for delivery. In this situation the patient is usually encouraged to have interval tuboligation. This is because it has been found that often patients who sign for tuboligation during the intrapartum or immediate post-partum period change their minds later and tend to have more complications (1).

The patient presented was a non-clinic attendant. She was counselled while in the post-natal wards and was booked for interval tuboligation. She availed herself promptly and had tuboligation done after which she made excellent recovery.

Sterilization was initially offered to the patients with medical or obstetric problems which may be made worse by pregnancy or for which another pregnancy would

not be recommended. Today it is offered to any female who does not need further child bearing. The method is used widely because it gives permanent proteciton against pregnancy.

The indication for sterilization is in the majority, limitation of family size. Studies have shown that in western countries the mean parity at sterilization has been falling from 6.5 in the 1960s to 3.5 in 1980s (1). In our set-up no data exists to show the trend of family size. However, the general observation is that most people opt for family size of 4 to 6 children. Our patient had 6 living children at the time she had bilateral tuboligation done.

Tuboligation should not be considered as an innocuous procedure. It is associated with a certain degree of morbidity and mortality. The basic risk factors involved are pulmonary embolus, subsequent ectopic pregnancies and psychiatric disturbances in the unstable personalities (1). Berger et al (4) found luteal phase deficiency in patients who needed reversal of sterilization as compared to the normal findings in patients with tubal blockage causing infertility. Our patient had no immediate complications and it is hoped that since she had counselling together with the husband she may not have psychiatric problems.

A number of methods for tuboligation exist but the Pomeroy method is the one widely used and has stood the test of time. This is the method commonly used in this unit when minilaparatomy is done. The operation done on this patient was similar to that described by Pomeroy (1,2).