# OBSTETRIC AND GYNAECOLOGY

# CASES AND COMMENTARIES

A dissertation Submitted in partial fulfillment of the requirements for the degree of Masters of Medicine in Obstetrics and Gynaecology of the University of Dar es Salaam (2000).

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**MD (KHARKOV) 1986.**

## DECLARATION

I SOLEMNLY DECLARE THAT TO THE BEST OF MY KNOWLEDGE THIS DISSERTATION HAS NOT BEEN SUBMITTED BY ANY BODY AT ANY UNIVERSITY FOR THE AWARD OF ANY DEGREE.

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## DEDICATION

I DEDICATE THIS DISSERTATION TO MY WIFE ROBINA,

AND MY CHILDREN BAHATI, FARAJA AND NZEIMANA.

DR. NZOMUKUNDA, Y.S.M.

## ACKNOWLEDGEMENTS

I wish to express my sincere gratitude and appreciation to Prof. E.J.N. Urassa for his Supervision, criticisms and encouragements during the preparation of this dissertation. Despite of his many responsibilities as Head of the Department he still could divide his limited time to go through this manuscript.

I am grateful and indebted to all my teachers in the various firms of the department. Through various means of communication and interactions I have gained a lot of new knowledge from their skills and experiences.

I would like to thank Mr. Makwaya, Mr. Kazaura Ms. Rose and Ms. Candida of the department of Epidemiology and Biostatistics for assisting me in Epidemiological and statistical matters in the Long Commentary study. Additional thanks are deserved by Colleagues and friends for their moral support and Mrs. H. Matimbwa who was kind enough to do ever-tiring Secretarial Services to the final production of this manuscript.

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**ABSTRACT:**

This dissertation consists of three parts. Both part one and two each made up of 10 obstetrical and 10 gynaecological cases and commentaries respectively. All these 20 case reports and commentaries were managed by the author under supervision of senior staff members in the department. For each case a thorough history, examination, investigations, and treatment have been narrated. Cases were managed according to standard management protocols, though investigations at times were not exhaustive because of limited facilities. After each case there is a commentary followed by relevant references.

The third part consists of research paper on Fetal movement count and outcome of pregnancy at Muhimbili Medical Center, Tanzania. This was an observational descriptive study. The study described the use of fetal movement count for surveillance of high risk pregnancies. The mean gestation age for fetal movement count was 34.8 weeks. Patients with reduced fetal movement count were 24 (16.9%) and out of these 22 (91.6%) were delivered by intervention. There were 5 (20.8%) still births and 2 (8.7%) had severe birth asphyxia. This was lower than in the group with no reported reduced fetal movements 16 (13.6%). The FMC was able to pick the most severely forms of birth asphyxia, and the results were statistically significant. $p = 0.03$.

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**OBS No.1: SEVERE EPH GESTOSIS WITH IMPENDING ECLAMPSIA IN A GRAND MULTIPAROUS. DELIVERY BY LOWER SEGMENT CAESAREAN SECTION AND SURGICAL STERILIZATION OF TUBES**

Name: Mrs. E.J.

Age: 38 years.

Residence: Tabata

Date of admission: 7.11.97

Delivery No: 15849

**SUMMARY:**

Mrs E.J. was gravida 7 para 5 + 1. She was admitted in the labour ward from home at the gestation of 37 completed weeks, because of elevated blood pressure with signs and symptoms of impending eclampsia. Proteinuria was heavy 3+. Pelvic examination revealed an unfavourable cervix. Diagnosis of severe EPH gestosis at 37 completed weeks with impending eclampsia was made. Supportive treatment with Hydralazine 10mg and Valium 10mg intravenously were given to lower the blood pressure and prevent convulsions. In view of the aforementioned, caesarean section was considered as the only certain way of terminating pregnancy safely. She was counselled and signed an informed consent, in addition she requested

for permanent sterilization. She was delivered by lower segment caesarean section of a 3.050Kg female baby with apgar score of 9 in the first minute and 10 in five minutes. Bilateral tubo-ligation was done. The management of multiparous women with severe EPH gestosis is discussed.

**Index Pregnancy:**

She had booked for antenatal care at Tabata MCH clinic at the gestation of 28 weeks. Her last normal menstrual period had started on 15.2.97 and therefore the calculated date of delivery was supposed to be on 22.11.97. She had four subsequent visits. The blood pressure was checked only twice in her last 2 antenatal visits and it was found to be 140/90 and 160/110 respectively. Urine for albumin was not checked. There was no remarkable change in her body weight. The booking haemoglobin was 85%. Serological test for syphilis and determination of blood group and Rh factor were not done. She was referred from peripheral clinic to Muhimbili Medical Center at the gestation of 37 completed weeks because of raised blood pressure of 180/130 mmHg, with signs and symptoms of impending eclampsia. On admission proteinuria was heavy 3+, she was transferred to the labour ward for immediate delivery.

**Past Obstetric history:**

She was gravida 7 para 5 + 1. All were spontaneous vaginal deliveries at the hospital. She had no complications in all her deliveries. She had no history of raised blood pressure in the previous pregnancies or in between pregnancies.

**Menstrual and Gynaecological History:**

She attained Menarche at the age of 14 years. She had regular 28 days cycle with a flow of 3 - 4 days. She had uterine evacuation due to incomplete abortion in 1995 with no complications. She denied history of abnormal vaginal discharge, abnormal vaginal bleeding or dyspareunia. She had no history of contraceptive use.

**Past Medical history:**

She had never been treated for hypertension in the past. There was no history of Diabetes mellitus, urinary tract infection or renal disease.

**Family and Social history**:

She was married. The husband was employed as a watchman. There was no history of hypertension, diabetes mellitus or bleeding disorders in the family.

**Physical Examination:**

The patient was conscious, moderately pale, not cyanosed and not jaundiced. She had no lymphadenopathy or pedal oedema.

**Cardiovascular System:**

She had a blood pressure of 180/130mmHg and her pulse rate was 100 beats per minute, regular and of normal volume. On inspection there was no pericardial heave and no cardiomegally on percussion. The heart sounds were normal and there were no murmurs.

**Respiratory System:**

She was not dyspneic and her respiratory rate was 22 breaths per minute with normal vesicular breath sounds.

**Central Nervous System:**

The patient was oriented to time, place and person. She had blurred vision but no fits or lateralizing signs. There was no neck stiffness and reflexes were normal.

**Abdominal examination:**

The abdomen was uniformly distended. The spleen, liver and kidneys were not palpable. The fundal height corresponded to 36 weeks of gestation. The fetal lie was longitudinal with cephalic presentation and the level was 5/5. The fetal heart rate were 140b/m and were regular. The estimated baby size was 3.0Kg and the liquor was adequate.

**Pelvic Examination:**

The vulva and vaginal mucosa were normal. The cervix was thick, 2.5cm long and closed. The pelvic capacity was estimated to be adequate.

**Diagnosis**:

Severe EPH gestosis at term with impending eclampsia in grand multipara with unfavourable cervix.

**Plan of Management:**

1) Intravenous Hydralazine 10mg start were given

2) Intravenous Valium 10mg start were given

Misoprostol, and Consult your C/S

Not good, give $MgSO_4$ 4g /20cc N.S 10–15 minutes then 4g /500cc N.S 4hrly.

damage the bladder and bowel underneath. The cut edges of the peritoneum were grasped by artery forceps and peritoneal incision was enlarged downward and upwards with the scissors under direct vision while the assistant lifted up the abdominal wall. The loose utero-vesicle peritoneum was picked up with a pair of non toothed dissecting forceps and incised transversely. This was aided by the assistant moving the retractor from side to side.

The lower peritoneal flap was pushed downwards and away from the site of incision of the uterus using swab on a stick, thereby mobilizing the bladder downwards and away from the site of incision of the uterus. It was held in this position by application of Doyern's retractor. A crescent shaped incision was made on the lower segment by stroking gently with the knife over a length of 2 to 3cm and cutting down to the amniotic membrane and the incision was extended laterally by means of curved scissors using the fore finger of the left hand as an elevator. The membranes were ruptured and clear liquor sucked out. The surgeon's right hand was inserted below the fetal head and scooping the fetal head out of the pelvis. The upper part of the fetal trunk was then extracted by hooking the finger into the nearest axilla delivering the shoulder and the arm. This was repeated on the other side. The mouth and nostrils were cleaned of mucus, blood and liquor with sterile gauze. The cord was clamped twice and cut between the clamps. The baby was handed over to the midwife. Oxytocin 5iu was given intravenously immediately after delivery of the baby. Green Armittage forceps were applied to the upper and lower

edges of uterine incision so as to occlude the most significant sites of haemorrhage. Placenta and membranes were delivered easily by controlled cord traction. No abnormality of the cord was detected and the placenta was normal. The uterine cavity was mopped with warm sterile abdominal pack, to control bleeding from bleeding sinuses on the placental bed. The uterine wound was repaired in two layers. The inner layer was repaired by continuous locking suture of chromic catgut No. 2, starting from just beyond the lateral margin of the wound by a figure of eight knot, finishing also beyond the edges. The second layer was closed by a non locking continuous stitch in such a way it completely buried the first layer. The utero-vesicle peritoneum was repaired with chromic catgut No.0 in a continuous stitch. The ovaries and tubes were inspected and were healthy. Bilateral tubal ligation was done by Pomeroy's method. The right tube was grasped with a Babcock clamp at about the middle. The loop of the tube was held up and ligated with No. 1 chromic catgut. The loop was then cut off with a scalpel. The same was repeated on the opposite side. The abdomen was mopped dry after the swab and instrument counts were pronounced correct. The abdomen was closed in layers with chromic catgut No.2/0 to peritoneum by continuous stitch, Vicryl No. 2 to rectus sheath by interlocking stitch and Nylon No. 0 to skin by interrupted stitch. The vaginal toilet was done. The blood loss was estimated to be 500mls. The delivered baby which was female weighed 3.050kg and scored an apgar of 9 in the first minute and 10 at 5 minutes.

of high parity and this was the first time she had raised blood pressure while pregnant. The possiblity is that she had asymptomatic essential hypertension which was still undetected, with a subsequent superimposed preeclampsia. The management of a pregnancy complicated by hypertension is determined by effects of the disorder on maternal and fetal well being rather than pathophysiology[1,3]. Delivery of the fetus and the placenta always reverses the problem as was seen in this patient. In severe pre-eclampsia the prime objectives are to fore stall convulsions, to prevent intracranial haemorrhage, serious damage to other vital organs and to deliver a healthy infant[4]. Magnesium Sulphate is used to prevent and control eclamptic convulsions although there is controversy about the way it acts. Magnesium ion is considered to be natures physiological calcium blocker. This would explain its ability to effect both drug induced responses and tone of peripheral and cerebral vascular smooth muscle. Until recently treatment of eclampsia varied throughout the world. A large Multi center study has shown that Magnesium sulphate is superior to both Phenytoin and Diazepam in the management of eclampsia. However the situation is less clear for seizure prophylaxis in a pre eclamptic women[4,5]. Aspirin in low dose has been proposed as a means of preventing preeclampsia on the grounds that both hypertension and coagulative abnormalities are in part a result of an imbalance between vasodilating and vaso-constricting prostaglandins. Although initial single center trials indicate a substantial risk reduction and prompted the wide prophylactic use of Aspirin, subsequent larger trials failed to disclose beneficial effects[6]. Delivery

may be in the form of induction if the cervix be ripe, or by caesarean delivery either as a primary approach or following a failed oxytocin induction. Caesarean section is not the standard approach to the management of pre-eclampsia. This approach was more favourable in this patient who had unfavourable cervix, because it is the only certain way of rapidly terminating the pregnancy safely. Ripening of the cervix could have been done by using either prostaglandins or intracervical foley's catheter. Prostaglandins ~~are~~ were not readily available in our center. Caesarean section following prolonged labour due to induction failure in preeclamptic patients carries bad prognosis to the child as well as to the mother[5,6]. The role of prophylactic antibiotics is very vital in all abdominal operations. There is a danger of infection either through the birth canal or through abdominal wound. This is very crucial if membranes have ruptured more than 6 hours. Studies have shown that with intact membranes the incidence of infection is very minimal[1,3]. Hence no antibiotics were prescribed in this patient.

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**OBS.2: GESTATIONAL DIABETES: INDUCTION OF LABOUR.**

| | |
|---|---|
| Name: | Mrs. E.M. |
| Residence: | Sea View |
| Age: | 29 years old |
| Date of admission: | 20.1.98 |
| Date of delivery: | 24.2.98 |
| Delivery Number: | 3404 |

**SUMMARY:**

Mrs E.M. a 29 year old gravida 3 para 2+0 was diagnosed to have gestational diabetes during her second pregnancy in 1994. She was admitted in the ward for treatment with Insulin at 34 weeks of gestation. However she delivered a macerated still birth at the gestation of 36 weeks to a 3.200kg male baby. Following delivery her blood sugar returned back to normal. She was seen by physician regularly and her blood sugar remained within normal limits. She was not on any medication. She conceived again in 1997 after consultation with her physician and obstetrician. During the antenatal visits her blood sugar remained normal only to be found raised at the gestation of 32 weeks. Treatment with Insulin was initiated in the ward and she was put on fetal movement count. She reported

reduced fetal movements the morning before planned induction at the gestation of 37 completed weeks. Successful induction of labour was done and she had spontaneous vaginal delivery, a 3.800kg female baby with apgar score of 9 in the first minute and 10 in five minutes. Both mother and child were discharged home 3 days later in good condition. The role of screening for diabetes in pregnancy is briefly discussed.

**Index Pregnancy**:

Mrs. E.M. was gravida 3 para 2 + 0 with 1 living child. She booked for antenatal care at MMC high risk antenatal clinic at the gestation of 16 weeks and she had 8 subsequent visits. Her last normal menstrual period had started on 2nd June 1997 and therefore her calculated date of delivery was supposed to be 9th March 1998. Her booking weight was 72kg, blood pressure was 120/80 mmHg and the haemoglobin was 12.8g/dl. She had no pedal oedema and urine for protein and sugar were negative. The fundal height was 16 weeks and corresponded to menstrual dates. Investigations done included blood group which was AB Rh(D) positive, VDRL was negative and serum creatinine was 72mmol/L. Ultrasonography was done at 16, 32 and 36 weeks of gestation respectively. No gross fetal abnormality was detected. There was moderate hydramnious noted at the gestation of 36 weeks. Urine was negative for sugar and protein. Mid stream specimen of urine for culture and sensitivity was done twice at booking and at 36 weeks of gestation. There were no bacterial growth reported. Blood Sugar profile ranged between 3.6mmol/l - 4.4mmol/l. At the gestation of 32 weeks random blood sugar was found to be

elevated (9.4mmol/L). She was admitted in the antenatal ward and treatment with insulin was started, 5 iu of soluble insulin in the morning and 10 iu lente Insulin in the evening. She was also put on fetal movement count (FMC). She continued to be monitored by physician and obstetrician. Her fasting blood sugar ranged from (3.8mmol/L - 4.6mmol/L) in all her subsequent profiles. She only presented with moderate increased frequency in micturation up to 3 times more than usual at the gestation of 36 weeks. In view of reduced FMC at 37 completed weeks, induction of labour was considered.

**Obstetric History:**

She was gravida 3 para 2 + 0. She had a spontaneous delivery of a 3.700kg male baby in 1993. Her delivery was complicated by post partum haemorrhage but she was not transfused with blood. She was diagnosed to have gestational diabetes in her second pregnancy in 1994 at the gestation of 34 weeks. She was admitted and treated with insulin but she delivered a macerated still birth a 3.200kg male baby at the gestation of 36 weeks. She had no postpartum complications and her blood sugar returned back to normal. She was advised to attend diabetic clinic and to consult physician and obstetrician before she plans for her next pregnancy.

**Gynaecological and Menstrual History:**

Menarche was at 14 years with regular cycles of 28 days and a duration of 3 - 4 days. She had no history of abnormal vaginal bleeding, or abnormal vaginal discharge. She had never used any methods of modern contraception.

**Past Medical History:**

She had Diabetis melitus diagnosed in her last pregnancy in 1994. She denied history of raised blood pressure, urinary tract infection, renal disease or bleeding tendencies.

**Family and Social History**:

She was a nurse at MMC married to a lawyer. She did not smoke cigarettes but she drunk alcohol moderately on special occasions. There were no history of diabetes mellitus or hypertension in the family.

**Physical Examination (on admission at 32 weeks):**

On admission she was moderately obese, not pale and not jaundiced. She had slight pitting oedema but had no lymphadenopathy and thyroid was not enlarged. Breasts were well developed, hyperpigmented, nipple not retracted. There were marked montgomery tubercles and no lumps were palpable.

**Cardiopulmonary System:**

The pulse rate was 84 beats per minute regular and normal volume. Her blood pressure was 120/80 mmHg. Heart sounds were normally heard and there were no added sounds. The lung fields were clear, with normal vesicular breath sounds.

**Abdominal Examination**:

The abdomen was uniformly distended, soft and non tender. The liver and spleen were not enlarged and the renal angles were none tender. The fundal height

corresponded to 32 weeks of gestation. The fetal lie was longitudinal with cephalic presentation and the level was 5/5. The fetal heart rate were 136bpm. The amount of liquor was judged adequate.

**Diagnosis:** Gestational diabetes at 32 weeks.

**Investigation and results:**

1. Haemoglobin was 11.6g/dl
2. The blood sugar profile at 32 weeks
   - Fasting - 5.8 mmol/L
   - One hour after breakfast 8.4mmol/L
   - One hour after lunch 12.0mmol/L
   - One hour after dinner 13.5 mmol/L
3. Serum Creatinine 72 mmol/L
4. Urine for : Sugar was + 1 (only one episode)
   . Ketones was negative
   . Protein was negative
5. Urine for Culture. No specific bacterial growth
6. Ultrasound at 32 weeks - Revealed normal singletone fetus with fundal placenta and no polyhydromnious. No gross fetal abnormality was detected. Cardiac activity was detected and the gestation age corresponded to 32 weeks.

**Management plan**:

Patient was admitted to the antenatal ward

- To control blood sugar level
- Fetal movement count was initiated to ensure fetal well being
- She was reviewed weekly by physician
- Blood Sugar profiles were done every day with a glucometer.
- Urine for Sugar, Ketone bodies and protein were checked daily and charted.
- Maternal weight was charted weekly
- Fetal movement counts were checked and fetal heart tones were auscultated daily and charted.
- Haemoglobin and Blood Slide for malaria parasites were checked weekly.

**Treatment:**

- She was started on soluble insulin Subcutaneous 5iu in the morning and Lente Insulin 10iu in the evening (these were given half hourly before meals).
- She was given weekly 300mg chloroquine for malarial prophylaxis.

Fasting blood sugar profile ranged between 3.8 - 4.6mmol/L. Urine for Sugar was negative. Her blood pressure ranged from 110/70mmHg - 130/80mmHg and her haemoglobin ranged from 11.2g/dl to 12.6g/dl. The day prior to planned induction at the gestation of 37 weeks she reported reduced fetal movements which were less than

4 in 12 hours, and she gave history of not feeling fetal movements for the past 6 hours. The fetal heart rate were 142 bpm and regular.

**Pelvic examination:**

Vulva was normal. There was no obvious draining or vaginal bleeding. With patient in dorsal position, both legs flexed and parted using sterile gloved hand and three cotton swabs soaked in 2% savlon, digital examination was done. The first two swabs were applied to each labia minus using the left hand. The third was used to swab the vestibule from above down ward using a single stroke while the left hand was holding the labia apart. The index and the middle fingers of the right hand were introduced into the vagina. Bishop score was done and it was favourable with a score of 8. Parameters for Bishop score were position of the cervix, its consistency, effacement, dilatation and the level of the presenting part. Each was scored according to the chart. The cervix was found to be anterior, soft, 80% effaced, 2cm dilated and the head was at station 0. These findings were consistent with a Bishop score of 8. Thus the cervix was assessed as favourable for induction and the pelvis was assessed adequate for the baby. The same morning induction of labour was done. Physician and neonatologist were informed.

**Diagnosis:** Gestational Diabetes at 37 completed weeks with reduced foetal movements.

**Plan for Induction:**

- Fasting blood sugar was taken just before induction, it was 3.9mmol/L

- Urine for Sugar, Ketone bodies and protein were negative
- Intravenous line with 5% - Dextrose was set
- Blood pressure was 120/70mmHg, pulse rate was 82bpm and she was afebrile.
- Blood group and crossmatch of two units of blood to be standby.
- Urine was checked for sugar and Ketone bodies whenever she voided
- She was counselled about the mode of delivery and chances for caesarean section in case of any deviation from normal.

Her fundal height corresponded to 36 weeks of gestation. The fetal lie was longitudinal with cephalic presentation. The level was 4/5 above the pelvic brim. The fetal heart rate was 142 bpm. The baby size was estimated to be 3.500kg. Sterile vaginal examination was done again in the labour ward and previous findings were confirmed. Artificial rupture of membranes was done and clear liquor drained and there were no cord prolapse. Oxytocin 5iu in D/Saline 1000mls was started and titrated at 10, 20, 30, 40, 50, 60d/m every 15 minutes. (This corresponded with 5, 10, 15, 20, 25 and 30mu/L). At the rate of 20mu/L, she started active contractions. The pulse rate and blood pressure remained normal. Fetal heart rate and colour of liquour were monitored after every 15 minutes. The liquor remained clear. Hourly blood sugar by glucometer were 3.9mmol/L, 8.2mmol/L, 4.7mol/L 4.4mmol/L and 4.1mmol/L. Urine for sugar and Ketones remained negative. Partogram was filled. Cervical dilatation was marked and was determined after 4 hours. Fetal heart rate,

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rythm, frequency strength and duration of contractions and head descent were assessed half hourly and were normal. She had successive vaginal delivery a 3.800kg female baby with apgar score 9 in first minute and 10 in 5 minutes. After delivery 5iu of syntocinon was administered intavenously and about 5 minutes later there were obvious signs of placental separation. The placenta and membranes were delivered completely by controlled cord traction. The perineum was noted to be intact. The uterus was well contracted. Blood loss was estimated to be 150mls. The baby had no obvious congenital malformation and was transferred to the neonatal ward for observation and blood sugar estimation. The baby remained Euglycaemic and was able to suck on mothers breast 8 hours latter. For 3 days the mother remained euglycaemic without insulin and was discharged home to attend post natal clinic, paediatric clinic and diabetic clinic fortnightly. She was counselled for contraception and she opted for loop which was inserted before discharge.

**Post Partum Review:**

Review after 6 weeks, her blood sugar level remained within normal limits. Blood sugar was 4.2mmol/L, urine for sugar and Ketones were negative. The child had no problem. She was counselled to attend diabetic clinic for follow up and to consult physician and obstetrician before she decides her next pregnancy.

**Commentary:**

St. Vincent declaration was adopted in 1989 that women with Diabetes Mellitus (DM) should have pregnancy outcome approximating to that of non diabetic

women. With well controlled DM throughout pregnancy, a diabetic mother has an excellent chance of delivering a normal healthy child. Nevertheless recent studies in UK have shown continuing rates of fetal loss and abnormality above that found in the general population[1]. Other studies have reported a risk of major abnormalities of 4 - 10% in diabetic patients compared with approximately 2% in non diabetic women[2]. Thus women with diabetes may have a slightly higher risk of fetal abnormality no matter how good their diabetic control[3]. Animal and human studies implicate high blood glucose as a major teratogen, especially during the first trimester hence glycaemic control before conception is highly recommended[3,4]. The metabolic disturbances in diabetic pregnant patient are expressed by increased concentrations of circulating metabolic fuels, including carbohydrate, protein and fat which can be transferred to the fetus and may contribute to the development of fetal macrosomia[2,4]. In late pregnancy the increased risk is associated with induction of fetal hyper insulinemia. Fetal insulin is the main growth hormone in the second half of pregnancy and the anabolic drive means the baby will tend to be big in organ size, bone size and particularly fat[4]. The metabolic derangement in gestational diabetes is minor when it is compared with that in type I or type II diabetes mellitus. However its importance becomes clear when the following evidence is considered[4].

- perinatal fetal mortality and morbidity, as well as maternal morbidity are increased with the potential for full blown complications developing in the infant.

- Both mother and child are at high risk of having diabetes in the future.

As it was in this woman most cases of gestational diabetes presents without symptoms and the diagnosis is based on abnormal results of oral glucose tolerance test (GTT). Gestational diabetes was incidentally diagnosed in this patient during her second pregnancy when blood sugar was found raised at the gestation of 34 weeks. She continued to attend diabetic clinic after delivery and she consulted physician and obstetrician before she carried her current pregnancy. Her blood sugar was normal preconception, only to be found raised at the gestation of 32 weeks. Most authorities recommend universal screening of pregnancy women at 24 - 28 weeks of gestation, the time when there is an increase in insulin resistance[2,4]. Most of gestational diabetes have emerged at this time and enough time remains for effective therapeutic intervention[4,5]. Additional screening can be done before 20th week to detect early gestational diabetes or unrecognized type II diabetes, or at 32 - 35 weeks to uncover gestational diabetes that develops during the last weeks of pregnancy. Gestational diabetes could be caused by increased insulin resistance, inability to increase insulin output adequately or by combination of these two abnormalities[4,5]. This patient developed gestational diabetes in her two pregnancies at the gestation between 32 and 34 weeks of pregnancy. So the role of late screening for diabetes mellitus cannot be disputed. Earlier screening for gestational diabetes and antepartum fetal surveillance could have saved the poor fetal outcome in her

previous pregnancy. Abnormal glycaemic levels affects placental development, hence limiting fetal size. Some studies have demonstrated that even a limited degree of maternal hyperglycaemia is related to adverse pregnancy outcome[5]. At high glucose levels the increased oxygen requirement may exceed supply capacity and the fetus may tend towards hypoxia and there may be increasing anaerobic activity and lactic acidosis causing intrauterine fetal death. The critical end point of maternal hyperglycaemia is believed to be fetal hyper-insulinemia. Measurement of this in utero offers a gold standard[6]. Fetal insulin can be measured through amniotic fluid, but this is an invasive test and at present there is no evidence that amniotic fluid insulin measurement improves pregnancy outcome[6]. Most women with gestational diabetes deliver spontaneously at term. Despite of diabetic control in this patient the reported reduced fetal movements was the area of concern, hence induction of labour was considered. The management program is based on intensive control of diabetes, which by permitting postponement of delivery to term results in minimal obstetric intervention. Contemporary management emphasize pre pregnancy education, women should be instructed in the recognition and management of hypoglycaemia. It is only with poor control that there is greatly increased abnormality rate.

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**0BS NO.3: RECURRENT MID TRIMESTER ABORTIONS: CERVICAL CERCLAGE AND SUCCESSFUL VAGINAL DELIVERY AT TERM.**

| | |
|---|---|
| Name: | Mrs. A.M. |
| Address: | Buguruni |
| Date of Operation: | (Cerclage Procedure): 1.11.96 |
| Date of Cerclage removal: | 15.04.97 |
| Date of Delivery : | 18.4.97 |
| Delivery number: | 5802 |

**SUMMARY:**

Mrs A.M. was a 24 years old gravida 4 para 0 + 3. She was referred to our high risk antenatal clinic at the gestation of 14 weeks with history of recurrent painless second trimester fetal wastage of live fetuses. Her last normal menstrual period was 23rd July 1996, so the expected date of delivery was on 30th April 1997. She was in general good condition. Pelvic examination revealed a healthy cervix which admitted a tip of finger and was 2cm long. Other investigations revealed no abnormality. The diagnosis of cervical incompetence was made based on her past obstetric performance. Mc Donald cerclage placement was done at 14 weeks of

gestation and removed at the gestation of 38 weeks. Three days latter she went into spontaneous labour and delivered a 3.5 male baby with an apgar score of 8 in the first minute and 10 in 5 minutes. The case is presented with a short commentary on the management of recurrent fetal wastages.

**Index Pregnancy:**

Her last normal menstrual period was 23rd July 1996, so the expected date of delivery was 30th April 1997. She booked at MMC high risk antenatal clinic at the gestation of 14 weeks and made a total of 8 visits. She was normotensive throughout her visits and her haemoglobin ranged between 9.6g/dl to 11.2g/dl. Save for the recurrent fetal wastage no other problems were detected antenatally.

**Obstetric history:**

Mrs. A.M. was gravida 4 para 0+3. She was referred to MMC high risk antenatal clinic on account of three previous second trimester fetal wastages. Her first abortion occurred in 1993 at the gestation of 6 months. The abortion occurred suddenly as it started with an abrupt gush of amniotic fluid followed by vaginal bleeding and delivery of a female fetus which died shortly. Her second abortion occurred in 1994 at the gestation of 5 months. As in the previous pregnancy, the abortion started with premature rupture of membranes, and she delivered a live fetus which died shortly. She had third abortion in 1995 which started with premature rupture of membranes and delivery of fresh still birth at the gestation of ~~5 1/2~~ five and 1/2 months. In all the pregnancies she remembered that they were single fetuses with

no obvious external congenital malformations. Uterine evacuation was not done in all abortions. All these incidencies were not preceded by febrile illnesses and they all occurred while she was receiving antenatal care.

**Gynaecological and Menstrual History:**

She attained menarche at the age of 14 years. She had regular cycles of 28 days with periods lasting 4 - 5 days and normal flow. She had no history of dilatation and curettage or operation to the cervix. She denied history of foul smelling vaginal discharge, genital ulcer or dyspareunia. She had never used any of the contraceptive methods.

**Past Medical History:**

She had no history of Diabetes Mellitus, Renal disease or hypertension. She also denied history of generalized body rush or recurrent upper respiratory tract viral infections.

**Family and Social History:**

Mrs A.M. was a primary school leaver, married to a petty businessman. She denied history of Diabetes Mellitus, Hypertension, renal disease, or bleeding disorders in her family. She also denied history of similar problems to her sisters. She neither smoked cigarettes nor drank alcohol.

**Physical Examination:**

She was a healthy young woman, afebrile, not pale and not jaundiced. She had no lymphadenopathy or pedal oedema, and thyroid gland was normal .

Breasts were well developed, hyperpigmented, nipples were not retracted and there were marked Montgomery tubercles. No lumps were palpable.

**Respiratory system:**

The respiratory rate was 20 breaths /minute and the chest was clinically normal.

**Cardiovascular:**

Her pulse rate was 72/beats per minute regular and of normal volume and the blood pressure was 100/60 mmHg. Heart sounds were normal and there were no added heart sounds.

**Abdominal Examination:**

The abdomen was not distended and moved well with respiration. It was soft and non tender. The liver, spleen and kidneys were not palpably enlarged. The uterus was palpable above the symphysis pubis. (14/40)

**Pelvic Examination:**

Vulva and vaginal mucosa were normal with no obvious discharge. Speculum examination revealed a healthy looking cervix with no obvious lesion or old tear. Membranes were not bulging and there were no discharge from the cervical os. On digital examination the cervix was 2cm long, soft and admitted a tip of finger. The uterus was soft about 14 weeks size. The adnexa were free of masses.

**Provisional Diagnosis:**

In view of her past obstetric history the diagnosis of cervical incompetence was made.

She was counselled for cervical cerclage placement after the necessary investigations. She agreed to the suggested mode of treatment.

**Investigations done included:**

1. VDRL - was Negative
2. Haemoglobin - 11.6g/dl
3. Blood group - group B Rh (D) Positive
4. Random blood sugar - 3.8 mmol/L
5. Serum Creatinine - 62mmo/L
6. Urine for protein - Negative
7. Urine for Sugar - Negative
8. Mid stream Urine for Culture and Sensitivity - No bacterial growth
9. Cervical swab for culture and sensitivity - No bacterial growth.
10. Pelvic ultrasound - Single intrauterine live fetus about 14 weeks of gestation. No gross fetal malformation noted.

She was admitted in the ward a day prior to operation. She was again re-examined. By dates she was 15 weeks pregnant and her fundus corresponded to

14/40 weeks of gestation. There was no cervical shortening on speculum examination and the membranes were clinically intact.

**Pre operative preparations:**

- The perineum was cleaned with soap.
- A signed informed consent was obtained for anaesthesia and surgery after explanations of the risks involved.

**Anaesthesia:**

Induction was done using

- Atropine 1mg intravenously
- Ketamine 100mg intravenously.

Anaesthesia was maintained by face mask,

Oxygen 4l/min and Halothane 0.8%.

**Cervical cerclage procedure: (Mc Donald)**

Patient was positioned in lithotomy position. The vulva and perineum were cleaned with chlorhexidine and then draped with sterile linen. Bladder was emptied by using metal catheter and about 200mls of clear urine were drained. The cervix was exposed by inserting sims speculum. There were no discharge, no scarring of the cervix or bulging of the membranes noted. Using two none serrated sponge holding forceps the anterior and the posterior lips of the cervix were held firm with mild traction. The Mc Donald stitch (Proline No2) was applied around the cervix as a purse string suture using round bodied needle at the level of vesico- cervico-

peritoneal reflection. The stitch was first inserted at 12 o'clock to emerge at 10 o'clock. Similar bites were made at 8, 4, and 2 o'clock. A knot was secured at 12 o'clock and tightened just enough to provide slight resistance of the passage of hegars dilator No. 6. No significant bleeding was encountered and there were no liquor draining at the end of the procedure.

**Post operative care:**

1. Reversal anaesthesia was achieved by oral pharyngeal suction and oxygen by mask till she was awake.
2. Blood pressure, pulse rate and temperature were monitored 4 hourly during the first 24 hours. They remained stable.
3. Oral capsule Ampicillin 500mg six hourly for 5 days
4. Injection Diclofenac 75mg 8 hourly for 24 hours.

She was briefly observed in the recovery room and she was transferred to the Antenatal ward.

**Review in the ward:**

Six hours post operative, she was fully awake and the vital signs remained stable. There were no vaginal bleeding or draining. On the third day she had no complaints. There were no abdominal pain, vaginal bleeding or draining. She was discharged home to attend antenatal clinic after every 2 weeks. She was advised to avoid coitus for the rest of the pregnancy and avail of complete bed rest at home.

**Subsequent Antenatal Visits:**

Antenatal visits were as per appointments. She had no problem. She felt fetal movements since at the gestation of 20 weeks and the fundal height corresponded well with dates. At each visit the Cerclage was inspected and found to be in place. She had no abnromal cervicovaginal discharge. Cerclage removal was done in the labour ward at the gestation of 38 completed weeks.

**Cerclage removal:**

Patient was placed in lithotomy position and the vulva was cleaned with antiseptic. The bivalve speculum was introduced into the vagina. The cervix was normal. The ends of the purse string suture were drawn through a ring forceps. This used to exert counter pressure against the cervix. These were cut by using stitch scissors. Then digital examination was done, cervix was 1cm dilated and the membranes were intact. She was advised to rest in the antenatal ward. She was transferred to the labour ward three days later because of labour pains.

**Examination in Labour**:

On examination she was afebrile not pale and had no pedal oedema. Her pulse rate was 88 beats per minute regular and of normal volume. The blood pressure was 100/70mmHg. The heart sounds were normal and lung fields were clear.

**Abdominal Examination:**

Abdomen was uniformly distended and moved well with respiration. The liver and spleen were not palpable and renal angles were non tender. The fundal height corresponded to 36 weeks of gestation, longitudinal lie with cephalic presentation and 4/5 of the presenting part was above the pelvic bream. There were contractions of 2 -3/per 10 min, lasting 20 seconds. Fetal heart rate were 140/minute.

**Pelvic Examination:**

Cervix was soft, fully effaced and 3cm dilated. Artificial rupture of membranes was done and liquor was clear. There was no cord prolapse and the position was right occipital transverse.

**Progress of labour:**

Her pulse rate was 90 beats/minute and the blood pressure was 120/80 mmHg. The fetal heart rate remained within normal range and uterine contractions were 2 - 3/10 minutes lasting about 20 - 40 seconds. Partogram was filled and cervical dilatation was determined after 4 hours. Fetal heart rate rythm, frequency, strength, duration of contractions and head descent were assessed half hourly and they were normal. Pelvic examintion after 4 hours showed the cervix to be 7cm dilated and liquour remained clear. There was no cuput or moulding and the position was right occipital anterior. Four hours latter the mother had spontaneous vertex delivery of a 3.5kg male baby with apgar score of 8 in the first minute and 10

in 5 minutes. Placenta and membranes were delivered 5 minutes latter by controlled cord traction. The blood loss was estimated to be 200 mls. Both mother and her baby were discharged home in good condition, after 24 hours.

**COMMENTARY:**

Recurrent miscarriage affects almost 1% of couples and etiologies for recurrent miscarriage are diverse[1] Cervical incompetence as a cause of mid trimester abortion has long time been recognized, but it has been difficult to assess its incidence in a given community because there are no generally agreed rules on criteria for diagnosis[(2)]. However the incidence varies from 0.5% - 1% in an obstetrical population[(2,3)]. Cervical Incompetence has been associated with a weakness in the sphincteric mechanism of the internal os. Usually this has been associated with acquired causes. Some of these causes are trauma of the cervix during child birth, previous dilatation and curettage and also increase with the number of previously induced abortion[(3)]. Usually the reproductive history associated with cervical incompetence is painless cervical dilatation followed by fetal expulsion in the gestation window of 16 - 28 weeks of pregnancy. In most cases the diagnosis is based on clinical history. This was the case for Mrs. A.M. But possible causes must be excluded eg infections, myoma and others. However in this particular patient none of the above causes have been associated with her fetal wastage. Congenital causes for cervical incompetence accounts 2% of all cases[(1,3)]. This was most likely to be the cause of cervical incompetence in this woman. In congenital cervical

incompetence no etiologic factor can be ascertained, it is thus presumed that this group poses an inherent weakness of the fibromusculature at the upper end of the cervix and internal os. Cervical incompetence has been associated with anomalies of the mullerian duct system, though hysterographic studies may rarely reveal any abnormality[3]. Patients who were exposed to Diethyl stilbestrol in utero have increased chances of latter development of cervical incompetence especially when the exposure was prior to 18 weeks of gestation[(2,3)]. Several modalities of treatment have been suggested, these include bed rest, mechanical methods and hormones but it is generally accepted that surgical treatment is the method of choice[(1,2,3)]. In 1950 Lash conducted a procedure on a non gravid patient. A diamond shaped area of the tissue was excised at the level of internal os and repairing the defect with two layers of chromic catgut suture. The method received limited acceptability as there is concern about their effect on subsequent fertility[(2,3)]. Two strategies have been used in surgical management of cervical incompetence.

These are:

- primary repair of the anatomic defect
- reinforcement of the cervix with a circumferential suture.

Several types of cerclage procedure are currently being used. The MC Donald and Shirodkar are the most common and have been reported to have similar efficacy[(1,2,3)]. Mc Donald procedure is easy to perform with less trauma and easy to be removed at or near term, while the removal of Shirodkar suture is usually

difficult and delivery by caesarean section becomes the priority. Contraindication for cerclage include rupture of the membranes, antepartum haemmorrhage, uterine contractions, chorioamnionitis, cervical dilatation > 4cm, polyhydramnios or known fetal abnormality. Our patient had none of these complications. It is often difficult to investigate all the possible causes of fetal losses in patients with a poor reproductive history. Most patients as was the case in this particular patient frequently present after a number of fetal wastage. Universal agreement on the etiology and diagnostic criteria remains a question of debate[2,4]. Complications from cervical cerclage include post operative infection, immediate onset of labour, suture displacement, cervical laceration, post operative bleeding, rupture of membranes, fistula formation, placental abscess, bladder injury, uterine rupture and cervical dystocia[5]. During antenatal visits till delivery none of the mentioned complications were encountered in our patient. Clinical presentation is not uniform in all patients with cervical incompetence. Diagnostic testing in non pregnant state has been less than satisfactory although pre- conceptional hysteroscopy is an important diagnostic procedure. Risk assessment has involved investigation by vaginal examination of cervical dilatation, but reports on the predictive value of second trimester surveillance have varied greatly and are poorly reproducible[6]. Ultrasonography can help in the evaluation of cervical incompetence. A concept of varying degrees of cervical incompetence emerges by measurement of endocervical canal length, internal os width and degree of funnelling. Ideally a test that detects when the cervix is opening where no physical

signs exists would be extremely useful. Modern thoughts no longer sees the cervix as a dichotomous organ, which is either open or closed, but rather as a continuous variable whose dynamic is little known and whose assessment is frustrating in practicability[7]. It is important to evaluate carefully the cervix at weekly interval either clinically or by ultrasound for progressive shortening and dilatation in a patient with recurrent second trimester abortions. This is important because the cervix in none gravid state does not reflect its ability to retain conceptus. In this case serial ultrasound could have confirmed progressive internal os dilatation. This was not possible in our set up because of logistic problems with the ultrasound. Hence the diagnosis based largely on the past obstetric history. Prophylaxis antibiotics were prescribed in this patient. Because studies have shown that even cultures from intact membranes the prevalence of microbial invasion was 51.5% on the amniotic fluid which becomes a cause of pregnancy loss and chorioamnionitis[8].

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## OBS:4 PROLONGED PREGNANCY - INDUCTION OF LABOUR

Name: Mrs. C.M

Age: 29 years

Address: Ilala

Date of admission: 29.11.98

Delivery No: 14266

**SUMMARY**:

Mrs C.M. was gravida 2 para 0 + 1. She was admitted to the antenatal ward from our antenatal clinic because of prolonged pregnancy. Her gestation was 42 completed weeks supported by her last normal menstrual period, pelvic examination done at 16 weeks of gestation, ultrasound done at 16 weeks of gestation, quickening at 22 weeks and extrapolation from the Antenatal card. She reported reduced fetal movements two days prior to the day of planned induction. On examination the fetal heart rate were 134 b/m, and clinically the amount of liquor was assessed to be reduced. This was supported by ultrasonography done on the day of admission. The weight of the baby was estimated to be 3.2kg. She had favourable cervix by Bishop scoring method. Induction of labour was done. She had successful vaginal delivery of a male baby weighing 3.5kg with apgar score of 9 in the first minute and 10 in 5 minutes. The case is presented and commentary on controversies surrounding diagnosis and management of prolonged pregnancy are discussed.

**Index Pregnancy:**

She booked for antenatal care at Muhimbili Medical Centre at the gestation of 16 weeks. Her last normal menstrual period was on 8th February 1998 and her calculated date of delivery was 15th November 1998. Her cycles were regular and she was sure of her dates. Ultrasonography done at booking confirmed 16 weeks of gestation which corresponded with gestation age by dates and pelvic findings. She felt quickening at the gestation of 22 weeks. Booking weight was 55kg and the blood pressure was recorded as 110/70 mmHg. Her booking haemoglobin was 10.7g/dl. She had no pedal oedema and urine for albumin and sugar were negative. Serological screening for syphilis was negative. She was blood group O Rhesus (D) positive. She made a total of 7 subsequent visits. During her visits she got 2 injections of tetanus toxoid. She had normal weight gain and the fundal height was corresponding to the gestation age. She was admitted in the antenatal ward for planned induction at the gestation of 42 weeks. Clinical examination and the ultrasound done on the day of admission confirmed moderate oligohydramnios. The Bishop score which was done revealed a favourable cervix and induction of labour was considered.

**Menstrual and Gynaecological History:**

She attained menarche at the age of 13 years, with periods lasting 4 days in regular cycles of 28 days. She had history of spontaneous abortion at the gestation of 2 months. She had no history of abnormal vaginal discharge or vaginal bleeding. She never used any form of modern contraception before.

**Past Medical History:**

It was none contributory..

**Family and Social History:**

She was a secretary married to a self employed businessman. She denied history of Diabetes Mellitus, hypertension or any other major illnesses in the family. She neither smoked cigarettes nor drunk alcohol.

**Physical Examination (in the antenatal ward):**

She was a young healthy looking woman. she was not pale and not jaundiced. She was afebrile, had no pedal oedema or lymphadenopathy.

**Cardiopulmonary System:**

She was not dyspnoeic, the pulse rate was 86 beats/minute regular and good volume. Her blood pressure was 110/70 mmHg. The heart sounds were normally heard and the lung fields were clear.

**The Abdomen:**

The abdomen was uniformly distended. Liver, spleen and kidneys were not palpably enlarged. The fundal height was 36/40. The fetal lie was longitudinal with cephalic presentation. The level was 4/5, the fetal size was estimated to be 3.2kg and clinically the amount of liquor was reduced. The fetal heart rate was 142 beats per minute and were regular.

**Diagnosis:** Prolonged pregnancy.

**Plan of Management:**

- She was admitted in the antenatal ward for planned induction of labour.
- She was explained the possible complications of prolonged pregnancy and a place of conservative management. She was counselled about induction and also the possibility of abdominal intervention.

**Preparation for Induction of labour:**

Investigations

1. Haemoglobin 10.8g/dl
2. Urine for albumin was negative
3. Urine for sugar was negative
4. Blood was taken for grouping and crossmatch

Two days prior to the day of planned induction she reported reduced fetal movements which were 3 in 12 hours. The same morning she was transferred to the labour ward for delivery.

**Examination for induction:**

She was afebrile, not pale and not jaundiced. Had no pedal oedema or lymphadenopathy. Her pulse rate was 82 beats per minute, regular with good volume. The blood pressure was 120/80 mmHg. Heart sounds were normal and the lung fields were clear.

**Abdomen:**

The abdomen was uniformly distended, The liver, spleen and kidneys were

not palpably enlarged. The fundal height was 36 weeks with moderate reduced amount of liquor. The lie was longitudinal in cephalic presentation. The level of presenting part was 4/5 and the fetal size was estimated at 3.2kg. The fetal heat rate were 145 beats per minute and were regular.

**Pelvic Examination:**

Pelvic examination and Bishop score was done as in obstetric case No 2. Findings were consistent with a Bishop score of 8.

**Induction of labour:**

1. In the labour ward artificial rupture of membranes was done by using Kocher's forceps. The liquor was scanty with slight old meconium. There were no Cord prolapse.
2. An Oxytocin drip with 5 iu in 1L of Dextrose/ saline was started using a canula size 18. It was titrated at 10, 20, 30, 40, 50 and 60 drops per minute ½ hourly against contractions. (This corresponded with 5, 10, 15, 20, 25, and 30mu/L)
3. Intramuscular pethidine 100mg and Injection Promethazine 25mg were to be given when contractions became strong.
4. She was instructed to remain nil orally till delivery.

**Progress in Labour:**

Labour progressed well. Maternal blood pressure, pulse rate, and fetal heart rate were recorded 1/2 hourly and they remained normal. Also was the colour of

liquor. Four hours later she was in regular strong contractions, 4 -5 lasting 20 - 40 seconds after every 10 minutes. The level of presenting part was 3/5 the fetal heart rate was 140/minute and they were regular. A repeat Vaginal Examination revealed the cervix to be 6cm dilated with left occipital anterior. No signs of obstruction was noted and the liquor remained slightly meconium stained. Four hours latter the cervix was fully dilated with the level of presenting part at +1. Thirty minutes latter the patient had strong urge to push and she was encouraged to do so since the head was seen distending the perineum and the anus was gaping.

**Delivery**:

Under aseptic technique and after lignocaine infiltration a left medio-lateral episiotomy was made. She delivered normally 5 minutes later. Ergometrine was given immediately after delivery of the baby. A male baby weighing 3.5kg with apgar score of 9 in the first minute and 10 in 5 minutes was delivered. There was no gross congenital anomaly noted. The baby had dry cracked skin and the skin was meconium stained. The placenta with calcified areas and membranes were delivered complete by Brandt - Andrew method. Repair of the Episiotomy was done on the high bed in lithotomy position. The perineum was cleaned with antiseptic. The episiotomy wound was exposed and repaired with Catgut No. O in two layers with interrupted Sutures starting at the apex up to the mucocutaneous junction at the introitus. The estimated blood loss was 250mls. The baby was transferred to the neonatal ward and the neonatologist was informed.

**Commentary:**

The definition of post-term pregnancy as endorsed by the World Health Organization and the International Federation of Gynaecology and Obstetrics is 42 completed weeks or more (> 294 days). Other terms are used synonymously such as prolonged pregnancy, post dates or after term pregnancy. These terms are about the chronological duration of pregnancy, they do not infer pathological condition and should not be confused with term postmaturity, which refers to features seen occasionally in infants born after prolonged gestation[1]. The reported incidence of post term-pregnancy ranges from 4 to 14%[1]. Post-term pregnancy appears to be more common in primigravida and women with previous post-term births[2]. Evidence gathered over the last 60 years shows that perinatal mortality is higher if pregnancy goes beyond 42 weeks, but the magnitude of this increase remains controversial[2]. Large observational data on term and post term births from Scandinavia suggests that the number of perinatal death is lowest at 40 weeks gestation (0.23%) with only slight increase to (0.30%) at 42 weeks and (0.40%) at 43 weeks[1]. But several case series have failed to show this trend[2]. On the other hand the overall risk of post term pregnancy may be significantly underestimated because high risk pregnancies will be delivered before 42 weeks[2,3]. The task of defining those women whose pregnancies are prolonged is fraught with difficulty. Even if the date of the last normal menstrual period is recalled with accuracy, delay in ovulation can result in over estimation of the gestation age which results in an apparent prolonged pregnancy[3,4]. Mc Nay found

that 31% of women had unreliable dates at booking and a further 19% had an irregular menstrual cycle. Even those with apparently reliable dates who were seen before 20 weeks, 20% had discrepancies of 1 - 6 weeks between dating by history and dating by ultrasound[5]. Hence using scan, dates will result in fewer pregnancies being considered post term[5]. This patient scan was done at the gestation of 16 weeks which corresponded with gestation age by dates. This was further supported by early pelvic findings, the time she felt quickening and the first time fetal heart rate were picked at the gestation of 22 weeks. So there was little doubt in the diagnosis of prolonged pregnancy. She could have waited for spontaneous labour because she had favourable cervix. But she reported reduced fetal movements and reduced amount of liquor was detected clinically and by ultrasonography. This was a warning that the baby is in danger and that the placental reserve is low. Despite of modern antepartum surveillance, intrapartum monitoring and improved neonatal care, recent report continue to report increased perinatal mortality in women with prolonged pregnancy[5,6]. The fact that she delivered a baby with features of post maturity suggests that this woman had prolonged pregnancy. Other authors will not recommend induction of labour if there is no risk factor because this has been associated with increased caesarean section rate[7]. This could not be applicable in this patient who had decreased fetal movements and had oligohydromnious. Roberts and Young in analysis of women attitudes to elective delivery after term concluded that most pregnant women are unwilling to accept conservative management of

prolonged pregnancy and become more reluctant to do so if undelivered by 41 weeks gestation[8,9]. Maternal satisfaction was related to the mode of delivery and outcome rather than that labour was induced or spontaneous. However sweeping or stripping the membranes during vaginal examination at term doubles the chances of spontaneous onset of labour within 3 days[8]. There is currently no evidence that sexual intercourse can shorten the duration of pregnancy despite of high prostaglandins. Evidence from one small trial with 200 randomized women suggests that nipple stimulation for 3 hours per day from 39 weeks until delivery decreases the incidence of prolonged delivery[7]. It is known that there is often a decline in placental function, increase intrapartum distress due to oligohydramnios, and meconium passage in decreased fluid volume after the 41st - 42nd week[9]. If these are not detected and acted upon the fetus may die usually of unexpected asphyxia. Whole sale induction of labour at an arbitrary time limit is not recommended, selecting patients at risk is more logical approach to the problem. This is what was considered in this patient who reported reduced fetal movements and had clinically and sonographically detected oligohydramnios.

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## OBS NO.5: CORD PROLAPSE: EMERGENCY CAESAREAN SECTION

Name: Mrs. Z.M.

Age: 20 years

Residence: Sinza "B"

Date of admission: 15.01.98

Delivery Number: 620

**SUMMARY:**

Mrs Z.M. was a primigravida admitted from home at the gestation of 36 completed weeks because of labour pains. She had spontaneous rupture of membranes 1 hour prior to admission. On abdominal examination the fundal height corresponded to 36 weeks of gestation. She had 2 - 3 contractions every 10 minutes and lasted for about 20 seconds. The presenting part was 4/5 above the pelvic brim and the fetal heart rate was 128 beats per minute. Pelvic examination revealed a cervix which was 3 cm dilated, fully effaced with a pulsating cord. She was put in a knee chest position and prepared for emergency caesarean section. She was delivered of a 2.650kg asphyxiated male baby with apgar score of 4 in the first minute and 6 in 5 minutes. The baby recovered well and the mother had uneventful post operative period. Management of cord prolapse is disscussed.

**Index pregnancy:**

She was a primigravida and her last normal menstrual period had started on

3.05.1997 so the calculated expected date of delivery was supposed to be on 10.2.98. By dates she was 36 completed weeks. She booked for antenatal care at the peripheral clinic in Sinza at the gestation of 24 weeks. She made a total of 5 antenatal visits. She was normotensive throughout her visits and she had no pedal oedema. The blood pressure ranged between 120/70 and 130/80. Her haemoglobin levels ranged between 70% and 80% and she was on oral haematenics. She was not investigated for syphilis and her blood group and rhesus factor were not determined. She started labour pains 3 hours prior to admission, and she had spontaneous rupture of membranes 1 hour prior to admission.

**Menstrual and Gynaecological History:**

She attained menarche at the age of 14 years. The cycles were regular occurring after every 28 days and she had a normal flow of 4 - 5 days. She had no dysmenorrhoea, abnormal vaginal discharge and she had never used any of the contraceptive methods.

**Past Medical History:**

This was uneventful.

**Family and social history:**

She had completed class 7 three years previously, and she was married to a welder working with a private firm. There was no history of Diabetes Mellitus, hypertension, bleeding disorders or twining in the family. She never drank alcohol and she was a non smoker.

**Physical Examination:**

She was a young woman in good general condition. She was afebrile not pale and not jaundiced. She had no pedal oedema or lymphadenopathy.

**Cardiopulmonary System:**

She was not dyspnoeic. The pulse rate was 80 beats per minute, regular and of normal volume. Her blood pressure was 100/60 mmHg. and the heart sounds were normally heard. There were no added heart sounds and the lung fields were clear.

**Abdomen:**

The abdomen was uniformly distended and moved well with respiration. The abdomen was soft with no area of tenderness. She had no hepatosplenomegaly and renal angles were free of tenderness. The fundal height corresponded to 36 weeks of gestation, in longitudinal lie with cephalic presentation. Fetal heart rate was 124 beats per minute. The presenting part was 4/5 above the pelvic brim.

**Vaginal Examination:**

The vulva looked normal. Clear liquor was draining through the vagina. Digital examination revealed cervix to be fully effaced and 4 cm dilated with a loop of pulsating cord between the fingers. The vertex was at station -1 and the position was left occipital transverse. There was no caput or moulding. The pelvis was assessed to be adequate for the baby.

**Management Plan:**

1. Patient was counselled for Emergency caesarean section and a written consent was obtained for operation and anaesthesia.
2. Obstetric theater staff were informed of the emergency.
3. Blood for grouping and crossmatch was taken. She was blood group A Rhesus positive and one unit was available.
4. Fetal heart rate was monitored and were found to be present and regular.
5. She was transferred to theater in the knee chest position to reduce compression of the umbilical cord by the fetal skul. She was maintained in this position till when all preparation for operation were ready.

**In Theater:**

1. The fetal heart sounds were checked for the last time just before cleaning the abdomen, and found to be 120 beats per minute and regular.

**Anaesthesia:**

This was given as described in obstetric case No. 1

**Procedure:**

Lower segment caesarean section was done as described in obstetric case No. 1. A 2.650kg asphyxiated male baby with an apgar score of 4 in the first minute and 6 in 5 minutes was delivered. Suction of the nasal cavity and pharynx was done

gently with size 8FG catheter and oxygen therapy was given under mask. The baby was sent to neonatal ward for treatment and care. Placenta and membranes were delivered complete by controlled cord traction. The uterus was repaired as described in obstetric case No. 1. The abdomen was closed after correct swab and instrument count as described in obstetric case No. 1. Estimated blood loss was 400mls.

**Post Operative Care:**

1. The blood pressure, pulse rate, and respiration rate were monitored ½ hourly for 4 hours then twice daily there after.
2. Intravenous Dextrose Saline 3000mls were given over a period of 24 hours.
3. Intramuscular Pethidine 100mg was given to relieve pain 6 hourly for 24 hours.

She made uneventful recovery. She began breastfeeding her baby from second postoperative day. Her vital signs remained stable and the haemoglobin checked on the third post operative day was 8.4g/dl. The stitches were removed on the 6th post operative day and she was discharged home on haematenics. To be reviewed after 6 weeks.

**Follow up after 6 weeks:**

She was seen 6 weeks latter and she had no problem. She was not pale and her haemoglobin was 10.2g/dl. The baby was active and was sucking well.

**COMMENTARY:**

Cord prolapse is the falling down of the cord in front of the presenting part after the rupture of the fetal membranes. This is an obstetrical emergency which is associated with high perinatal morbidity and mortality[1]. In our center cord prolapse accounted for 11.4% of all caesarean section done in 1993[3]. Cord prolapse is greatest in clinical situation in which the presenting part is not well engaged in the maternal pelvis and is therefore not well applied to the cervix. This can happen if spontaneous rupture of membranes occurs or artificial rupture of membranes is done while the presenting part is high up in the pelvis. This was the case in this patient on discussion. Other situations include malpresentation, prematurity, high parity, multiple gestation, obstetrical manipulations, abnormal placental location, abnormality of the cord and hydramnious[2]. The possible cause of prolapse of the cord in this patient is only speculative. The gush of liquor amnii while she had spontaneous rupture of membrane carrying with it the cord is a possibility. This was ascertained by the pelvic examination which revealed the prolapsed cord with trickling liquor amnii after spontaneous rupture of membranes. However cord beside the presenting part or undetected cord presentation cannot be ruled out. The widespread use of ultrasound has made possible the antepartum diagnosis of funic presentation, cord loop below the presenting part or an hour glassed membranes may be quite significant[4]. The treatment of this condition is to deliver the fetus in an expeditious manner as possible. This means immediate vaginal delivery if this is

possible. In such situations with an adequate pelvis delivery by forceps or vacuum extraction is advocated. Where immediate vaginal delivery cannot be accomplished surgical delivery by caesarean section is the best treatment. However this depends on the fetal condition, fetal maturity, presentation of the fetus, the extent to which the cervix is dilated and the presence of any co-existing abnormality in the maternal pelvis[5]. In situations where the fetus is proven dead beyond reasonable doubt, labour is left to proceed normally if there is no contraindications to vaginal delivery. In this patient the fetus was still alive hence caesarean section was performed and the baby was saved. This was the best option for this patient whose cervix was only 4cm dilated. The much free use of caesarean section has greatly reduced the risk to the fetus. Clinical management of the patient who presents with a pulseless, limp cord in the vagina has recently generated fresh discussion because of the new ability to assess fetal activity by sonographic emerging. Several authors have suggested that the appearance of a flaccid, none pulsatile umbilical cord is not an indication of fetal death[5,6]. Driscoll et al showed that although the fetal heart could not be heard and the cord was pulseless ultrasonic evidence showed fetal heart activity and caesarean section was productive of living infants who subsequently did well[6]. However non availability of ultrasonography in our labour ward makes us depend on pulsation of the cord and auscultation of the fetal heart as the important criteria for emergency caesarean section.

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**OBS. NO.6: ABRUPTIO PLACENTA : MANAGEMENT**

Name: Mrs S.R.

Residence: Tabata

Age: 42 yrs

Reg.No: 174/97

Date of admission: 25.5.98

**SUMMARY**:

Mrs S.R. wa gravida 7 para 6 at 38 completed weeks of gestation. She was admitted in the labour ward from home. She presented with abdominal pain which was followed by heavy vaginal bleeding with clots. On admission fetal movements were not felt. On examination she was grossly pale, profuse sweating with cold extremities. Her pulse rate was 102beats/min with a blood pressure of 100/50mmHg. She had a tense and tender abdomen. The fetal lie and presenting part could not be well appreciated and the fetal heart were not heard. Diagnosis of abruptio placenta was made; she was resuscitated and had vaginal delivery of a fresh still birth with a big retro-placental clot. She was discharged home 3 days latter on haematenics. The case is presented with brief discussion on aetiology, associated factors and management of abruptio placenta.

**History of the Pregnancy and Antenatal Care:**

Mrs S.R, booked for antenatal care at our high risk antenatal clinic at the

gestation of 20 weeks. Her last normal menstrual period had started on 27.8.1997 and thus the calculated expected date of delivery was supposed to be 4.6.1998. She made 6 subsequent visits. Her booking blood pressure was 120/80mmHg. The raised blood pressure was found only once in her last visit which was recorded as 150/100mmHg. Her weight gain was normal. She had no pedal oedema and urine for albumin was not checked. Her haemoglobin levels ranged from 10.6g/dl - 11.6g/dl. She was blood group A Rhesus (D) positive, VDRL was negative and random blood sugar was 4.2mmol/L. She was admitted in the labour ward because of abdominal pain associated with vaginal bleeding, which started 2 - 3 hours previously. She was in her 38th week of pregnancy. Abdominal pain was of sudden onset and became continuous with increasing intensity. This was latter followed by fresh vaginal bleeding of moderate amount with clots. On admission she could not feel the fetal movements. She had dizziness but had no fainting attacks. She had no history of trauma to the abdomen.

**Past Obstetric History:**

She was gravida 7 para 6 with 5 living children. All were full term normal hospital deliveries with average birth weight of 3.3kg. There were no complications.

**Gynaecological and Menstrual History:**

She attained menarche at the age of 15 years. She had regular menstrual flow lasting 3 - 4 days in a cycle of 28 - 30 days. She had no history of contraceptive use.

**Past Medical History:**

She had never been admitted for medical or surgical illnesses in the past. There were no history suggestive of urinary tract infection or renal disease.

**Family and Social History:**

She was a housewife married to a self employed petty businessman. There were no history of hypertension, diabetes mellitus or bleeding disorders in the family. She neither smoked cigarettes nor drunk alcohol.

**Physical Examination:**

She was in pain and sweating profusely. She was afebrile, grossly pale with cold extremities. She had no lymphadenopathy or pedal oedema.

**Cardiopulmonary System:**

She was not dyspnoeic, the pulse rate was 102 beats per minute regular with diminished volume. Her blood pressure was 100/50 mmHg in left recumbent position. The heart sounds were normally heard and there were no added heart sounds. The lung fields were clear.

**Abdomen:**

The abdomen was uniformly distended, poorly moved with respiration. The abdomen was tense and tender all over. Liver, spleen and kidneys could not be palpated because of the tense and tender abdomen. The fundal height corresponded to 38 weeks of gestation. Fetal parts could not be palpated easily. The lie and the presenting part could not be appreciated. The fetal heart sounds were not heard.

**Vaginal Examination**:

The vulva was stained with blood, and there was obvious bleeding seen trickling through the introitus which was moderate in amount with few clots. Speculum examination revealed pale vaginal mucosa, a normal cervix with no lesion. Digital Examination revealed a fully effaced and 4cm dilated cervix with intact membranes. Artificial rupture of membranes was done blood stained liquor drained. The presenting part was cephalic in left occipital transverse. The descent was at station 0. The bony pelvis was assessed to be adequate. Aseptically an indwelling urethral catheter was inserted at the same sitting.

**Diagnosis:**

Antepartum hemorrhage due to abruptio placenta with intrauterine fetal death.

**Management Plan**:

- Explanation was given to the patient about the diagnosis and plan of management.
- Intravenous line was secured with 2 wide bore canula gauge 16 and 18 were inserted on each arm and 2 liters of Ringers lactate ran fast concurrently. The fluid was interchangeably with Normal saline. She had 5L of fluids till delivery.
- With indwelling urethral catheter fluid in put and out put chart were monitored hourly. She produced 3000mls in 24 hours.

- Bed side clotting time was 7 minutes. This was repeated hourly and ranged between 7 - 10 minutes.
- Blood for grouping and cross match was taken and two units of group A Rh (D) whole blood and 2 units of fresh frozen plasma were available and transfused.
- Serum Creatinin 75mmol/L
- Blood pressure and pulse rate were checked half hourly. The pulse rate ranged from 98b/m - 102b/m and her blood pressure ranged from 100/50 - 130/80mmHg.
- She was given Morphine 10 mg intramuscular for analgesia.
- Labour was augmented with oxytocin 1.25 iu in 1000mls of Normal Saline to titrate at 10 - 60 drops per minute ½ hourly and to monitor the progress of labour four hourly.
- Sterile pads were supplied and vagina bleeding monitored.

**Intrapartum Monitoring:**

In three hours she had received 5 liters of Ringers lactate. Her blood pressure ranged between 100/50 - 130/80 mmHg, and the pulse rate was 100bpm. She was becoming more pale, and the bed side clotting time was 10 minutes and urine output was 1000mls in 4 hours. One unit of fresh frozen plasma and one unit of whole blood were given fast. Four hours latter vaginal examination was done and the cervix was fully dilated and the level of the presenting part was at station +1, and she was

experiencing a bearing down sensation. 45 minutes latter she had spontaneous vaginal delivery of a fresh still birth, male baby weighing 2.3kg. There was a retro-placental clot about 700mls. Intravenous Oxytocin 5iu was given. The uterus contracted well and there was no more blood loss. She received 2 more units of blood in the labour ward and clinically she was out of shock. The blood pressure was monitored 1/2 hourly and stabilized at 120/80 -130/80mmHg and her pulse rate was 88b/m. She produced 3000mls of urine in 24 hours. She was transferred to the antenatal ward. Third day after delivery her haemoglobin was 7g/dl. She was advised to wear a tight fitting brassierie to suppress lactation. She was discharged home on haematenics, and to be reviewed 2 weeks later.

**Review after two weeks:**

She was reviewed 2 weeks later. She was not pale and her haemoglobin was 9.2g/dl. The uterus was not palpable abdominally. She was counselled for possibility of recurrence of the problem. Because of her parity and age she was counselled for permanent sterilization of which she agreed and she was planed for Minilaparotomy after two weeks. She continued with haematenics for one more month.

**Commentary**:

Abruptio placenta is the term used for the premature separation of the normally implanted placenta before delivery of the fetus. The basic cause is unknown and this problem has been a challenge to obstetricians since it was first described by

Edward Rigby in 1895[1]. Abruptio placenta as a complication of pregnancy is associated with increased perinatal mortality and increased maternal mortality rate. World wide incidence of abruptio placenta ranges from 0.5 - 1.5% and accounts for 20 - 25% of antepartum hemorrhage[2]. In Muhimbili Medical Centre, the incidence of abruptio placenta is 0.97%[3]. The aetiology of abruptio placenta is largely unknown. Among associated factors includes hypertensive disorders of pregnancy, trauma to the abdomen, reduction in the size of uterus, as occurs in second twin in interval after the first twin has been delivered. Sudden loss of amniotic fluid e.g. in polyhydromnious. Pressure on the veins draining the uterus e.g. pressure on the gravid uterus on the inferior vena-cava, or large veins draining the uterus, may sufficiently raise the venous pressure in the retro-placental veins to cause their rupture. Poor nutrition, including folic acid and Vitamin A deficiency, short umbilical cord, smoking and multiparity has also been shown to be associated with abruptio placenta[4,5]. In the majority of patients the condition occurs without warning as was the case in this particular patient and diagnosis was made too late for fetal salvage. She was admitted in labour with clinical signs and symptoms of abruptio placenta in shock . In this patient advanced age with high parity brings the highest suspicion of abruptio placenta, though the sudden rise of blood pressure which was detected only once could be another possibility. The fetus suffers from the direct reduction in functioning intervillous space as well as the indirect effects of maternal vasoconstriction and uterine spasm. These factors associated with early separation of

placenta can explain why fetal movements had ceased prior to admission and also as to why fetal heart were not heard. Retro-placental hemorrhage of more than 250mls will produce some uterine hypertonias, and fetal asphyxia. If more than 500mls fetal death is likely and more than 1000mls serious maternal sequelae are likely. For Mrs. S.R. the approximated retro-placental clot was about 700mls. In both moderate and severe abruptio placentae there is compensatory vasoconstriction which adversely affects the fetus because of utero-placental ischaemia[4,5,6]. Mrs. S.R. had classical history and clinical features thus diagnosis of abruptio placenta was not difficult. Ultrasound scan and Doppler assessment may aid the diagnosis by revealing a retro-placental clot or a pool of blood[7]. However if the abruptio is mild or if bleeding occurs without a large accumulation of blood (ie it escapes externally) ultra sonographic findings may be negative[7]. The complications which follows abruptio placenta are disseminated intravascular coagulopathy (DIC) hypofibrinogenemia and renal failure[1,4]. This results from extensive damage to the decidual bed underlying the placenta, release of thromboplastic clotting factors, consumption of coagulation factors in the retro-placental clot and also over stimulation of the sympathetic nervous system as a result of shock which slows blood flow in the small constricted vessels[2]. A prolongation of the bedside clotting time may be significant but the usefulness of this test has been questioned as false positive may cause unnecessary panic. Laboratory determination of prothrombin time, partial thromboplastin time, serum fibrinogen levels, platelet count, fibrinogen degradation products should be

done to monitor coagulation profile of these patients. These were not available for logistic reasons and instead only serial bed side whole blood clotting time was done. In this patient the bed side clothing time was within normal limit.

Management of abruptio placentae aims at preventing the above complications or stop and reverse them if they have occurred[4,5].

Thus management includes:

i. Early emptying of the uterus

ii. Early detection of coagulation failure

iii. Early detection of renal failure

iv. Early correction of hypovolemia by blood transfusion in severe forms, and adequate crystalloid rescusitation. Maintaining volume assists the clearance of fibrin degradation products from the plasma.

Amniotomy should be done and patient allowed to deliver vaginally. Amniotomy will reduce intrauterine pressure which will reduce thromboplastin release into the circulation. Secondly the prostaglandin release from chorioamniotic membranes will augment labour. Clinically important coagulopathy is extremely rare in the presence of a living fetus. If the fetus is alive then lower segment caesarean section should be the treatment of choice[2,4,7]. Fetal survival is closely related to diagnosis delivery interval, hence the quickest mode of delivery should be opted for. However most of these babies are pre-term and delivery by caesarean section would only convert the probability of intra uterine death to a later neonatal death if a sophsicated intensive

care unit is not available. Mrs. S.R, was in established labour with intra uterine fetal death, amniotomy with Syntocinon in Hartmans Solution was Set. She had uneventful vaginal delivery.

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**OBS NO.7: ASSISTED BREECH DELIVERY AT TERM**

| | |
|---|---|
| Name: | Mrs R.S. |
| Address: | Temeke |
| Age: | 30 years |
| Date of admission: | 4.3.1997 |
| Delivery No: | 14617 |

**SUMMARY:**

Mrs R.S. a 30 years old, gravida 4 para 3 + 0. booked at MMC antenatal clinic at the gestation of 20 weeks. Breech presentation was diagnosed at the gestation of 34 weeks which persisted to term. She was admitted in the labour ward because of labour pains at the gestation of 38 completed weeks. She had spontaneous rupture of membranes just on admission. A successful assisted breech delivery of male baby weighing 2.950kg. with an apgar score of 7 in the first minute and 10 in 5 minutes was accomplished. Both mother and child fared well and were discharged home. Controversies of management of breech delivery are discussed.

**History of Index pregnancy**:

Mrs R.S. booked at MMC antenatal clinic at the gestation of 20 weeks. Her last normal menstrual period had started on 17.3.98 and thus her calculated expected date of delivery was supposed to be 24.12.98. Her booking blood pressure was

110/70mmHg and the haaemoglobin was 11.6g/dl. Breech presentation was identifical at the gestation of 34 weeks. This was further confirmed by ultrasonography at the gestation of 36 weeks. It revealed complete breech with good cephalic flexion and no congenital malformation was detected and the placenta was fundal anterior.

**Past Obstetric History**:

She was gravida 4 para 3 + 0. She had spontaneous vertex deliveries in 1989, 1992 and 1995 respectively to a 3.4kg, 3.3kg and 3.5kg all male babies. All her deliveries were uneventful with no intrapartum or postpartum complications.

**Gynaecological and Menstrual History:**

She attained menarche at the age of 13 years. She had cycles of 28 - 29 days with a flow of 4 days, regular and not painful. She denied history of abnormal vaginal discharge, vaginal bleeding or dyspareunia and she had never used any method of contraception.

**Past Medical History**:

She had no history of previous admission, surgery or blood transfusion.

**Family and Social History:**

She was a house wife married to a self employed businessman. There was no family history of hypertension diabetes or twining in the family. She never smoked cigarettes but she was a social drinker only on gatherings.

**Physical Examination:**

Mrs. R.S. was a young lady of good nutritional status. She was afebrile not pale and not jaundiced. She had slight pitting oedema and there was no lymphadenopathy.

**Cardiopulmonary:**

She was not dyspnoeic, her pulse rate was 86 b/m regular and of normal volume and the blood pressure was 120/80 mmHg. The heart sounds were normally heard and there were no added heart sounds. The lung fields were clear.

**Abdominal Examination:**

The abdomen was uniformly distended and moved well with respiration. The liver and spleen were not palpably enlarged and there were no renal angle tenderness. The fundal height corresponded to 36 weeks of gestation. The lie was longitudinal in breech presentation with a well flexed head. She had 2 - 3 contractions after every 10 minutes lasting between 20 - 40 seconds. Fetal heart rate were heard above the umbilicus at the rate of 142 b/m. The estimated baby size was 2.8kg.

**Vaginal Examination**:

Revealed normal vulva with obvious draining through the vagina. The liquor was clear. The cervix was fully effaced 3cm dilated there was no cord felt. The presentation was breech in left sacral anterior position at station -1. The pelvis was assessed to be adequate. The criteria for breech delivery were:

- estimated birth weight less than 3.5Kg but above 2.5Kg.
- Previous uncomplicated deliveries.
- Normal amount of liquor.
- No footling .

**Diagnosis**: Breech presentation at term in active phase of labour.

**Management Plan:**

1. 1000mls of blood group (A +ve) were cross-matched for her in case abdominal delivery becomes necessary.
2. Intravenous Dextrose/saline 1000mls with wide-bore canula.
3. She was counselled about the mode of deliveries and the possible complications. She opted for vaginal delivery.

**Intrapartum Monitoring:**

She was given injection pethidine 100 mg Intramuscular and injection promethazine 25 mg Intramuscular to alley anxiety and for sedation. She remained afebrile and normotensive. The fetal heart rate ranged between 136 - 146 beats per minute. Labour progressed well with moderately strong contractions with increasing frequency and duration. Four hours later a vaginal examination was done and revealed no cord prolapse and the cervix was 7cm, the position was left sacral anterior and the level of the presenting part was + 1 below the ischial spines. Two hours later she was experiencing a bearing down sensation.

**Conduct of delivery**:

The patient was transferred to a high bed and was kept in lithotomy position. Vulva and perineum were cleaned with savlon. Patient was encouraged to bear down with each uterine contraction. The fetal back was on the left side in reference to the maternal pelvis. Further bearing down led to delivery of anterior buttock and posterior buttock easily. The lower limbs were easily and gently hooked out. Further delivery was spontaneous up to the level of the umbilicus whereby the umbilical cord was safely guided by pulling it down. Delivery of the baby continued spontaneously with guidance and unhurried monouvres by ensuring a gentle downward pull in the right oblique position. When the inferior angle of the scapular of the anterior shoulder appeared the baby was held by its pelvis with both thumbs over the sacrum and both index and middle fingers on iliac crest and pubic rami. The baby's trunk was turned in anti-clockwise direction to bring the posterior shoulder under the pubic symphysis where by the right arm was hooked out by index finger. The baby's trunk was now gently and deliberately rotated in a clockwise manner bringing the anterior shoulder under the symphysis pubis whereby the left arm was wiped down. The baby was then left to hang on its weight encouraging further descent till the hairline of suboccipital region was visible. The baby's legs were then held by the obstetricians left hand, and in a gentle sweep the fetal trunk and the legs were swung in an arc towards the mothers abdomen. The right hand supported the mother's perineum and the fetal head to avoid maternal and fetal injury. As the fetal legs approached the

mothers abdomen, the assistant cleaned the baby's face with a gauze. The head was eventually delivered gently. The cord was doubly clamped and cut and the baby wrapped in sterile towels and handed over to the mid wife. The placenta and membranes were delivered complete by controlled cord traction and the perineum was intact. Blood loss was 200mls. Post delivery blood pressure was 110/70. The birth weight was 2.950kg male baby with an apgar score of 7 in the first minute and 9 in 5 minutes there were no any features suggestive of any trauma. Both mother and child were discharged 24 hours latter.

**COMMENTARY:**

Breech presentation is where the caudal pole of the baby present in the inlet of the pelvis. The usual incidence at delivery is 2 - 4%[1]. Earlier in pregnancy 24 - 32 weeks the breech present much more commonly 20 -30%[2]. But spontaneous version occurs in the majority of these patients. At our Centre the incidence of breech presentation is 3.6%[3]. Conditions which restrict fetal turning include extended legs, multiple pregnancy, alterations of fetal uterine relationship eg in placenta praevia, fetal or uterine anomalies and occasionally loops of cord around the fetal neck prevent spontaneous cephalic version. However none of these factors were detected in this patient. The diagnosis of breech presentation at 30 -34 weeks is important because external cephalic version is considered to have a well defined role by some practitioners if carried out with care between 30 - 34 weeks[4,5]. Technique for external cephalic version is becoming a lost art in many Centers[5]. It is not

universally accepted. It has a small risk to the fetus because of placental separation, premature rupture of membranes, premature labour, entanglement of the cord, fetal maternal red cell transfer and fetal trauma[4,5,6]. If version does fail or is not undertaken assessment the risk factors involved in allowing vaginal delivery should be considered. There is agreement that both footling presentation and hyperextension of the fetal neck are contraindications to vaginal delivery, and that breech fetuses estimated to weigh over 4000gm should not undergo trial of vaginal delivery[7]. Other factors include the size of the mother's pelvis (x ray pelvimetry), Size attitude and normality of the baby, age, parity, gestation and fetal well-being. There is no consensus on how to assess the adequacy of maternal pelvis[5,7]. The maternal pelvis can be assessed by clinical pelvic examination or radiological pelvimetry. Radiological pelvimetry plays a diminishing role in modern obstetrics because the best pelvimetry is the fetal head[7,8]. Retrospective studies have suggested that pelvimetry in breech presentation at term cannot predict difficulties and that it might even increase fetal risk; other variables such as estimated fetal weight, type of breech presentation, position of the head, and progress in labour are apparently given less weight once the pelvimetry results has been declared normal[9]. Breech presentation is a high risk pregnancy on account of the following:

- It is associated with difficult labour as the lesser diameters are first delivered followed by bigger diameters and less compressible fetal parts. The entrapment of the after coming head is an ever

unpredictable danger.

- There is an increased caesarean delivery rate hence increase in post caesarean morbidity.
- Breech delivery tends to have 3 to 4 times higher perinatal mortality rate when compared to cephalic delivery.

At Muhimbili Medical Centre 18.2% of perinatal mortality in primigravida was due to breech deliveries[3]. Most of the morbidity and mortality associated with breech delivery results from cord compression, nuchal arm, and difficulty in the delivery of the after-coming head[4]. Delivery of breech presented fetuses remain controversial topics in obstetrics, despite of numerous studies and much discussions[1,5]. Hence the optimal management of breech delivery remains without consensus. The outcome of breech delivery in this patient was assessed by uncomplicated previous deliveries, estimated fetal weight, exclusion of footling presentation, normal clinical pelvimetry, normal liquor volume and normal first and second stages of labour. With regards to Mrs. R.S. external cephalic version was not considered. Ideally external cephalic version is done with both ultra-sound assessment and electronic fetal heart monitoring. Inferior health facilities in our center has made this approach to be unacceptable. Within the last two decades many centers have adopted the policy of abdominal delivery in particular of nulliparous women. Some practitioners consider caesarean section should be carried out for all patients in whom the breech is still presenting in late pregnancy. The dilemma with

this policy is that between 25 and 50 caesarean sections will be needed to save one infant from none optimal condition at birth. ie morbity is being transferred from fetus to the mother[6]. Even maneuvers of extracting breech by caesarean section are similar to those associated with delivery of a breech via vaginal route. So caesarean section alone can not guarantee a good infant outcome[4,6]. There is no standard set of general criteria for selecting route of delivery for breech presentations, but when several criteria are combined (size of the baby, fetal altitude, normal amount of liquor, previous uncomplicated deliveries, clinical pelvimetry, gestation, fetal wellbeing etc) have shown to reduce the risk when applied in clinical settings[6]. The precaution taken in this patient allowed successive vaginal delivery of a breech. Optimal management of breech presented fetuses remains without consensus. The author thinks that under optimal and ideal situations external cephalic version has still a roll to play. Augmentation of in-efficient labour with oxytocin is a controversial issue, but seems reasonable if there is no disproportion and the labour is carefully monitored[7,8,9].

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**OBS No.8: PREVIOUS LOWER SEGMENT CAESAREAN SECTION**

**TRIAL OF SCAR: SUCCESSFUL VAGINAL DELIVERY.**

Name: Mrs H. M.

Address: Vingunguti.

Age: 27 years.

Date of admission: 26th october 1998.

Delivery number: 13030

**Summary:**

Mrs. H.M. was gravida 4 para 3. She was admitted into the high risk labour ward from home at the gestation of 37 completed weeks because of labour pains. Her second delivery was by lower segment caesarean section due to eclampsia. She was planned for and had successful vaginal delivery of a male baby weighing 2.6 kg with an apgar score of 7 in the first minute and 9 in 5 minutes. The case is presented and discussion made on the controversies of trial of scar.

**Index pregnancy:**

She booked for antenatal care at MMC at the gestation of 24 weeks. Her last normal menstrual period had started on 10th February 1998 and her calculated date of delivery was supposed to be on 17th November 1998. Her booking weight was 60kg and her height measured 162cm. Her haemoglobin levels were 11g/dl. Her blood pressure was 110/70 mmHg and she remained normotensive throughout her visits. Her blood group was A rhesus positive, VDRL was negative. She had no pedal

oedema and proteinuria was not checked. The fundal height was corresponding to the gestation age. Subsequently she made 5 visits and her fundus was found growing normally. Pelvic examination was done at the gestation of 36 weeks and the pelvis appeared adequate for the baby. Trial of scar was the preferred mode of delivery in the opinion of the authour. She was counselled for trial of scar and to report immedietly to the labour ward in case she gets labour pains prior to the planned date of admission at 38 completed weeks.

**Past obstetric history:**

She was gravida 4 para 3 with 2 living children. Her first pregnancy was in 1991. She had spontaneous vaginal delivery of a 3.200kg male baby who is alive and well. The intrapartum and postpartum periods were uneventful. She delivered a fresh still birth female baby by lower segment caesarean section in 1993 due to eclampsia. The baby weighed 3.300kg. She had uneventful post operative recovery. She had successful trial of a scar in her third pregnancy. She delivered a 2.6kg male baby and she had no problem.

**Menstrual and Gynaecological history:**

She attained menarche at the age of 14 years. The periods lasted 3 - 4 days with normal menstrual loss. The cycles were regular 28 - 29 days. She had no history of abnormal vaginal discharge or vaginal bleeding. She denied using any of the modern methods of contraception.

**Past Medical history:**

She had no history of previous admission, blood transfusion or bleeding tendencies.

**Family and social history:**

She was a house wife married to a mechanic working with a private garage. She denied history of Diabetes Mellitus or any other major illnesses in the family. She neither smoke cigarettes nor drunk alcohol.

**Physical examination:**

Mrs. H.M. was healthy and of good nutritional status. She was not pale and not jaundiced. She was afebrile, had no pedal oedema or lymphadenopathy.

**Cardiopulmonary system:**

She was not dyspnoeic, The pulse rate was 82 beats/min, regular and good volume. Her blood pressure was 110/70mmHg. The heart sounds were normally heard and there were no murmurs or added heart sounds. The lung fields were clear.

**The Abdomen:**

The abdomen was uniformly distended. There was a sub umbilical midline scar that had healed by primary intention. The liver, spleen and kidneys were not palpable. The fundal height corresponded to 36 gestational weeks. There was regular uterine contractions of 2 - 3 per 10 minutes lasting 20 -40 seconds. The fetal lie was

longitudinal with cephalic presentation. Four fifth of the head was above the pelvic brim. The fetal heart were 138 / minute and were regular. The baby size was estimated to be 3.0Kg and the liquor was adequate.

**Vaginal examination:**

The vulva and vaginal mucosa were normal and there was no obvious draining or vaginal bleeding. The cervix was soft, fully effaced and 4 cm dilated. Membranes were intact and no cord was felt. Artificial rupture of membranes was done by using Kochers forceps and the liquor was clear. The vertex was at station -1 and the position was left occipital anterior. The pelvis was estimated to be adequate

**Diagnosis:**

Previous lower segment cesarean section in active phase of labour.

**Management plan:**

1. Patient was explained about the mode of delivery and the possible complications.
2. Patient was prepared as for caesarean section and informed consent was obtained.
3. She was instructed to take nil orally till delivery.
4. Blood group was A Rh positive and two units of blood were crossmatched.
5. The urine analysis was negative for sugar and protein.

6. Intravenous drip of Dextrose/saline 500mls was set up to go slowly.

7. Injection Pethidine 100 mg intramuscular and injection Promethazine 25mg intramuscular were given.

**Progress of labour:**

Labour was allowed to proceed naturally. Mean while the maternal blood pressure, pulse rate and fetal heart rate were recorded half hourly, so was the palpation of scar tenderness. The contractions caught up and labour progressed well. After 4 hours the contractions were moderately strong at a frequency of 4 - 5 lasting 20 - 40 seconds after every 10 minutes. There were no scar tenderness and fetal heart rate was 136 beats per minute and regular. 2/5 of the presenting part was above the pelvic bream. Maternal pulse was 90 beats per minute. On pelvic examination there was no vaginal bleeding and the liquor was clear. The cervix was 8 cm dilated and the position was left occipital anterior and there were no caput or moulding. The vertex was at station +1. Two hours latter the patient had strong urge to push and was encouraged to do so. The head was seen crowning. Under aseptic technique and after lignocaine infiltration a left medio-lateral episiotomy was made. She delivered normally 3 minutes latter. Ergometrine 0.5mg was given intravenously immedietly after delivery of the baby. A male baby 2.6kg with apgar score of 7 in the first minute and 9 in 5 minutes was delivered. The placenta and membranes were delivered complete by Brandt - Andrew method. Repair of the episiotomy wound was done in layers using chromic catgut No. 0 with interrupted

stitch. The patient was briefly observed in the labour ward. Both pulse rate and blood pressure remained stable. Uterus was well contracted and there were no undue vaginal bleeding. Blood loss was estimated to be 300 mls. Both mother and child fared well and were discharged after 24 hours.

**Follow up:**

They were seen again after 6 weeks, both mother and the baby were doing fine. Her blood pressure was normal, haemoglobin was 10.8g/dl. She was counselled on the various methods of contraception and she was advised to attend a nearby MCH clinic.

**Commentary:**

The famous dictum once a caesarean section always a caesarean section by Edwin Cragin in 1916[1] was a reasonable recommendation under circumstances prevailing at his times, With increasing awareness of safety of vaginal delivery, it is now recommended wider use of vaginal birth after caesarean section[2]. Today over 90% of caesarean section operations are of lower segment type. Despite of these operative changes that have dramatically minimized the risk of vaginal delivery subsequent to caesarean section, the doctrine of once caesarean section always caesarean section continue as a stated policy in some institutions and in minds of some obstetricians[1],

A study done by Sabhati in Eritrea showed that out of 66 women with previous scar 71.2% had successful vaginal delivery and only 28.2% had to undergo

caesarean section for failure of progress of labour[4]. The incidence of vaginal delivery following caesarean section at MMC is 18.9%[5]. Patients with previous scar form a high risk group who need a specialized antenatal care and planned mode of delivery. This patient attended MMC high risk antenatal clinic as she was told previously. She had 5 subsequent visits and she had planned delivery. Allowing a trial of scar is only safe in circumstances with suitable facilities to perform a repeat caesarean section instantly should complications arise. There are several factors that one has to consider on a decision about a trial of scar in patients with previous caesarean section.

The overall vaginal delivery rate following more than 2 previous caesarean section shows little difference from that seen in women who had previous scar, 58 - 81% versus 65 - 90%[6]. The available data does not suggest that these two groups should be treated differently. However due to small numbers of case with more than one previous scar reported further studies are needed[2,6]. But it is still accepted that when more than one caesarean section has been performed the success is much more less[7], and it is still emphasized that such patients should not be tried for vaginal delivery. Previous vaginal delivery is a good prognostic indicator especially if it occurred after caesarean section, although this may not always be true as a previously small dehiscence may just become a serious rupture in subsequent delivery. Trial of scar is uniformly contraindicated in patients with classical caesarean section, because of the higher incidence of scar rupture which is four times

that of a lower segment scar[4,6]. It may occur even before labour onset during the course of pregnancy. Previous hysterotomy, inverted T incision and operation done as early as 26 - 28 weeks of gestation should be treated like classical scar. Knowledge of operative technique used at previous caesarean section and post operative course may also influence the scar integrity and hence the choice of delivery. When there is puerperal sepsis following operation the scar is deemed weak and should not be tried. In the past it was thought patient with a history of caesarean section due to a recurrent cause such as cephalo-pelvic disproportion should not be tried for vaginal delivery. Successful vaginal delivery of over 50% has been reported in patients with previous caesarean section due to cephalo-pelvic disproportion[6]. Thus CPD is not an absolute contraindication for trial of labour. In this case Mrs. H.M. had LSCS due to eclampsia in her second pregnancy which is a non recurrent factor. There was no sepsis and pelvic assessment and fetal size were both in favour of vaginal delivery. She also had spontaneous vertex delivery in her third pregnancy following trial of scar. So trial of scar was a logical approach according to the author. Care during trial of scar for women with previous caesarean section requires skilled evaluation of labour and routine maternal and fetal surveillance. Where facilities allow fetal scalp blood sampling and electronic fetal heart monitoring should be conducted to enable a more correct diagnosis of fetal distress. Minimal standards for fetal monitoring suffice. ( i.e. auscultation after contraction every 15 minutes in the active phase of the first stage of labour and every 5 minutes in the second stage).

Inspection of liquor for meconium must be done regularly as this may also indicate fetal distress. In this patient labour was monitored closely using the available facilities and went quite smoothly until delivery and there after. There is no consensus for most obstetrician in the use of oxytocin for induction or augmentation of labour. The use of oxytocin has remained controversial because of speculation that there might be an increased uterine rupture or dehiscence. However some think that the force for uterine contraction with or without augmentation remains the same and they all carry the same risks[6]. Bologi showed that oxytocin when carefully monitored is safe and reasonable[7]. Transcervical exploration of the uterine cavity after trial of vaginal delivery has also been an area of debate. Some think it must be done while others regard it as unnecessary[1,2]. However no study have shown any benefit from routine manual exploration after delivery in such patients. There is always the risk of introducing infection or converting dehiscence in to a large rupture. Only increased vigilance in the hour after delivery of the placenta is needed reserving internal palpation of lower segment for those who showed abnormal bleeding. Moreover the procedure may be inconclusive and asymptomatic dehiscence does not require treatment[2]. The Author feels that trial of labour after caesarean section is logical approach for women with:-

One transverse incision caesarean section.

Singleton with vertex presentation and there is no absolute indication for caesarean section. Patients should have antenatal evaluation and adequate information be

provided so that a woman can make an informed consent in the choice between repeat elective caesarean section and trial labour.

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**OBS.9: RHESUS NEGATIVE PREGNANT WOMAN:**

**VAGINAL DELIVERY AND IMMUNOPROPHYLAXIS**

Name: F.M.

Age: 23 years

Residence: Kinondoni

Date of delivery: 1.12.98

Del. No: 14,325.

**SUMMARY:**

Mrs F.M. was a 23 years old primigravida. She booked for antenatal care at our high risk antenatal clinic at the gestation of 18 weeks. Baseline investigations done at booking discovered her to be blood group O Rhesus D negative, and her husband was blood group A Rhesus D positive. Test for antibodies were done at booking, 28, 34, and 36 weeks of gestation respectively. Ultra sound scan was done at booking, 24 and 36 weeks of gestation. No features of erythroblastosis was detected and the amount of liquor was adequate. Her antenatal visits were uneventful. She had spontaneous delivery a 3.2Kg male baby with apgar score of 8 in the first minute and 10 in five minutes respectively. Fetal cord blood revealed blood group A Rhesus (D) positive and direct coombs test was negative. In maternal blood there was no anti D Rhesus blood or foetal red blood cells. She was given

300mcg of anti D gammaglobulin within 72 hours of delivery. They both fared well and were discharged home in good condition. Immunopophylaxis in rhesus negative pregnant mothers is discussed.

**Index Pregnancy:**

She booked for antenatal care at MMC at the gestation of 18 weeks. Her last normal menstrual period was 25.2.98 and thus her expected date of delivery was 4.12.98. Baseline investigations done at booking discovered her to be blood group O Rhesus D negative, and her husband was blood group A Rhesus D positive. Test for antibodies was done at booking, 28, 34 and 36 weeks of gestation, they were all negative. Ultrasound scan done at booking, 24 and 36 weeks of gestation, revealed no features of erythroblastosis fetalis, and the amount of liquor was found to be adequate. Her antenatal visits were uneventful, she booked with haemoglobin of 11.0g/dl and a blood pressure of 110/70mmHg, they all remained normal in her seven subsequent visits. Her booking weight was 56kg and she had no pedal oedema. She denied history of blood transfusion, abortion, or vaginal bleeding in the index pregnancy. During her visits she received 2 injections of tetanus toxoid. She had normal weight gain and the fundal height was corresponding to the gestation age.

**Menstrual and Gynaecological History**:

She had menarche at 15 years of age. The menstrual cycle were regular 28 - 29 days. She denied history of abnormal vaginal discharge or vaginal bleeding. She had never been on contraception before.

**Past Medical History:**

There were no history of major illness in the past. She had no history of previous blood transfusion or bleeding tendencies.

**Family and Social History**:

She was a primary school teacher married to a petty businessman. She denied history of Diabetes mellitus, hypertension or any other major illnesses in the family. She was a social drinker but never smoked cigarettes.

**Physical Examination:**

She was a young lady with good nutritional status. She was afebrile, not pale and not jaundiced. She had no pedal oedema or lymphadenopathy.

**Cardiopulmonary System:**

She was not dyspnoeic, the pulse rate was 82 beats per minute regular and good volume. Her blood pressure was 110/70mmHg. The heart sounds were normally heard and there were no added heart sounds. The lung fields were clear.

**The abdomen:**

The abdomen was uniformly distended with no area of marked tenderness. She had no hepatosplenomegaly and the renal angles were free of tenderness. The fundal height was 18 weeks of gestation which corresponded with dates.

**Diagnosis:**

Primigravida with blood group O Rhesus D negative at 18 weeks of gestation.

**Plan of management:**

The problem of Rhesus isoimmunization was clearly explained to her. The need to get anti D gammaglobulin should the baby be rhesus D positive was explained. She was asked to prepare money to buy anti Rhesus D gammaglobulin as it is not readily available at MMC. She accepted.

**Investigations:**

- Haemoglobin 11,0 g/dl.
- Blood group and Rhesus factor.
- Mother was blood group O Rh D negative.
- Husband was blood group A Rh D positive.
- Indirect coombs test at booking, 28, 34, and 36 weeks of gestation were negative.
- Mid stream urine for microscopy was normal.
- VDRL was negative.
- Ultra sound done at booking, 24 and 36 of gestation, showed no fetal abnormalities, no features of erythroblastosis fetalis and the amount of liquor was adequate.

**Delivery:**

At 39 completed weeks of gestation she was admitted in the labour ward because of labour pains. On admission the neonatologist was informed and accepted to take care of the baby.

**Examination in labour:**

She was afebrile, not pale and not jaundiced. She had no pedal oedema or lymphadenopathy. The pulse rate was 90 beats per minute, regular with normal volume and the blood pressure was 110/70 mmHg. Heart sound were normally heard there were no added heart sounds and the lung field were clear.

**The Abdomen:**

The abdomen was uniformly distended with no area of marked tenderness. She had no hepatosplenomegaly. and renal angles were free of tenderness. The fundal height corresponded to 36 weeks of gestation. The fetal lie was longitudinal with cephalic presentation. The level was 4/5 the fetal size was estimated to be 3.0 Kg.and the amount of liquor was assessed to be adequate. The fetal heart rate were 138 beats per minute and were regular. She had about 2 - 3 contractions in every 10 minutes which lasted 10 minutes.

**Pelvic Examination:**

The vulva and vaginal mucosa were normal. There was no obvious draining or vaginal bleeding. The cervix was soft, fully effaced and 4cm dilated. Membranes were intact there was no cord felt. Artificial rupture of membranes was done by using Kocher's forceps ad the liquor was clear. The position was left occipital transverse and the presenting part was at station -1. The pelvis was estimated to be adequate.

**Progress in the labour ward:**

Labour progressed well. Fetal heart rate, maternal pulse, blood pressure and uterine contractions were monitored 1/2 hourly. Meconium stained liquor was also followed closely. Four hours later she was in regular strong contractions. The level of presenting part was 3/5. The fetal heart rate was 140 beats per minute. A repeat vaginal examination revealed the cervix to be 8cm dilated. No signs of Obstruction was noted. Two hours latter the patient had a strong urge to push and was encouraged to do so since the head was seen distending the perineum and the pelvis looked roomy for the baby. She delivered normally 10 minutes latter. Oxytocin 5iu was given i/v immediately after delivery of the baby. A male baby weighing 3.2kg with apgar score of 8 in the first minute and 10 in 5 minutes was delivered. There was no gross congenital anomaly noted. The baby was not pale and had no features of hydrops fetalis. Cord blood and maternal blood was taken for hematological and immunological studies. The baby was found to be blood group A Rhesus D positive, with haemoglobin of 19 g/dl. and serum bilirubin was 5 mmol/l. Maternal blood tested had no antibodies against Rh D factor. She was given anti D gammaglobulin. Both mother and the baby were discharged in good condition 4 days later. They were to be reviewed 2 weeks later.

**Follow up:**

Both mother and baby were in good health. The baby was breast feeding well and the mother had no problems.

**COMMENTARY:**

When any fetal blood group factor inherited from the father is not possessed by the mother, there is the possibility of an immune reaction by the mother[1]. Maternal immune reactions can also occur from blood product transfusion. The formation of maternal antibodies to a foreign antigen may be followed by various degrees of transplacental passage of these antibodies into the fetal circulation. Depending on the degree of antigenicity and the amount of antibody involved this transplacental passage may lead to haemolytic disease of the new born[2]. The Rh antigens are inherited independent of all other blood group antigens. There is apparent no difference in the distribution of Rh antigens with regard to sex. There are however important racial differences. The Rh factor present in some 85 - 90% caucasians, 95% of blacks and 99% Asiatics[3]. In the pre-prophylaxis era approximately 13% of caucasian women were at risk of rhesus isoimmunization (Rh - negative with Rh -positive husband), but only about 0.5 - 1% had affected babies. There are a number of possible reasons for this difference[3].

- The fetal cells may be of a different ABO group to the mother and are quickly destroyed.
- The varying rates of occurrence of the offending red cells antigens.
- Lack of transfer of antibody across the placenta from the mother to fetus in amount sufficient to effect the fetus. - The variability of maternal response to the antigens.

- The husband may be heterozygous for the rhesus factor, hence 50% of the babies will not be affected.

The appropriate administration to the mother who is rhesus D negative of anti (D) immunoglobulin during or immediately after pregnancy has eradicated most but not all Rh (D) isoimmunization among Rh(D) negative women[4]. Two recent studies have reported that failure to give Anti D Immunoglobulin has accounted for 14% to 41% of immunization[5]. Approximately half of these immunizations resulted from failure to administer anti - D immunoglobulin after a previous pregnancy, including failure to administer anti-D immunoglobulin to women in whom circulating antenatal prophylactic anti-D immunoglobulin was misinterpreted[5]. The remaining immunizations have been ascribed to failed or delayed administration after potentially sensitizing event during pregnancy, such as administration of anti - D immunoglobulin more than 72 hours after the immunizing event[5,6]. The first pregnancy rarely results in severely affected fetus. However there is evidence which suggests that the largest single cause of maternal Rh D antibodies is immunization during a pregnancy where there has been no prior overt sensitizing event[7]. Hence haemolytic disease is a possibility in nearly every pregnancy and late immunization during first pregnancy is responsible for 18% to 27% of cases[4,7]. For this reason the mother was given Anti D Immunoglobulin within 72 hours to eliminate any rhesus positive red blood cells to prevent maternal iso-immunization

to this primi para woman who had successive vaginal delivery to a rhesus positive baby.

Immunization in a second or subsequent pregnancies probably accounts for a similar proportion of cases, although it is impossible to distinguish late sensitization from failure of prophylaxis at the end of the proceeding pregnancy[7,8]. It is recommended that following delivery irrespective of the dose of anti-D immunoglobulin routinely given, postnatal prophylaxis must include a screening test to identify women with large fetal maternal haemorrhage who may need additional immunoglobulin to ensure clearance of all fetal red cells. The Kleihauer acid elution test or flow cytometry may be used to quantitate fetal maternal haemorrhage[8]. Flow cytometry is more reproducible and more accurate for large transplacental haemorrhage (> 4ml) but it is not available in all hospitals. The volume of fetal blood entering the maternal circulation should be determined for all high risk pregnancies[6,8]. Routine antenatal prophylaxis is advocated at 28 and 34 weeks by some centers. It has been shown that without antenatal prophylaxis 0.9% to 1.8% of Rh (D) negative mothers carrying their first Rh (D) positive fetus become iso-immunized during the antepartum period[7,8]. Debate continues regarding the cost benefit of routine antenatal prophylaxis ( Anti D prophylaxis at 28 and 34 weeks to all rhesus negative mothers). With the introduction of an immune globulin program only about 1% of Rhesus negative mothers will subsequently become immunized.

Failure usually results from previous incompatible blood transfusion, antepartum rather than intrapartum sensitization and a larger than normal fetal maternal haemorrhage[8]. The major recent advance in management has been the prophylactic use of Anti D gamma globulin at the termination of pregnancy, since pregnancy subverts the normal immune response. Treatment is also necessary during pregnancy if damage to the placenta, amniocentesis, other trauma, fetal death etc). Haemolytic disease of the fetus and the new born from Rh (D) iso-immunization has become a problem almost totally limited to Rhesus negative woman who was sensitized. Anti D gamma globulin was given in this patient who was primigravida to prevent iso-immunization since the degree of maternal sensitization increases with each pregnancy and she still expects to become pregnant sooner or later.

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**OBS NO.10: RETAINED PLACENTA : MANUAL REMOVAL**

Name: Mrs. H.K.

Age: 25 yrs

Address: Mtoni

Delivery No: 15850

Date of admission: 8.11.97

**SUMMARY:**

Mrs H.K. was gravida 4 para 2 + 1, admitted from home because of labour pains at the gestation of 39 completed weeks. She had a normal term vaginal delivery but the third stage was complicated by retention of the placenta. Blood loss was progressively increasing, however vital signs remained stable. The placenta was successfully removed manually under general anaesthesia. She had uneventful recovery and was discharged home 24 hours latter.

**Index Pregnancy:**

She first booked at Muhimbili Medical Center high risk antenatal clinic at the gestation of 22 weeks. Her last normal menstrual period was 8.2.1997 and therefore the calculated date of delivery was on 15.11.1997. She had mild anaemia of 9.6 g/dl which was corrected with haematenics and she was on weekly 300mg of Chloroquine for malaria prophylaxis. Her blood group was O Rhesus D positive and serologicl screening for syphilis was negative. She remained normotensive throughout her visits. Her booking blood pressure was 110/70 mmHg. She had spontaneous

vaginal delivery of a 2.550kg female baby with apgar score of 9 in the first minute and 10 after 5 minutes. Intravenous Injection 0.5mg Ergometrin was given after delivery of the anterior shoulder. However third stage of labour was complicated by retained placenta. She was catheterized, and an intravenous syntocinon drip 10 iu in 1L of Hartman's Solution continued to run but still the placenta could not be delivered within an hour of delivery of the baby.

**Past Obstetric History:**

She was gravida 4 para 2 + 1, all 2 children were alive and well. All were full term normal deliveries. Her second delivery was also complicated by retained placenta which was manually removed under general anaesthesia. There was no history of blood transfusion and she was discharged home 24 hours latter.

**Menstrual and Gynaecological History:**

She attained menarche at the age of 14 years. Her cycles were regular occurring every 28-30 days. She had normal menstrual loss and the period lasted 4 - 5 days. She had laparotomy due to ectopic pregnancy in 1994 and she was transfused with one unit of blood. She had no history of abnormal vaginal discharge and she had never used any of the contraceptive methods.

**Past medical history:**

This was uneventful.

**Family and Social history:**

Mrs. H.K. was a house wife married to a technician with a private company.

There was no family history of hypertension, Diabetes mellitus or twining in the family. She did not smoke or drink alcohol.

**Physical Examination**:

She was in good general condition. She was afebrile, moderately pale and she had no lymphadenopathy or pedal oedema.

**Cardiopulmonary System:**

She was not dyspnoeic. Her pulse rate was 92 beats per minute regular and of normal volume and the blood pressure was 120/80mmHg. The heart sounds were normal and there were no murmurs. The lung fields were clear.

**Abdominal examination:**

The abdomen was distended supra-pubically to above the umbilicus. There was a healed sub umbilical midline scar. The liver and spleen were not palpable. The uterus was well contracted and corresponded to 24 weeks of pregnant uterus.

**Vaginal Examination:**

A clamped cord to the placenta was still on place. Bleeding through the vagina was evident and the vulva was soaked with blood. There were no vaginal lacerations or tears and the perineum was intact. Catheterization was done and about 150mls of clear urine was drained. One more attempt to deliver the placenta by Brand - Andrew manoeuver failed. Digital examination revealed a constricted ring that was felt about 6 cm beyond the external os. the uterus was 24 weeks size.

**Diagnosis:**

Post- partum Haemorrhage:

Secondary to Retained placenta.

**Management Plan:**

1. Pre-operative preparation
2. Manual Removal of Placenta under general anaesthesia
3. She was counselled about the procedure and a written consent for anaesthesia and operation was available.

**Pre-operative preparations:**

1. Blood was taken for grouping and crossmatch one unit of blood group O Rhesus positive was available. .
2. Intravenous fluid N/saline was started with wide bore canula.
3. Her pulse rate was 100 beats per minute and the blood pressure was 100/60. These were monitored ½ hourly.
4. Her perineum was cleaned.

**Manual Removal of Placenta under Anaesthesia:**

Induction of anaesthesia was done by using

- Ketamine 100mg intravenously

Anaesthesia was maintained by face mask.

**Procedure**:

The patient was placed in lithotomy position. The vulva, perineum and inner

parts of the thighs were cleaned with 1% chlorhexidine and she was draped with sterile linen. Bladder was catheterized and 150mls of clear urine was obtained. Examination under anaesthesia revealed the previous findings. The fingers of the right hand were molded into a shape of cone and the hand was guided by umbilical cord in the uterine cavity. The uterus was steadied abdominally by the left hand. The fingers inside the uterus searched for cleavage line between the placenta and the uterine wall. With sweeping movements using mainly the ulnar border of the hand the placenta was stripped from the wall of the uterus. The placenta was grasped and removed wholly. There was no vent palpated in the uterus. During this time a drip of Dextrose-Saline with 40iu of Syntocinon was running to maintain uterine contractions and thus control the bleeding. The estimated blood loss was 300mls. The vagina and perineum were mopped dry and a sterile gauze pad applied to the vulva. Anaesthesia was discontinued. The patient was briefly observed in the recovery room and transferred to post natal ward.

**Post operative care and progress:**

1. She received 1500mls of Dextrose Saline over 12 hours
2. Her Blood pressure was 110/70 and the pulse rate was 88 beats per minute. These were monitored ½ hourly for 4 hours then 12 hourly there after.
3. The uterus remained contracted and there were no undue vaginal bleeding.

4. Haemoglobin checked on the second day post operative was 8.0g/dl.

5. She was discharged home on oral iron tablets and folic acid.

**Follow up after 6 weeks**:

She was seen at post natal clinic 6 weeks later. She had no problems. Her haemoglobin was 11.6g/dl and the child was sucking well. She was discharged from Antenatal clinic to attend family planning clinic.

**COMMENTARY:**

Retained placenta is the failure to deliver the placenta within half an hour of the birth of the baby[1]. Some authors would dispute the diagnosis until after an hour have elapsed[1].

The patient presented did not expel the placenta within an hour after delivery of the baby and she had moderate vaginal bleeding. With that clinical picture the fear was that of excessive bleeding which could result into haemorrhagic shock. Active management of the third stage of labour with its components of prophylactic use of oxytocic drugs, early clamping and division of the umbilical cord and controlled cord traction for the delivery of the placenta has been widely adopted in an attempt to prevent both post partum haemorrhage and retained placenta[2]. However some authors have offered evidence to suggest that routine active management of the third stage of labour promotes a cascade of intervention[3]. The placenta typically separates from the uterus and is delivered within 5 minutes of delivery of the infant. Attempts to speed separation are of no benefit and may cause harm[2,3]. Most people are agreed

that a patient with a previous history of retained placenta runs an appreciably great risk of the same misfortune in subsequent deliveries[4]. A woman therefore who has once had third stage trouble, be it haemorrhage, placental retention or manual removal of placenta should be suspected of being capable of a repeat performance. This was presented in this patient who had retained placenta in her second delivery. Etiological factors associated with retaining of the placenta include various degrees of morbid adherence of the placenta to the uterus, namely placenta acreta, increta and pacreta, uterine inertia, Submucous fibroid and a full bladder. In this particular patient the retained placenta was most likely associated with uterine inertia. The conventional treatment of retained placenta is manual removal following digital separation of the placenta from the uterine wall. Selinger et al in 1986 noted that waiting 60 minutes before resorting to manual removal will almost halve the number of women who will require manual removal with its attendant anaesthetic risks[5]. However opinion is divided about the timing of manual removal of the placenta. In the presence of haemorrhage it is obviously unreasonable to wait for spontaneous separation and manual removal of the placenta should be taken without delay. This patient had moderate vaginal bleeding which was progressively increasing in amount. Waiting for spontaneous separation of the placenta was illogical in such a situation. Proper preparation for manual removal under general anaesthesia was done. Availability of crossmatched blood was ascertained. Manual removal of the placenta can be undertaken without general anaesthesia e.g. In shocked patients or when the

placenta is loose in the lower segment. This was not done to this patient because she had retained placenta firmly attached in the fundal. It is advised that manual removal be done under anaesthesia and should be removed en-block, although occasionally sometimes piecemeal removal can sometimes be indicated in adherent placenta. In cases of severe adherence as in placenta increta or pacreta laparotomy and hysterectomy are indicated. This is however a rare occurrence and it was not the case in this patient.

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**GYN NO. 1 RUPTURED ECTOPIC PREGNANCY: IN A PAROUS WOMAN WITH ADVANCED AGE, RIGHT SALPINGECTOMY**

Name: Mrs. A.A.

Reg. No. 943206

Age: 37 years

Date of Admission: 29.11.98

Date of discharge: 4.12.98

**SUMMARY**:

Mrs. A.A. a 37 years old para 4 + 0 was referred from Temeke hospital on account of sudden onset of lower abdominal pain associated with fainting attacks and slight vaginal bleeding. This followed a period of 8 weeks amenorrhoea associated with pregnancy symptoms. On physical examination she was found to have severe palor, hypotension, rapid weak pulse, tender abdomen and features of free peritoneal fluid. A diagnosis of ruptured ectopic pregnancy was made. Laparotomy and total right salpingectomy was done. She had smooth recovery and was discharged six days latter in good condition. The case is presented with commentary on possible etiologic factors on ectopic pregnancy at advanced age.

**History of Present Illness:**

Mrs. A.A. was admitted from Temeke hospital with history of sudden onset

of lower abdominal pain which occurred at home while lifting a bucket of water. The pain was cutting in nature and more marked on the right side and radiating to the back and thigh of the same side. The pain was accompanied with dizziness, palpitations and she had a single episode of fainting attack. She had episode of vaginal bleeding. All these fetures followed amenorrhoea of eight weeks. There was no history of preceding trauma. She denied history of fever, vomiting, shoulder tip pain or dysuria.

**Menstrual and Gynaecological history:**

She attained menarche at the age of 14 years. Her menstrual cycles were regular with periods lasting 3 - 4 days. The cycles were of 28 - 30 days. She had no history of dysmenorrhoea. Her LNMP was on 4th October 1998, so on admission she had amenorrhoea of about 8 weeks. There was no history suggestive of prior pelvic infection and had never used any contraceptive method.

**Past Obstetric History:**

She was para 4 with 3 living children. All pregnancies were uneventful, full term normal deliveries. The puerperia were without complications. Her last delivery had been 2 years previously.

**Past Medical History:**

There was nothing significant.

**Social and Family History**:

She was a house wife married to a watchman who was employed at the Palm Beach Hotel. She had no formal education. There was no history of Tuberculosis, diabetes mellitus or hypertension in the family. She neither smoked cigarettes nor took alcohol.

**Physical Examination:**

The patient was conscious but in severe pain. She was grossly pale but not jaundiced. She was afebrile, had no pedal oedema or peripheral lymphadenopathy.

**Cardiovascular System:**

Her pulse rate was 104 beats/minute, regular in rhythm but diminished in volume. Her blood pressure was 80/50mmHg in recumbient position. Heart sounds were normally heard and there were no added sounds.

**Respiratory System:**

Her respiratory rate was 22/minute and she had a symmetrical chest expansion. The lung fields were clear and there were no basal crepitations.

**Abdomen:**

The abdomen was slightly distended and it poorly moved with respiration. It was modarately tender on deep palpation with obvious guarding and rebound tenderness on the lower quadrants of the abdomen. Signs for shifting dullness and fluid thrill were positive. Liver, spleen and kidneys were not palpably enlarged.

Renal angles were free of tenderness. The uterine size was difficult to elucidate due to tenderness.

**Pelvic Examination:**

With the patient in dorsal position the vulva was normal with no discharge or bleeding from the vagina.

speculum examination: Revealed a bluish parous cervix with no lesion.

Digitally: The cervix was soft and closed and the pouch of douglas was fluctuant and tender. Both adnexa were tender and cervical excitation test was not attempted.

**Diagnosis:** Ruptured ectopic pregnancy

Acute Anaemia due to Internal haemorrhage

**Pre- Operative Management**:

1. Resuscitation

   Patient was started on intravenous line with canula size 18 gauge. Normal Saline 1 litre and Ringers lactate were run.

2. Haemoglobin was checked and found to be 6.0g/dl.

3. She was counselled for surgical sterilization, she categorically refused because of her religious beliefs.

4. Blood was taken for grouping and crossmatch and 2 units of blood group O Rhesus Positive were made available before operation.

**5. Preparation for Emergency Laparotomy:**

a) Patient was counselled and a written consent was obtained for anaesthesia and operation.

b) The skin of the abdomen and pubic area was cleaned and shaved

c) Theater staff were informed about the emergency operation planned.

d) An indwelling foley's catheter size 14 was inserted with aseptic technique, 250mls of clean urine was drained and it was left to drain throughout the operation.

**Emergency Laparotomy:**

**Anaesthesia:**

- She was induced with Thiopentone 250mg intravenously
- Atropine 1mg intravenously
- Suxamethonium 75mg intravenously.
- Intubation was done using 7.5mm cuffed endotracheal tube.
- Maintenance of anaesthesia was achieved with Oxygen 4 litres per minute and Halothane 0.8%
- Pavlon 4mg Intravenously
- Morphine 10mg intravenously.

**Procedure:**

The abdomen was cleaned aseptically with 1% iodine twice and then excess iodine removed. Draping with sterile linen was done. Using a scalpel No.10 the

was opened in layers through a sub umbilical midline incision. The incision was carried down through the fat to linear alba with a clean knife separate from that of the skin incision. Bleeders were clamped with small curved artery forceps and tied with plain catgut No. 2/0. The aponeurosis was incised at the linear alba for the full length of the incision. The anterior rectus sheath was divided and the rectus muscles retracted to the sides. Peritoneal fat was incised and peritoneum opened from the upper part taking care not to damage the bladder and bowel underneath. The cut edges of the peritoneum were grasped by artery forceps and peritoneal incision was enlarged downward and upwards with the scissors under direct vision while the assistant lifted up the abdominal wall.

**Findings:**

1. There was haemoperitoneum of about 1500mls of fresh blood with some blood clots. The free blood appeared fresh and could have been used for auto-transfusion but there were no ACD bottles.
2. The uterus was enlarged, equivalent to a 10 weeks gravid uterus.
3. A ruptured ectopic pregnancy at the ampulla portion of the right tube. The embryo and placental tissue were still attached to the site of rupture.
4. Both ovaries looked normal
5. The left fallopian tube was normal

6. There was collection of blood in the pouch of Douglas which was sucked.

**Done:**

A self retaining Balfour retractor was inserted into the open abdominal wound and the side walls of the wound were retracted laterally. Two tagged abdominal packs were used to pack the intestines away from the operation site. The uterus was lifted upwards and forward and right salpingectomy was accomplished in the following manner.

The right fallopian tube was clamped at the proximal part of the isthmus using two strong curved Kocher clamps and haemorrhage was arrested. The tissue between the two clamps were divided with a scalpel. Another pair of Kocher clamps was placed at the distal edge of the mesosalpinx and the tube was separated from the mesosalpinx. Successive clamping and separation of the affected tube was done until the tube was completely isolated and it was excised. Chromic catgut no.1 was used to close the mesosalpinx and the two ends were tied together. The remaining blood clot were removed and haemoperitoeum was sucked out. Both ovaries were normal. The abdomen was mopped dry by using sterile pack. After correct instrument and swab count the abdomen was closed in layers as follows:

The peritoneum was closed by continuous No.2/0 chromic catgut suture. The rectus sheath was closed by interlocking suture using vicryl No 1. The skin was closed by a mattress suture using silk No. O. The wound was cleansed with iodine

and spirit ad latter dressed with there sterile gauze. Blood loss was estimated to be 2000mls. She was transfused with 500mls of blood intraoperatively.

**Reversal Anaesthesia:**

This was achieved by Atropine 1mg and Neostigmine 2.5mg Intravenously. Secretions were sucked out and an endotracheal tube was removed. Patient was maintained on oxygen mask. Consciousness was recovered and she was taken to the recovery room before she was sent to the gynaecological ward.

She was sent in the ward with a blood pressure of 100/80mmHg and the pulse rate was 90 beats per minute regular with normal volume.

Post operative orders:

1. Intravenous fluid Dextrose Saline 3000mls for 24 hours.
2. One more unit of 500mls of whole blood was given in the ward
3. Injection pethidine 100mg Intramuscularly 8 hourly for 24 hours.
4. Her blood pressure was 100/60 and the pulse rate was 90 beats per minute. These were monitored ½ hourly for four hours and there after 4 hourly up to 24 hours.
5. Fluid in put was 3000mls against urinary output of 1000mls in 24 hours.

**Progress in the ward:**

She made a smooth post operative recovery and six hours post operative she was awake and her cardiovascular system was stable. She was still on blood

transfusion. The urinary catheter was draining a clear urine. 24 hours post operative her blood pressure was 110/70mmHg. The pulse rate was 84 beats per minute. The abdomen was soft and there was no shifting dullness. Her fluid input was 3000mls against urinary output of 1000mls. she started oral sips and ambulation. Three days latter her haemoglobin was 8.2g/dl and she was started an oral haematenics. Six days latter the stitches were removed and wound was dry. She was discharged home on haematenics to be seen after six weeks at the outpatient clinic.

**Follow up after Six Weeks:**

Six weeks latter she was seen at the outpatient clinic and she had no problem. Her scar was completely healed by primary intention. She had a haemoglobin of 10.8g/dl. Pelvic examination revealed normal findings. She was discharged from the clinic.

**COMMENTARY:**

Ectopic pregnancy refers to the implantation of a fertilized ovum in any tissue other than the endometrium. The true incidence of ectopic pregnancy is difficult to determine but ranges from 0.25% - 1% of all pregnancies[1]. In the last two decades there has been a 6 fold increase in the incidence of ectopic in the United States and a 4 fold increase in the United Kingdom[2]. In our center ectopic pregnancy accounted for 11.6% of all gynaecological operations done in 1993[3]. In our country like many other developing countries the major associated factor is pelvic infection[4]. However the increase in ectopic pregnancies has not been paralleled by similar increase in

sexually transmitted infections (STI'S) and therefore is not due to STI'S alone[5]. The other important contributing factors are reconstructive tubal surgery, women with recurrent abortions and assisted reproductive technologies. Cigarette smoking increases risk to 2 fold which is explained by anti oestrogen effect of smoking. These etiologic factors were non existent in this patient. Ectopic pregnancies do occur in totally normal tubes.[5,6] The proportion of chromosomal abnormalities is a least as great in ectopic pregnancy as in early spontaneous abortion.[6,7] This suggests that abnormalities of the conceptus or maternal hormonal changes can function as etiologic factors[7]. Impaired oestrogen/progesterone ratio may facilitate the retention of ovum in the ampullary for several days which may occur more often in premenopausal years[6]. Job Spiral (et al) found that after adjustment for all known ectopic pregnancy risk factors, maternal age was strongly associated with increased risk to ectopic pregnancy. Fetal chromosomal abnormalities and impaired uterine - tubal capacity are the consequence of ageing[6,7]. Hence any of these factors can be associated with ectopic pregnancy in this woman who was 37 years old. The increased incidence of ectopic pregnancy observed in Africa is attributed to the increased occurrence of gonococcal, chlamydia and tuberculous endosalpingitis[2,4]. Pelvic inflammatory disease is very common in this part of the world due to poor social economic circumstances, promiscuity and poor hygiene[4,8]. This patient had no history suggestive of previous pelvic inflammatory disease or puerperal sepsis. Today management intervention occurs prior to tubal rupture is more than 80% of ectopic

pregnanncies in UK and America[8,9]. This is because there have been marked changes in surgical practice aiming at reducing patient trauma and morbidity while maintaining fertility. With the advances in the diagnosis of ectopic pregnancy before rupture by using highly specific and sensitive immunoassay for human chorionic gonadotropin (HCG), ultrasonography and laparoscopy has reduced patients trauma morbidity while maintaining fertility by allowing conservative treatment in developed countries[7,8]. This is not possible in our set up where most patients arrive with already ruptured ectopic pregnancy in shock. Ignorance of women, limitation of fascilities for early screening and diagnosis before rupture of the ectopic pregnancy is also a set back. Conservative management includes medical treatment with Methotrexate, Salpingocentesis which is directly injection of substances into the gestational sac within the tube, (Methotrexate, Potasium Chloride, Prostaglandins, hyperosmotic glucose) either laparoscopically or under ultrasound guidance. With earlier diagnosis conservative surgery to preserve fertility has replaced the life saving procedure of Salpingectomy. These include linear salpingostomy, partial salpingectomy, fimbrial expression or segmental resection and anastomosis[5,8]. As the case for Mrs. A.A. who was parous, in her advanced age the aim was to arrest bleeding as soon as possible and thus total right salpingectomy was done. Ligating the other tube could have been the best option in preventing the next ectopic pregnancy. However she did not consent because of her religious beliefs.

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**GYN No. 2** **SEXUAL ASSAULT: THE ROLE OF ATTENDING PHYSICIAN.**

Name: Miss M.S.

Age: 5 years

Reg. No: 910371

Date of admission: 18.10.97

**SUMMARY:**

Ms. M.S. a 5 years nursery school girl, was admitted in gynaecological ward on 18.10.97 at 7.20 p.m. with history of being sexually assaulted 3 days earlier. The perpetrator was approximated to be 25 - 30 years old. On examination in the presence of a nurse incharge she was anxious and rather distressed. There were no scratches found on the body but she had a limping gait. On inspection of the genitalia the vestibule and the labia major were hyperemic swollen and tender. Bruises were seen on the posterior fourchette. Vaginal swab, VDRL and ELISA tests were taken as baseline investigations for medical legal purposes. Sexual assault as an over growing public health problem and the role of the attending physician in its management are briefly discussed.

**History of Present Illness:**

The patient was brought by her father on account of alleged sexual abuse by an assailant who is their neighbour. The victim was forcefully locked in assailant

room after being threatened. After the act she was given some money not to disclose the information. The victim could not ascertain if ejaculation occurred. She denied oral or anal penetration. This incidence occurred 3 days earlier and she had already taken bath and changed her clothes. She further informed that this was her third time with the assailant. This history was consistent with that given by the elder brother who was 10 years old who informed the father that this usually happens when they go to watch video films in the assailant room who is their neighbour. He is usually given some money, to leave her sister behind and not to disclose this information to any body. When he refuses to take the money he is threatened and chased away after the video show and the assailant remained with the sister. The grand mother noted the abnormal vaginal discharge which stained the underpants and swelling of the vulva. There was no history of vaginal bleeding after the assault.

**Past Menstrual and Gynaecological History:**

She was pre-menarche with history of about three incidencies of forceful sexual assault. She had no history of abnormal vaginal discharge.

**Family and Social History**:

She was living with her father, step mother and grand mother in a family of 6 dependants. The mother had been divorced 2 years previously. They were living in a rented 2 roomed house. She usually slept with her grand mother with other 2 children. She was attending nursery school. The father was employed as a driver with Dar-es-salaam sanitary sewage disposal company with the city council.

**Physical Examination:**

This was done in front of an attending nurse. She was found to be anxious and rather distressed. She looked healthy and she was well dressed. There were no scratches noted on the open parts of the body. She did not bring the clothes she put on the day of the assault.

**Cardiopulmonary System:**

She was not dyspnoeic, the pulse rate was 92 b/m regular and of normal volume and her blood pressure was 100/60 mmHg. The heart sounds were normal and there were no added heart sounds. The lung fields were clear.

**Abdomen:**

The abdomen was not distended, it moved well with respiration. No scratches were noted. There were no area of marked tenderness. The liver, Spleen and Kidneys were not palpable.

**Pelvic Examination**:( only inspection)

The clothes and the underpants were clean, not torn and there were no stains seen. There were no scratches seen on both thighs. The vestibule and the labia majora were hyperemic, swollen and tender. There were bruises seen on the posterior fourchette and on both labia majora. The hymen had an old tear at 12 o'clock. Some non foul smelling whitish discharge was seen at the introitus and was taken for sperm analysis Gram stain and culture and sensitivity. Speculum and digital examination were not done.

**Rectal Examination**:

There were no bruises or lacerations around the anus. Rectal examination was done with the smallest finger. The rectal mucosa looked normal with normal sphincteric action. There were no masses felt.

**Diagnosis**: Sexual Assault:

**Management Plan.**

1. Counselling
2. Investigations
3. Treatment and follow up

**Counselling was done to the father**:

Before collecting specimen counselling was done to the father. The need to take investigations for treatment and medical legal purposes were emphasized and the victim was reassured. Psychological and emotional disturbances experienced by the victim was discussed. Parents were advised to give emotional support to the child and to avoid unnecessary blames which could increase psychological trauma to the child. The father was also explained the need to continue with the case for prosecution. The case was still in the court of law.

**Investigations which were taken**:

1. Vaginal discharge for presence of spermatozoa
2. Vaginal discharge for gram staining, culture and sensitivity
3. Rectal swab for presence of spermatozoa

4. Serum for VDRL, Elisa for HIV to rule out pre- existing infections.

**Treatment:**

1. Cap Ampicillin 250mg 6 hourly for 5 days
2. Tabs Metronidazole 200mg 8 hourly for 5 days.
3. Tabs Paracetamol 250mg 8 hourly for 3 days
4. Sits bath with antiseptic 3 times a day for 3 days.

**Review after 2 weeks:**

Two weeks latter she came for review and she had no complaints. Results of the investigations were available. The VDRL, Elisa for HIV and urine for culture and sensitivity were all negative. Vaginal discharge for Culture and sensitivity revealed no bacterial growth and no spermatozoa were seen. The results were communicated to the father. Psychologically the victim was still anxious and fearful. She was now walking normally and inspection of the genitalia showed that all bruises were healed. She was allowed home to be followed again after 3 months for repeat VDRL and Elisa test.

**Review after 3 months:**

At 3 months VDRL and ELISA test were repeated and the results were negative. The case was still in the court of law and Police Form number 3 were filled.

**COMMENTARY:**

The number of reported cases of sexual abuse of children has increased

significantly in recent years[1]. In 1990 approximately 80 out of 100,000 females in the USA were reported victims of rape, or one every 6 minutes[2]. Throughout the world, sexual abuse and rape is a big problem in large metropolitan cities. With increasing urbanization in Tanzania the incidence of rape and sexual abuse are on increase however the incidence is not known because some of these cases are unreported. However the number of rape cases admitted at MMC rose from 25 patients in 1994 to 67 patients in 1995 and 71% of these were below the age of 14 years[3]. The worldwide low report rate is thought to be due to multiple social and cultural reasons[4]. Many victims are extremely embarrassed, feel much guilt and fear the publicity that may occur if the rape is reported. There is a social stigma attached to rape. Woman aged between 17 - 25 years are at the highest risk and extremes of age has the highest risk of injuries[5]. The patient on discussion was only 5 years old and was sexually assaulted. The findings were suggestive of sexual assault. This patient who was brought by her parent had swollen, hyperemic labia which were tender. Bruises were observed on both labia majora and the posterior fourchette. The hymen had an old tear at 12 o'clock. This shows that evidence of previous sexual abuse cannot be denied. The history obtained from the interview with the child is the center piece of the medical evaluation for suspected sexual abuse. It is perhaps the most important aspect of the evaluation. When performing the examination it is important for the examiner to remember that evidence is being gathered to help authorities obtain a conviction[6]. In order to guide the direction of examination a brief

medical, gynaecological history and description of the assault are obtained and clearly documented on the medical record. Whether the victim has chronic health problems, known allergies or current medications is noted. At our center usually assailants are not brought for examination. It is the authors opinion that these should also be examined for medical legal purposes. Chronic ill conditions of the assailant may initiate investigations for other medical conditions not directly associated with rape. (e.g Tuberculosis). The victim is asked briefly what happened during the assault, including what body orifices were involved, whether ejaculation occurred and if so where on or in the body. In addition the victim is asked what she did after the assault. Unfortunately some of the information could not be obtained because of the young age of the patient. The Colposcope now appears to be the instrument of choice for examination of child victim of sexual abuse. It allows a detailed magnified inspection of the vulva of search for physical signs of abuse which may have escaped detection, also provides an opportunity to review the physical findings under magnification[7]. However this is not possible in our set up where facilities are still inadequate.

Specimen are collected for evidence of spermatozoa and sexually transmitted disease. It is strongly advised multi-disciplinary approach to develop individual state protocols[5]. Identifying the assailant can be assisted by finding foreign hairs on the victim. Man found significant hair transfer in about 4% of rape cases studied[7]. Obtaining hair roots is best for DNA analysis. Seminal fluid evidence needs to be

collected carefully and preserved for evaluation by forensic personnel. Also seminal fluid is evaluated for the presence of acid phosphatase, which is found in vaginal secretions. So a high level indicates recent sexual contact. Victims need to be encouraged to seek follow up care for repeat cultures. In our places where facilities are inadequate and forensic examination are rarely done, patients should be encourage to attend early for medical attention. A delay in seeking medical attention decreases the likelihood of positive findings, as most findings are seen only acutely e.g. Semen, erythema or injuries, this child was delayed for 3 days. Some positive findings which were still available could be related to several times the victim has been abused. It is often difficult to identify residual findings from the introduction of a penis, digit or other objects into the anus, particularly when acute signs are not present[6,7]. The external anal sphincter has the ability to dilate, therefore there may be no any residual findings. Following sexual abuse, child victims often is depressed with a feeling of fear. The long term follow up by psychologist/community worker is important. Unfortunately such services are not yet established. Instead proper counselling was done to the father so that the child can feel secure.

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**Gyn. 3: UTERO VAGINAL PROLAPSE: VAGINAL HYSTERECTOMY ANTERIOR AND POSTERIOR COLPOPERINEORRHAPHY:**

Name: Mrs. A.A

Reg. No: 930586

Age: 58 years

Residence: Magomeni

Date of admission: 16.7.98

Date of operation: 11.9.98

**SUMMARY:**

Mrs A.A, a 58 years old, para 8 + 1, was 10 years postmenopausal. She was admitted in the gynaecological ward through gynaecologic outpatient clinic with history of a mass protruding through the vagina associated with bearing down sensation for eight years. At the begining the mass was easily reducible by fingers but could still come down on straining or standing. Of recent the mass was no longer reducible by fingers. She had no associated urinary stress incontinence but she had increased frequency of micturation. She had no abnormal bowel symptoms. Examination revealed a third degree utero-vaginal prolapse with cystocele and rectocele. There was no enterocele. Vaginal hysterectomy, anterior and posterior colpoperineorrhaphy was done. Her recovery was uneventful. The case is presented and commentary made on genital prolapse as a common problem in postmenopausal women and modality of treatment are presented.

**History of Present Illness**:

Mrs. A.A. was admitted in the gynaecological ward with eight years history of something protruding through the vagina associated with bearing down sensation. This was preceded by a dragging discomfort in the pelvis and a sensation of fullness in the vagina. The mass became obvious as days went on. It was made worse when the patient stood up or strained in the toilet. She could easily reduce the mass with her fingers especially while lying down but it kept coming down when she stood up. She had no stress incontinence or dysuria but of recent she has noted increased frequency of micturation up to 3 times at night. There were no associated vaginal discharge or bleeding. She had not noted any ulcer on the mass. There were no history of rectal bleeding or haematuria. She denied history of cough, night sweats, loin pain or loss of weight. She had normal bowel habits with no constipation.

**Menstrual and Gynaecological History**:

Her menarche was at 13 years, the cycles were regular occurring after 30 days with a menstrual flow of 4 days duration. She was 10 years post menopausal and she had no history of abnormal vaginal discharge or abnormal vaginal bleeding.

No any Gynaecological Surgery

**Obstetric History:**

She was para 8 + 1 with 6 living children. All were home deliveries assisted by a traditional birth attendant. Her deliveries were easy and none complicated. However there was no clear evidence of precipitate labour and she didn't know the weight of her babies. Her last born was 18 years old. How long Time Interval from the children 1yr, 2yr, 3yr?

**Past Medical History:**

She denied history of chronic cough, diabetes mellitus or Hypertension. There was no history of previous surgery.

**Family and Social History:**

She was widowed, a peasant with no formal education. She lived with her elder son. She did not smoke cigarettes or drink alcohol. Neither her siblings nor mother had similar problem. There was no family history of diabetes mellitus or hypertension.

**Physical Examination:**

She was an elderly lady who looked healthy. She was afebrile, not pale and not jaundiced. She had no lymphadenopathy or pedal oedema. The breasts were atrophic and there were no lumps palpable.

**Respiratory:**

The chest was symmetrical and air entry was normal bilaterally. The respiratory rate was 24 breaths per minute with normal breath sounds.

**Cardiovascular System:**

Her pulse was 78 b/mn, regular and good volume. The blood pressure was 130/80mmHg. There were no murmurs or added heart sounds

**Abdomen:**

Abdomen was scaphoid and moving with respiration. It was soft and non tender and there was no ascites. The liver and spleen were not palpably enlarged.

Both renal angles were free of tenderness and hernia orifices were normal.

**Vaginal Examination:**

In the dorsal position, on inspection the vulva and vaginal mucosa looked atrophic. The cervix and a portion of the uterine body were found protruding through the introitus. The cervix looked healthy without ulceration. Pap smear was taken for cytology. With full bladder no stress incontinence was noted. The patient was then placed in the left lateral position and a sims speculum gently introduced. The anterior vaginal wall and the cervix were exposed by retracting the posterior vaginal wall. On straining a cystocele was demonstrated. The posterior vaginal wall was next exposed by retracting the anterior vaginal wall, also a rectocele was demonstrated. When the patient was asked to strain there was no enterocele. Finally, the patient was again put in the dorsal position and a bimanual pelvic examination was done. The uterus was small and mobile. The fundus was within the introitus and the two fingers could just go above the fundus. There were no adnexal masses palpable.

**Rectal Examination:**

The anal sphincteric tone was normal and the rectal mucosa was freely mobile. A firm mobile mass was felt through the anterior rectal wall. The index finger could go above its roundish upper border. The tone of the perineal body was rather poor. No hemorrhoids were seen and the gloved finger was stained with fecal matter.

**Diagnosis**:

Third degree uterovaginal prolapse with an associated cystocele and rectocele without stress incontinence.

**Plan of Management**:

This was a postmenopausal woman who had good physical strength to withstand surgery. Vaginal hysterectomy, anterior and posterior colpoperineorrhaphy was planned. This was discussed with the patient and relatives and they all agreed.

**Investigations:**

1. Haemoglobin 10.7g/dl
2. White blood cell count 6,500%$Cm^3$.

   Differential cell count:

   56% Neutrophils

   4% Eosionophils

   40% Lymphocytes

   ESR 15mm/hr.

   RBC - Normochromic, Normocytic
3. Random blood sugar 4.2mmol/L
4. Serum creatinine 114mmol/L

5. Urinalysis : Few Epithelial cells

: Few pus cells

Urine for protein negative

Urine for Sugar negative

6. Mid Stream urine for culture and sensitivity yield significant growth of Enterobacter species

Susceptible to - Ampicillin

- Augumentin

- Gentamicin

- Cethaziodine

She was treated with tablets Augumentin 375mg 8 hourly for 10 days.

A repeat culture showed no bacterial growth.

7. Pap smear cytology - No atypical cells

8. Chest X-ray - was reported as normal

9. ECG - was reported as normal

10. Intravenous Urography - Reported normal ureters and Kidneys.

**Surgical treatment**:

1. Vaginal hysterectomy

2. Anterior Colporrhaphy

3. Posterior Colpoperineorrhaphy.

**Preparation for Operation:**

1. The patient was informed of the operation that she would undergo and a written consent for anaesthesia and operation was obtained.
2. She was given enema in the night before the operation and she remained nil orally.
3. 1000mls of whole blood group O Rhesus positive were cross matched ready for operation.
4. The vulva and perineum were cleaned.

**Anaesthesia:**

This was done as described in gynaecological case No.1.

**Operative details:**

The patient was placed in lithotomy position, with her hips at the edge of the operating table and her thighs well flexed on the abdomen. The lower abdomen, perineum and vagina were cleaned with salvon and 1% Povidon iodine and sterile drapings were applied. The labia minora were picked up and anchored on their respective thighs with silk suture No. 1 to facilitate exposure. Aseptic catheterization of the bladder was done using a metal catheter and about 200mls of clear urine was drained. A repeat pelvic examination under anaesthesia was done and the previous pre operative findings were confirmed. An Auvard speculum was placed in the vagina. The cervix was exposed and the anterior lip was grasped with Jacobs tenaculum. A sound was passed into the uterine cavity to confirm its depth. A

preliminary Dilatation and curettage was performed. This was done to be certain that an unsuspected pyometra or an extensive endometrial carcinoma was not present. Gentle traction in an up and down motion with tenaculum was done to enable visualization of the line of traction between smooth mucosa of the cervix and the wrinkled mucosa of the vaginal wall. About 20mls of normal saline was injected underneath the vaginal mucosa on the anterior and lateral aspect of the cervix and near to the bladder. Three pairs of littlewoods forceps were now placed as follows. The first in the midline where the urethra meets the bladder. The second and third were placed on the right and left hand sides of the cervix. So that each instrument was holding the vaginal tissue on each side and away from the external os. When these were put on stretch formed a triangular area which corresponded to the amount of anterior vaginal wall that was necessary to be removed. Using a scalpel and starting on the patients left side, an incision was made from the top littlewood to the littlewood on that side. On the opposite side the incision was from the bottom littlewood to the top littlewood. The apex of the triangle was now picked with dissecting forceps and was cut with a scalpel and the separated vagina was grasped with a pair of straight Kochers forceps. With a dry gauze swab and the help of the right hands thumb, the bladder was pealed off the cervix upwards. Bleeding sites were identified and grasped with curved small artery forceps and ligated with catgut No. 2/0. The swab was pushed into the apex of the triangle formed, tapped and held with an artery forceps. The tape from the bladder swab was brought out of the apex

of the triangle and held secure on to the abdominal towel with straight artery forceps. This acted as hemostat and the bladder was kept out of the operation site. A second tenaculum was placed on the posterior lip of the cervix and the cervix as a whole was brought forward and of the vaginal mucosa with the apex towards the pouch of Douglas was made. The head of the patient was lowered at this stage to allow the intestines that might be present in the cul de sac to fall away from the peritoneum. The peritoneum of the cul de sac was grasped with tissue forceps and opened transversely. After opening the cul de sac the bowel were packed away using a long tail sponge. This packing was held in place by a Heaney retractor inserted in the cul de sac. Stay suture were later applied as makers. The weighted posterior vaginal retractor was then removed and the assistant applied traction on the Heaney retractor, thus exposing the uterosacral ligaments. The left uterosacral ligament was grasped doubly clamped with Kochers forceps cut and transfixed using catgut No.1. The suture ends were left long and held by a hemostat for identification later in the operation and this was done on the right side. This was followed by clamping of uterine vessels on both sides and were doubly clamped. The uterus descended in the vaginal canal and it was delivered at this stage. The toboovarian ligament together with the round ligament were clamped cut and ligated on both sides. Uterus was taken out by pulling the tanecullum holding the cervix. Haemostasis was achieved and the anterior and posterior edges of peritoneum were identified from makers put before and peritonization with catgut No. 2/0 was done with a purse string suture.

Vaginal vault was closed and supported using pedicle. The stay suture of uterine vessels was cut short on each side. The uterosacral and cardinal ligaments bundles were tied together, these were then used to close center of the vault while ovarian pedicles closed and supported the angle of the vagina.

**Anterior Colporrhaphy:**

After the uterus was removed the edges of the anterior vaginal skin were grasped with two Kocher forceps and gentle traction was made downward, putting the anterior vaginal mucosa on stretch. The vaginal mucosa and the adherent pubo-vesico-cervical fascia were separated from the bladder by alternately opening and closing a curved scissors and progressing upward until approximately 1cm below the urethral meatus. The vaginal mucosa was cut in the midline each time the scissors progressed a few centimetres. Kocher clamps were applied to the edges of the vaginal mucosa on each side until the entire bladder was exposed. This dissection was carried upward by either blunt dissection until it was possible to have the bladder entirely separated from the mucosa and fascia for the index finger to extend into the space of Retzius on each side of the bladder. Bladder plication was applied after the bladder and urethra were separated from the fascia and vaginal mucosa. The position of the first stitch was applied into the bladder wall at the level of vesico-urethral junction. The 3/0 chromic catgut stitch was began on the left side from above downward and then to the right side of the junction in the same manner. While this suture was being tied, the tissue of the bladder neck and urethra were

pushed upward by a small curved clamp held by an assistant. When the bladder was sufficiently elevated, by using the plicating figure of eight suture, portions of redundant vaginal fascial flaps were excised. After the flaps were trimmed the edges were joined by interrupted sutures using 3/0 chromic catgut. The initial stitch fixed the fascia and vaginal mucosa to the highest point of the bladder, which was at the vesico urethral junction. The entire anterior vaginal wall was closed with series of such sutures. Following closure of the anterior vaginal wall the vaginal vault was now closed with series of interrupted sutures, using 2/0 chromic catgut.

**Posterior Colpoperineorrhaphy:**

The redundant tissue of posterior vaginal wall at its lowest part was picked by two Allyes forceps held about 2cm apart. Each forceps applied on either side of the midline. These were then drawn outward to put the skin of the perineum at stretch. A thin layer of the stretched skin was excised with a scalpel. Then using Mayo's Scissors the vaginal skin was dissected upwards for a distance before blunt dissection with a finger was employed. Care was taken to avoid injury to the rectum during dissection. A midline incision was made on the dissected posterior vaginal wall towards the vault of the vagina and further blunt dissection carried out until the levator ani muscle were exposed. The prerectal fascia was stitched with chromic catgut No.1 together with approximation of lavator ani muscle. The redundant posterior vaginal skin was excised. The posterior vaginal wall and perineum were approximated with interrupted chromic catgut No.1. The vagina allowed two fingers

with ease. A two way foley's catheter was inserted into the bladder and ballooned with 20mls of Normal Saline. A sterile vaseline gauze roll was used to pack the vagina. Total blood loss was estimated to be 500mls.

**Reversal of Anaesthesia:**

This was done as in gynaecological case No.1.

**Post operative Care:**

1. Intravenous fluid Dextrose/Saline 3000mls in 24 hours.
2. Injection Pethidine 100mg Intramuscular 8hourly for 24 hours
3. Inj. Ampicillin 500mg 6 hourly for 24 hours then continue with oral caps 500mg 6hrly for 5 days
4. Inj. i.v Metronidazole 500mg 8 hourly for 24 hours continue with oral tablets 400mg 6 hourly x 5 days
5. Vital signs monitoring
   - Pulse rate and Blood pressure were monitored 1/2 hourly for 4 hours then 4 hourly and they remained stable.
6. Continuous bladder drainage was maintained for 48 hours, She did not develop stress incontinence after removal of the catheter.

**Progress in the ward:**

Six hours post operatively her pulse rate was 86b/m and the blood pressure was 130/80mmHg. 24 hours latter she had no problem the vital signs were stable. The urine output was adequate. The abdomen was soft, she had passed flatus and

the bowel sounds were heard. Intravenous fluids were discontinued. She was allowed oral fluids and ambulation. The catheter was removed 24 hours latter and she was continent. The haemoglobin level 3 days post operative was 9.6g/dl. She was discharged seven days post operative and advised to abstain from sexual intercourse for 3 months. To be reviewed after 6 weeks.

**Follow up:**

She was seen at the gynaecological outpatient clinic 6 weeks latter. She had no problem. There was no evidence of vault prolapse and she had no signs of stress incontinence. The vaginal admitted 2 fingers. she was discharged from the clinic.

**Commentary:**

Uterovaginal prolapse is a common condition in elderly women than in young ones[1]. This is a consequence of pelvic floor relaxation. Approximately 50% of all women who have delivered near term infants have some degree of clinically apparent genital prolapse[2]. At MMC genital prolapse accounted for 0.6% of all gynaecological operations in 1993. The normal position and support of the uterus and other pelvic organs are maintained by several anatomic structures and systems that are interrelated[4]. The basic or underlying factor in genital prolapse is inherent weakness in one or other of the support of the uterus or vagina[1,4].

The tearing, stretching and pressure on pelvic support tissue that occurred with each pregnancy and vaginal deliveries can damage anatomic structures and systems which contribute to the support mechanism of the uterus and other pelvic organs[2,4]. However this has an important influence if there is inherent weakness. Any tendency to prolapse is more likely to manifest itself after the menopause when ovarian steroidogenesis ceases. Such a tendency is increased by greater intra-abdominal pressure, that is transmitted to the pelvic floor. Prolonged heavy load lifting, chronic cough, ascites and pelvic masses which in the erect female is directed with greater force to the most dependant part of the abdominal cavity and the pelvic diaphragm. Post menopausal atrophy of fascial and muscular support elements seem to be the important precipitating factor in the development of genital prolapse in older patients[4]. This lady had eight vaginal deliveries at home. All her deliveries were easy and non complicated. There were no evidence of precipitate labour. However such labour may be associated with a congenitally lax pelvic support, despite of the fact that she had no evidence of hernias or haemorrhoids elsewhere. There was no familial tendency shown in this patient. Multiparity which is associated with frequent tearing stretching and pressure on pelvic support tissue which occurred with each vaginal delivery, plus fascial and muscular atrophy aggravated by 10 years of post menopausal could have been the cause of genital prolapse in this woman. The uterine component of uterovaginal prolapse is measured

in relationship to the degree of the prolapse of the cervix below the level of the ischial spines. A first degree of utero vaginal prolapse refers to decent of the cervix below the ischial spines as far as but not beyond the introitus. A second degree prolapse refers to descent of the cervix, "but not the entire uterus", beyond the introitus. A third degree prolapse is herniation of the entire uterus beyond the introitus. Several modalities have been used to treat utero vaginal prolapse depending on the age of the patient, desire for fertility, poor operative risks and need for coital function. Conservative management is advocated for women with asymptomatic prolapse or with early symptomatic prolapse. Perineal exercise can be of great value in tightening the support of the vagina and hence the uterus by improving the tone of the levator ani muscle in asymptomatic young women. Ring or Smith Hodge pessaries may be used in patients who either refuse surgery or who are poor operative risks. This treatment is only for temporally relief and long terms use of pessaries is generally unsatisfactory. Manchester Forthegil operation and anterior and posterior colpoperineorrhaphy are the commonly surgical methods used in treating uterovaginal prolapse. In Manchester Forthegil operation recurrence of prolapse has been found to be high and it occurs in about 20%[4]. With this procedure post operative haemorrhage sometimes happens quite often. However it is still performed in young women who want to retain uterus for future pregnancy though high incidence of infertility, abortion, and premature labour have been reported[4,5]. Le forte operation has also been performed in elderly patients who are poor operative

risk and whom the use of pessaries is not satisfactory. However the recurrence of prolapse have been found to be very high[4].

The urinary symptoms associated with utero vaginal prolapse are distressing. They include increased urinary frequency especially when they become nocturnal, difficult in emptying the bladder and genuine stress incontinence. This women had increased frequency of micturation with no signs of genuine stress incontinence but she had a cystocele and rectocele.

In this case vaginal hysterectomy anterior and posterior repair was the preferred mode of treatment. It must be remembered that the uterus is not the cause of uterovaginal prolapse and removal of the uterus does not solve the problem. Support for the vaginal walls, vaginal vault and vaginal outlet is the most important part of this operation and not hysterectomy although it is desirable to remove the uterus for other reasons especially when it is no longer functional[6], the removal of uterus and cervix will also protect malignancies of these sites [4,5]. Complications which are commonly found post operative include fever, haemorrhage, urinary and fecal fistulae, enterocele, stress incontinence, prolapse of the vaginal vault, vaginal stenosis or shortening and fallopo peritoneal vaginal fistula. As to the time of review post operatively non of these complications had developed in our patient.

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**GYN.NO.4: PELVIC ABSCESS: DRAINAGE BY LAPAROTOMY.**

Name: Mrs. M.A.

Age: 29 years

Reg. No: 944425

Address: Buguruni

Date of admission: 21.12.1998

**SUMMARY:**

Mrs. M.A. 29 years old para 2 + 0 was referred from Amana hospital, with history of lower abdominal pain associated with high grade fever, vaginal discharge and diarrhoea. Initially she had been treated with antibiotics with little relief. Examination revealed semi cystic supra pubic mass which was tender and fixed, this was further confirmed on pelvic examination. A presumptive diagnosis of pelvic abscess was made. Laparotomy and drainage was done and the previous findings were confirmed. This was done after resuscitation of the patient with intravenous fluid, and intravenous antibiotics course. She continued with antibiotics post operatively and she had uneventful post operative period. The case is presented and discussion made on the management of pelvic abscess.

**History of Present Illness:**

Mrs. M.A. was referred from Amana hospital with the history of lower abdominal pain associated with fever, abnormal vaginal discharge and diarrhoea for

5 days. She was initially on crystalline Penicillin, Chloramphenicol and Metronidazole with little relief. On the day of admission the symptoms were more severe. The pain became throbbing in nature and radiating to the right thigh, though the vaginal discharge decreased in amount. The frequency of diarrhoea had increased 5 - 6 times a day which was watery and mixed with mucus. She also reported history of treated pelvic inflamatory disease 3 months earlier. She denied history of vomiting, shoulder tip pain, painful micturation or haematuria. She had no headache, palpitation or dizziness. She had no history of amenorrhoea or excessive weight loss.

**Gynaecological History:**

Her menarche was at 15 years of age. The menstrual cycles were regular taking 4 - 5 days in a cycle of 30 days. She had history of dysmenorrhoea which usually persisted 4 - 5 days after her normal menstrual flow. She frequently had a course of Aspirin during her menstrual loss. She had history of abnormal vaginal discharge 3 months ago and she was treated with antibiotics. She had no history of excessive vaginal bleeding. She had never used any of the modern contraceptive methods. She had her menses 10 days prior to admission.

**Obstetric history**:

She was para 2, all were uncomplicated normal vaginal deliveries. her last delivery was 3 years ago.

**Past Medical history:**

It was non contributory.

**Family and Social History**:

She was not married, but cohabitating with a man for one year now. Her children belonged to different fathers. She had formal primary education and she was a self employed petty business woman selling food. There was no history of Diabetes Mellitus, hypertension or tuberculosis in the family. She drunk alcohol moderately but she never smoked cigarettes.

**Physical Examination**:

She was sick looking, moderately dehydrated and febrile. Her temperature was 38.5°C. She was not pale and not jaundiced. She had no pedal oedema, two small discrete bilateral inguinal lymphnodes were palpable and they were none tender.

**Cardiorespiratory System:**

The pulse rate was 100 beats/minute regular with good volume and her blood pressure was 100/70mmHg. Heart sounds were normal and there were no added heart sounds. Lung fields were clear.

**Abdominal Examination:**

The abdomen was slightly distended at the hypogastrium and it moved with respiration. Liver, spleen and kidneys were not palpably enlarged. There was tenderness at the hypogastric region with guarding and rebound tenderness. There

was a semi-cystic suprapubic tender mass of size 14/40 with fairly smooth surface. The mass was dull on percussion. There was no fluid thrill or shifting dullness.

**Vaginal Examination**:

The vulva and vagina were normal the cervix was parous with no obvious discharge from the external os. There was a tender semi-cystic suprapubic mass corresponding to size 14/40, The mass was fixed. The size of the uterus was difficult to estimate because of tenderness. The pouch of Douglas was not bulging cervical excitation test was positive and both fornices were tender.

**Rectal Examination**:

The rectal mucosa was normal and pelvic mass was palpable.

**Diagnosis:**

Pelvic abscess ? Pelvic Peritonitis

**Plan of management:**

1. Investigations
2. Resuscitation
3. Laparotomy and Drainage

**Investigations**:

- Haemoglobin 10.2g/dl.
- Serum Creatinine 76mmol/L
- Endocervical swab - No Neisseria gonorrhoea isolated
- Urinalysis - Albumin trace

- Microscopy - 0 - 5 HPF
- Blood Culture - No bacterial growth isolated
- White blood cell count - There was marked neutrophilia
- Mid stream urine for culture and sensitivity was negative.
- Screening for HIV - was negative.
- Blood Slide for malaria parasites - was negative

**Resuscitation:**

1. Intravenous Ringers lactate 2 Litres in 3 hours.
2. Intravenous Metronidazole 500mg 8 hourly for 48 hours then to continue with tablets 400mg 8hrly for 5 days
3. Intramuscular Gentamicin 80mg BiD x 5 days.
4. Intravenous Ampicillin 500mg 6 hourly for 48 hours then to continue with oral ampicillin for 5 days.
5. Tepid sponging PRN.
6. Tab Paracetamol 1gm start.
7. Indwelling catheter for input output chart.

The patient was counselled after resuscitation. A written consent for anaesthesia and operation was secured.

- Grouping and crossmatch of two units of compatible blood group A Rh (D) positive were made available.
- Anterior abdominal wall and pubic area were shaved and cleaned

**Operative procedure**:

- Anaesthesia was induced and maintained as described in gynaecological Case No. 1
- The abdomen was cleaned, draped and opened through subumbilical midline incision as outlined in gynaecological case No.1.

**Findings:**

Peritoneum was free of adhesions. The omentum and some adhesions were plastered to the left tuboovarian mass. The mass was well encapsulated and the bowel was free. The previous diagnosis was confirmed. About 80mls of pus was in the pouch of Douglas. Specimen was collected for culture and sensitivity and the rest sucked out. The uterus was of normal size the right tube was blocked at the fimbrial end with peritubal adhesions.

**Done:**

Slowly and meticulously adhesiolysis was done with blunt dissection using index finger. Thus releasing omentum and part of the bowel away from the mass. With this manouvre the abscess ruptured into the pelvic cavity and about 500mls of thick pus was sucked out. Left salpingoophorectomy was done together with removal of the capsule. Haemostasis was achieved by transfixing the stamp with chromic catgut No.2. The right tube had peritubal adhesions which were released. Pelvic peritoneal lavage with warm saline was done with the patients head up so that avoiding pus spread to the general peritoneum. The abdomen was mopped dry. The

appendix was normal. Corrugated rubber drain was left in the pouch of Douglas and both paracolic gutters opening through a stab wound on the right about 2cm above the iliac fossa. It was enhanced on the skin with silk stitch No. 2.0. Instruments, gauze and packs were pronounced correct. Abdominal closure was done as in gynaecological case No 1. Blood loss was estimated 500mls.

**Reversal Anaesthesia:**

Anaesthesia was reversed as in gynaecological case No. 1. She recovered well from anaesthesia and she was sent to the ward with the following post operative orders:

- Dextrose saline intravenously 3000mls in 24 hours
- Intramuscular injection Pethidine 100mg 8 hourly for 24 hours.
- She continued with Antibiotics (Metronidazole, Gentamicin and Ampicillin) as prescribed.
- Fluid input - output chart were monitored for 24 hours.
- Blood pressure and pulse rate were recorded half hourly for four hours then 4 hourly for 24 hours.
- Temperature was recorded 12 hourly.

**Progress in the ward:**

Six hours post operatively she was awake and fully conscious. Her temperature was 37.2°C and the cardiovascular system was stable. The abdomen was not distended. The drain site gauze was soaked and it was changed. The rest of post

operative care was continued. Twenty four hours post operatively she was afebrile. Her body temperature was 37°C, the pulse rate was 84b/minute and the blood pressure was 100/60 mmHg. The abdomen was soft and bowel sounds were audible. The drain was still discharging. Intravenous fluids were stopped and she was started on oral sips and ambulation. The drain was removed after 48 hours. Her haemoglobin checked on the third day post operatively was 8.6g/dl. Pus culture results were negative. She was started on oral haematenics and she continued with oral antibiotics. Stitches were removed on seventh day and she was discharged home to be reviewed after 6 weeks. She was counselled about her poor future obstetric carrier.

**Follow up:**

Six weeks latter she had no complaints. The wound had healed well by primary intention. Her haemoglobin was 11.0g/dl. She had no palpable pelvic mass. She was discharged from the clinic.

**Commentary:**

Pelvic abscess remains a common sequelae of inadequetly treated pelvic inflammatory disease. It may be extratubal collection of pus in the pelvis usually in the cul-dc-sac[1], however intraperitoneal pyogenic infections may point in the rectum, large bowel,or through adhesions into the upper abdomen. Pelvic abscess is increasingly being diagnosed in developing countries, this has been associated with increasing sexually transmitted diseases and HIV/AIDS syndrome[2]. In 1993 at our

Centre pelvic abscess accounted for 11.5% of all gynaecological admissions[3]. In reproductive years usually pelvic abscess is a consequence of acute pelvic infections post abortal infection and puerperal infection[4]. In such situations the aetiological agents include Neisseria gonorrhoea, chlamydia trachomatis, anaerobic bacteria, facultative gram negative rods and others[4,5] usually aerobic and anaerobic bacteria invade inflamed tubes after gonococcal or chlamydia primary infection[4,5]. In advanced age pelvic abscess is usually associated with disease of intestinal tract (eg. Appendicitis, diverculitis etc). The most likely cause of pelvic abscess in this woman is acute pelvic inflammatory disease. This can be ascertained from the history and clinical findings. The highest possibility is that the offending organisms ascended through the cervix along mucosal surface to the uterus, fallopian tubes and into the peritoneal cavity to result into intra-abdominal abscess formation. This patient had abnormal vaginal discharge and treatment with antibiotics was initiated at periphery prior to HVS or endocervical swab being taken for culture and sensitivity. Probably this could have isolated organisms with proper sensitivity to antibiotics. Treatment for pelvic abscess relies on aggressive antibiotic therapy which often seems to result in dense and extensive adhesions involving bowel, pelvic peritoneum and omentum and ending in distressing symptoms of chronic pelvic pain and infertility[6]. A diagnosis of pelvic abscess is made from the history of fever, abdominal pain or discomfort and diarrhoea[5,7], also these patients may give history of having received antibiotics recently for acute pelvic infection. All these symptoms were apparent in

this patient. With positive pelvic findings the diagnosis was made without difficulty. Pelvic abscess may subside spontaneously, may open through the pouch of Douglas anteriorly into the vagina or posteriorly into the rectum, or else gut perforation may occur. Surgical treatment include posterior colpotomy and laparotomy[7,8]. Posterior colpotomy has less morbidity however this is mostly used as a temporary measure in severely ill patients who can not with stand anaesthesia. With this procedure usually drainage is incomplete and the chances for recurrence are very high[7]. As opposed to laparotomy where focus of infection and necrotic tissue are removed. This patient had antibiotics at periphery with no desired effect. She had persisting high grade fever with signs and symptoms of peritonitis hence operative drainage with antibiotics coverage was the preferred mode of treatment. The negative culture and sensitivity results can be explained by the prior antibiotic coverage. Despite of negative results patient continued with the course of antibiotics.

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**GYN No.5 LITHOPAEDION A RARE CAUSE OF CHRONIC PELVIC PAIN**

Name: Mrs. F.M.

Age: 35 years

Residence: Sinza

Hospital No: 901036

Date of admission: 18.06.1997

Date of discharge: 25.06.1997

**SUMMARY:**

Mrs. F.M. was para 1 + 0, the last and only child was born 20 years ago followed by a long period of involuntary infertility. She was referred from peripheral dispensary on account of lower abdominal pain of one year duration and abnormal vaginal bleeding for 3 months. She also complained of severe dyspareunia in the preceeding 6 months.

Pelvic Examination revealed a firm tender mobile mass in the pouch of Douglas. Ultrasonography showed calcified mass in the left adnexa which was suggestive of calcified pedunculated fibroid. Lithopaedion was found at laparotomy and proved by histopathology. Patient had an uneventful post operative recovery. Lithopaedion as a rare cause of chronic pelvic pain is discussed.

**History of Present Illness**:

The patient experienced lower abdominal pain for a duration of one year. At the beginning the pain was intermittent and not very severe. As time went on the pain became persistent and colicky in nature more on the left iliac fossa. Three months prior to admission she experienced abnormal vaginal bleeding. The bleeding was light and on rare few occations it was associated with heavy clots. Dilatation and curettage was done twice at peripheral hospital. This did not relieve the abdominal pain but she was relieved of vaginal bleeding which had stopped. She was put on different types of antibiotics with no relief. She occasionally complained of deep dyspareunia. She had no history of associated fevers, painful micturation or change in bowel habits.

**Past Obstetric History**:

She was para 1+O last child was born 20 years ago no antepartum or post-partum complications. Since then she had never conceived.

**Menstrual and Gynaecological History:**

She attained menarche at the age of 15 years. Her menstrual flow lasted 4 - 5 days in a cycle of 30 days. She had history of occasional dysmenorrhea but she denied any history of previous amenorrhoea. She had history of deep dyspareunia and had episodes of abnormal vaginal discharge. She had no history of using any of the modern contraceptives.

**Past Medical History:**

She had history of laparotomy in 1982 due to pelvic peritonitis. She denied history of tuberculosis, hypertension or diabetes Mellitus.

**Family and Social History:**

She was married to a lecturer at the University of Dar es Salaam. She drank socially but did not smoke cigarettes. There was no family history of diabetes mellitus or hypertension. She denied history of tuberculosis contact.

**Physical Examination:**

She was in a good nutritional status. She was not pale and not jaundiced. She had no pedal oedema and she had no lymphadenopathy.

**Respiratory System:**

The chest expanded symmetrically with respiration. Her respiratory rate was 20 breaths per minute. Air entry were equal bilaterally and the lung fields were clear.

**Cardiovascular System:**

Her pulse rate was 80 beats per minute, regular and of normal volume. Her blood pressure was 120/80 mmHg and the heart sounds were normal. There were no murmurs or added heart sounds.

**Abdominal Examination:**

Abdomen was not distended moved synchronously with respiration. There was sub umbilical midline scar. The abdomen was soft, there were no obvious

masses palpable. Liver, spleen and kidneys were not palpably enlarged. The renal angles were free of tenderness. There was slight tenderness in the left iliac fossa with minimal guiding but there was no rebound tenderness.

**Pelvic Examination:**

The vulva and vaginal mucosa looked normal. There were no obvious vaginal discharge. Cervix was firm, closed and looked healthy. There was a firm tender mass fixed on the left adnexa which was not mobile. The size of the mass was about 6 x 6 cm. The uterus was normal size anteverted. The right adnexa was free of any mass.

**Rectal Examination:**

The anal sphincteric action was normal. The rectal mucosa felt smooth. The hard mass was palpable per rectum. The gloved finger was stained with fecal matter.

**Diagnosis** :Toboovarian mass. Tubo

**Investigations:**

- Haemoglobin 12.0g/dl
- VDRL - was negative
- Blood group O Rh(D) Positive
- Midstream urine for culture and sensitivity no bacterial growth.
- Pelvic Ultrasound (report)

Findings - Left sided adnexa calcified mass 4 x 6cm.

Opinion: Calcified Pedunculated fibroid.

Patient was counselled about her problem and the need for laparotomy. She agreed and a written consent for anesthesia and operation was obtained.

**Management Plan:**

1. Blood Sample was taken for grouping and cross matching. She was group O Rhesus positive and 1000mls of blood was cross-matched and made available.
2. Intravenous drip of Dextrose Saline through a canula size No. 18 was set and 1 liter was allowed to run.
3. Patient was catheterized about 300mls of clear urine was obtained.

**Anaesthesia:**

This was as described in gynaecological case No. 1.

**Procedure:**

The abdomen was cleaned and draped as in gynaecological case No 1. Through an old well healed sub umbilical midline scar, the abdomen was opened in layers. The incision was carried down through the fibrous tissue. There was minimal bleeding which was arrested by applying a pressure gauze. The incision went up to the rectus sheath. The rectus muscle was retracted to the sides. The peritoneal cavity was entered at higher point than the scar of the former operation to avoid damage to the bowel. The peritoneum was picked carefully by using 2 artery forceps and was lifted up to avoid accidental damage to the bowel which partly was adherent to it. This was released by Mc Indoe scissors, blunt dissection by using fingers and swab

on a stick. Once all the bowel was released, the walls were retracted by using self retaining retractor. Moist laparotomy packs were used to push gently the bowel in the upper abdomen away from the operation site. Adhesions of the pelvic organs were released by blunt dissection and the pelvic organs were identified. A normal size uterus was brought out from the incisional wound. Left tube which was very tortious was identified. A hard mass adherent to the left broad ligament was felt just below the tortious left tube. The mass was separated from ovary and removed after blunt dissection. Oval hard and calcified mass measuring 6 x 4cm was sent for histopathology. Right tube could not be identified because it was deeply buried into adhesions. Because of oozing haemostasis was achieved by applying pressure with warm abdominal packs. Pelvic cavity was dried with a dry pack after the swab and instruments count were pronounced correct. Abdominal closure was done in layers as described in gynaecological case No1. The estimated blood loss was 500mls.

**Reversal Anaesthesia**:

Anaesthesia was reversed as in gynaecological case No.1. She was briefly observed in the recovery room and transferred back in the ward.

**Postoperative orders:**

1. Intravenous D/Saline 3000mls were administered in 24 hours.
2. Intramuscular injection of pethidine 100mg 6 hourly for 24 hours were ordered.

3. Injection Ampicillin intramuscular 500mg 6 hourly for 24 hours then to continue with oral ampicillin 500mg 6 hourly for 5 days.
4. Injection Gentamicin intramuscular 80mg 12 hourly for 5 days
5. Pulse rate and blood pressure were checked ½ hourly for 4 hours then twice daily thereafter. Temperature was charted 4 hourly for 24 hours then twice daily thereafter.

**Post Operative Period**:

Eight hours post operative she was fully awake. The abdomen was soft and not distended. In the first 24 hours her vital signs remained stable. The urine out put was normal. She was allowed to ambulate and to take oral feeds. Her haemoglobin was checked on the 3rd post operative day and it was 10.2g/dl. She was discharged 7th post operative day after the stitches were removed. She was also counselled about her poor future obstetric carrier. She was advised to be reviewed after 6 weeks.

**Histopathology report HP 2304/97**:

Showed a cone shaped calcified mass, very hard in consistency measuring 6 x 4 cm. Microscopic findings were consistent with lithopoedion.

**Follow up:**

She was reviewed 6 weeks latter and she had no problems. Pelvic examination revealed no abnormality.

**COMMENTARY:**

Lithopaedion (Stone child) is a dead fetus. It is a rare sequelae of ectopic gestation. Usually this is the result of primary or secondary abdominal pregnancy that has been retained by the mother and subsequent calcified. It was first discovered at the autopsy of 68 years old french woman in 1582 who had carried her lithopaedion for 28 years[1]. At Muhimbili Medical Center the 2nd reported case was in 1995[2]. Most cases of abdominal pregnancy result from early tubal abortion or rupture with extension and implantation of viable placenta on the peritoneal surface[1,3]. However this patient had no signs and symptoms of pregnancy. Oden and Lee described five conditions for the lithopaedion formation[3].

- There must be an extra uterine pregnancy and the fetus must survive longer than 3 months.
- The fetus must escape medical detection
- The fetus must be sterile
- Conditions necessary for calcium deposition must be present

With improved diagnostic methods and closer medical supervision complication of extrauterine pregnancy is extremely rare complication of ectopic gestation. Because of its rarity it is rarely discussed in modern obstetrics and gynaecological literature[4]. Surgical treatment was not timely in this patient because of dilemma in diagnosis. There were no time she presented with history suggestive of extra uterine pregnancy. The outcome was death of the fetus, mummification and

eventually calcified to lithopaedion. Cyclic pelvic pain, abnormal vaginal bleeding, dyspareunia and long period of involuntary infertility were the main complaints in this patient. Identifying the cause of pain in patients with chronic pelvic pain has been attributed to a variety of sometimes spurious or incidental conditions such as pelvic congestion syndrome, uterine retroflexion, uterine descensus and broad ligaments defects. The goals of evaluation of chronic pelvic pain are to rule out potentially life threatening pathologies and to identify treatable sources of pain. With wide spread of laparoscopic procedures chronic pelvic pain has recently been attributed to findings such as endometriosis and pelvic adhesions. In view of previous laparotomy, laparoscopy was avoided in this patient. Even though laparoscopic procedures did not influence long term outcome in women with chronic pelvic pain[5]. The pathogenesis of lithopaedion is fascinating. The woman must survive a number of complications of pregnancy in order to form a lithopaedion[6]. This patient presented with atypical symptoms of an ectopic pregnancy. She did not have any history suggestive of previous pregnancy. She had episodes of vaginal bleeding not associated with pregnancy. But 20 years of involuntary infertility was still pointing to the possibility of an ectopic gestation. Despite of negative results reported by ultrasonography, the highest index of suspicion is required in such difficult situations. The chronic pelvic pain could be explained by constant compression of the hard calcified mass to the left adnexa where there are vessels and nerves. In this case lithopaedion as a cause of chronic pelvic pain should not be neglected. This

should be considered especially if chronic cyclic pelvic pain is associated with history of involuntary infertility and poor response to antibiotics and analgesics. In some occasions dead fetus occurs, the disintegrated contents of the sac find an outlet through the lower, vaginal wall or bladder this did not happen in this patient. She carried the lithopaedion which formed a hard mass within the pelvis. It is not easy to determine the time she carried the lithopaedion. Rupture into the general peritoneal cavity seldom occurs because as a result of inflammatory process the surrounding intestines and omentum becomes adherent and completely sheet off the general peritoneal cavity.

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**GYN No. 6 INDUCED INCOMPLETE ABORTION. IN A TEENAGE: A CONTINUING PROBLEM.**

Name: Ms. T.M.

Address: Chang'ombe

Reg. No: 898961

Age: 17 years old

Date of Admission: 24.5.96

**SUMMARY:**

Miss T.M. was referred from peripheral dispensary with history of vaginal bleeding for one day. She denied history of sexual contact, amenorrhoea, pregnancy symptoms or pregnancy intervention. After reassurance and thorough interrogation she accepted that her pregnancy was induced at the dispensary which referred her to this center. However she declined to explain the instruments used. Pelvic examination confirmed induced incomplete abortion. Evacuation of products of conception was done by manual vacuum aspiration. Induced abortion in a teenage as a continuing problem is discussed.

**History of Present Illness:**

The patient was referred from a peripheral dispensary on account of vaginal bleeding for one day associated with lower abdominal pain. She denied history of sexual contact, amenorrhoea or pregnancy intervention. After reassurance and thorough interrogation, she accepted that her pregnancy has been induced at the

dispensary which referred her to this centre. This was done on the same day but she was not able to explain the instrument used. This followed a period of 3 months amenorrhoea. She experienced heavy bleeding with clots after the procedure which was associated with lower abdominal pain cramping in nature. She also had mild dizziness but there was neither history of fainting attacks nor shoulder tip pain. She denied history of fever, foul smelling vaginal discharge, urinary symptoms or change in bowel habits and there was no abdominal fullness.

**Gynaecological And Menstrual History:**

She attained menarche at the age of 12 and she had irregular cycles occurring after 21 - 30 days, and the periods were 4 - 5 days of normal flow with moderate dysmenorrhea. Her last normal menstrual period was 20th February 1996. So she was 13 weeks pregnant. She denied any history of abnormal vaginal discharge and she was not on any contraception.

**Family and Social History:**

She was a house girl. She denied history of diabetes mellitus, renal disease or hypertensive disorders in the family. She neither smoked nor drank alcohol.

**Physical Examination:**

Ms T.M was well nourished lady, moderately pale and she was not jaundiced. She was afebrile, She had no pedal oedema or lymphadenopathy.

Breast: Were hyperpigmented, dark areola with prominent Montgomery tubercles. No lumps were palpable.

**Respiratory System:**

Chest was symmetrical and trachea was centrally placed. Percussion note was normal and air entry was normal bilaterally. Breathing was vesicular and there were no added breath sounds.

**Cardiovascular**:

The pulse rate was 88 beats per minute regular and of normal volume. Her blood pressure was 100/60 mmHg. There were no murmurs or added heart sounds.

**Abdominal examination:**

The abdomen was not distended and moved well with respiration. It was soft, the liver and spleen were not palpably enlarged. Renal angles were free of tenderness. There was no guarding, rebound tenderness or sign of free peritoneal fluid, there was moderate suprapubic tenderness.

**Pelvic Examination:**

The vulva was normal and normal urethral meatus. Speculum examination revealed blood clots in the vagina. Minimal blood was seen trickling from cervical os. Products of conceptus were seen on the cervical os. Laceration of the cervix was seen on the upper lip at 12.00 o'clock. Digitally the cervix was soft and 2cm dilated. Products of conception were felt at the cervical os and few were evacuated manually. The uterus corresponded to 10 weeks. There were no adnexal masses and the pouch of Douglas was not bulging.

**Diagnosis:**

Induced incomplete abortion .

**Management Plan:**

1. Investigations
2. Evacuation of the products of conception by manual vacuum aspiration.

**Investigations and results:**

- Hb was 9.6g/dl
- Blood group A Rhesus Positive.

She was counselled about the procedure. Her problem and mode of management were explained thoroughly to her. Pre-procedural counselling against pain was done. She verbally consented for the procedure.

**Evacuation:**

Manual vacuum aspiration was done in the procedure side room of the gynaecological ward. Patient was placed in lithotomy position with both hips flexed and abducted. This was done just after the patient has voluntary voided. The vulva and perineum were cleaned using savlon. With sterile gloves a repeat pelvic examination was done and the diagnosis was reconfirmed. Digitally blood clots were removed. Sterile Cusco bivalve speculum was introduced into the vagina for good exposure of the cervix. Anterior cervical lip was grasped with tenaculum forceps. Karman flexible canula size 10 was introduced into the uterine cavity up to the

fundus. Vacuum was created in the bivalve syringe and connected to the cannulae. The syringe and cannulae were gently moved up and down combined with rotatory movements and approximately 50 mls of products were obtained. Evacuation was accomplished after observing air bubbles within the syringe, audible gritty sounds of canula against the uterine wall and there were no further flow of products. Inspection of evacuated products revealed no vesicles and were submitted for histopathologic examination. She was given 0.25mg injection of ergometrine after the procedure. Post evacuation pulse rate was 90 beats per minute and the blood pressure was 120/80 mmHg. The patient was transferred back to the ward for rest and vital signs to be observed half hourly. They remained stable and there were no undue vaginal bleeding or uterine cramps. She was discharged home 12 hours latter on capsules Ampicillin 500mg 6 hourly for 5 days and Tablets flagyl 400mg 8 hourly for 5 days. Upon discharge she was advised the following:

1. To return immediately if she developed heavy vaginal bleeding, severe lower abdominal pain or develops fever with abnormal vaginal discharge.
2. Avoid Sex, douching and tampons for 2 weeks.
3. She was couselled for post abortal contraception and she opted for pills. Packets for 3 cycles were provided.

On the fifth day post evacuation the patient had developed none of the above symptoms. Speculum examination showed that the laceration had completely healed.

There were slight watery vaginal discharge. Digitally the cervix was closed and the uterus was of normal size and both adnexa were normal.

**Six weeks Post Evacuation:**

She had no problems and histology results were available and showed features which were consistent with incomplete abortion. She was still using oral contraceptives. She was advised to attend MCH clinic when in short supply and for further advise

**COMMENTARY:**

It is not easy to find out the incidence of abortion in the general population because a lot of abortions which occur at very early gestation are not reported and even some times are not recognized(1). Justensen (et al) found the prevalence of induced abortion among women admitted for incomplete abortion at MMC to be 31%[1]. Induced abortion is practiced throughout the world, but its adverse effects are most profound in developing countries. Poor social economic conditions, lack of information on reproductive health for women, poor access to contraception and restrictive law on abortion are among the main contributing factors[2]. Seventy five percent of the worlds population now have liberal abortion laws. The situation in most of third world countries remain restrictive[2,3]. In Tanzania the law permitting abortion is very restrictive and there fore most unwanted pregnancies result in criminally induced abortions. In Dar-es-salaam 45% of teenage girls admitted in hospitals for incomplete abortions had unwanted pregnancies[3]. Usually patients do

not volunteer information on the nature of interference. But it was not difficult in this patient to find laceration on the cervix. However termination of pregnancy goes on illegally to the hands of those least qualified to do so. Even places where abortion is allowed still there is high incidence of illegal abortions, so legalizing abortion alone does not guarantee to completely solve the problem of illegal abortion[4,5]. Illegal abortion is associated with high morbidity and mortality rate. These may be from direct mechanical injury to an extragenital organs, sepsis, peritonitis to severe haemorrhage[2,4]. In UK liberalization of abortion laws has been associated with the fall in the number of deaths from septic abortion[5] . The patient on discussion developed none of these complications. Teenage girls carry unplanned pregnancies and termination of pregnancies becomes their last resort as was demonstrated by Miss T.M. With global decline of age on menarche and sexual liberty, unwanted pregnancy will continue to be a problem. Pregnancy at a very young age is an adolescent trap that leads to a vicious circle of medical and social problems. A study done in Nigeria confirmed that induced abortion is not only a teenage problem but also common among students and that untrained personnel still top the list of abortionist[4]. Broad spectrum antibiotics, evacuation of the focus of sepsis, drainage of pelvic abscess preferably following a laparotomy and blood transfusion remain the main stay in the management of post-abortal complications. In view of all these complications, it is authors opinion that it is the high time that reproductive health which includes sexual education and contraception being provided in schools and safe

abortion be freely provided. In our society however, one still needs to overcome a lot of social and cultural problems to effectively implement the sex education program[1,2,3,6]. It is true that these pregnancies are terminated illegally some times under very uncompromising conditions, to avoid the law enforcement agents. Manual vacuum aspiration has been found to be cost effective, easy to use, no need for general anaesthesia and fewer complications as compared to the usual method of dilatation and curettage. There is no doubt that liberalization and provision of safe abortion services will have a lot of impact.

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**GYN. 7: UTERINE FIBROID WITH MENORRHAGIA**

**TOTAL ABDOMINAL HYSTERECTOMY**

Name: Mrs. A.S.

Age: 40 years

Address: Kilimahewa - Tandika

Reg. No. 893950

Date of Admission: 27.5.97

Date of Operation: 3.6.97

**SUMMARY:**

Mrs A.S. was 40 years old lady, nulliparous who presented at our gynaecological clinic with history of abdominal swelling and heavy menstrual bleeding for 6 months. Physical examination revealed healthy woman with a bulky firm irregular uterus. Investigations confirmed presence of uterine fibroid. Total abdominal hysterectomy was done on account of big fibroid accompanied with severe menorrhagia. She recovered uneventfully. The case is presented and commentary on etiology, pathogenesis of Menorrhagia in leiomyoma and options of treatment modalitilies.

**History of Present Illness:**

Mrs. A.S. was first seen at our clinic as a referral case from Temeke hospital. She presented with history of heavy and prolonged menses associated with clots for 6 months. Prior to this problem her cycles were regular with normal

periods of 3 to 4 days. The flow was not heavy and used to change pads 2 - 3 times daily. These were moderately soaked with menstrual blood. She later noted that the periods became prolonged lasting 10 - 14 days and the flow was heavy associated with clots more so on the 3rd to 5th day. During this period she also noted abdominal swelling. The swelling was not painful and it progressively increased in size. She had history of occasional palpitation and dizziness but she had no history of fainting attacks or excessive weight loss. She had no history of painful micturation, rectal bleeding or change in bowel habits. Due to progressive menorrhagia she was admitted twice at Temeke hospital where she was given haematenics and also she had injection Depo- provera in an effort to control abnormal vaginal bleeding.

**Previous Menstrual and Gynaecological History:**

She attained menarche at the age of 14 years. Her cycles were regular occurring after every 28 days with a normal blood flow of 4 days. Since the onset of the problem the cycles have remained the same but the flow have increased. She denied history of dyspareunia, abnormal vaginal discharge or contact vaginal bleeding. She had never been on any type of modern contraception. She had primary infertility which she had never been investigated.

**Past Medical/Surgical History:**

She had never been treated for any other major illnesses in the past.

**Social and Family History:**

She was married to a polygamous husband of 3 wives. The husband had

children with the other 2 wives. She was the senior wife and they are all subsistence farmers. She was a non smoker and she did not drink alcohol. There was no family history of Diabetes mellitus, cardiac disease, or bleeding disorders.

**Physical Examination:**

She was afebrile, moderately pale and not jaundiced. She had no pedal oedema or lymphadenopathy and she had no petechial haemorrhages.

Thyroid - was not enlarged

Breast - were normal with no lumps or galactorrhoea.

**Cardiopulmonary System:**

She was not dyspnoeic, the pulse rate was 84/beats per minute regular and of normal volume. Her blood pressure was 120/80mmHg. The heart sound were normally heard and there were no added heart sounds. The lung fields were clear.

**Abdominal Examination:**

The abdomen was distended above the pubic symphysis up to the umbilicus. It moved with respiration. There was no area of marked tenderness. The liver and spleen were not palpable and there was no tenderness in both renal angles. There was an irregular firm mass which was equivalent to twenty weeks pregnant uterus. The mass was mobile and non tender.

**Pelvic Examination:**

The vulva and perineum were normal with no features suggestive of prolapse.

Speculum examination: - revealed healthy vaginal walls. The cervix was nulliparous

with no obvious lesion. No bleeding was noted on touching the cervix with lids of the speculum. No discharge was noted.

- Digitally the cervix was firm, closed
- The uterus was bulky, nodular and firm corresponding to 20 weeks pregnant uterus. It was mobile and none tender.
- The fornices and pouch of Douglas were normal
- Examining fingers were not stained with blood.

**Rectal Examination:**

There was no rectal bleeding or evidence of hemorrhoids. The rectal mucosa moved freely and the parametria were free of masses.

**Diagnosis:** Uterine fibroid with Menorrhagia

**Management:**

Investigations

1. Haemoglobin 9.2g/dl
2. Total WBC 4500/$cm^3$
   a) Neutrophils 65%
   b) Eosinophils 2%
   c) Lymphocytes 33%
   d) ESR 15
3. RBC morphology - hypochromic Normocytic
4. Platelet count 220,000/$mm^3$

5. Urinalysis

Microscopy - No pus cells or ova were seen

Biochemical - urine was negative for sugar and protein

Culture - there was no significant bacterial growth

6. Stool - was negative for ova

7. Random blood sugar was 4.2mmol/L

8. Serum creatinine 88mmol/L

9. Chest X-ray - Normal lung fields with no cardiomegaly or evidence of metastasis.

10. IVU - was not done due to technical problems (urografin contrast media) was out of stock.

11. Papanicolaou Smear: No atypical cells noted.

12. Endometrial biopsy: Revealed normal endometrial tissue with no features suggestive of endometritis or endometrial hyperplasia

**Pre - operative management:**

Total Abdominal Hysterectomy

This was planned on account of

1. Abnormal heavy and prolonged bleeding which was likely to cause anaemia.

2. Huge uterine fibroid of about 20 weeks gestation

3. Age 40 years.

All findings were communicated to the patient and she was counselled that she should not expect to be pregnant, she will not be able to get her menstrual periods, but her sexual function will remain normal. Plan of management was explained to her. She was admitted in the ward a day prior to the operation.

- Her haemoglobin was rechecked found to be 10.2g/dl
- A written consent for anaesthesia and operation was obtained.
- Blood grouping and crossmatching of 1000mls of compatible blood was made available.
- She was given enema the night before and fasted from 22.00 hours.

**Anaesthesia:**

This was done as in gynaecological case No. 1.

**Procedure:**

The abdomen was opened as in gynaecological case No.1.

**Findings**:

A 20 weeks mobile uterus with multiple fibroids some subserous and others intramural. The fallopian tubes and ovaries were normal in size and appearance. There were no adhesions and the peritoneal cavity was normal.

Self retaining Balfour retractor was inserted into the open abdominal wound and the side walls of the wound were retracted laterally. In moderate Trendelenburg position two tagged abdominal packs were used to keep intestines away from the operating site. The uterus was pulled upward and to the left side of the patient. The

right round ligament was put on stretch. It was grasped clamped and cut with Mayor's scissors between two curved Kocher forceps near the uterine cornu and ligated with catgut number 2, at a point one half of the distance to its point of disappearance at the lateral pelvic side walls. The ligature was cut long and tagged with small haemostat, and allowed to hang outside the peritoneal cavity. The anterior leaf of the broad ligament was opened and incised to a point of reflection of the bladder peritoneum on the uterus. The vesico-uterine peritoneal fold was incised at the level of its reflexion over the bladder. The right utero-ovarian ligament was skeletonized medially and the underlying areolar connective tissue overlying the ureter was exposed. The following procedure was done on the left side. The right utero-ovarian ligament was triply clamped, cut between the clamps nearest the uterus and the middle clamp. The ligament was doubly tied with chromic catgut No.2. The same procedure was done on the left side. The midline reflection of the bladder peritoneum was freed by extending the incision in the anterior leaf of the lower uterine segment where the two incisions met in the midline. At the upper end of attachment of the bladder to uterine cervix was separated easily and provided space for separating the bladder from uterine cervix and upper vagina. In the midline the bladder fibres were pushed away until a shinny connective tissue overlying the uterine cervix and vagina was evident. The bladder was freed from the anterior uterine wall using a fine dissecting scissors. The posterior leaf of the broad ligament was incised on either side parallel with lateral sides of the uterus down to the origin

of the uterosacral ligaments. The exposed uterine vessels on both sides were then triply clamped bilaterally with curved Kochers clamps and cut with scalpel between the upper and the middle clamps. These were doubly ligated using chromic catgut No.2 and clamps were removed. Once the uterine vessels were ligated a vigorous upward and forward traction was applied to the uterus and the attachment of cardinal ligaments were assessed. These were clamped by straight Kocher clamps cut and doubly ligated with catgut No. 2 at the level of their attachment to the lateral edge of the cervix and upper vagina. This was repeated on the other side. The utero - sacral ligaments were put on tension by pulling of the uterus upwards over the symphysis pubis. They were clamped cut and ligated with vicryl No1. The vagina was entered posterolaterally. The uterus was removed by circumcising the cervix as closely as possible. A sponge soaked in iodine was placed into the vagina. The cervix was further circumcised until the uterus and cervix were completely excised. Tissue forceps were applied successfully at 3, 6, 9, 12, o'clock position and the vaginal cuff was developed. Traction of these forceps elevated and exposed the vaginal vault with constant visualization of bladder base and rectum. The vaginal vault was closed with continuous suture of chromic catgut No 2. The closure started at the right vaginal angle where a figure of eight suture was placed in such a manner that the small vessels at the angle of the vagina were ligated and the ends of the suture exist near the cut edge of the vaginal cuff. After the suture was tied twice approximately 6 inches of the freed end of the suture was left and tagged with haemostat for traction.

A subcuticular type of stitch was used to catch the outer margin of the cut vaginal wall, parallel to the cut margin , and this excluded vaginal mucosa. So that the vaginal edge is inverted. At the left vaginal angle the portion of the left utero-sacral ligament, pubo-cervical fascia, the cardinal ligament and the small vessels in the left vaginal angle were picked. The suture was locked and run perpendicular across the vaginal vault to include the rolled edges of the vagina and the attached pubo-cervical fascia. Thus a two layered closure of the vaginal vault was accompanied with a single continuous suture which includes the pubo-cervical fascia, the endopelvic fascia, the uterosacral ligaments and the cardinal ligaments for anatomic support. The pelvis was reperitonised with a single continuous suture of 2/0 chromic catgut. Peritoneal cavity was mopped dry. Gauze, packs and instruments were ascertained correct.

The abdomen was closed in layers as in gynaecological case No1. Blood loss was estimated to be 1000mls.

**Reversal of Anaesthesia:**

This was done as in gynaecological case No.1.

The uterus was incised vertically they were submucous fibroid which measured about 6 - 8cm x 4cm and about 5 intramural fibroid. There was no evidence of malignancy.

**Post Operative Management:**

1. Intravenous fluids 3000 mls Dextrose - Saline in 24 hours

2. Injection pethidine 100mg 8 hourly 1/m for 24 hours to relieve pain
3. Injection Ampicillin 500mg Intravenously 8 hrly for 24 hrs then oral tablets for 5 days.
4. Vital signs chart pulse rate and blood pressure were monitored ½ hourly for 8 hours. Then 2 hourly charting for 12 hours. Temperature was charted 12 hourly.
5. Input output chart for 24 hours.

**Progress in the ward:**

Her pulse rate and blood pressure remained stable and six hours post operatively she was fully awake. 24 hours post operatively, the pulse rate was 88 beats/minute and the blood pressure was 120/80 mmHg. The abdomen remained soft and there were no shifting dullness. Renal angles were none tender. Her urine out put was 1500mls of clear urine against an intake of 3000mls. The urethral indwelling catheter was removed and she started ambulation and oral sips. Stitches were removed on the sixth post operative day. She was discharged home with haemoglobin of 8.6g/dl on oral haematenics. She was to be reviewed six weeks latter.

**Follow up Review:**

Six weeks latter she had no problems. She was fully continent and the abdominal scar had completely healed. Speculum examination revealed a healthy vault with no haematocele. She was discharge from the clinic with haemoglobin of 11.6g/dl.

**Commentary:**

During the woman's reproductive years the endometrium and myometrium are subjected to continuous flux of hormonal activity, chiefly from ovaries. New growths in the uterus are therefore relatively common[1]. By far the commonest tumour of the uterus is the leiomyoma. Although arising in the muscular wall of the uterus there is always some admixture of fibrous tissue in these tumours[1]. It is estimated that 20% all women over 35 years of age have leiomyomas although frequently without symptoms[1,2]. The aetiology is not precisely known, but there is evidence that the growth of fibroid is dependent on oestrogen. No explanation has been suggested as to why they occur in some women and not others since oestrogen is practically produced by all women[2,3]. However racial variation has been associated with increased incidence. It is more common in Africans as compared to caucasians[3]. With the use of oestrogen containing contraceptive pills it has been found that fibromyoma can suddenly increase in size[3]. Many patients with fibroids are asymptomatic, while others suffer from abnormal uterine bleeding, anaemia, dysmenorrhea, urinary symptoms and constipation. Leiomyoma are an important cause of Menorrhagia and other forms of abnormal uterine bleeding. This was presented in this patient. The mechanisms of excessive menstrual bleeding in patients with uterine fibroid can be multiple. With large myomas, the endometrial cavity is enlarged creating a larger surface from which menstrual shedding can occur. With intramural myomas impendence of venous return from the endometrium may produce

heavier flow. In patients with submucous myomas mechanical attractions of the endometrium with distortion, dilatation and elongation of the endometrial glands at the margins of the myomas may contribute to menorrhagia[4]. Recent work demonstrated dys-regulation of a number of growth factors in the myometrous uterus[5]. Dysregulation of growth factors or their receptors provides the molecular mechanism underlying vascular abnormalities. In turn these abnormal vessels lead women with leiomyomas experience menorrhagia[5,6]. Factors that may prove to be important in this process include basic fibroblast growth factor, vascular endothelial growth factor, heparin binding epidermal growth factor, platelet derived growth factor, transforming growth factor beta, parathyroid hormone related protein and prolactin[5]. In response to the increased attention and the development of new procedures and drugs more conservative treatment is now practiced[6]. Progesterone may be used to suppress menorrhagia, but use of these agents to treat fibroid is not routine. Gonadotropin releasing hormone analogues (GnRH) offer a promising medical approach to the treatment of fibroid, they have been shown to decrease fibroid size and to decrease uterine bleeding. The use of GnRH analogues is preferred preoperatively because studies have shown decrease in 80%, of the volume of the fibroid[7]. GnRH analogues are highly effective because of their ability to induce amenorrhoea, but long term use is contraindicated because of their hypo-oestrogenic effects[7]. This modality of treatment in our set up is very difficult because of the cost involved and this treatment modality has not yet been tried.

Prostaglandin Synthetase inhibitors can be useful, with up to a third of women with menorrhagia benefiting from a reduction of between 25% and 35% in blood loss[7,8]. Treatment of symptomatic fibroid has long been surgical. Hysterectomy remains one of the most commonly performed major surgical procedure worldwide[9]. The laparoscopic mode avoids the need for laparotomy and enables the procedure to be completed either totally laparoscopically or by combination of laparoscopic and vaginal routes (Laparoscopic Assisted Vaginal hysterectomy). However it is insisted that laparoscopic hysterectomy only develops from extensive training in these procedures. It has been shown by some centers that vaginal hysterectomy is preferred to total abdominal hysterectomy[6,9]. It is because of - lower overall complications, lower hospital stay and faster covalences. However abdominal hysterectomy is still performed over 80% of all hysterectomies in UK[10].

Main indications for hysterectomy in patients with uterine fibroid includes: progressive menorrhagia, pelvic pressure or pain, compromise of adjacent organs and fast growing fibroid. Hence abdominal hysterectomy in this woman was justified. She was 40 years old, big fibroid and persisting menorrhagia. Myomectomy could have been the best option because she was nulliparous. But her age the size of the uterus and severe menorrhagia were against this approach.

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**GYN No. 8: TWISTED OVARIAN DERMOID CYST - A DIFFERENTIAL DIAGNOSIS OF ACUTE ABDOMEN IN GYNAECOLOGICAL PRACTICE.**

Name: Ms H.M.

Age: 31 years

Residence: Ilala

Hospital No: 905574

Date of admission: 19.8.97

**SUMMARY:**

Mrs. H.M. was a 31 year old para 2, referred from Ilala hospital on account of abdominal pain and vomiting for one day. She had no symptoms of pregnancy. On examination she was in pain with some dehydration. Apart from tachycardia of 100b/m her cardiovascular system was stable. She had a cystic tender mass in the right iliac fossa which was confirmed on pelvic examination. Abdominal ultrasound revealed a right adnexal mass with some amount of fluid in the pouch of douglas. A diagnosis of twisted right ovarian cyst was made and this was confirmed at laparotomy. Histopathology results showed to be a dermoid cyst (mature teratoma). Twisted ovarian dermoid cyst, a differential diagnosis of acute abdomen in gynaecological practice is discussed.

**History of present illness**:

Mrs. HM, complained of sudden onset of sharp none radiating lower

abdominal pain which was more localized on the right iliac fossa. Latter on the pain radiated to the left thigh and to the lower back. She denied history of shoulder tip pain or epigastric pain. She had one episode of vomiting following the pain but no fainting attacks or loss of consciousness. She denied history of amenorrhoea, painful micturation or change in bowel habits.

**Gynaecological and Menstrual History**:

She attained menarche at the age of 13 years. She had regular menstrual flow lasting 3-4 days in a cycle of 30 days. She denied history of abnormal vaginal bleeding, abnormal vaginal discharge or dyspareunia. She had no history of oral contraceptive use. She had no history of any gynaecological operations. Her LNMP was two weeks prior to admission.

**Obstetric History:**

She was para 2 + 0. Last child was born in 1993. The child had neonatal death at the age of 7 days due to anal atresia. All were spontaneous vaginal deliveries and she had no intrapartum or post- partum complications.

**Past Medical History:**

She is hypertensive for the past 1½ years but not on regular medication. She had no history of Diabetes Mellitus or renal disease.

**Family and Social History:**

Ms. H.M was not married, she was engaged in petty business. Her mother is hypertensive. She denied history of diabetes mellitus in the family. She did not

smoke cigarettes and she stopped taking alcohol one year ago.

**Physical Examination:**

She was in pain. She was not wasted and she was afebrile. She was not pale or jaundiced. She had no pedal oedema or lymphadenopathy.

**Respiratory System:**

The respiratory rate was 24 breaths per minute with normal vesicular breath sounds.

Breasts - Were essentially normal.

**Cardiovascular System:**

Her pulse rate was 100 beats per minute regular and of normal volume. She had a blood pressure of 130/90 mmHg. The apex beat was in the 5th intercostal space mid-clavicular line and heart sound were normally heard. There were no murmurs or added heart sounds.

**Abdomen:**

The abdomen was distended more on the right flank. There was tenderness and guiding more marked on the right iliac fossa. A tender cystic mass was palpated in the right iliac fossa.The mass was about 6cm in size and was of limited mobility. The liver and spleen were not palpably enlarged. Renal angles were free of masses. There were no evidence of free peritoneal fluid and bowel sound were audible.

**Pelvic examination:**

The vagina and vaginal mucosa looked normal. There were no vaginal

bleeding or vaginal discharge. Cervix was firm, closed and looked healthy. The size of the uterus could not be appreciated because of tenderness. There was tender right cystic adnexa mass. The mass had limited mobility, the size was about 6 x 8 cm. The excitation test was positive bilaterally. The mass occupied the bulging pouch of Douglas.

**Rectal examination:**

The anal sphincteric action was normal. The rectal mucosa felt smooth. The cystic mass with limited mobility was felt in the pouch of douglas. The gloved finger was stained with fecal matter.

**Diagnosis**:

twisted ovarian cyst.

R/O Pelvic abscess.

**Resuscitative measures:**

1. Intravenous fluids Ringers lactate 2L alternating with Dextrose/ Saline 2L
2. I/V flagyl 500mg 8hrly x 48 hours.
3. I/V Ampicillin 500mg 6hrly x 48 hours.

The patient remained nil orally.

**Investigations:**

1. Haemoglobin 11.6g/dl.
2. Serum creatinine 80 mmol/l.

3. Mid stream urine for culture and sensitivity No bacterial growth.

4. Urgent pelvic ultrasound - left twisted ovarian cyst.

5. Blood group and crossmatch of 2 units of compatible blood were requested.

Patient was counselled about her problem and the need for operation. She agreed and a written consent was secured.

**Induction of Anaesthesia:**

This was done as in gynaecological case No.1.

**Procedure:**

The abdomen was opened in layers through sub umbilical midline incision as described in gynaecological case No.1.

**Finding:**

There were no seedlings on the peritoneum. There were clear peritoneal fluid about 200mls in the pouch of douglas. About 5 mls were collected for cytology. There were no evidence of metastasis on the omentum, liver and spleen. No metastasis were found in both paracolic gutters. Two wet packs were put to push away the bowel from the operation site. Normal size uterus was found. A gangrenous left ovarian cyst with its long pedicle twisted through 360° was found. The size of the cyst was about 6 x 8 cm. The left infundibulopelvic ligament was doubly clamped and then ligated twice with chromic catgut No. 2 and then cut. Medially the left tube was doubly clamped with Kochers forceps as near to the uterus

as possible, ligated twice with chromic catgut No. 2 and then cut. The cyst together with the ovary and the left tube were excised with a knife and ligated with No.2 catgut suture twice. Haemostasis was achieved. The uterus, the right tube, and ovary were normal. Biopsy was taken from the right ovary and further inspection revealed no suspicion of metastasis or seedling. The abdominal cavity was mopped dry after correct instrument and swab count. Abdomen was closed in layers as described in gynaecological case No.1. Dissection of the cyst showed thick serous fluid and cartilaginous tissue which were sent for histopathology together with a sample from the normal looking right ovary and also peritoneal fluid was sent for cytology.

**Reversal Anaesthesia**:

Anaesthesia was reversed as in gynaecological case No1. The patient recovered well from anaesthesia and she was sent to the ward with the following post operative orders;

1. Intravenous D/Saline 3000mls were administered in 24 hours.
2. Intramuscular injection of pethidine 100mg 6 hourly for 24 hours were given.
3. I/V Ampicillin 500mg 6 hourly for 24 hours were given and she continued with oral Caps Ampicillin 500mg 6hourly for 5 days.
4. Pulse rate, Blood pressure and respiration rate were checked ½ hourly for 8 hours then twice daily there after were monitored.

5. Fluid input and urinary output chart were monitored for 24 hours.

**Post operative period:**

Eight hours post operatively, she was fully awake and the vital signs were stable. Twenty four hours postoperatively she started on ambulation and oral fluids sips. On the 6th post operative day the stitches were removed and the wound was dry. She was discharged home on oral haematenics, to attend gynaecological outpatient clinic after 6 weeks.

**Histology results:**

The Histology specimen HP 3261/97 report showed Benign Matured dermoid cystic teratoma.

Histology from contralateral ovary: Normal ovarian tissue.

Cytology results: No malignant cells

**Review after 6 weeks:**

She had no problems and the sub umbilical mid line scar was nicely healed. Pelvic examination revealed no abnormality. She was discharged from the clinic.

**COMMENTARY:**

Tumours of the ovary may be benign or malignant. An adnexal mass may be diagnosed in an asymptomatic woman seen for yearly check up or may present with acute pain resulting from rupture or torsion[1]. Dermoid tumours are usually asymptomatic and are often detected on routine pelvic examination, but it is possible for them to present with acute symptoms secondary to torsion or spontaneous

rupture[2]. The classical presentation of sudden onset of abdominal pain was demonstrated by this patient. More than 50% of benign ovarian tumours are found during child bearing years which may mimic the diagnosis of ruptured ectopic pregnancy[3]. This was shown by this patient who was still active reproductive carrier. Overall germ cell tumours account for approximately 20% of all ovarian tumours and 95% are benign mature teratomas while only 4% of all ovarian malignant tumours are of germ cell origin[1,2]. Benign cystic teratomas can be found in the retroperitoneal area of the pelvis or upper abdomen in the mediasternum and even in the pineal body. Primary sex (germ) cells originate in embryonic life near the hind gut in the region of the yolk sac and allantois and migrate along the base of the mesentery to the gonadal ridge on either side of the midline. It can take on a great variety of forms with virtually all adult tissues being represented. Elements of all three germ layers may be present but those from the ectoderm usually predominate (hair, sweat and sebaceous gland and teeth). Other tissue components commonly found in benign cystic teratoma include brain, bronchus, cartilage, intestines, borne and carcinoid cells. Torsion occurs in about 5 to 10 percent of patients, infarction, rupture and peritonitis usually follow if there is no timely surgical intervention[4]. Rupture although uncommon is particularly dangerous because of the irritating nature of the cyst contents in the peritoneal cavity[3,4].

Sonographic examination may be helpful for the diagnosis of dermoid cyst Plain abdominal radiograph sometimes can show some of the contents comprising the

cyst. In this patient the diagnosis was easily picked by ultra sonography. The patient was prepared for emergency laparotomy. The circulatory disturbances produced by the torsion usually affects chiefly the veins with intense venous stasis. In extreme cases the arteries are also occluded with resultant gangrene as was the case in this particular patient.

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**GYN No. 9: RECURRENT BARTHOLIN ABSCESS:**

Name: Ms K.N.

Age: 17 years

Address: Goba

Reg. No: 908538

Date of admission: 26.9.97

**SUMMARY:**

Ms. K.N. was 28 weeks pregnant. She was referred to MMC with history of painful bilateral labial swelling for 7 days. This was a third episode within two months. The first episode she had spontaneous rupture of the abscess which healed without further treatment. The second episode incision and drainage was done at Bagamoyo district hospital. On examination she had bilateral swelling which were warm tender and fluctuant. A diagnosis of bilateral recurrent bartholin abscess was made. Marsupialization was done and pus swab for gram stain revealed gram negative bacilli and culture isolated E. Coli and proteus spp. sensitive to Gentamicin and Chloramphenicol. VDRL and ELISA tests were negative. She was put on Gentamicin 80mg 12 hourly for 5 days and she had uneventful recovery and she was discharged home on the 7th post operative day to attend antenatal clinic at Goba. Aetiology and management of Bartholin's abscess is discussed.

**History of Present Illness:**

Ms. K.N. was referred from Goba Antenatal clinic at the gestation of 28 completed weeks, with history of recurrent painful bilateral labial swelling. This being the third episode within 2 months. The first incident she had spontaneous rupture of the abscess which healed untreated. The second episode was 2 weeks later and incision and drainage was done at Bagamoyo district hospital. On admission she presented with history of painful bilateral labial swelling for 7 days. Initially the swelling was on the right labia and the pain was dull which became throbbing in nature as time went on. Latter on the swelling involved the left labia. A day before admission the pain was so severe that she was unable to walk or sit down. She also presented with history of low grade fever and general body malaise. She denied history of abnormal vaginal discharge, painful micturation, or increased frequency.

**Index Pregnancy:**

She was primigravida. Her last normal menstrual period was on 14.3.97, so she was 28 weeks pregnant by dates. She booked for antenatal care at Goba MCH clinic since at the gestation of 20 weeks and she had 2 antenatal visits to the time of referral.

**Menstrual and Gynaecological History:**

She attained menarche at the age of 15 years. She had regular cycles of 30 days with 3 - 4 days of normal menstrual flow. She had no history of abnormal

vaginal discharge, genital ulcers, abnormal vaginal bleeding or dyspareunia. She had 2 episodes of bartholin's abscess which recurred twice within 2 months. She had no history of contraceptive use.

**Past Medical History:**

She had no history of serious illnesses in the past and this was her first admission to hospital.

**Family and Social History:**

She completed class VII one year ago. She was not married, however she gave history of sexual intercourse with a boyfriend who was a petty businessman. She fully depended on her parents who were low scale farmers with other 8 dependants. She denied history of Diabetes mellitus or hypertension in the family. She also denied history of TB contact. She neither smoked cigarettes nor drank alcohol.

**Physical Examination:**

She was a young lady in severe pain. She was febrile 38°C and she was moderately pale. She had 2 discrete palpable inguinal lymphnodes bilaterally. They were mobile and slightly tender.

**Cardiopulmonary system:**

She was not dyspnoeic, the pulse rate was 98 b/m regular and of normal volume and her blood pressure was 120/80 mmHg. The heart sounds were normally

heard and there were no murmurs or added heart sounds and the lung fields were clear.

**Abdominal examination:**

The abdomen was distended to above the umbilicus. It was soft and none tender. The liver, spleen and kidneys were not palpable. There were no obvious palpable masses and the hernia orifices were normal. The fundal height corresponded to 28 gestational weeks.

**Vaginal Examination:**

There were swellings on both labia minora at the inferior aspect of the vaginal introitus which measured about 4 x 5 cm in size. The swellings were warm hyperemic tender and fluctuant. They occluded the vaginal entrance. There was no discharge from the urethral meatus. Speculum and digital examination were not done due to pain.

**Diagnosis:** Recurrent Bilateral Bartholin's abscess.

in Pregnancy

**Management Plan:**

Investigations:

- Haemoglobin 9.6g/dl
- VDRL Negative
- Blood slide for malaria parasites was (Negative)

- ELISA for HIV was Negative.

- Blood picture: WBC total 6500

differential - Normal

RBC morphology

Hypochromic, Poikilocytosis, Anisocytosis.

- Urinalysis

Microscopy - + few pus cells

+ few ephithelia cells

- Culture - No bacterial growth

Pus from abscess (taken in theater)

Gram Stain: + Pus cells and gram negative bacilli

Pus Culture and sensitivity isolated E.coli and proteus Spp. E.Coli were sensitive to Gentamicin, and Chloramphenicol and were resistant to Ampicillin, Augumentin and Tetracycline.

- Proteus spp. were sensitive to Gentamicin, Ampicillin and chloramphenicol and were resistant to Tetracycline and Cotrimoxazole

Surgical Intervention: Marsupialization

**Anaesthesia:**

Induction was done by Atropine 0.5mg and Thiopentone 250mg intravenously and she was maintained on face mask.

**Procedure:**

The patient was placed in lithotomy position. The vulva and perineum were cleaned with antiseptic (chlorhexidine) then draped with sterile linen. Digital Examination was done and confirmed the diagnosis. A Cusco Bivalve Speculum was introduced into the vagina. The cervix was healthy looking and there were no obvious discharge.

A longitudinal incision about 3cm long was made over the center of the abscess bilaterally and about 25mls of purulent offensive pus was drained from both cavities. Pus swab for culture and sensitivity was taken and kept in Stuarts transport media. Elliptical incision was made on either side of the vertical incision thus removing two pieces of skin and hence leaving a hole of about 2cm in transverse diameter. Loculation in the cavity were broken down with the index finger and more pus was drained. The edges of the abscess wall were averted and sutured to the vaginal epithelium using interrupted catgut No.2/0 and the wound was packed with eusol.

**Post operative care:**

1. Pulse rate, Blood pressure, and respiration were monitored 1/2 hourly for 4 hours then twice hourly there after. Temperature was recorded twice daily.
2. Oral flagyl 400mg 8 hourly for 5 days.
3. Oral Ampicillin 500mg 6 hourly for 5 days.

These were given pending culture and sensitivity results.

4. Sits bath with dettol twice daily for 72 hours
5. Eusol pack to be removed after 24 hours.
6. Tabs Aspirin 500mg 8 hourly for 72 hours.
7. Haem up 15 mls 12 hourly for 1 month.
8. Tabs folic Acid 5 mg daily for 1 month.
9. Weekly chloroquine 600mg for malarial prophylaxis.

**Post Operation Review:**

The general condition of the patient on the first post operative day was good. The body temperature was fluctuating from 37.8°C to 38.°C. The pain had moderately subsided. The culture and sensitivity results were available 72 hours latter and the patient was put on Gentamicin for 5 days and had an uneventful recovery. She was discharged to attend antenatal clinic at GOBA MCH clinic.

**COMMENTARY:**

The common cystic swelling in the vulva is that due to inflammatory occlusion of the duct of the Bartholin's gland. Occlusion of the vestibular gland duct can predispose to acute infection of the gland[1]. Bartholin adenitis can progress to abscess cellulitis or fasciitis. Occlusion of the major vestibular gland without infection can lead to pseudocystic accumulation of mucin commonly known as bartholin cyst. Bartholin's abscess appears commonly during reproductive years and

the primary cause is infection either pyogenic or gonorrhoeal[2]. This was shown by this patient who was in her early reproductive age and she was 28 weeks pregnant. In 1993 at MMC bartholin's abscess accounted for 1.5% of all gynaecological admissions[3]. However this does not clearly represent the magnitude of the problem in the community because some of them burst hence they are unreported. There is a wide range of causative organisms in this condition contrary to earlier beliefs that it commonly followed gonococcal infection[4]. None specific bartholinitis present like gonococcal bartholinitis and different organisms may be present together[4]. Gram negative anaerobes are part of the normal vaginal flora and contribute to a range of superficial and deep genital infections[5]. In a review done by Park and Cardiff in 1993 showed that porphyromonous asaccharolytica is not probably a vaginal commensal, but may be isolated from patients with vaginal or pelvic disease and it is more specifically associated with superficial abscesses like bartholin abscess[5]. However in this particular patient Escherichia Coli and Proteus Spp. which are common organisms around the perineum were isolated from the Bartholin's abscess.

Bartholin's abscess was believed to be a sign of gonococcal infection but this is no longer acceptable. Positive cultures from Bartholin's gland abscess are often polymicrobial and may contain wide range of bacteria similar to the natural flora of the vagina or perineum. The diagnosis of Bartholin abscess in this patient was not difficult. A typical history, signs and symptoms of the disease were obvious. She

was a young sexually active and had a similar illness just within two months that was in adequetly attended. The aim of the treatment of bartholin's abscess should be the preservation of the gland and its function[6]. The treatment of choice is the development of a fistulous tract from the dilated duct to the vestibule. Marsupialization was hence chosen to be the treatment of choice for this patient with appropriate antibiotics coverage.

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**GYN No.10: RECTAL VAGINA FISTULA: SUCCESSFUL REPAIR:**

Name: Ms. E.F

Residence: Morogoro

Age: 20 years

Reg. No: 893324

Date of admission: 27.5.97

Date of operation: 9.6.97

**SUMMARY:**

Ms E.F. was a 20 years old primipara with no living child. She was referred from Morogoro Regional Hospital on account of passing faeces per vagina. This followed instrumental delivery after prolonged and difficult labour 9 months previously. She was found to have recto- vaginal fistula at examination under anaesthesia. This was repaired successfully and she had an uneventful recovery. Rectal vaginal fistula as a complication of neglected obstructed labour is discussed.

**History of Present Illness:**

Ms. E.F. was referred from Morogoro regional hospital on account of passing faeces per vagina for 9 months. This followed prolonged and difficult labour after which vaginal delivery was effected by an instrumental destructive procedure. She had laboured for 3 days in her home area where she was attended by traditional birth attendants. She booked for antenatal care at her home area but no advise was

given regarding her delivery. She was referred to Morogoro Regional Hospital which is 50km away. On the day of admission the fetal heart tones were not heard. Hence vaginal delivery was effected by instrumental destructive procedure. She had a tear which was repaired. She was delivered a macerated still birth 3.6kg male baby. Upon recovering from anaesthesia she noticed that she had a catheter which was draining urine and it remained for 10 days, the bed remained dry. The same day she experienced passing faeces per vagina however she remained continent. She stayed in the hospital for 14 days, she was counselled and discharged home. She continued to be reviewed monthly at morogoro regional hospital till when she was referred to this centre 9 months latter.

**Menstrual and Gynaecological History**:

She attained menarche at the age of 16 years. Her cycles were regular occurring after 26 - 28 days with 3-5 days of normal menstrual flow. She had no history of dysmenorrhea, abnormal vaginal discharge or dyspareunia. She had no history of using any of the modern contraceptive methods.

**Past Medical History:**

Was uneventful.

**Family and Social History:**

She was not married and had no formal education. She was living with her parents who are farmers in a family of 6 dependants. There was no history of hypertension or Diabetes mellitus in her family.

**Physical Examination**:

She was a young lady of short stature, her height was 145cm. She was health looking, not pale and not jaundiced. However she looked very depressed. She had a normal gait with no pedal oedema or lymphadenopathy.

**Cardiopulmonary System:**

She was not dyspnoeic, the pulse rate was 78 beats per minute regular and normal volume. Her blood pressure was 100/70 mmHg and the heart sounds were normal and there were no added heart sounds. The lung fields were clear.

**Abdomen:**

The abdomen was not distended and moved well with respiration. There was no area of marked tenderness and there were no obvious masses palpable. The liver and spleen were not palpably enlarged. Renal angles were free of tenderness.

**Pelvic Examination:**

The vulva and vaginal mucosa looked normal. There was a well healed left medial lateral episiotomy scar and there were no leakage of urine. A pad on the vulva was stained with faecal particles. A small fistula of about 1cm was felt about 2cm above the posterior fourchette on the posterior vaginal wall. The edges of the fistula were fibrotic .The cervix was closed firm. The uterus was of normal size. The adnexa were free of masses and the excitation test was negative bilaterally.

**Rectal Examination:**

The anal sphincteric action was normal. The rectal mucosa felt smooth. A small fistula was felt on the anterior wall of the rectum above the anal sphincter. No external haemmorrhoids were noted. The gloved finger was stained with faecal matter.

**Diagnosis:** RVF Cause ? Instrumental injury

? Obstructed labour

**Investigations done:**

1. Haemoglobin: 10.7g/dl.
2. Blood group: AB Rh (D) positive
3. Mid Stream urine for Culture and Sensitivity significant growth of Klebsiella species were isolated.

They were sensitive to nalidixic Acid, Gentamicin and Augumentin and they were resistant to furadantin, Ampicillin, Tetracycline and Cotrimoxazole. She was treated with Gentamicin 80mg 12 hourly for 10 day before she was scheduled for operation.

4. Repeat Midstream urine for culture and sensitivity. Revealed no bacterial growth.

**Management plan.**

1. She was on 3 days mechanical preparation of the intestine with progressive reduction of diet to clear fluid
2. Three days prior to operation Neomycin 1gm and Erythromycin 1g were prescribed 3 times a day.
3. Enema was ordered the night before surgery
4. Blood sample was taken for grouping and cross-matching.
5. The vulva and perineum were cleaned.
6. A written consent for anaesthesia and operation was obtained.

**Anaesthesia:**

This was given as in gynaecological case No. 1.

**Operative Procedure:**

Patient was put in lithotomy position. Vulva and perineum were cleaned with Chlorhexidine, and then draped. The bladder was emptied by using metal catheter, about 200mls of clear urine were drained. The cervix and vaginal walls were exposed by inserting a sims speculum. A small fistula about 1cm above the posterior fourchette was identified. There was no any other fistula seen. The fibrotic tissue around the fistula was excised by using scalpel blade number 21. A linear incision was made along the recto-vaginal junction. The vagina and underlying rectum were separated widely from the overlying vaginal mucosa. Rectal wall reconstruction was

performed without tension. The edges of the rectal mucosa were freshened. The rectum was reconstructed by using vicryl number 3 - 0 interrupted inverting sutures that did not traverse the rectal mucosa. A second layer was placed in perirectal fascia. The vagina was reconstructed by interrupted chromic catgut suture number O, starting at the apex and extending down to the vaginal introitus. Hemostasis was ascertained. Blood loss was estimated to be 250mls.

**Reversal Anaesthesia:**

Anaesthesia was reversed as in gynaecological case No 1. She was sent to gynaecological ward.

**Post Operative Care:**

1. Intravenous Dextrose Saline 3000mls were administered in 24 hours.
2. Inj. Ampicillin intravenously 500mg 6 hourly for 48 hours then to continue with oral ampicillin 500mg 6 hourly for 5 days.
3. Inj. Flagyl intravenously 500mg 8 hourly for 48 hours then to continue with oral flagyl 400mg 8 hourly for 5 days.
4. Pulse rate, Blood pressure and respiration rate were checked ½ hourly for 4 hours and then twice daily there after.
5. Continuous bladder drainage for 24 hours.

**Post Operative Period**:

Eight hours post operative she was fully awake and the vital signs remained stable. In the first 24 hours she had normal urinary output. The abdomen was soft

and she was started on ambulation and oral sips. She was reassured and advised to abstain from sexual intercourse for 3 months. She was discharged 7 days post operative, to be reviewed after 6 weeks.

**Follow up:**

She was reviewed after six weeks and she had no problem. She was continent and had normal bowel habits. Pelvic Examination revealed normal vaginal mucosa with no leaking of faeces.

**Rectal Examination:**

The Anal sphincter was normal and the rectal mucosa moved freely. The fistula had completely healed and there was no any leakage and there were no signs of fecal incontinence.

**Commentary:**

Rectal vaginal fistulas are communication between the vagina and the rectum. These fistulas may be located at any point between the vaginal introitus and the vaginal vault. Fistulas between the small bowel or large bowel and the vagina are relatively rare[1]. In some areas of the world birth injuries cause up to 85% of recto vaginal fistulas[2].

There are a continuing number of fistulas that result from surgery for benign disease, congenital anomalies and granulomatous disease[2,], however obstructed labour is still an important cause of fistulae in our set up.

Most recto-vaginal fistulas result from unsuccessful attempts to repair a tear that

extends through the anal and lower rectal mucosa, break down of rectal repairs, or rectal injury during vaginal delivery[3]. In developing countries this problem accounts to high percentage of fetal losses and maternal morbidity [4,5]. In this particular patient the cause of recto-vaginal fistula could either be directly due to prolonged labour which resulted to persistent pressure on the rectum to the sacral curve, hence pressure necrosis and latter fistula or tear which was observed and repaired at delivery. The role of vaginal delivery following instrumentation cannot be under estimated. Risk factors for pelvic floor injury include forceps delivery, episiotomy, destructive operations, prolonged second stage of labour and increased fetal size. All these risk factors were present in this patient. Morbidity in this patent could have been prevented by early caesarean section. The problem of neglected obstructed labour is still a common occurrence in most of rural areas in the third world countries where infrastructure is still underdeveloped and the first referral health care centers are not well equipped[2]. This is also contributed by the effect of traditional obstetric practices, decision making and distance to hospital. This was the case in this particular patient. When obstruction is diagnosed it must be relieved without delay, and this is by operative means. When labour is obstructed by cephalopelvic disproportion and the fetus is dead delivery may be achieved by reducing the size of the fetal head. In developed countries because of the rarity of obstructed labour instrumental destructive operations are rarely done except to delivery hydrocephalics[2,3]. In performing instrumental delivery maternal morbidity

should be considered a major factor. Although complication rates range from 6% - 40% most are relatively minor such as episiotomy extension, or cervical lacerations[5]. These minor complications are also seen in spontaneous deliveries in cases of precipitous uncontrolled delivery or large infants. Studies have shown that the incidence of birth injuries and postpartum complications are related to prolonged labour, abnormal pelvis and presentations as well as large infants[5].

In developing world where cases of obstructed labour still prevail, instrumental deliveries remain an important weapon in the armoury of tropical obstetrician[2,3]. On performing this procedure there is a danger of instruments glancing of the skull and doing injury to the soft parts of the mother including the posterior vaginal wall which may involve the rectum. This might have been the cause of recto-vaginal fistula in this particular patient. However in obstructed labour usually vesicle vaginal fistula is the common occurrence. The risk factors in this patient were quite clear. She was a teenage primigravida with big baby who was referred late to hospital early intervention could have prevented her morbidity. However factors such us poor roads, long distance to the referral center, will still be a set back in helping these women for along period to come.

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## OBSTETRIC/GYNAECOLOGY LONG COMMENTARY

## TITLE : FETAL MOVEMENT COUNT AND OUTCOME OF PREGNANCY AT MUHIMBILI MEDICAL CENTRE DAR - ES - SALAAM. (1997 /1998)

**ABSTRACT:**

**Objective:** To describe the use of fetal movement count (FMC) for surveillance of high risk pregnancies.

**Study Design:** Observational descriptive study.

**Study Place:** Muhimbili Medical Center, a tertiary referral obstetric unit.

**Study Population:** One hundred and forty nine women with high risk pregnancies admitted for fetal movement count.

**Study Duration:** From 1st November 1997 to 28th February 1998.

**Method:** All women with high risk pregnancies admitted in the antenatal ward were recruited into the study. Special questionnaire were filled on the day fetal movement count were initiated. Patients were followed till delivery.

**Main outcome measures:** Gestation for starting FMC, Gestation at intervention, Mode of delivery and fetal outcome.

**Results:**

Out of 149 high risk pregnant women 142 (95.3%) were followed till delivery. FMC were mostly initiated at 32 - 37 weeks of gestation and the mean

gestation age was 34.8 weeks with standard deviation of 3.9. FMC was reported reduced in 24(16.9%) patients. In this group 8 (33.3%) induction of labour led to spontaneous vaginal delivery, 6 ( 25%) Induction of labour led to abdominal delivery and 8 (33.3%) had planned elective caesarean section. Fetal out come in this group were 5 (20.8%) still births, 2 (8.7%) severe birth asphyxia. Patients with no reported reduced fetal movements had a severe birth asphyxia rate of 16 (13.6%). The results were statistically significant. p = 0.03

**Conclusion:** Fetal movement count was able to pick the most severely form of birth asphyxia.

Key Words: Gestation age, Fetal movement count (FMC), Fetal outcome, Intervention.

**Introduction and Literature Review:**

The primary objective of fetal surveillance is to prevent perinatal deaths which is un acceptably high[1]. In recent years the advances of perinatal diagnosis have made possible the identification of factors that might predict not only risk of death and immediate morbid out come but also the quality of life after delivery[3]. Several techniques for assessing fetal well being are available including biochemical tests, fetal biophysical assessment with real time sonography, Doppler ultrasonography for measuring umbilical and fetal blood flow and fetal movement count. Fetal movement in utero is a sign of fetal well being and may also be used as a screening tool for patients prior to further evaluation[7]. It has been demonstrated

that fetal movement decrease in many instances of fetal distress. Pronounced reduction in fetal movement until cessation has been noted before fetal demise while fetal heart beats were still audible at least for an additional 12 hours. However some late fetal deaths are not preceded by reduction in fetal movements and some fetal deaths are too sudden to allow clinical action[9]. The most important consideration in deciding when to begin antepartum testing is the prognosis for neonatal survival, since identification of fetal compromise before neonatal viability is of no clinical value. In developed countries high risk conditions, testing might begin as early as <24 - 28 weeks while in this part of the world where neonatal facilities are not well developed, testing usually begins at 32 - 34 weeks[12]. Several techniques for recording perceived fetal motion has been suggested. Pearson (1976) recommended 12 hour recording daily and less than 10 movements in 12 hours was considered as evidence of fetal inactivity, but this long counting has been un acceptable for most women[6]. Rayburn (1980) recording period was one or more hour when convenient daily and less than four movements per hour for two consecutive hours was considered as the evidence for fetal inactivity[4,6]. Neldham (1980) One 2 hour period three times weekly and less than four movements per hour was counted as abnormal. Heper (1981) recommended recording period of 3 in one hour period daily and complete cessation was considered as a sign of fetal inactivity[6]. Leader (1981) proposed 30 minutes four times daily and the fetal inactivity was shown by one day of no fetal movement or two successive days or weeks in which there were less than 10

movements[4,6]. O'Leary (1981) proposed three half hour periods daily and the evidence for fetal inactivity was considered as 0 - 5 movements / 30 minutes for each of the three and half hour periods[6,7]. Self recording periods of half hour has not been acceptable by most authors, self recording periods of half an hour seems to be inadequate because this is less than the shortest fetal heart rest activity cycle[7,8,9].

Two basic approaches to the investigation of maternally perceived fetal movements have been suggested[13]. The mother can either count for a fixed length of time or may be advised to count a fixed number of movements.

More recently, kick counts have been expressed as hourly rates. The Pearson count of 10 is the best known example of fixed number of counting. It is theoretically attractive because mothers with vigorous fetuses count for minimum length of time, where as mothers with quiet fetuses will count longer. Sadovsky proposed fetal movement count 30 minutes to 1 hour, twice to three times daily. Its draw back however is that frequent counting, some women forget to chart their fetal movement count due to various reasons[1,7]. In a departmental clinical report perinatal mortality accounted for 98.0 per thousand live births out of which 17.4% had no identifiable cause[14]. It is not clear if some of these deaths occurred while mothers were on fetal movement count. It has been suggested that in some circumstances the maternal history of fetal activity may provide a better index of impending fetal death. This method has theoretical advantage over other tests which are either difficult or impossible to perform daily for practical reasons and due to inadequate facilities in

most of the hospitals of the third world countries. The merits of the mother recording of fetal movement include its low cost, acceptability by most mothers and it is the mother rather than medical attendants takes responsibility for monitoring the pregnancy.

**Statement of the Problem:**

Fetal movement count has been found to be very useful in monitoring fetal well being among high risk pregnancies[3,7]. Muhimbili Medical Center is a tertiary referral center, where high risk pregnancies are referred for care and delivery. However high risk pregnancies still account for higher percentage of perinatal mortality at Muhimbili Maternity wards[14]. Fetal movement count is the only method used for antepartum fetal surveillance in Muhimbili Antenatal wards. Despite the wide use of fetal movement count for surveillance of high risk pregnancies at Muhimbili Medical Center the perinatal loss is still unacceptably high[14]. No study has been conducted to determine its practicability, usefulness and efficacy. This study aimed at describing the use of fetal movement count for surveillance of high risk pregnancy, and the fetal outcome as seen in Muhimbili Medical Center.

**Broad Objective:**

To describe the use of fetal movement count for surveillance of high risk pregnancies and the fetal outcome as seen in Muhimbili Medical Center; Dar es Salaam.

**Specific Objective:**

1. To describe the indications for fetal movement count and the gestation age at which fetal movement counts are started at Muhimbili Medical Center Maternity wards.
2. To describe association between fetal movement count and gestation at intervention.
3. To describe the pregnancy out come based on fetal movement count.

**MATERIALS AND METHOD:**

**Study design:**

This was an observational descriptive study.

**Study place:**

The study was conducted at Muhimbili Medical Center started from antenatal wards till delivery in the labour ward. Muhimbili Medical Center is among the four referral hospitals in the country. Situated in Dar-es-salaam it is the largest among the four referral hospitals. Due to the fact that there is no regional hospital in the city it also serves as a regional hospital. It receives all high risk pregnancies from the city and at times from upcountry.

**Study population:**

All high risk pregnant mothers admitted in the antenatal wards for fetal movement count were recruited in the study. A special questionnaire was set which

had the social demographic characteristics, obstetric characteristics, mode of delivery and fetal outcome.

**Study period:**

The study was conducted for duration of four months from 1st November 1997 to 28th February 1998.

**Sample size:**

This was calculated from 17.4% of perinatal death who had no identifiable cause. The prevalence was taken to be

P = 0.174. Hence in calculating the sample size the following formular was used.

$n = \frac{Z^2Pq}{e^2}$ where n = required sample size

Z = Percentage point of the normal distribution corresponding to the significance level for significance level = 5%

Z = 1.96

P = Prevalence of the condition in this case (17.4%)

q = 1 - P

e = Margin of error taken to be 6%.

$$n = \frac{(1.96^2)\ (0.174)\ (0.826)}{(0.06)^2} = 153$$

From the formular n = 153 ~ 155.

**Inclusion and exclusion criteria:**

All women with high risk pregnancies admitted in the antenatal wards for Antepartum fetal movement count were enrolled for the study. Women with twin pregnancy, breech presentation and gross fetal abnormality were excluded from the study.

**Study instruments:**

These included a special questionnaire, which had social demographic characteristics, obstetric characteristics,mode of delivery and fetal outcome. Social demographic characteristics and obstetric characteristics were filled on the day of recruitment. These included name, age, date of admission and education status. Others were gravidity, parity, number of living children, gestation at the first booking, gestation on admission, reason for admission and indication for fetal movement count. The questionnaire was left in patients files for filling how deliveries were conducted if intervention was done in terms of induction of labour or abdominal delivery and the reasons sorted out. Fetal outcome was filled in terms of Apgar score, admission to neonatal ward, if discharged home alive and well or had perinatal death. Special designed charts for fetal movement count were checked daily for completeness. Antenatal cards and patograms were also checked daily for completeness. This was done by the researcher or his assistants.

**Data collection:**

Women with high risk pregnancies who were admitted at MMC antenatal wards for fetal movement count were recruited for the study. Patients were explained the purpose of the study and informed consent was obtained. Every patient on the study had a study number written on the top of the questionnaire. Patients were followed up in the antenatal wards twice daily and new patients were recruited daily. Those admitted previously were asked to show the filled fetal movement charts. Any deviations from normal were recorded in the questionnaire and if there were any action taken. The files were checked daily if the reported deviations were reported to the doctor. Those who had delivered were also followed and mode of delivery, fetal outcome in terms of apgar score, admission to neonatal ward and if discharged home alive and well were recorded. Women whose deliveries were intervened reason for intervention were recorded on the questionnaire. The recorded pattern of fetal activity was compared with fetal outcome. When all sections were filled the questionnaires were collected for data processing.

**Data analysis**:

Data was analyzed using Epi-Info version 6 statistical software. Preliminary exploration of the data was done followed by examining associations according to the specific objectives. Condensive statistics were used to describe continuous quantitative variables. Association between qualitative variables e.g. nature of

intervention and fetal out come were assessed using appropriate statistical tests e.g. Chi. Square. Ninety five percent confidence intervals around proportions were estimated according to Miettine's method.

**Operational definitions:**

1. **Gestation Age**:

   This was calculated from the last normal menstrual period or by extrapolation if the abdominal pelvic assessment was done before 20 weeks of gestation also if she had ultrasound done before 20 weeks of gestation.

2. **Methods of fetal movement counts**:

a) Sadovsky method: - This was accepted if the patient counts for a period of 30 minutes to 1 hour, two or - three times a day.

b) Pearson method: - This was accepted if the patient counts up to 10 fetal movements (fixed number) or those who counted for 12 consecutive hours.

3. Fetal outcome - This was assessed by Apgar score, admission in the neonatal ward, discharged home alive or perinatal death.

4. Intervention: This was considered if delivery was by planned induction leading to spontaneous delivery. Induction which lead to abdominal delivery or planned abdominal delivery.

5. Recurrent IUFD: Recurrent Intrauterine death with no associated cause.

**RESULTS:**

A total of 149 mothers with high risk pregnancies were recruited for the study. 142 (95.3%) were followed till delivery. Most of the fetal movement counts were initiated at the gestation of 35 - 37 weeks followed by 32 - 34 weeks. The mean gestation age for fetal movement count was 34.8 weeks of gestation with standard deviation of 3.9. Patients whose fetal movements were reduced were 24 (16.9%) and the only method used was Sadovsky Method. In the group with reduced fetal movement count intervention was done to making a rate of 33.3% induction leading to spontaneous delivery, 6 (25.0%) induction leading to abdominal delivery and 8 (33.3%) were planned elective delivery. Fetal outcome in this group were as follows, 5 (20.8%) were still birth and 2(8.7%) were severe birth asphyxia. Other parameters are summarized as in the tables below.

**Table 1: Indications for fetal movement count and mode of delivery.**

| INDICATIONS | MODE OF DELIVERY | | | | | |
|---|---|---|---|---|---|---|
| | SPONTANEOUS | | INTERVENTION INDUCTION OR C/S | | TOTAL | |
| | NO | % | NO | % | NO | % |
| Pregnancy induced hypertension | 28 | 33.7% | 55 | 66.3% | 83 | 58.% |
| Recurrent abortions (before 28 weeks) | 10 | 45.5% | 12 | 54.5% | 22 | 15.5% |
| Recurrent IUFD (after 28 weeks with no associated factors) | 6 | 42.9% | 8 | 57.1% | 14 | 9.9% |
| Others | 7 | 30.4% | 16 | 69.6% | 23 | 16.2% |
| Total | 51 | 35.9% | 91 | 64.1% | 142 | 100% |

$X^2 = 1.63$ $P = 0.65$

As shown in table 1 the commonest indication for fetal movement count was pregnancy induced hypertension which was 83 (58.5%), recurrent abortion 22 (15.5%) and recurrent IUFD with no associated factors was 14 (9.9%). Other indications accounted for 23 (16.2%) of the patients who were put on fetal movement count. These were small in numbers included patient with Diabetes mellitus(2), Rhesus negative mothers (3), patient with intrauterine fetal growth restriction not due

to hypertension (4), patients with antepartum haemorrhage (4), patients who were postdate (5), patient with premature rupture of membranes(3) and cardiac disease(2) patients.

**Table 2: Gestation at which Fetal Movement Count were started:**

| GESTATION STARTED FMC | NUMBER OF PATIENT |
|---|---|
| Below 32 weeks | 12 (8.0%) |
| 32 - 34 weeks | 50 (33.6%) |
| 35 - 37 weeks | 52 (34.9%) |
| Above 37 weeks | 35 (23.5%) |
| TOTAL | 149 (100%) |

The Mean Gestation age 34.8 weeks. Standard deviation 3.9

As shown in table 2, most fetal movement counts were started at 35-37 and 32-34 weeks of gestation. These were 52 (34.9%) and 50 (33.6%) respectively. However 12 (8%) started counting the fetal movements before the gestation of 32 weeks. This could have been attributed by the fact that 69 (48.6%) of patients the fetal movement count were started by Intern doctors, 52 (36.6%) by residents or registrars and 21 (14.8%) by specialists or consultants.

**Table: 3 Mode of delivery based on Mothers perception of Fetal Movement:**

| MODE OF DELIVERY | REDUCED FETAL MOVEMENT | NORMAL FETAL MOVEMENT COUNT | TOTAL |
|---|---|---|---|
| Spontaneous Vaginal delivery | 2 (8.4%) | 49 (41.5%) | 51 (35.9%) |
| Induction leading to spontaneous vaginal delivery | 8 (33.3%) | 28 (23.7%) | 36 (25.3%) |
| Induction leading to abdominal delivery | 6 (25.0%) | 10 (8.5%) | 16 (11.3%) |
| Abdominal delivery | 8 (33.3%) | 31 (26.3%) | 29 (27.5%) |
| TOTAL | 24 (16.9%) | 118 (83.1%) | 142 (100%) |

$X^2 = 12.04, \quad P = 0.07$

Table 3 shows that of all deliveries 24 (16.9%) had reduced fetal movements. Of which 8 (33.3%) had induction leading to spontaneous delivery, 6(25.0%) had induction which led to abdominal delivery and 8 (33.%) had planned abdominal delivery. Two (8.4%) patients had spontaneous vaginal delivery. Abdominal delivery was more common in patients who reported reduced fetal movement as compared to patients who had no reported reduced fetal movements. These were 8 (33.3%) and 31 (26.3%) respectively. Induction leading to abdominal delivery was common in patients with reduced fetal movements 6(25.0%) as compared to those with no

reported reduced fetal movements 10 (8.5%). Induction of labour was also common in patients with reduced fetal movement as compared to those with no reported reduced fetal movement. Conclusively intervention in terms of induction of labour or abdominal delivery was more common in patients with reduced fetal movement count as compared to those who had no reported reduced fetal movements.

**Table 4: Gestation at delivery basing on Fetal Movement Count**

| GESTATION AT DELIVERY | REDUCED FETAL MOVEMENT | NORMAL FETAL MOVEMENT | TOTAL |
|---|---|---|---|
| 32 - 35 weeks | 2 (8.3%) | 5 (4.2%) | 7 (4.9%) |
| 36 - 37 weeks | 16 (66.7%) | 57 (48.3%) | 73 (51.4%) |
| Above 37 weeks | 6 (25%) | 56 (47.5%) | 62 (43.7%) |
| TOTAL | 24 (16.9%) | 118 (83.1%) | 142 (100%) |

$X^2 = 4.29$ P value 0.117

Table 4 shows that most mothers with reduced fetal movements delivered between 36 - 37 weeks 16 (66.7%) and only 6 (25 %) delivered above 37 weeks. In reduced fetal movement group intervention was done in 22 (91.6%) patients and only 2 (8.4%) had spontaneous delivery. Therefore demonstration of reduced fetal movement count led to action compared to those with no reported reduced fetal movements.

**Table 5: Fetal outcome based on fetal movement count by Apgar Score.**

| FETAL MOVEMENT COUNT | APGAR SCORE | | | | |
|---|---|---|---|---|---|
| | 0 | 2 - 4 | 5 - 7 | 8 - 10 | TOTAL |
| Decreased FMC | 5(20.8%) | 2(8.3%) | 7(29.2%) | 10(41.7%) | 24(20.4%) |
| Normal FMC | 11(9.3%) | 16(13.6%) | 14(11.9%) | 77(65.2%) | 118(83.1%) |
| TOTAL | 16(11.3%) | 18(12.7%) | 21(14.8%) | 87(61.2%) | 142(100%) |

$x^2 = 8.62$ df = 3 p = 0.003

Table 5 shows that still births were much more in patients with decreased fetal movements 5 (20.8%). Severe birth asphyxia was found in only 2 (8.3%). Early neonatal death was found in 4 (16.6%) in the group with reduced fetal movements and 16 (6.6%) from the group with normal fetal movements. Thirteen (54.3%) infants of mothers who reported reduced fetal movements were discharged home alive and well and 91 (77.1%) of mothers with no reported decrease in fetal movements. The results were statistically significantly p = 0.003

**Discussion:**

Several studies published in mid 1970's demonstrated that reduction or caesation in maternally perceived fetal movements may precede antepartum fetal death by a day or longer[12]. Ever since formal fetal movement counting emerged as a valuable, non invasive method of assessing fetal well being. In the present study the commonest indication for fetal movement count was pregnancy induced hypertension 83 (58.5%). This corresponds with various studies which have shown that pregnancy

induced hypertension is the commonest encountered problem during pregnancy and the commonest indication for antepartum fetal surveillance[1,9]. Most fetal movement count on high risk pregnancies are started between 32 - 37 weeks of gestation and the mean gestation age in this study was 34.8 weeks. Other studies have advocated to start fetal movement count as early as 24 weeks of gestation in high risk pregnancies, where chances for survival of severely premature infants is high because of advances in perinatal and neonatal care[8,11]. In our center intervention done before 32 weeks of gestation fetal outcome is usually poor. Our neonatal intensive care unit has no sophiscated facilities to sustain babies born with severe prematurity. Usually intervention is done from 32 completed weeks and above. Fetal movement count initiated before 32 weeks of gestation can be explained by the way fetal movement counts were initiated. This study shows that of all women who were put on fetal movement count 69(48.6%) were initiated by Intern doctors, 52 (36.6%) by registrar or residents and 21(14.8%) by Consultants or Specialists. Intervention was done in terms of induction leading to spontaneous vaginal delivery, induction leading to abdominal delivery and elective abdominal delivery. The study showed that intervention was done in 22(91.6%) of patients who reported reduced fetal movements. This tells that if FMC used appropriatly can be helpful in making decision for intervention. However the rates of abdominal delivery were found to be higher in this group as compared to those with no reported reduced fetal movements. Induction of labour leading to abdominal delivery for various reasons was 6(25%)

and 10(8.5%) for group with no reported reduced fetal movements. Elective abdominal delivery was also higher in the group with reduced fetal movements as compared to those with no reported reduced fetal movements. The results were 8(33.3%) and 31(26.3%) respectively. This shows that FMC increases the rate of intervention in its all aspects. Most deliveries in the group with reduced fetal movements occurred between 36 - 37 weeks 16(66.7%). It is easy to say that all deliveries which occurred in this group were intervened either by induction of labour or abdominal delivery. In the whole study patients with reduced fetal movements were 24(16.9%) and 118(83.1%) had no reported reduced fetal movements. The rate of still birth was higher in the former group 5(20.8%). This tells that FMC was not able to pick the most severe forms of birth asphyxia. Severe birth asphyxia was more prominent in the later group 16 (13.6%). Probably this can be explained by the fact that there were more intrapartum care in the group with reduced fetal movements as opposed to the group with no reduced fetal movements. Fetal movement count by Sadovsky was the only method used for fetal movement count. Patient's compliance with daily fetal monitoring is an important clinical issue, Smith in his study evaluated patient's compliance of most common charts. The neonatal outcome was favoured with all charting techniques, but the count to 10 (Pearson) was most preferred in 95.3%[2]. A study is needed in our set up to compare various methods of FMC to find the most acceptable and the most convenient to the patients.

**Conclusions and Recommendations**:

1. The average gestation age at which fetal movement count starts at MMC is 34.8 weeks. However there were incidences where fetal movement count was initiated before 32 weeks. It is recommended to strongly adhere to start FMC after 32 weeks where intervention is possible rather than create unnecessary panic and anxiety to mothers who intervention cannot be done if reduced fetal movements are reported.
2. FMC by Sadovsky method is the only method used in our center and it was able to pick the most severe forms of birth asphyxia. It is recommended that other methods for fetal FMC should be tried to compare the efficacy of each method.
3. Severe birth asphyxia was found to be more common in the group with normal fetal movement count and FMC was able to pick only 24 (16.9%) patients with reduced fetal movement count. It is recommended that other methods for antepartum fetal surveillance be readily available.
4. The intervention rate was high in the group with reduced fetal movements with good fetal outcome. So the increased rate of intervention in these patients should be accepted..

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