GYNECOLOGIC AND OBSTETRICS CASES AND COMMENTARIES

A DISSERTATION SUBMITTED FOR THE DEGREE OF MASTER OF MEDICINE (OBSTETRICS AND GYNECOLOGY) OF THE UNIVERSITY OF DAR ES SALAAM 1994

BY

INDIRA R. D. ASSER, M.B.B.S (INDIA) 1984



DECLARATION

I declare that to the best of my knowledge the work in this dissertation has not been submitted by anybody at any University for the award of any degree.

Indira R. D. Asser



THE MUHIMBILI UNIVERSITY COLLEGE OF HEALTH SCIENCES OF THE UNIVERSITY OF DAR ES SALAAM

This is to certify that the cases in this book were managed by Dr. Indira R. D. Asser during her period of residency under my direct or delegated supervision.



Dr. E. J. N. Urassa

Head, Department of Obstetrics and Gynecology

DEDICATION

Dedicated with love to the memory of my father R. D. ASSER. He gave me the greatest gift a father can give a child, the desire to excel. He taught me to be strong of heart and to stand tall.

It is also for my mother Gulzaar, whose love and support has equalled my father's.

With all my love.

Dr. Indira R. D. Asser

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INTRODUCTION

This dissertation is submitted as part of the requirements for the award of the Degree of Master of Medicine (M. Med) of the University of Dar es Salaam. It consists of three parts.

Part One: consists of ten Obstetrical conditions encountered in day to day practice.

Part Two: comprises of ten Gynecological conditions encountered in day to day practice.

To the author's best capability, the management of the conditions was done to acceptable standards and availability of facilities. A short commentary is given regarding one aspect of each case.

Part Three: Is a research paper on postpartum intrauterine device (IUD) insertion at Muhimbili Medical Centre. This study was undertaken in order to provide our women with a reliable contraceptive method at the time of high motivation. Poor infrastructure facilities make many women fail to utilize family planning facilities. Postpartum IUD is expected to be a breakthrough in low family planing service utilization in this country.

A comparison of complications with interval intrauterine device insertions was done in this study. The results of the study showed that postpartum IUD insertions were as safe, effective and acceptable as interval IUD insertions. The author recommends this one time reversible method of contraception as a solution to the problem of low contraceptive prevalence rates in the country.

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OB.1 POSTPARTUM CONTRACEPTION: INTRAUTERINE DEVICE INSERTION

NAME : Mrs. E. M

AGE : 27 years

REGISTRATION No. : 3003

DATE OF ADMISSION : 28.04.93

DATE OF DISCHARGE : 28.04.93

SUMMARY:

Mrs. E. M. attended Muhimbili Medical Center's antenatal clinic for antenatal care, where she was counseled on the various methods of family planning available and she chose to have an intrauterine device (IUD) inserted immediately after delivery. She had an uneventful delivery at term, and TCu-380A was inserted half an hour after completion of the third stage of labor. She was discharged home on the same day with her baby and advised to attend the family planning clinic after 6 weeks. She was followed up at 6 weeks, 3 months and 6 months with no complications. Thereafter she was advised to come annually for check up. The intrauterine device as a method of immediate postpartum contraception together with its rationale are discussed.

HISTORY OF PRESENT PREGNANCY:

Mrs. E. M., a 27 years old $G_3 P_1 +^1$, was attending our high risk antenatal clinic for antenatal care during her third pregnancy as she was a nurse at Muhimbili. She had no risk factors. On one of her early visits she was informed about postpartum contraception and was subsequently counseled. Towards term, she had considered all options open to her, discussed them with her husband and decided to have an intrauterine device (IUD) inserted before she was discharged home

from the hospital. After her decision, during subsequent counseling sessions, she was given information about the device, regarding its advantages, side effects, and disadvantages. All her doubts and queries were answered and the follow-up procedures were explained. She was cautioned that the device would be inserted if no contraindications arose during or after delivery. Her antenatal card was earmarked for postpartum intrauterine device insertion and she continued her antenatal attendance as advised, up to term.

Obstetric History:

She was $G_3 P_1 +^1$. She had a full term normal delivery of a 2.8 kg male child one and a half years ago. She had conceived again 5 months after delivery and had a termination of pregnancy at 7 weeks of gestation. This was her third pregnancy.

Gynecological History:

She attained menarche at 13 years of age and had regular periods lasting 4 days with cycles of 28-30 days. Her last normal menstrual period was on 15.07.92. She had a copper intrauterine device in situ for 2 years after the abortion, and had conceived 2 months after its removal. She had no history of abnormal bleeding or discharge per vagina.

Previous Medical History:

There were no serious illnesses in the past. There was neither any history of allergy to copper nor of any bleeding disorders.

Family and Social History:

There was no history of hypertension or diabetes mellitus in the family. She was a nursing officer at Muhimbili Medical Center, married to an anthropologist.

INTRAPARTUM PERIOD:

At a gestation age of 40^{+6} weeks, she was admitted to the labor ward, in established labor. The resident trained for postpartum intrauterine device insertion was notified.

Physical examination:

Her general condition was good. She was neither pale nor febrile. Her vital signs were stable. The uterus was contracting regularly every 2-3 minutes, the lie was longitudinal and the presentation was cephalic. The head was at 4/5 and fetal heart sounds were audible. A pelvic examination revealed a fully effaced cervix, 6 cm dilated and the membranes were intact. Artificial rupture of the membranes was done and clear, non-offensive liquor was obtained. Labor progressed smoothly and 3 hours later, she delivered spontaneously a male baby weighing 3.0 kg with an Apgar score of 9 and 10 at 1 and 5 minutes respectively. Injection ergometrine was administered intravenously at the delivery of the anterior shoulder. The entire placenta and membranes were delivered by controlled cord traction and the measured blood loss was 100 ml. The perineum was intact. The patient was cleaned and given her baby. She was asked again if she still wanted to have an IUD inserted immediately, and she consented.

Postpartum IUD insertion technique:

After cleaning up the delivery bed, the patient was asked to lie in a lithotomy position and the vulva was cleaned with an antiseptic solution. A Cusco's speculum was used to expose the vagina and visualize the cervix, which was then dried with a dry sterile gauze to remove blood clots lying at the external os. A TCu-380A was grasped with ring forceps, holding it at a slight angle. The IUD was then

introduced through the cervix into the lower uterus using the right hand and with the left hand, placed on the lower abdomen, the uterus was stabilized externally with firm pressure. The IUD was advanced to the top of the uterine fundus and fundal placement was appreciated both by the abdominal hand and the hand inserting the IUD. After releasing the IUD, the ring forceps was rotated slightly so as not to dislodge the IUD as the forceps were removed. The vagina was then inspected to see whether the IUD strings were visible and when they could not be seen, the Cusco's speculum was removed and the patient was given a sterile sanitary pad.

She was instructed to return for a check-up after 6 weeks, and to return to the family planning clinic immediately if she experienced pelvic or abdominal pain, unusually heavy bleeding, chills or fever, expulsion of the IUD or if she could not feel the IUD strings at the cervical opening by 6 weeks postpartum in case she missed her appointment.

Follow-up Visits:

She visited the family planning clinic regularly at 6 weeks, 3 months and 6 months post delivery. She had no complaints except for slight backache during the first week. The IUD strings were visible and the uterus was well involuted. There was no evidence of sepsis. She had resumed sexual intercourse after 40 days post delivery. She had stopped exclusive breast feeding as soon as she resumed duties after the maternity leave was over, but still continued breast feeding whenever she could. She resumed menstruation from the fourth month and had a normal flow. She was advised to attend the family planning clinic yearly for follow-up.

COMMENTARY:

The immediate postpartum period is an efficient, convenient and safe time to provide women who want to postpone additional pregnancies with a long acting and reversible contraceptive method[1]. In providing contraceptives after delivery, it is essential to think about the timing of the initiation of the contraceptive used and the special circumstances of the parturient and the lactating mother.

The concern that postpartum IUD would be providing "double-coverage" as an unnecessary additional contraceptive when the woman is covered by breast feeding and / or observing the traditional period of postpartum abstinence is true in many instances. However, traditional taboos on resumption of sexual intercourse after childbirth are eroding and along with the fact that many women are not exclusively breast feeding puts couples at an earlier risk for another pregnancy[2]. More and more women for valid and good reasons are moving further away from the traditional patterns of breast feeding and thus may have to use alternative methods of family planning earlier, even while they are still breast feeding[3].

Postpartum IUD provides an effective, long-acting and safe contraceptive method before the patient leaves the hospital. This method of contraception has been practiced in various countries including Mexico, Bangkok, Mali and Kenya, and is about to be introduced at a national scale in Tanzania.

In the postpartum period the IUD is a good method of contraception because it is easy to insert since the cervix is dilated. There is no pain or bleeding and it does not affect lactation, involution of the uterus or lochia loss[4]. The risk of uterine perforation is reduced as most of the insertions are done manually or using blunt ring forceps.

If strict criteria for client selection is followed so as to exclude those with puerperal infection or multiple sexual partners, there is no added risk of pelvic infection. The only major concern is that the rate of expulsion of IUD inserted in the postpartum was reported to be as high as 31-41 per 100 in a WHO multicenter trial [5]. The expulsion rate can be reduced by the high placement of the IUD in the uterine fundus and in the correct plane. Retainability of the IUD is also enhanced by the experience of the service provider.

Postpartum IUD insertion is an advantage especially for rural women whose health facilities are too far from home, and because of poor socio-economic circumstances, are unable to reach the health centers. This method is also advised for women who live in urban areas, who, because of social and domestic pressures are not able to attend family planning clinics in time and conceive unexpectedly. This is exactly what took place in the patient in discussion. Mrs E. M. was an educated, sophisticated nurse, who worked in the maternity unit of our hospital. After her first delivery, she could not keep her appointment to attend the family planning clinic, neither could she continue exclusive breast feeding to her baby and as a result she had conceived accidentally when her baby was only 3 months old. She was not prepared for another pregnancy so soon and hence had opted for a termination of pregnancy. This in itself demonstrated her strong desire to prevent childbirth and look for a contraceptive method that would be effective immediately and would not require any extra visits. Having learnt by experience, she did not want to take a chance after delivering her second baby and felt a need to feel secure by leaving the hospital well-protected with a method which had the added advantage of not

interfering with breast feeding or in the production of breast milk.

REFERENCES:

1. Guidelines on postpartum IUD insertion (June 18, 1992)

2. Lyman P et al: PPIUD - Experiences with programmatic introduction at a provincial hospital in Kenya.

3. Thiery, M: Contraceptive for postpartum use: Nonhormonal methods - IUDs. Family Health International. Postpartum conference, Article IV, September 1991.

4. Githiari JN, Mate EM: Report of Introduction of PPIUD in Kenya. A paper presented to the Symposium on Norplant and PPIUD of the Kenya Obstetrical and Gynecological Society, Nairobi, Kenya. 24-25 Feb 1992.

5. WHO SPECIAL PROGRAM OF RESEARCH, DEVELOPMENT AND RESEARCH TRAINING IN HUMAN REPRODUCTION. TASK FORCE ON INTRAUTERINE DEVICE FOR FERTILITY REGULATION. Comparative multicenter trial for three IUDs inserted immediately following delivery of the placenta. Contraception 22(1): 9-18, July 1980.

OB.2 CARDIAC DISEASE IN PREGNANCY

NAME : Mrs. C. H.

AGE : 26 years

GRAVIDITY : Primigravida

REGISTRATION No. : E/456

DELIVERY No. : 10940

DATE OF ADMISSION : 23.07.93

DATE OF DISCHARGE : 08.08.93

SUMMARY:

Mrs. C. H., a 26 years old primigravida with a known rheumatic heart disease was attending the high risk antenatal clinic at Muhimbili. At 38 weeks of gestation she was admitted with symptoms suggestive of cardiac failure which was treated. She eventually had an uneventful spontaneous vaginal delivery with the obstetrician in attendance throughout labor and delivery. She gave birth to a normal female child weighing 3200 g with an Apgar score of 9 and 10 at 1 and 5 minutes respectively. She was discharged home well a week later and advised to attend the cardiac clinic for follow-up. The management of a cardiac case during labor and delivery is discussed.

HISTORY OF PRESENT PREGNANCY:

Mrs. C. H., a 26 years old primigravida, known case of mitral regurgitation for 5 years; had her last normal menstrual period on 28.10.92 and her expected date of delivery was on 05.08.93. She booked at a gestational age of 20 weeks at our high risk antenatal clinic. Her blood pressure was 110 /70 mm of Hg and her weight was 58 kg. She remained normotensive throughout her antenatal period, with her blood pressure ranging between 110-120 / 70-80 mm of Hg. She gained 10 kg

throughout pregnancy and developed mild pedal edema from the 38th week onwards. The uterine fundal height corresponded with dates and the fetus was active. Her hemoglobin at term was 12.2 g/dl. She was advised admission at 34 weeks of gestation for rest, which she declined because she was assured of getting adequate rest at home as she had good family support.

At 38 weeks of gestation, when she came to the antenatal clinic for her routine visit, she complained of palpitations, dizziness, dyspnea with a dry cough. The dyspnea and palpitations were felt even at rest, as she was leading a very sedentary life for about one month. She was not in labor and had no other complaints like fever, headache, chest pain, or hemoptysis.

Obstetric and Gynecologic History:

She was a primigravida and had attained menarche at the age of 14 years. She had regular menstrual cycles of 28-30 days with a normal flow of 5-6 days, with no history of dysmenorrhea. She had never used any contraceptives.

Previous Medical History:

She did not recall having any recurrent throat infection or fleeting joint pains or a skin rash. She was not aware of having a cardiac lesion until the age of 21 years when she developed chest pain and palpitation while doing strenuous exercises at the National Service. She was investigated thoroughly after which she was diagnosed to have mitral regurgitation, consequent to rheumatic fever. She had since then been receiving injection penindure every month, with an addition of beta-blockers (atenolol) and tablets frusemide 40 mg daily which were prescribed by her cardiologist, until 2 days prior to admission.

Family and Social History:

She was an assistant nursing officer working at Sunni Muslim Charitable Hospital and was married to a laboratory technician and lived with her family. There was no family history of hypertension, diabetes mellitus or cardiac disease. She was a non-smoker and did not take alcohol.

PHYSICAL EXAMINATION ON ADMISSION:

General Examination:

Her general condition was satisfactory and she was 159 cm in height. She was afebrile, and was not dyspneic or orthopneic. There was slight pedal edema. She had no jaundice, cyanosis, finger clubbing or splinter hemorrhages.

Cardiovascular System:

The jugular venous pressure was not raised. The pulse rate was 125/min and was regularly regular with a normal volume. The apex beat was situated in the fifth left intercostal space 1 cm lateral to the midclavicular line. There was no apex pulse deficit and no radiofemoral delay. The blood pressure was 120/80 mm of Hg. Both heart sounds were audible and normal. A soft pan-systolic murmur was heard at the apex radiating to the left axilla.

Respiratory System:

There was normal vesicular breathing with a respiratory rate of 22/minute. There were no basal crepitations.

Abdominal Examination:

The abdomen was uniformly distended. There was no hepatosplenomegaly. The uterine fundal height was 36 weeks. The lie was longitudinal with a cephalic presentation and the fetal heart sounds were audible.

Pelvic Examination:

The cervix was long, posterior with the os closed. The presenting part was at the pelvic brim and the pelvis was adequate.

DIAGNOSIS:

Primigravida with cardiac disease NYHA (class II).

INVESTIGATIONS AND RESULTS:

1. Hemoglobin was 12.2 g/dl.
2. Blood group was O Rh positive.
3. VDRL was negative.
4. Urine examination showed no deposits and the culture revealed no bacterial growth.
5. The blood smear for malarial parasites was negative.
6. Chest X-ray revealed cardiomegaly and there were no Kerley B lines.
7. ECG: The R wave in V_5/V_6 was 27 mv and S wave in V_1 and R wave in V_5/V_6 was 35 mv. The P wave in lead II was not wide. There was no atrial fibrillation.

PLAN OF MANAGEMENT:

1. Bed rest.
2. To be nursed in a semi recumbent position.
3. To be reviewed by a cardiologist.
4. Increase frusemide to 60 mg daily, orally.
5. Tablet digoxin 0.25 mg daily.
6. Close monitoring of the pulse and respiratory rates and blood pressure.
7. Await spontaneous vaginal delivery.

PROGRESS WHILE IN THE WARD:

She was reviewed by the cardiologist, and he advised to stop atenolol

tablets, to continue with the frusemide and digoxin as already started. Two days after beginning the above treatment and ensuring complete bed rest, she improved. She no longer had any cough and the pedal edema had subsided. She remained normotensive and afebrile with no other complaints.

At the gestational age of 39 weeks and 5 days, she went into labor spontaneously and was sent to the labor ward and the attending obstetrician was informed.

PROGRESS IN THE LABOR WARD:

First stage of labor:

On examination in the labor ward, she was in pain. She was not pale, not dyspneic or orthopneic and had no edema. Her pulse rate was 100/minute and the blood pressure was 130/80 mm of Hg. The jugular venous pressure was not raised. Both heart sounds were normal with no basal crepitations.

Abdominal examination:

This revealed a uterine fundal height of 36 weeks with the uterus eliciting moderate contractions every 3-5 minutes. The presenting part was at the level of 4/5 and the lie was longitudinal. The fetal heart sounds were audible at 144 beats per minute.

Pelvic examination:

This was done as follows: The left hand swabbed the labia majora anteroposteriorly using different sterile swabs soaked in 1:20 savlon solution for each side. The left thumb and index finger then parted the labia minora to expose the vestibule. The right hand holding a third sterile swab cleaned the vestibule starting on the urethral meatus to the introitus. The right index and middle finger were then introduced

into the introitus and the two fingers were driven into the vagina. The cervix was soft and fully effaced with the os dilated to 4 cm. The vertex was in a right occipito-transverse position and the membranes were intact. The pelvis was adequate.

Low amniotomy (forewater rupture of membranes): With the examining fingers still in the vagina, a Kocher's forceps held on the left hand was introduced along the examining fingers into the cervix and the forceps was opened, closure of which while including the membranes resulted into artificial rupture of the membranes. Old meconium stained liquor drained out and the examining hand was left in the cervix to guard the rate of flow of liquor so as to prevent cord prolapse. The fetal heart sounds were still regular and beating at the same rate after artificial rupture of membranes.

PLAN OF MANAGEMENT:

1. She was to be nursed in a semi recumbent position.
2. Injection pethidine 50 mg with injection promethazine 50 mg were administered stat intramuscularly for relief of pain.
3. The pulse and respiratory rates were monitored every 15 minutes in the first stage of labor and every 10 minutes in the second stage of labor.
4. The contractions were monitored half hourly.
5. The fetal heart sounds were monitored half hourly.
6. Injection ampicillin 500 mg 6 hourly intravenously and then to be continued orally 6 hourly for 4 days.
7. A repeat pelvic examination 4 hours later.

Her vital signs remained stable. The pulse rate ranged between 96-104 per minute and the respiratory rate ranged between 20-24 per minute.

After sedation, she became much less apprehensive.

Second stage of labor:

On being re-examined 4 hours later, the uterus had strong contractions and the presenting part was in the pelvis. The fetal heart sounds were good. On pelvic examination, the head was seen crowning at the perineum. She was encouraged NOT to bear down forcefully. Preparations were made for a vacuum extraction if the need arose, and a right medio-lateral episiotomy was made under local anesthesia using 5 ml of 1% lignocaine. Labor was terminated easily by a spontaneous delivery of a female child weighing 3.2 kg with an Apgar score of 9 and 10 at 1 and 5 minutes respectively.

Third stage of labor:

Soon after delivery, 5 i.u. of Syntocinon were administered intravenously and 5 minutes later after obvious signs of placental separation, the placenta and membranes were delivered by controlled cord traction. Lastly, the episiotomy was repaired and the patient was nursed in a propped up position.

Repair of episiotomy:

The vaginal mucosa was approximated with a running 0 caliber chromic catgut suture using an atraumatic needle. Fingers were inserted into the vagina to push the rectum away and bring the vaginal sutures to stand out and facilitate their approximation. The muscle layer was closed with few interrupted sutures and the skin was closed with chromic catgut interrupted sutures.

Puerperium:

She was monitored carefully in the labor ward for the first 12 hours after delivery for signs of pulmonary congestion, but she remained

stable. The pulse rate was 96 per minute and the respiratory rate was 24 per minute before she was transferred to the postnatal ward, where antibiotics were continued. She remained well and was able to feed her baby from the following day. She was discharged home one week later after counselling on contraception. She was advised to attend the family planning clinic 6 weeks later and the cardiac clinic as per appointment.

FOLLOW-UP:

She came to the postnatal clinic 6 weeks later after attending the cardiac clinic. She had no complaints. Both she and her baby were fine. She had decided to have Norplant inserted and an appointment was made. Her terminal objective was never to conceive again but since the baby was still very young and she herself was also young she had decided to get an effective form of contraception until she made up her mind for permanent contraception. She was thus discharged through the family planning clinic.

COMMENTARY:

Although uncommon, heart disease is a worrying problem (with an overall incidence of 1 per cent of all pregnancies) it is an important cause of maternal deaths[1]. Moreover, the diagnosis of heart disease in pregnancy causes a problem because the hemodynamic changes of normal pregnancy can mimic those of heart disease[2]. It is the severity and persistence of symptoms that suggest underlying organic heart disease[2]. Ideally, the patient with a known cardiac disease should consult her physician before becoming pregnant in order to determine the advisability and optimum timing for pregnancy, the need for and timing of diagnostic procedures, the prospects for corrective or palliative

cardiac surgery, the type of prosthetic valve to be used and the need for discontinuing certain drugs during pregnancy. If she presents after pregnancy has occurred, as in this patient, the obstetrician should be able to recognize the presence of preexisting cardiac disease, assess the degree of disability, and understand the impact of the added hemodynamic changes of pregnancy. The obstetrician must also be able to anticipate, prevent, diagnose and treat complications when they arise and advise the patient regarding discontinuation or continuation of the pregnancy and the risk of future pregnancies.

After the initial assessment of the patient, the remainder of the medical management during pregnancy is associated with avoiding, if possible, those factors which increase the risk of heart failure and treating heart failure vigorously if it occurs. Risk factors for heart failure include infections (urinary tract infections, malaria, etc), anemia, hypertension, obesity, multiple pregnancy, the development of arrhythmias and very rarely the development of hyperthyroidism[1].

Obstetric management before labor includes early ultrasonographic examination for the gestational age and in women with congenital heart disease, second trimester examination of the fetal heart to exclude congenital malformations[1]. It has been seen that the incidence of congenital heart disease is much higher in children born to mothers who have congenital heart disease, than the 1 per cent cited for the general population. It was 17.9% in children of mothers who had not had cardiac surgery and 14.2% in those who were operated upon[3].

Labor should not be induced because of heart disease; indeed the risks of failed induction and of possible sepsis are relative contraindications. Nevertheless, these risks are slight, and induction

should not be withheld if it is necessary for obstetric reasons[1].

During labor the mother should be kept in a semi recumbent position. The pulse and respiratory rates should be measured every 15 minutes during the first stage of labor and every 10 minutes during the second stage [4]. Increases in pulse rate greater than 110/min and respiratory rate more than 24 / minute particularly when associated with dyspnea suggest cardiac decompensation that may progress to overt left ventricular failure[4]. Patients with heart disease can not cope with the increase in circulating blood volume and decrease in colloid osmotic pressure which result from copious amounts of intravenous crystalline fluids. This easily leads to pulmonary edema. Therefore intravenous fluids should be avoided in cardiac patients[1]. Relief from pain and apprehension without undue depression of the infant or the mother is especially important during labor and delivery[4].

With any evidence of cardiac decompensation, intensive medical management must be instituted immediately. This calls for the use of morphine, oxygen, intravenous frusemide, rapidly acting digitalis preparations and the Fowler's position.

Only in the presence of the completely dilated cervix, engaged presenting part may the changes suggesting cardiac embarrassment be taken as an indicator for prompt forceps or ventouse delivery, unless easy spontaneous birth is expected within a few minutes. With the cervix only partially dilated, and the mother showing obvious evidence of cardiac embarrassment, there is no method of delivery that will not first intensify rather than relieve heart failure.

Quite fortunately, as in Mrs. C. H.'s case, most patients with heart disease do have rapid, uncomplicated labors, particularly if they are

taking digoxin.

The use of oxytocic drugs in the third stage of labor is much debated. The theoretical disadvantage is that ergometrine and Syntocinon will cause a tonic contraction of the uterus, expressing about 500 ml of blood into the circulation whose capacitance has also been made smaller by associated venoconstriction. However, the management of postpartum hemorrhage in a cardiac patient is also not easy. Use of Syntocinon is suggested in all patients in the third stage, unless they are in heart failure, when oxytocics should be withheld altogether. Syntocinon has less effect on blood vessels than ergometrine and can be given by infusion which can be accompanied by intravenous frusemide[1].

Cardiac decompensation may even occur after delivery in women who had shown little or no evidence of cardiac distress during pregnancy[4]. Therefore it is important that the same meticulous care provided during antepartum and intrapartum periods be continued into puerperium. Postpartum hemorrhage, infection and thromboembolism are much more serious complications of pregnancy in women with heart disease.

In general, if tubal ligation is to be performed, it should be delayed for several days until it is obvious that the mother is not anemic, is afebrile and has demonstrated that she can ambulate without evidence of distress. The rest should be given detailed contraceptive advice.

REFERENCES:

1. de Swiet M: Heart disease in pregnancy: Medical disorders in Obstetric practice. 2nd edition, 1989. Ch. 5 pg 198-245. Publishers Blackwell Scientific Publications, Osney Mead, Oxford OX2 OEL. 25 John Street, London WC 1N 2BL.

2. Biswas M, Perloff D: Cardiac, Hematologic, Pulmonary, Renal and Urinary tract disorders in Pregnancy. Current Obstetric and Gynecologic Diagnosis and Treatment, 1987. Sixth edition. Ch.19 pg. 353-367. Publishers: Appleton and Lange. 25 Van Zant Street, East Norwalk, Connecticut 06855.

3. Whitmore R, Hobbins JC, Engle MA: Pregnancy and its outcome in women with and without surgical treatment of congenital heart disease. Obstetrical and Gynecological Survey. Vol 38 No. 9 pg 555-557 Sept 1983.

4. Cunnigham FG, MacDonald PC, Gant NF: Cardiovascular Disease. William's Obstetrics. 18th edition, 1989. Ch. IX pg 796-865. Publishers Appleton and Lange. 25 Van Zant Street, East Norwalk, Connecticut 06855.

OB.3 ADVANCED ABDOMINAL PREGNANCY: LAPAROTOMY

NAME : Mrs. C. T.

AGE : 23 years

REGISTRATION NO : 414/91

PARITY : Para 1 (+0)

RESIDENCE : Ngeta

DATE OF ADMISSION : 16.03.92

DATE OF DISCHARGE : 19.05.92

SUMMARY:

Mrs. C. T., a 23 years old gravida 2 para 1 was referred from Ngeta hospital with a diagnosis of an intrauterine fetal death. Medical induction failed on two occasions leading to the suspicion of an extrauterine pregnancy. A laparotomy was performed, the diagnosis was confirmed and a male macerated fetus and the entire placenta were delivered. Postoperative recovery was uneventful. The difficulties in diagnosis and the management of abdominal pregnancy are discussed.

HISTORY OF PRESENT PREGNANCY:

Mrs. C. T., a gravida 2 para 1 lady had her last normal menstrual period on 16.06.91 and her expected date of delivery was on 23.03.92. She was 39 completed weeks on arrival at the center. She had been referred from Ngeta hospital for medical induction because of an intrauterine fetal death which had been diagnosed by X-ray.

She recalled that she had severe lower abdominal pain in early pregnancy which had necessitated admission at Ngeta hospital for 7 days without much relief. She also gave a history of spotting per vagina at 6 months of

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gestation, followed by 2 more episodes of bleeding per vagina at monthly intervals and just prior to admission. The bleeding lasted for 2 days, was mucoid and resembled her normal menstrual blood loss. She had never experienced any fetal movements.

Obstetric History:

She was gravida 2 para I. Three years after her marriage, she delivered by spontaneous vaginal delivery, a normal male child, now 9 years old and well. She had no history of antenatal, intranatal or postpartum complications.

Gynecological History:

She had attained menarche at 13 years. Her menstrual cycles were regular every 28-30 days with a duration of 4-6 days. She had never used any contraceptives, and gave no history suggestive of pelvic inflammatory diseases.

Previous Medical History:

There was no history of serious illnesses in the past.

Family and Social History:

She was a housewife, married to a peasant for 12 years. There was no history of hypertension or diabetes mellitus in her family. Her two sisters had 4 children each.

PHYSICAL EXAMINATION (ON ADMISSION):

General Examination:

Her general condition was satisfactory. She was afebrile, not pale, had no edema or jaundice.

Breast Examination:

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Both the breasts were normal but were lactating.

Cardiorespiratory Systems:

These were essentially normal.

Abdominal Examination:

The abdomen was soft and uniformly distended. The liver and spleen were not palpable. The renal angles were non tender. The uterine fundal height was 26 weeks with a longitudinal lie but the presentation could not be appreciated. The fetal heart sounds were not heard.

Pelvic examination:

The vulva and vagina were normal. The cervix was pink and pushed to the right. The cervix was long, firm and the os was closed. A bulging cystic mass, the size of an orange was felt in the posterior fornix of the vagina. A small mass was palpated anterior to the 'uterus', towards the right iliac fossa. The mass was about 5 cm by 4 cm in size, firm, non tender and relatively fixed. The uterus could not be appreciated separately from the mass.

PROVISIONAL DIAGNOSIS:

Intrauterine fetal death and a left adnexal mass. A differential diagnosis of an extrauterine pregnancy was considered.

INVESTIGATIONS AND RESULTS:

1. Hemoglobin was 11.0 g/dl.
2. Coagulation profile:

Serum fibrinogen	= 270 mg/dl.
Bleeding time	= 2'40" (Ivy's method)
Patient's prothrombin time	= 11.5" (control = 11.5")

Partial thromboplastin time = 35" (control = 34")

3. Blood group O POSITIVE.
4. X-ray abdomen:(Done at Ngeta):

   Postero-anterior view:

   Fetus with longitudinal lie, cephalic presentation, with overlapping of the skull bones. A definite uterine shadow was visualized around the fetus with no maternal intestines.

   Lateral View: Was requested but could not be done.

5. Ultrasonographic examination:

   Singleton, in cephalic presentation with positive Spalding's sign. The head was deeply embedded in the pelvic cavity, below the lower uterine segment. A uterine outline could be made out surrounding the fetus. The placenta was visualized at the fundal region, anteriorly. No fetal cardiac activity was demonstrated. There was no free fluid in the peritoneal cavity between the liver and the kidney. A solid left adnexal mass was seen, measuring about 80 mm in length.

PLAN OF MANAGEMENT:

1. For medical induction soon after investigations.
2. Blood grouping and crossmatching 2 units.
3. Consent to be obtained induction of labor.

MEDICAL INDUCTION:

The patient was prepared and taken to the labor ward early in the morning for induction of labor on the scheduled day. She was reassessed and the cervical findings were the same as on admission.

The following were done:

1. Medical induction was begun with 10 i.u. of Syntocinon in 1000 ml of 5% dextrose administered intravenously at 10, 20, 30, 40, 50, 60 drops per minute escalating every 15 minutes.
2. Uterine contractions were monitored hourly and any abdominal tenderness was watched for.
3. The blood pressure, pulse and respiratory rates were monitored half hourly.
4. A pelvic assessment was repeated 4 hourly.

Contractions had not yet begun when the next pelvic assessment was due, so it was deferred. Syntocinon was increased to 15 i.u. in 1000 ml 5% dextrose and escalated as above. She had no contractions for 12 hours after beginning the Syntocinon drip, so she was sent back to the antenatal ward, and scheduled for a repeat performance the following week.

Second attempt at medical induction:

A day prior to this, the coagulation profile and serum fibrinogen were repeated and found to be within normal limits. Her blood was sent for crossmatching and 2 units of compatible blood were reserved. A second attempt at medical induction was scheduled on the following day despite the fact that the Bishop's score was still the same.

In the labor ward early the following morning, medical induction was begun with 20 i.u. Syntocinon and escalated as before, and she was monitored in the same way. There was no response despite increasing the dose of Syntocinon to 30 i.u. so she was sent back to the antenatal ward where she was reassessed. Although the results of the X-ray and the ultrasonogram suggested intrauterine death and an adnexal mass, the

clinical findings and the failure to respond to Syntocinon drip strengthened the case for a diagnosis of an abdominal pregnancy. A hysterosalpingogram was requested, but facilities were not available.

REVISED DIAGNOSIS:

Advanced abdominal pregnancy.

PLAN OF MANAGEMENT:

1. Four units of compatible blood were reserved.
2. She was counselled and informed about the diagnosis.
3. Preparations were made for laparotomy.
4. Consent was obtained for anesthesia and surgery.

LAPAROTOMY:

Anesthesia:

She was given atropine 0.6 mg, Ketamine 100 mg and suxamethonium hydrochloride 100 mg, all administered intravenously. She was intubated with a 7 mm cuffed endotracheal tube. Maintenance was done with halothane 1% and oxygen 6 l/min.

OPERATIVE DETAILS:

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

A subumbilical midline incision was made from the upper border of the pubes to a point 2.5 cm below the umbilicus. The rectus sheath was incised, the rectus muscle was pushed to one side. The parietal peritoneum

was incised with a knife on the upper third, and the abdomen was opened.

Findings:

A slightly bulky uterus, displaced and lying in the left iliac fossa was seen. A very well encapsulated fetus was lying deep in the pouch of Douglas. Both ovaries were normal. The right tube was edematous and kinked. The left tube could not be visualized because of adhesions between the intestines and the tube, but felt thick on palpation.

Done:

The sac was opened by a transverse incision anteriorly, and a macerated male fetus was removed with the entire devitalized placenta which was adhered to the interior of the top part of the sac. The redundant part of the sac was excised and hemostatic sutures were applied to the walls of the sac and it was left open. Hemostasis was achieved with ease. Peritoneal lavage was done with warm normal saline.

Closing of the abdomen:

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

The wound was cleaned and dressed with dry sterile gauze.

The blood loss was approximately 150 ml. Reversal from anesthesia was uneventful, and she was sent back to the postnatal ward.

POSTOPERATIVE ORDERS:

The following were done:

1. The patient was given 3 liters of 5% dextrose saline intravenously in 24 hours.
2. The vital signs were monitored half hourly until they were stable, then recorded 4 hourly for 24 hours.
3. Injection pethidine 100 mg was administered intramuscularly 6 hourly for 24 hours for the relief of pain.
4. Fluid intake and output chart was maintained for 24 hours.
5. Injection ampicillin 500 mg 6 hourly was administered intravenously for the first 24 hours, then capsules ampicillin were given 6 hourly for 4 days.

POSTOPERATIVE FOLLOW-UP:

She had a smooth recovery. Her vital signs remained stable. She was ambulated from the second postoperative day and was started on oral fluids. Her hemoglobin, checked on the third postoperative day was 10.6 g/dl. The sutures were removed on the seventh postoperative day. The wound had healed well. She was discharged home on hematinics and advised to attend the postnatal clinic 6 weeks later for follow-up.

FOLLOW-UP:

She attended the clinic 6 weeks later. She was well and had no complaints. She had resumed menstruation 28 days after the operation. A pelvic examination revealed a normal sized, relatively fixed uterus with no adnexal masses or tenderness. She was counselled and informed of her slim chances to conceive again, and of the probability of the problem recurring being higher. Since her marital harmony depended on her ability to conceive, she was very keen on getting another baby and declined any

advice on family planning. Therefore, she was advised to attend the gynecological clinic as soon as she conceived again.

COMMENTARY:

Abdominal pregnancy is rare and potentially serious as it can be a cause of maternal and perinatal mortality [1]. Advanced abdominal pregnancy is commoner in the developing countries as compared with developed countries where there is a high standard of obstetric care. Advanced abdominal pregnancy is avoidable, provided all obstetricians remain constantly vigilant to suspect this clinical entity. Delay in diagnosis is mainly due to difficulties in clinical assessment caused by variance in presentation. Thus, the diagnosis of an advanced extrauterine pregnancy depends upon a high index of suspicion. In a study done by Rahman et al the frequency of the symptoms was as follows: abdominal pain (100%); nausea and vomiting (70%); general malaise (40%); and painful fetal movements (40%). The physical findings were as follows: abdominal tenderness (100%), abnormal fetal lie (70%) and a displaced uterine cervix (70%) [2].

The incidence of diagnostic error is about 60% [2]. Multiple diagnostic procedures are needed to reduce the incidence of error.

Abdominal X-rays:

Antero-posterior and lateral films should be taken. Absence of definite uterine shadow around the fetus, as well as maternal intestine shadows intermingling with the fetal parts in the antero-posterior view with the overlapping of the maternal spine by fetal small parts in the lateral film, are nearly conclusive evidence of extrauterine pregnancy[2]. In our case, only the antero-posterior view brought by the patient from Ngeta

hospital was available as facilities for X-ray were not available at that time at our center. The thick sac which enclosed the fetus appeared like a uterine shadow hence the initial error in diagnosis.

Ultrasonographic examination:

In expert hands, an ultrasound might well be an important diagnostic tool for preoperative diagnosis of an abdominal pregnancy. The fetus may be demonstrated within a cystic structure and a small empty uterus may be seen outside. The placenta may not be easily delineated. In our case, the sac was again mistaken for a uterine shadow and the placenta was very easily delineated, at its 'usual' fundal position. However, the 'adnexal' mass ought to have risen some doubt.

Hysterosalpingogram:

This could have been done since the fetus was dead, but the facilities were not available at that time.

Making a diagnosis is only part of the problem. Assessing the fetal status and choosing the optimal time of delivery are also of concern. Because of the high incidence of fetal malformations, increased perinatal mortality, and unpredictable risk for intraperitoneal hemorrhage, expectant management is not justified and laparotomy should be performed as soon as possible, whereby the magnitude of the problem can be evaluated[2]. Delivery of the fetus is easy but the actual dilemma begins with the decision of whether to remove the placenta or leave it *in situ*. Review of literature shows that both procedures are practiced almost equally [2]. The placenta may be removed entire (if feasible) or left, or removed with the

uterus. Gentle exploration of the placenta is advisable to evaluate its blood supply and how widely it is spread in the pelvis and abdomen. The general condition of the patient, the vitality of the placenta and whether there is firm adherence to vital organs, are of paramount importance in guiding decision. If the placenta is removed entire, the postoperative course is smoother as was seen in our case. If the placenta is partially or entirely left behind, methotrexate therapy has been used to hasten the resorption of the placenta although its efficacy is uncertain[3]. Often times leaving the placenta in the peritoneal cavity is accompanied by ileus, peritonitis, abscess formation and prolonged hospital stay. Occasionally a second operation is required to remove the placenta.

REFERENCES:

1. Bendudv E et al: Abdominal pregnancy. A case report and review of literature. Acta Obstet Gynecol Scand 62(4):377-9 1982.
2. Rahman MS, Al-Suleiman SA, Rahman J, Al-Sibah MH: Discussion on the clinical features, difficulties in diagnosis, management and the outcome in advanced abdominal pregnancy. Obstetrics and Gynecology, Vol. 59 No. 3 pg. 366-372, March 1982.
3. Stafford JC et al: Abdominal pregnancy: Review of current management. Obstetrics and Gynecology 50(5): 1977.

OB.4 TRIPLETS IN A PRIMIGRAVIDA: DELIVERED BY CESAREAN SECTION

NAME : Mrs. Z. A.

AGE : 22 years

DELIVERY No. : 5697/92

REGISTRATION No. : 30716

RESIDENCE : Temeke

DATE OF ADMISSION : 30.03.92

DATE OF DISCHARGE : 17.04.92

SUMMARY:

Mrs. Z. A., a 22 years old primigravida, was referred to Muhimbili Hospital at 26 weeks of gestation with a provisional diagnosis of multiple gestation with anemia, as the uterine fundal height was much larger than the calculated gestation age. An abdominal X-ray confirmed triplet pregnancy. She was admitted for bed rest and correction of anemia. Elective cesarean section was done at 38 completed weeks and she was delivered of three healthy male babies with birth weights of 1650 g, 2250 g and 2350 g respectively. She was discharged home well with all her babies on the seventh post operative day.

HISTORY OF PRESENT PREGNANCY:

Mrs. Z. A. a 22 years old primigravida was seen at Muhimbili antenatal clinic at 26 weeks of gestation. She had her last normal menstrual period on 18.07.91 so her expected date of confinement was on 25.04.92. She had booked for antenatal care at Magomeni antenatal clinic at 25 completed weeks of gestation. Her blood pressure and body weight were 110/70 mm of Hg and 48 kg respectively. At the peripheral clinic the uterine fundal

height corresponded to 30 weeks, which was noted to be out of proportion with the gestational age. She was also noted to be anemic but the hemoglobin estimation was not done. Multiple pregnancy was suspected and she was therefore referred for care at the high risk antenatal clinic. She was seen at Muhimbili a week later. Her blood pressure was 110/80 mm of Hg and hemoglobin was 6.5 g/dl but there were no symptoms or signs of cardiac failure. On abdominal examination the uterine fundus corresponded to 30 weeks and four fetal poles were palpated. A plain X-ray of the abdomen was done as the ultrasound machine was out of order. This revealed 3 fetuses all with breech presentations. She declined admission for rest and correction of anemia as she was assured of getting adequate bed rest at home. Since she was hemodynamically stable, permission was granted. Investigations for anemia revealed iron deficiency and she was treated with intramuscular Imferon and folic acid and chloroquine chemoprophylaxis on outpatient basis. Although her anemia was corrected to 11.5 g/dl at 34 weeks of gestation, as she approached term there was another drop of hemoglobin to 9.5 g/dl, so oral iron was instituted. She was then admitted for rest as she was breathless due to abdominal overdistension. Nevertheless, she remained normotensive with a blood pressure of 120/80 mm of Hg. She was scheduled for cesarean section at 38 weeks of gestation, in view of multiple pregnancy and malpresentation, but this was done one week earlier as she went into spontaneous labor.

Gynecological History:

She attained menarche at 14 years and had a regular menstrual cycle of 28 to 30 days with a normal flow of 4 days. She had never taken any hormonal

to 30 days with a normal flow of 4 days. She had never taken any hormonal contraceptives and had conceived spontaneously soon after marriage.

Previous Medical History:

There was no history of serious illnesses in the past.

Family and Social History:

She was a housewife, married to a businessman who was a twin. Her paternal grandfather was a twin and her paternal aunt had also delivered twins. There was no other significant family history.

PHYSICAL EXAMINATION ON ADMISSION:

General examination:

She had a small frame, was 154 cm tall, with moderate pallor, mildly dyspnoeic and orthopnoeic with pedal edema ++.

Cardiorespiratory Systems:

These were essentially normal.

Abdominal examination:

The abdomen was globularly distended, shiny, edematous and tense, with a uterine fundal height of 36 weeks. Fetal parts could not be palpated easily but fetal heart sounds were detected and the presenting part was breech.

DIAGNOSIS:

Multiple pregnancy (Triplets) with anemia.

PLAN OF MANAGEMENT:

1. Patient was informed and counselled about the management.
2. Bed rest.
3. Blood transfusion two units.

4. Tablets folic acid 5 mg daily.

5. Tablets chloroquine 2 per week.

6. Ultrasound scan.

7. Elective cesarean section at 38 weeks.

SUBSEQUENT FOLLOW-UP:

She was given one unit of blood preoperatively and received oral hematinics. Ultrasound scan done at 36 completed weeks showed 3 babies, all lying with breech presentations. Amniotic fluid was adequate. She was prepared for cesarean section at 38 weeks of gestation. She went into labor 4 days prior to the scheduled date of surgery and a cesarean section was performed in early labor.

OPERATIVE DETAILS:

Anesthesia:

Preoxygenation was done with the patient lying laterally tilted at 15^{0}. Intubation was carried out carefully with a 7.5 mm cuffed endotracheal tube and Sellick's maneuver was employed in order to prevent regurgitation. Thereafter, maintenance of anesthesia was done with 300 mg sodium thiopentone, atropine 1 mg and suxamethonium 100 mg all administered intravenously and maintenance was done with oxygen 6 liters per minute and ether.

LOWER SEGMENT CESAREAN SECTION:

Preparation:

Patient was made to lie supine on the operating table, tilted at 15^{0} to the left, with a slight head down (Trendelenburg) position of the table, above 5^{0} from the horizontal. The urinary bladder was catheterized using aseptic

precautions and the catheter was left in position until the operation was completed. The abdomen was cleaned and draped with sterile linen and opened through a subumbilical midline incision as described in obstetric case No. 3.

Uterine torsion was detected and was corrected.

The lateral recesses of the wound were packed with large packs attached with artery forceps.

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

Opening the uterus:

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

Extraction of the fetuses:

This was done by elevating and guiding the frank breech of the first triplet into the uterine wound, using the right hand as a scoop. The legs were freed by pressing the finger into the popliteal fossa and sweeping the knee gently backwards and outwards on the trunk, at the same time flexing the knee. The trunk was delivered as far as the umbilicus easily. The arms were disengaged next. The head was extracted by traction on the

infant's feet, swinging them slowly outwards and then upwards. The fetus was completely extracted, and the cord was clamped and cut. The procedure was repeated twice more and all the triplets were delivered easily, and handed to the neonatologist. All the babies were males and were delivered by breech. The first triplet weighed 1650 g and the second weighed 2250 g. They shared one amniotic sac but had separate placentae. The third triplet weighed 2350 g. All of them had an Apgar score of 8 at one minute and 9 at five minutes.

Controlling hemorrhage:

0.25 mg ergometrine was administered intravenously by the anesthetist and hemostasis from the overdistended uterus was achieved by administration of 10 i.u. of syntocinon added to the infusion fluid. Green-Armytage spring clamps were used to control bleeding from sinuses along the uterine incision.

Delivery of the placenta and membranes:

The third stage was completed, all the three placentae with their membranes were extracted by controlled cord traction. The membranes were stripped completely from the lower uterine segment. All flecks of vernix caseosa and stray portions of amniotic membranes were removed carefully.

Stitching the uterus:

This was done with No. 1 chromic catgut on an atraumatic round bodied needle in two layers. The first layer was sutured by carefully avoiding the uterine decidua, with locked continuous stitches. The second layer of suturing was done in such a way that it shut out the inner row of sutures

completely out of sight.

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

Closing of the abdomen: was done after ensuring hemostasis, and routine inspection of the adnexa, as described in Obstetric case No. 3.

The wound was cleaned and dressed with dry sterile gauze.

Vaginal and vulval toilet was done.

The blood loss was estimated to be approximately 1000 ml.

POST OPERATIVE ORDERS:

1. Careful monitoring of vital signs half hourly until stable then 4 hourly for 24 hours.
2. Intravenous 5% dextrose saline 2.5 liters in 24 hours.
3. Injection pethidine 100 mg intramuscularly 6 hourly for 24 hours.
4. Injection ampicillin 500 mg intravenously 6 hourly for 24 hours then capsules ampicillin 500 mg 6 hourly for 4 days.
5. Maintain input/output chart.

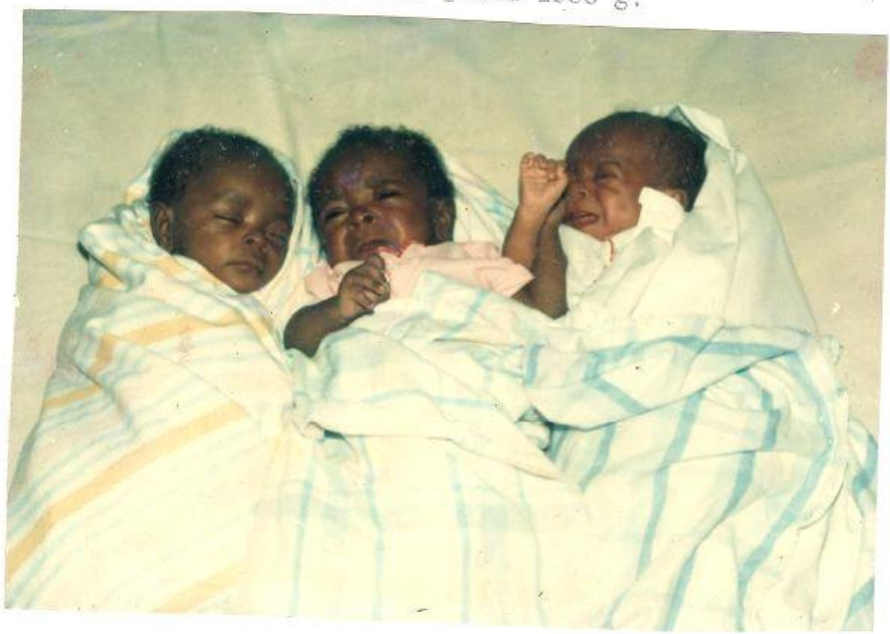
POST OPERATIVE FOLLOW-UP:

The post-operative period was fairly uneventful. Her hemoglobin on the fourth post operative day was 7.9 g/dl. The uterus involuted very well and the wound healed well. All the babies were discharged from the special care baby unit on the second day because they did well. The sutures were removed on the 7th post-operative day and she was discharged home after being trained on how to breast feed her babies. She was advised to continue taking oral hematinics and to attend the post-natal clinic 6 weeks later for postnatal review and counseling on family

T R I P L E T S :



Triplets: Held proudly by the mother (center) aided by two nurses.
Left to right: 1650 g, 2250 g and 2350 g.



Triplets: At 6 weeks, healthy and well.
Left to right: weighing 2410 g, 3050 g and 3260 g.

planning.

POST-NATAL FOLLOW-UP:

At 6 weeks, mother and all triplets were well. The uterus had involuted, the wound had healed well and her hemoglobin had risen to 10.0 g/dl. The babies weighed 2410 g, 3050 g, and 3260 g respectively and were active. She was counseled on family planning and opted for Norplant as her method of choice. She came to the family planning clinic 3 months after delivery for Norplant insertion. The triplets were cared for by her husband and sisters-in-law while she awaited the insertion, and went home filled with gratitude.

COMMENTARY:

Multifetal gestation is considered to be a complicated pregnancy because it has an appreciably increased risk of morbidity and mortality to the mother and the fetuses[1]. Practically all complications which occur in obstetrics are more likely to occur with multiple pregnancies.

The incidence of multiple pregnancy shows wide variations throughout the world. The quoted figures are probably underestimated as a higher proportion of multiple rather than singleton pregnancies are aborted[2]. It is now apparent, through the use of ultrasound in early pregnancy that the incidence of multifetal gestation conceptions is much higher than indicated by figures[1]. The reported incidence of triplets ranges from 1 per 1,696 to 1 per 7,925 live births[3]. The growing use of ovulation inducing agents has also dramatically increased the incidence of multifetal gestation. Furthermore, the use of in vitro fertilization and

embryo transfer has also increased the incidence of multiple pregnancies[6]. There are definite racial trends with higher frequencies in black women and a low incidence in white women. In a study done by Knox and Morley (1960) in a rural community in Nigeria, they found that twinning occurred once in every 19 births[11].

There is an increasing tendency to binovular twinning with maternal age and with the increasing number of fetuses in multiple pregnancy. There is undoubtedly a hereditary factor on the female side and this is easily explicable in terms of genetic predisposition to multiple ovulation. It has been suggested that there is a male hereditary element also. As noted in Mrs. Z. A.'s case, her strong family history of twins, her race and probably a male hereditary factor had stronger roles to play in making this young, newly married primigravida conceive triplets spontaneously. Fortunately for Mrs. Z. A., her antenatal period was fairly uneventful. Apart from anemia which developed towards term, Mrs. Z. A.'s pregnancy could be considered least complicated as far as multiple pregnancy is concerned. The anemia could be explained by the increased demand of iron by the fetuses. Even though hematinics were regularly supplied, poor compliance can not be excluded. She had to be transfused preoperatively in view of her low hemoglobin and anticipation of postpartum hemorrhage, as a complication of multiple pregnancy and cesarean section. With adequate bed rest, she successfully carried the pregnancy to term which was quite an achievement because despite aggressive management, the rate of prematurity in multifetal gestations has not changed significantly over the past 2-3 decades. The average gestational age for delivery of triplets

The best mode of delivery in normal multifetal gestation is still a matter of debate. Older triplet reviews usually involved a large proportion of vaginal deliveries, whereas recent surveys report a 90-95% cesarean rate. The combination of this high cesarean rate and improved neonatal care of very small infants is believed to be responsible for the improved survival rate[4].

Perinatal mortality rate for multiple pregnancy is four times that for singleton pregnancies and is increased in young mothers and in primigravidae [1]. Holoberg and associates (1982) reported outcome in 31 triplet gestations. The overall perinatal mortality rate was 312 per 10,000 and they attributed the improved prolonged outcome over recent years to early diagnosis, prolonged hospitalization and planned delivery by cesarean section, reserving vaginal delivery for those circumstances in which the fetuses are markedly immature or maternal complications make cesarean section hazardous to the mother [1].

In view of all these facts, Mrs. Z. A. was delivered by cesarean section to offer better prognosis for all her triplets. She delivered all males, who were growth retarded but mature and had a combined birth weight of 6250 g. Few fetuses from multifetal gestations achieve their optimal growth potential and the combined birth weight exceeds 4 kg in fewer than 5% of cases[2]. Levens et al (1979) found that in uncomplicated twin pregnancies 25% were below the tenth centile for body weight and the mean biparietal diameters were consistently smaller than singletons, with a mean deficit of 3.3 mm at 16-30 weeks gestation, increasing to 3.8 mm later in pregnancy.

mean deficit of 3.3 mm at 16-30 weeks gestation, increasing to 3.8 mm later in pregnancy.

REFERENCES:

1. Cunningham FG, MacDonald PC, Gant NF: Multifetal pregnancy. William's Obstetrics 18th edition, 1989 Ch. 34 pg 629-649 Publishers Appleton and Lange, 25 Van Zant Street, East Norwalk, Connecticut 06855.

2. Hibbard BM: Multiple pregnancy. Principles of Obstetrics Ch. 34 pg 594-604. Publisher: Butterworth and Company Limited, 1988.

3. Alvarez M, Berkowitz R: Multifetal gestation. Clinical Obstetrics and Gynecology Vol. 33 No. 1 March 1990.

4. Borlum KG: Third trimester fetal death in triplet pregnancy. Obstetrics and Gynecology Vol.77 No. 1 pg 6 January 1991.

OB.5 PLACENTA ACCRETA: MANAGED BY SUBTOTAL HYSTERECTOMY

NAME : Mrs. L. K.

AGE : 36 years

DELIVERY NO. : 6538

REGISTRATION NO. : E/4127/90

DATE OF ADMISSION : 28.05.90

DATE OF DISCHARGE : 06.06.90

SUMMARY:

Mrs. L. K., a 36 years old gravida 2 para 1, was admitted for elective cesarean section on account of a previous cesarean section with a big baby. At cesarean section, the third stage was complicated by placenta accreta. She bled profusely intraoperatively and a subtotal abdominal hysterectomy was done. She received two units of blood transfusion intraoperatively and had an uneventful postoperative period. She was discharged home on the sixth postoperative day after being counseled and advised to attend the postnatal clinic 6 weeks later for follow-up. The management and difficulties in diagnosis of placenta accreta prior to the third stage of labor are discussed.

HISTORY OF PRESENT PREGNANCY:

Mrs. L. K., a 36 years old $G_2P_1+^0$ was attending our high risk antenatal clinic because of a previous cesarean section. Her last normal menstrual period was on 04.09.89 and her expected date of confinement was on 11.06.90. She booked at 16 weeks of gestation with a blood pressure of 120/70 mm of Hg. and a weight of 60 kg. Her uterine fundal height corresponded to her gestational age. She subsequently made 9 more visits and remained normotensive, gained 10 kg throughout her pregnancy and had no pedal edema. At her last visit at 37 weeks of

gestation, the baby's size was assessed to be big and the pelvis inadequate for vaginal delivery. She was advised admission to the antenatal ward for an elective cesarean section the following week.

Obstetric History:

She was $G_2P_1+^0$. She had an elective cesarean section during her first pregnancy at 35 weeks of gestation, 6 years ago for severe EPH gestosis. She delivered a severely growth retarded female baby weighing 900 g. She had an uneventful postoperative period with no wound or puerperal sepsis. Her blood pressure returned to normal after 5 days of delivery and remained stable. She was discharged home with her baby on the sixth postoperative day. The child is alive and well to date.

Gynecological History:

She attained menarche at 12 years of age and had regular periods every 28-32 days lasting for 4-5 days, with no dysmenorrhea. She had a copper containing IUD in situ for 4 years after her first delivery and had it removed as her husband was transferred to Tanga and visited her occasionally every alternate weekend. She had never had any surgical gynecological procedures like dilatation and curettage done.

Previous Medical History:

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

Family and Social History:

She was a Nursing Officer Grade I at Muhimbili Medical Center. Her husband worked for Caltex in Tanga. She neither smoked nor took alcohol. There was no family history of hypertension, diabetes mellitus or twins.

PHYSICAL EXAMINATION ON ADMISSION:

General examination:

Her general condition was satisfactory, she was well nourished and pink. She measured 148 cm in height.

Cardiorespiratory system:

These were essentially normal.

Abdominal examination:

Her abdomen was uniformly distended, the uterine fundal height was 36 weeks size with a singleton fetus, longitudinal lie with a cephalic presentation with the head at 5/5. Clinically, the baby's weight was estimated to be 3.7 kg. The sub umbilical midline scar was well healed and the uterine scar was non-tender. Fetal heart sounds were audible and regular.

Pelvic examination:

The vulva and vagina were normal. The cervix was 2 cm long, firm and the internal cervical ostium was closed. The sacral promontory was just felt at 10 cm and the sacral curve was normal. The ischial spines were not prominent and the subpubic angle was 90^{0}. The intertuberous distance was 4 knuckles.

DIAGNOSIS:

Previous cesarean scar with a big baby.

PLAN OF MANAGEMENT:

1. For elective cesarean section at 38 weeks.
2. Grouping and crossmatching of 2 units of blood was done.
3. Hemoglobin was checked.
4. Consent for anesthesia and surgery was obtained.

INVESTIGATIONS:

1. Blood group was O positive

2. Hemoglobin was 12.4 g/dl.

OPERATION NOTES:

Anesthesia:

This was given as described in Obstetric case No. 3.

Cesarean section:

The abdomen was prepared and opened as described in Obstetric case No. 3 after excising the previous scar. Minimal adhesions were encountered and a lower segment cesarean section was done as described in Obstetric case No 4. A male baby weighing 3.8 kg was delivered with an Apgar score of 9 and 10 at 1 and 5 minutes respectively. Injection ergometrine 0.5 mg was administered intravenously by the anesthetist and the umbilical cord clamped with artery forceps and cut. The left and right edges of the uterine incision which were bleeding were clamped with Green-Armytage clamps to control the hemorrhage. Even by then, there were no obvious signs of placental separation, namely, the lengthening of the umbilical cord or appearance of the margins of the placenta at the uterine incision.

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

Subtotal Hysterectomy:

The round ligaments were first identified and clamped with Kocher's forceps, cut and tied with chromic catgut no. 1 in succession. The fallopian tubes and ovarian vessels were then divided and ligated and

both ovaries were conserved. The anterior leaf of peritoneum on each side was incised further to link up with the cesarean incision. The posterior leaf of the broad ligament peritoneum was then divided down towards the uterosacral folds. The uterine vessels were then identified on each side, secured with Kocher's forceps close to the cervix, divided and ligated. The lower segment of the uterus was then cut across at the level of the uterine incision. The uterine stump was closed with a continuous stitch of chromic catgut no. 2. Hemostasis was achieved satisfactorily and peritonization was done. Further suction was done and the peritoneal cavity was mopped dry. Swabs and instruments were counted correct. The abdominal incision was closed as described in Obstetric case No. 4. Two units of whole blood were transfused intraoperatively in addition to 4 liters of normal saline. The estimated blood loss was 3 liters and the total operating time was 2 hours. Reversal from anesthesia was uneventful.

She was transferred to the postnatal ward from the recovery room with a blood pressure of 100/60 mm of Hg and a pulse rate of 82 beats per minute.

POST OPERATIVE ORDERS:

The following were done:

1. She was infused with 3 liters of normal saline alternating with 5% dextrose over the first 24 hours.
2. Injection pethidine 100 mg intramuscularly was administered 6 hourly for 24 hours.
3. Injection ampicillin 500 mg 6 hourly intravenously for 24 hours then capsules ampicillin 500 mg 6 hourly for 4 days.
4. Vital signs were monitored half hourly for 6 hours then hourly until

24 hours, then twice daily.

5. An input/output chart was maintained.

POST OPERATIVE FOLLOW-UP:

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

She was informed about the extent of her surgery and her future menstruation and fertility status. She initially felt very depressed but later seemed to accept the situation. She was discharged home with her baby on the sixth postoperative day and advised to continue taking folic acid tablets and to return to the postnatal clinic after six weeks. She was seen at the postnatal clinic as per appointment and was found to be in good health and cheerful. Her hemoglobin had risen to 9.2 g/dl and her baby was also doing well. She was therefore discharged from the clinic.

COMMENTARY:

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

Estimates of the incidence of all forms of placenta accreta namely, placenta accreta vera, placenta increta and placenta percreta vary from

1:2000 to 1:7000 deliveries. Placenta accreta vera accounts for about 80% of abnormally adherent placentas; placenta increta 15% and placenta percreta 5%[2].

Placenta accreta arises because implantation of the ovum occurred in an area of the uterus in which the endometrium was deficient or damaged[3]. Etiological factors include previous cesarean section, previous uterine curettage, previous placenta previa, multiparity and previously treated Asherman's syndrome[2]. Congenital uterine abnormalities, cornual pregnancy, hydatidiform mole, myomectomy and manual removal of the placenta have also been attributed as predisposing factors in the etiology of placenta accreta[4]. Mrs. L. K. had a cesarean section in her last delivery and this could have predisposed her to her present condition.

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

Subtotal hysterectomy was resorted to in our case because of the severe hemorrhage. Had the bleeding not been life threatening, and had there been a need to preserve her uterine function, in some cases it has been

possible to leave the placenta in situ and hope that complete autolysis will occur[2]. The other most common form of conservative management is manual removal of as much placenta as possible and then packing of the uterus. Conservative surgical management in placenta accreta is associated with a fourfold increase in maternal mortality, hysterectomy therefore remains the treatment of choice[7].

REFERENCES:

1. Abnormalities of the third stage of labor. Placenta accreta, increta and percreta. William's Obstetrics. 18th edition, 1989. Ch. 24 pg. 419. Publishers: Appleton and Lange, 25 Van Zant Street, East Norwalk, Connecticut 06855.

2. Kapernick PS Postpartum hemorrhage and the abnormal puerperium: Current Obstetric and Gynecologic diagnosis and treatment, 1987. Sixth edition. Ch. 29 pg. 529. Publishers: Appleton and Lange. Norwalk, Connecticut /Los Altos, California.

3. Beazley JM Complications of the third stage of labor. Placenta accreta. Dewhurst's textbook of Obstetrics and Gynecology for postgraduates. Ch. 28 pg. 412.

4. Blumenthal NJ and Goldberger SB (1983) Spontaneous rupture of a uterus at 16 weeks of gestation. Australia and New Zealand Journal of Obstetrics and Gynecology 23, 248-249; in Journal of Obstetrics and Gynecology, vol.11 No. 4 July 1991 pg 257-258.

5. Cammu H, Friese S and Amy JJ (1986): Abnormally adherent placentation: a life-threatening complication. European Journal of Obstetrics, Gynecology and Reproductive Biology 23, 359-367; in Journal of Obstetrics and Gynecology, vol.11 no. 4 July 1991 pg. 257-258.

7. Cox SM, Carpenter RJ and Colton DB (1988) Placenta percreta: Ultrasound diagnosis and conservative management. Obstetrics and Gynecology 71, 454-456; in Journal of Obstetrics and Gynecology, vol.11 no. 4 July 1991 pg 257-258.

OB.6 PREGNANCY WITH UTERINE FIBROIDS: UNEVENTFUL VAGINAL DELIVERY

NAME : Mrs. B. W.

AGE : 26 years

REGISTRATION NO. : E/26/M/93

DELIVERY NO : 7359

GRAVIDITY : Primigravida

RESIDENCE : Tandale, Dar-es-Salaam

DATE OF ADMISSION : 17.05.93

DATE OF DISCHARGE : 31.05.93

SUMMARY:

Mrs. B. W., a 26 years old primigravida was referred to the high risk antenatal clinic at Muhimbili because of having a uterine fundal height which was greater than the gestational age. Clinical examination and ultrasonography revealed a singleton pregnancy with multiple uterine leiomyoma. She had a fairly uneventful antenatal period and she went into spontaneous labor at 37 weeks of gestation and had an uneventful spontaneous vaginal delivery of a 2.4 kg female baby with an Apgar score of 8 and 10 at 1 and 5 minutes respectively. She was discharged home with her baby in good condition. Management of pregnancy complicated by uterine fibroids is discussed.

HISTORY OF PRESENT PREGNANCY:

Mrs. B. W., a 26 years old primigravida was referred to our high risk antenatal clinic from Temeke Hospital at 20 weeks of gestation. Her last normal menstrual period was on 06.08.92 and thus her expected date of delivery was on 13.05.93. At booking, she weighed 45 kg and had a blood pressure of 130/80 mm of Hg. During this visit, it was noted that the uterine fundal height palpated 24 weeks, which

than the gestational age and the uterine contour was irregular. An ultrasonographic examination revealed a singleton pregnancy corresponding to the gestational age with multiple fundal subserous uterine fibroids. No fibroids were detected on the lower uterine segment or on the cervix. A fortnight later, she was admitted to the antenatal ward with abdominal pain around the umbilical region which was localized to the uterus and worsened on uterine mobility. There was no associated fever. Red degeneration of fibroid was suspected. She was admitted for rest and observations, given mild sedation and oral analgesics. She improved on this conservative management and was discharged home 4 weeks later and advised to attend the antenatal clinic regularly. Thereafter, her antenatal period was uneventful. She remained normotensive and her hemoglobin was 10.8 g/dl at 37 weeks. She was planned for elective cesarean section at 38 weeks, but she went into spontaneous labor at 37^{+5} weeks and was admitted again well advanced in labor.

Obstetric and Gynecologic History:

She was a primigravida. She had attained menarche at 14 years of age and had regular menstrual periods with cycles of 28–30 days and a normal flow of 4 days with no dysmenorrhea. For the past 2 years, she had slightly heavier periods lasting for the same duration of time with intermenstrual spotting and occasional dysmenorrhea. She had never used any form of contraceptives and had been trying to conceive for 4 years. She had just begun attending the gynecologic clinic for investigations on infertility when she missed her period.

Past Medical History:

There was no history of serious illnesses in the past.

There was no history of serious illnesses in the past.

Family and Social History:

She was a housewife and married to a clerk. There was no family history of hypertension or diabetes mellitus or twins in the family, neither was there any history of fibroids in her other two sisters.

PHYSICAL EXAMINATION (at admission):

General examination:

Her general condition was satisfactory, she was 158 cm in height and weighed 50 kg. She was not pale, had no pedal edema and was afebrile.

Cardiorespiratory Systems:

These were essentially normal.

Abdominal examination:

The abdomen was asymmetrically distended. The liver and spleen were not palpable and the renal angles were non tender. The uterine fundal height was 36 weeks and the contour was irregular with firm nodular masses on the fundus anteriorly, which were mobile and non-tender. The lower part of the uterine surface appeared smooth. She was having uterine contractions after every 2-3 minutes lasting 20 seconds. The lie was longitudinal with a cephalic presentation. The fetal heart sounds were audible and were regular at 144 beats per minute.

Pelvic examination:

The cervix was fully effaced with the os dilated to 6 cm. The vertex was in the right occipito-transverse position at the level of the ischial spines. The membranes were intact. No cervical or pelvic fibroids were palpated. An amniotomy was done as described in Obstetric case No. 2 and clear liquor was obtained. There was no caput or moulding. The umbilical cord was not felt and the fetal heart sounds

remained good after rupture of the membranes. The pelvis was adequate.

DIAGNOSIS:

Primigravida with uterine fibroids.

PLAN OF MANAGEMENT:

She was planned for trial of labor, as she was in established labor with a very favorable cervix, good uterine contractions, an engaged head with no signs of fetal distress.

The following were done:

1. She was prepared as for cesarean section.
2. Blood grouping and crossmatching were done. Her blood group was A Rh positive and two units of compatible, HIV negative blood were obtained.
3. An intravenous line was set up with 1000 ml of 5% dextrose saline to keep the vein open.
4. The vital signs were monitored half hourly.
5. The uterine contractions and the fetal heart sounds were monitored half hourly.
6. She was to be reassessed vaginally 4 hours later.

Progress during labor:

She progressed very well and two hours after rupture of membranes, she was in the second stage of labor. A right mediolateral episiotomy was given when the head was crowning, and she had a spontaneous vaginal delivery of a 2.4 kg female baby with an Apgar score of 8 and 10 at 1 and 5 minutes respectively. Injection ergometrine 0.25 mg was administered intravenously at the delivery of the anterior shoulder. The third stage took 4 minutes and the placenta and membranes were delivered entire by controlled cord traction. The episiotomy was

repaired as described in Obstetric case No. 2. The measured blood loss was about 120 ml. The uterus contracted well and her post delivery blood pressure was 120/80 mm of Hg. She was discharged home well with the baby as soon as the baby was vaccinated and advised to come to the postnatal clinic 6 weeks later for follow-up.

FOLLOW-UP:

She attended the postnatal clinic as per appointment. She was well with no complaints and the baby was fine. Abdominally, the uterus was not palpable. A pelvic examination revealed a bulky, firm, nodular uterus about the size of a 12 weeks pregnant uterus, with no adnexal masses. She was counseled on contraception and advised to use a barrier method. Since she was still young and desired one more child, she was advised to complete her family early and then be operated upon for the fibroids because a myomectomy could end up in a total hysterectomy.

COMMENTARY:

Fibroids are very common, being present in over 20% of women over 35 years of age[1]. They are usually multiple, only 2% are solitary. They are most prevalent in the nulliparous and in the dark skinned race[1] as was the case in this patient.

Association of fibroids with pregnancy is less common. It occurs in 0.5 to 1% of cases. This is because fibroids particularly if submucous, may cause infertility[2]. Whether infertility is the cause or effect of uterine fibroids is not yet resolved. Fibroids may cause uterine distortion or mechanical obstruction of the fallopian tubes and thus cause infertility. But infertility may also occur when the uterine cavity and the fallopian tubes are apparently undisturbed by the tumors. Pregnancy occurring in grossly distorted uterine cavities is

usually followed by spontaneous abortions. Mrs. B. W. had involuntary infertility of 2 years prior and had begun attending the gynecology clinic for infertility after having despaired that she would ever conceive spontaneously.

Fibroids are usually readily diagnosed clinically and do not always require ultrasonographic examination. Indications for scanning fibroids in pregnancy are:[4]

i) To detect cervical fibroids. Although only 3% of fibroids are cervical in position, these will obstruct labor.

ii) To detect if the fetal head is below the level of the fibroid.

iii) To aid in the differential diagnosis of abdominal pain. Red degeneration of a uterine fibroid may mimic a placental abruption. The ultrasound appearance of a red degeneration is usually obvious. Ultrasonographically, fibroids usually appear as rounded, distinct masses of increased, decreased or similar echogenicity to that of the surrounding myometrium, and a red degeneration would produce an echo free area within a fibroid.

In the majority of cases (about 75%), the presence of fibroids does not complicate pregnancy[1], as occurred in this patient. Her first trimester went smoothly and after having an acute red degeneration of fibroids in the second trimester, her antenatal period was otherwise uneventful. She was planned for trial of labor because of the absence of any tumors within the pelvic cavity, and when she decided to stay in hospital, her wish was granted because she would then be monitored closely. She was very fortunate that her labor was spontaneous and progressed well and there was no uterine inertia as anticipated. The third stage was also uneventful as the anticipated morbid adherence of the placenta was not

encountered although it was known through the ultrasonographic examination that the placenta was situated at the site of the posterior fibroid.

REFERENCES:

1. Llewellyn-Jones D: Tumors of the genital tract complicating pregnancy. Fundamentals of Obstetrics and Gynecology. Volume I. Obstetrics. 5th edition, 1990. Ch. 33 pg 261-262. Publishers Faber and Faber Limited. 3 Queen Square London WC1N 3A U.

2. Donald I: Practical Obstetric Problems. 5th edition, sixth reprint, 1988. Ch. IX. Local abnormalities - Fibroids and pregnancy pg. 263-268. Publishers Lloyd-Luke (Medical Books) Limited. 49 Newnan Street London.

3. Lacey CG: Benign Disorders of the uterine corpus. Myoma of the uterus. Current Diagnosis and Treatment Obstetrics and Gynecology, 1987. Sixth edition. Ch. 36 pg 660-662. Publishers Appleton and Lange, 25 Van Zant Street, East Norwalk, Connecticut 06855, California, USA.

4. Chudleigh P, Pearce JM: Ultrasound appearances of the normal pelvis. Obstetric Ultrasound: HOW, WHY, WHEN. 2nd edition, 1992 Ch. 2 pg 21-25. Publishers: Churchill Livingstone Inc. 650 Avenue of the Americas, New York, NY 10011, 1992.

OB.7 TRANSVERSE LIE WITH INTRAUTERINE FETAL DEATH: DECAPITATION

NAME : Mrs. J. K.

AGE : 27 years

GRAVIDITY : 3 para 2

REGISTRATION NO. : 3924

DELIVERY NO. : 5647

RESIDENCE : Mbagala

DATE OF ADMISSION : 18.04.93

DATE OF DISCHARGE : 20.04.93

SUMMARY:

Mrs. J. K., a 27 years old $G_3P_2 + {}^{0}$ was referred from Temeke Hospital with a transverse lie, arm and cord prolapse with intrauterine fetal death in the second stage of labor. Decapitation was done under general anesthesia and the patient was discharged home 2 days later. The place of reductive embryotomy in developing countries like ours is discussed.

HISTORY OF PRESENT PREGNANCY:

Mrs. J. K., a 27 years old $G_3P_{\ 2} + {}^{0}$ had her last normal menstrual period on 04.07.92 and so her expected date of delivery was calculated to be on 11.04.93. She had booked at Temeke Hospital at a gestational age of 26 weeks and had made 5 visits. She was normotensive, had a hemoglobin of 70% and had no pedal edema. At her last visit at term, it was noted that she had a breech presentation with an oblique lie and she was asked to return the following week for her routine antenatal check-up. She went into spontaneous labor at 41^{-1} weeks with spontaneous rupture of membranes at Temeke Hospital followed by an arm and cord prolapse. She was referred to Muhimbili

for delivery and arrived 13 hours later with a non-pulsatile cord, without any documentation about her intrapartum period at Temeke hospital.

Obstetric History:

She was $G_3P_2 + {}^{0}$ with 2 full term normal deliveries which had taken place four and a half and 2 years previously. The birth weights were 3300 g and 3700 g respectively. Both children were alive and well.

Gynecological History:

She had attained menarche at 14 years of age. Her menstrual cycles were regular at 29 - 30 days, with a normal flow of 4 days.

Previous Medical History:

There were no serious illnesses in the past.

Family and Social History:

She was a house wife, married to a petty businessman. There was no history of diabetes mellitus or hypertension in the family.

PHYSICAL EXAMINATION IN LABOR:

General examination:

She was dehydrated, afebrile, moderately pale with no pedal edema.

Cardiorespiratory Systems:

These were essentially normal. She had a pulse rate of 100 beats per minute with a regular rhythm and a blood pressure of 120/80 mm of Hg.

Abdominal Examination:

The abdomen was distended. The uterus was contracting strongly and the fundal height was 34 weeks. The lie was transverse with the head on the right. Fetal heart sounds were not audible. The baby's right arm and cord were seen prolapsed at the introitus.

Pelvic examination:

The cervix was fully dilated. The right shoulder was presenting and the right arm and cord had prolapsed. The head was on the right, dorsum was posterior. No pulsations were felt on the cord. There was no undue bleeding. Meconium was noted in the liquor, which was not offensive. The pelvis was roomy.

DIAGNOSIS:

Transverse lie with intrauterine fetal death, in second stage of labor complicated with arm and cord prolapse.

PLAN OF MANAGEMENT:

1. Preparation for reductive embryotomy.
2. Grouping and crossmatching two units of blood.
3. Intravenous 5% dextrose saline infusion 1000 ml.
4. Intravenous injection ampicillin 500 mg 6 hourly for 24 hours then capsules ampicillin 500 mg 6 hourly for 4 days.
5. Intravenous injection chloramphenicol 500 mg 6 hourly for 24 hours then capsules chloramphenicol 500 mg 6 hourly for 4 days.
5. Consent for general anesthesia and destructive delivery.

REDUCTIVE EMBRYOTOMY:

Anesthesia:

This was given as described in Obstetric case No: 3.

Examination under anesthesia:

Patient was placed in lithotomy position, cleaned with antiseptic solution and draped with sterile linen. The bladder was emptied aseptically and clear urine was obtained. An examination under anesthesia was done and the findings of the pelvic examination done in the labor ward were confirmed. The lower uterine segment was found to be intact. The exact position of the fetal neck was determined in order

to decide whether the decapitation saw could be passed more readily either posteriorly or anterior to it.

Decapitation:

A right medio-lateral episiotomy was given.

An assistant pulled gently on the prolapsed arm to exert traction so that neck was brought in easier access. A Ramsbotham's saw, protected by the palm of the left hand was passed up over the baby's shoulder from behind and the point was then turned over the neck. Then using backward and forward movements the head of the baby was severed from the trunk by cutting through the cervical vertebrae. The soft structures were divided using embryotomy scissors, and the trunk was delivered by traction on the arm, which was held by the assistant while one hand protected the vagina from laceration by the jagged spicules of bone protruding from the thoracic inlet.

The after-coming head was delivered next. The head which was floating in the empty uterus was held and turned so that the stump of the neck pointed towards the birth canal. The stump was then grasped with a heavy volsellum and using a finger inserted the baby's mouth to flex it, the head was delivered by traction on the volsellum in a manner similar to delivery of the after-coming head of a breech.

The placenta and membranes were lastly delivered by controlled cord traction, following which the uterus was well contracted.

The lower uterine segment was then re-examined to exclude a rupture and the cervix, vagina and perineum were inspected for any lacerations. They were all found to be intact.

The episiotomy was repaired as described in case No. 2

The severed head of the male stillborn fetus was sutured to the trunk

and the baby was found to weigh 3.850 kg.

Reversal from anesthesia was uneventful.

POSTOPERATIVE ORDERS:

1. Vital signs were monitored half hourly until stable then 4 hourly for 24 hours.
2. Intravenous 5% dextrose saline 2.5 liters in 24 hours.
3. Indwelling catheter for 24 hours to monitor urine output.
4. Antibiotics to be continued as prescribed preoperatively.

POSTOPERATIVE FOLLOW-UP:

The patient recovered very well. She remained afebrile and was ambulant within 12 hours of delivery. The abdomen was soft, non-tender and non-distended. The uterus was not tender and well contracted. The urine was clear and the output was adequate. The catheter was removed on the following day. The cause of her traumatic experience was fully explained to her and contraceptive advice was offered. She was advised that when she conceives again in future, there was need for her to be under skilled obstetric care. She was discharged home on the same day and advised to attend the family planning clinic 6 weeks later for family planning counseling.

COMMENTARY:

Reductive embryotomy may be of historical interest to our counterparts in the developed countries but in developing countries like ours, reductive embryotomy still has a place in obstetrics where because of various reasons antenatal and intrapartum care still leave much to be desired[1].

As seen in this case, Mr. J. K. was booked fairly early and a regular attendant of the antenatal clinic. The abnormal lie and presentation

(oblique breech) were noted at term, however, the appropriate decision to refer this lady to a center with facilities for cesarean section was not taken early. During labor, she was not examined at all until the membranes ruptured spontaneously and resulted in arm and cord prolapse. She was then seen and advised to be referred to our institution. Because of problems in transportation, thirteen hours elapsed by the time she arrived at our hospital and by then the fetus was obviously dead. She was very fortunate that despite strong uterine contractions, her uterus had not ruptured.

Since the baby was dead, and the cervix was fully dilated with no imminent rupture, a decapitation was resorted to rather than a cesarean section[2]. There is no place for internal version and breech extraction in obstructed labor with a transverse lie. Rupture of the uterus is almost inevitable if this rule is broken [2].

Although destructive procedures are unpleasant to perform, they are an alternative to an unnecessary and hazardous cesarean section or a vaginal delivery that would otherwise cause severe maternal trauma. Destructive procedures are contraindicated where the uterus is ruptured or rupture is imminent[2]. Reductive embryotomy is not without its own risks. Indeed, in some cases, when performed by less skilled obstetricians, the procedures can lead to severe injuries to maternal soft tissues, leading to tears of the cervix, rupture of the uterus, including injuries to the bladder and the rectum.

Nevertheless, with proper selection of cases and careful attention to intra- and post-operative care, the author is convinced that when labor is obstructed and the fetus is dead, operative vaginal delivery is safer than a cesarean section[3]. A good antenatal screening is greatly

emphasized to prevent such catastrophes.

REFERENCES:

1. Myerscough PR. Reductive embryotomy. Decapitation. Munro Kerr's Operative Obstetrics. 10th edition, 1980. Ch. 25 pg. 333-335. Publishers Bailliere Tindall/W. B. Saunders 24-28 Oval Road, London NW1 7DX, 1982.

2. Philpott RH: Clinics in Obstetrics and Gynecology. Vol. 9 No. 3 December 1982. Obstetric problems in the developing world. Publishers: W. B. Saunder's Company Ltd. 1 St. Anne's Road, Eastbourne, East Sussex, BN 21 3 UN.

3. Lawson J: Clinics in Obstetrics and Gynecology. Vol. 9 No. 3 December 1982. Obstetric problems in the developing world. Publishers: W. B. Saunder's Company Ltd. 1 St. Anne's Road, Eastbourne, East Sussex, BN 21 3 UN.

OB.8 COMPLETE PLACENTA PREVIA: DELIVERY BY CESAREAN SECTION

NAME : Mrs. A. S.

AGE : 32 years

GRAVIDITY : 4 para 3 – Multiparity.

REGISTRATION NO. : E/301/93

DELIVERY NO. : 7225

RESIDENCE : Kinondoni

DATE OF ADMISSION : 15.05.93

DATE OF DISCHARGE : 22.05.93

SUMMARY:

Mrs. A. S., a 32 years old gravida 4 para 3, was noted to have an unstable lie at term with a very high presenting part. An urgent ultrasound scan revealed a central placenta previa. The patient was immediately hospitalized and a lower segment cesarean section with tubal ligation was done. She recovered uneventfully and was discharged home 6 days later with her baby, both in good health. The diagnosis and management of placenta previa are discussed.

HISTORY OF PRESENT PREGNANCY:

Mrs. A. S., a 32 years old gravida 4 para 3, had her last normal menstrual period on 01.08.92 and her expected date of confinement was on 08.05.93. She had booked at Muhimbili at a gestation age of 27 weeks. During her course of pregnancy, she remained normotensive with blood pressure ranging between 90-110 / 60-70 mm of Hg. She had gained 3 kg in the last trimester and her hemoglobin was 10.6 g/dl. The uterine fundal height always corresponded with the gestational age by dates, and the lie remained longitudinal but the presentation alternated between cephalic and breech at every visit.

During her last visit, at a gestational age of 40 weeks and 6 days, a note was made of the unstable lie with a very high presenting part. Further questioning revealed that she had had about 4 episodes of painless bleeding per vagina from the gestational age of 28 weeks, which invariably followed acts of sexual intercourse, and on one occasion the bleeding occurred after she had exerted herself physically by walking a long distance. Since the bleeding was preceded by sexual intercourse, and the blood loss which amounted to one soaked sanitary pad per episode was insignificant to her, she had concealed this information until then. She gave no history of spotting or bleeding in the first and second trimesters of the index pregnancy nor did she have contact or post coital bleeding prior to this pregnancy. She was advised immediate hospitalization for emergency investigations and management as the pregnancy was already term.

Obstetric History:

She was gravida 4 para 3 with three full term normal deliveries, with no complications. The last child birth was 8 years previously.

Gynecological History:

She had attained menarche at 12 years and had regular periods with a duration of 4-5 days and occurring every 28-30 days. The flow was normal. She relied on Natural Family Planning (calendar method) for contraception.

Previous Medical History:

There was no history of any serious illnesses in the past.

Family and Social History:

She was a primary school teacher by profession and was married to a businessman. There was no family history of hypertension or diabetes

mellitus.

PHYSICAL EXAMINATION, AT ADMISSION

General examination:

She was healthy looking, not pale, afebrile and had no pedal edema.

Cardiorespiratory Systems:

These were essentially normal.

Abdominal Examination:

The uterus was soft, relaxed and non tender and the uterine fundal height was corresponding to 36 weeks. The lie was longitudinal, with a cephalic presentation and a high head. The fetal heart sounds were audible and regular with a rate of 144 beats per minute.

Pelvic examination:

The vulva and vagina were dry on inspection. Per speculum and digital examination were deliberately not done at this instance as placenta previa was strongly suspected.

INVESTIGATION:

An ultrasound scan was done on the day of admission after the patient had a full bladder. It showed a singleton fetus with cephalic presentation. The biparietal diameter was 92 mm which was consistent with a gestational age of 38 weeks and 5 days (±3 SD). The amount of amniotic fluid was adequate and the fetal heart beats were demonstrable, fetal activity was normal and the fetus had no gross congenital malformations. The placenta was situated on the lower uterine segment entirely covering the internal cervical ostium, which was closed.

DIAGNOSIS:

Unstable lie at term with complete placenta previa.

PLAN OF MANAGEMENT:

1. Blood grouping and crossmatching were done. Her blood group was O Rh Positive and 3 units of compatible blood were reserved.
2. Urgent hemoglobin estimation was done. The hemoglobin level was 11.4 g/dl.
3. NO PELVIC EXAMINATIONS.
4. Emergency cesarean section.
5. Counsel for tubal ligation.
6. Consent for anaesthesia and surgery.

OPERATIVE DETAILS:

Anesthesia:

This was given as described in Obstetric case No. 3.

The abdomen was cleaned as described previously in case No. 3, and after ascertaining that the landmarks of the symphysis and the anterior superior iliac spines were accessible, the abdomen was covered by sterile drapes which were evenly placed.

Opening of the abdomen:

The abdomen was opened through a Pfannenstiel incision which was about 12 cm long. The initial cut was made cleanly through the skin, slightly convex towards the pubis. The fat was incised down to the rectus sheath and the aponeurosis of the external oblique muscle, ligating all small bleeders. After the rectus sheath was exposed, a small transverse incision was made at its midpoint. This was then extended laterally on each side of the midline with Mayo's scissors, for the full length of the incision. The upper and lower edges of the incision were then grasped in turn by artery forceps, elevated and the underlying muscle was separated from the sheath by a combination of blunt (swab) and

sharp (scissors) dissection. Small vessels running parallel to the midline were clipped and tied and cut. The rectus muscles were separated vertically and the peritoneum was exposed. The peritoneum was opened in the same manner as for the midline incision, keeping a watchful eye on the bladder.

Lower segment cesarean section:

Having opened the abdomen and visualized the lower uterine segment which was devoid of varicose veins, a lower uterine segment cesarean section was done as described in Obstetric case No. 4. The uterus was incised transversely, the placenta was pushed down to avoid incising it with the scissors and the membranes were ruptured.

Extraction of the fetus:

This was done by inserting the hand below the fetal head and scooping the head out of the pelvis. The upper part of the fetal trunk was then extracted by hooking the finger into the nearest axilla delivering the shoulder and arm; this was repeated on the other side. When the fetus was half born, 0.25 mg ergometrine was injected intravenously. The fetus was completely extracted, and the cord was clamped and cut. A live, healthy female baby weighing 2450 g, with an Apgar score of 9 and 10 at one and five minutes respectively, was delivered.

The placenta and membranes were delivered next by controlled cord traction. Minimal amount of bleeding was seen from the placental sinuses on the lower segment both anteriorly and posteriorly, which was easily controlled with the use of hot packs.

The closure of the uterus and reperitonization were done as described before in Obstetric case No. 4.

Bilateral tubal ligation:

This was done using Modified Pomeroy's method as follows:

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

Closure of the abdomen:

This was carried out as in the midline incision described in Obstetric case No. 3, using a continuous chromic No. 0 for the peritoneum. The rectus sheath was closed transversely with continuous chromic catgut No. 1. The subcuticular space was obliterated with interrupted plain catgut no. 0, hemostasis was achieved, and the skin was closed with subcuticular nylon suture No. 0.

The wound was cleaned and dressed with dry sterile gauze. Vaginal and vulval toilet were done.

The estimated blood loss was 400 ml.

POST OPERATIVE ORDERS:

1. Monitoring of blood pressure and pulse rate half hourly until stable, then 4 hourly for 24 hours.
2. Intravenous 5% dextrose saline 2.5 liters in 24 hours.
3. Injection pethidine 100 mg intramuscularly 6 hourly for 24 hours.
4. Maintain an input / output chart.

POST OPERATIVE PROGRESS:

She recovered smoothly from the anesthesia. She remained afebrile, normotensive, the uterus involuted well, lochia was healthy, and the wound healed well. The nylon suture was removed on the sixth post

operative day and she was discharged home in good condition with her baby, and advised to attend the post natal clinic 6 weeks later for follow-up.

FOLLOW-UP AT THE POSTNATAL CLINIC:

She came to the postnatal clinic 6 weeks later. She had no complaints. The abdominal scar had healed well and the uterus had involuted. Her hemoglobin was 11.0 g/dl. The baby was also fine. She was discharged well from the clinic.

COMMENTARY:

In placenta previa, the placenta is implanted in the lower uterine segment within the zone of effacement and dilatation of the cervix, thus constituting an obstruction to the descent of the presenting part[1].

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

The essentials of diagnosis include spotting during the first and second trimesters with sudden profuse bleeding in the third trimester. In Mrs. A. S. there were no such symptoms apart from the post coital bleeding, which was not taken as a serious event by her. There was a failure to detect the problem earlier as the patient failed to report vaginal bleeding although this was specifically listed in the antenatal card as one of the risk factors. This failure of communication could have been brought about by the relation of the symptoms to sexual intercourse, an act which was prohibited in her tribe during pregnancy. There is a need for a high index of suspicion amongst doctors and midwives in the face of a changing presentation and a high presenting

part. The diagnosis was ultimately suspected on basis of her history and clinical findings.

The real time scanner is ideal for screening purposes, because it is not invasive, the test is easily and rapidly performed with an accuracy rate in expert hands, of over 95%. It is an excellent means of identifying those patients who clearly do not have placenta previa and who can thereafter be examined vaginally with certainty [2].

Cesarean section was performed in Mrs A. S. because it is the method of choice for delivery with complete placenta previa. Since the patient was term, this was done urgently, not giving a chance for fatal bleeding to occur. Perinatal mortality rates are lower with cesarean deliveries for every type of placenta previa (even those with lesser degrees)[1]. Cesarean section has proved to be the most important factor in lowering the maternal and perinatal mortality rate. The perinatal mortality rate associated with placenta previa in most medical centers has been 15-20% or at least 10 times that of a normal pregnancy, because of preterm labor, placental separation, cord accidents, and uncontrolled hemorrhage which can not be avoided. The maternal mortality rate can be greatly reduced if ideal obstetric care is given. Many now believe that there is almost no indication for vaginal delivery in these cases [1].

The choice of operative technique is of importance because of the placental location and the development of the lower uterine segment. A Pfannenstiel incision was done for purely cosmetic reasons in this well groomed lady. Had her preoperative condition not allowed it, a midline incision would have been used as it would have been faster and much less vascular. A classic incision on the uterus may be required to

through the placenta. If the incision passes through the site of placental implantation, there is a strong possibility that the fetus will lose a significant amount of blood, and require subsequent blood transfusion. With posterior implantation of the placenta, a low transverse incision may be best if the lower uterine segment is well developed[2].

REFERENCES:

1. Pernoll M: Placenta previa in Third Trimester Hemorrhage. Current Obstetric and Gynecologic Diagnosis and Treatment, 1987. Sixth edition. Ch. 22 pg. 418-421. Publishers: Appleton and Lange, 25 Van Zant Street, East Norwalk, Connecticut 06855.

2. Chudleigh P, Pearce JM: Obstetric Ultrasound: HOW, WHY, WHEN. Ch. 10 pg. 124 1st edition. Publishers: Churchill Livingstone Inc., 1560 Broadway, New York, N.Y. 10036, U.S.A.

ANENCEPHALY IN A PRIMIGRAVIDA: SUCCESSFUL INDUCTION OF LABOR

NAME : Mrs. M. M.

AGE : 23 years

GRAVIDITY : Primigravida

DELIVERY NO. : 8342

REGISTRATION NO. : 271/93

DATE OF ADMISSION : 05.06.93

DATE OF DISCHARGE : 08.06.93

SUMMARY:

Mrs. M. M., a 23 years old primigravida, was antenatally noted to have a persistent breech presentation with polyhydramnios up to term. Ultrasonographic examination revealed polyhydramnios with an anencephalic fetus with omphalocele. She and her husband were counseled and consent was obtained for induction of labor. Induction was successful and she delivered a growth retarded fresh still born female anencephalic fetus weighing 900 g. She was discharged home on the same day and advised to come for preconceptual counseling and to attend the antenatal clinic as soon as she conceives again. The diagnosis of anencephaly is discussed.

HISTORY OF PRESENT PREGNANCY:

Mrs. M. M., a 23 years old primigravida had her last normal menstrual period on 30.09.92 and her expected date of confinement was on 07.07.93. She had booked at Mbagala antenatal clinic at the gestational age of 16 weeks and attended the clinic seven times. She remained normotensive with a blood pressure ranging from 90-120/50-70 mm of Hg. In the last trimester she had an average weight gain of 1 kg per week and developed pedal edema. The uterine fundal height always

corresponded with the gestational age by dates. The lie of the fetus remained longitudinal, but the presentation was persistently breech. At 34 weeks of gestation, the abdomen was noted to be tense and shiny. The fetal heart sounds were inaudible using the Pinards fetoscope, although the patient denied absence of fetal movements nor the presence of any pressure symptoms. An ultrasound scan was requested then in view of the polyhydramnios, to exclude any congenital malformations but since facilities were not available at that time, the investigation was postponed until she went into spurious labor at 39 completed weeks.

She stayed in the labor ward for 6 hours without any uterine contractions and a pelvic examination showed a long, firm cervix with a closed os, and a high presenting part. She was diagnosed to have false labor pains and was sent to the antenatal ward for further investigations and management.

She did not recall having suffered from fever or rashes in early pregnancy, nor was she exposed to any children suffering from childhood viral diseases. There was no history suggestive of syphilis. She had not taken any drugs in early pregnancy with the exception of iron and folic acid tablets which had been prescribed her after she booked at 16 weeks of gestation. There was no history of exposure to irradiation during the early months of pregnancy.

Obstetrical and Gynecological History:

She was a primigravida and had attained menarche at 13 years of age. She had regular menstrual cycles of 30-32 days with a normal flow of 4-5 days. She had never used any contraceptives.

Previous Medical History:

There was no history of serious illnesses in the past.

Family History:

She was the first born in a family of five, and all the other siblings were normal. Her maternal aunt was hypertensive. There was no history of diabetes mellitus or twins or of congenital malformations in the family.

Social History:

She was a housewife, married to a clerk. She was a Kinga by tribe and was originally from Iringa, but had moved to Dar-es-Salaam two years previously when she got married. She was a non-smoker and did not take alcohol.

PHYSICAL EXAMINATION ON ADMISSION AT THE ANTENATAL WARD:

General Examination:

Her general condition was satisfactory. She was neither pale, nor febrile and had no pedal edema.

Cardiorespiratory Systems:

These were essentially normal. She was neither dyspneic nor orthopneic. Her pulse rate was 96 beats per minute and her blood pressure was 110/70 mm of Hg. Both heart sounds were normal and the chest was clear.

Abdominal Examination:

The abdomen was tense, shiny and distended uniformly. The uterine fundal height was 36 weeks. The lie and presentation could not be appreciated with certainty. The fetal heart sounds were not audible with the Pinards fetoscope.

Pelvic Examination:

The cervix was soft, anterior and almost effaced. The os was closed. The presenting part was high and could not be appreciated. The pelvis was adequate.

INVESTIGATIONS AND RESULTS:

1. Hemoglobin: 9.0 g/dl.
2. VDRL : Negative
3. Blood group: A positive.
4. Random blood sugar: 4.8 mmol/l.
5. Serum alpha-feto protein levels: not done.
6. Plain X-ray abdomen:

   Singleton fetus, cephalic presentation with no cranial vault.

7. Ultrasonographic examination:

   A small singleton fetus with a cephalic presentation and a hyperextended neck was noted. The biparietal diameter was not obtained because of the absence of the cranial vault. A typical "frog's eye" appearance was noted. The spine and limbs appeared normal. The intestines were herniating through the anterior abdominal wall, and the umbilical cord had a single umbilical artery and vein. Cardiac activity was normal and the fetus was very active. There was an excessive amount of liquor with the vertical column measuring 87 mm. The placenta was on the anterior upper uterine segment.

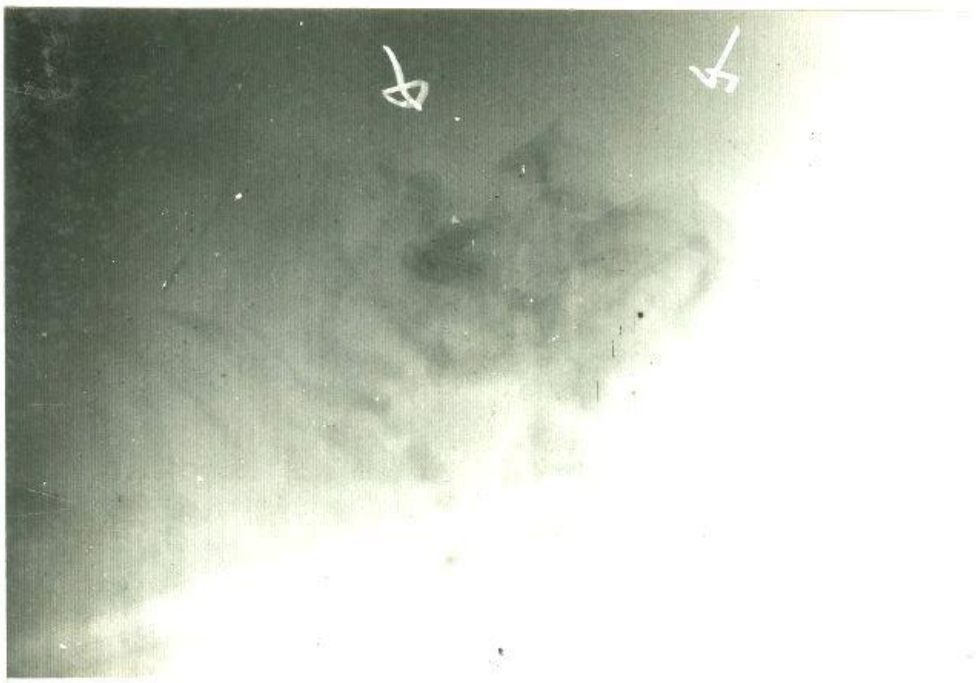
DIAGNOSIS:

Polyhydramnios with multiple fetal anomalies.

PLAN OF MANAGEMENT:

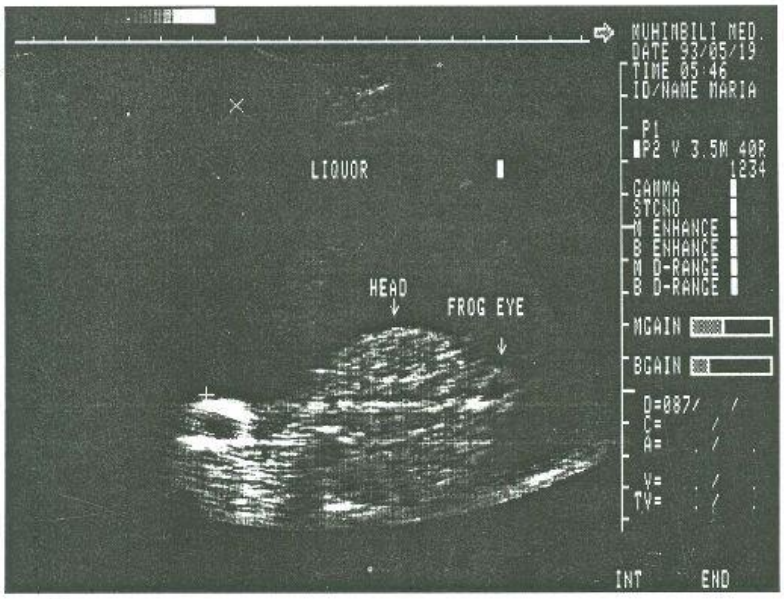
1. Counsel both partners.
2. Induction of labor the following day.
3. Group and cross match two units of blood.
4. Consent for induction.

A N E N C E P H A L Y :

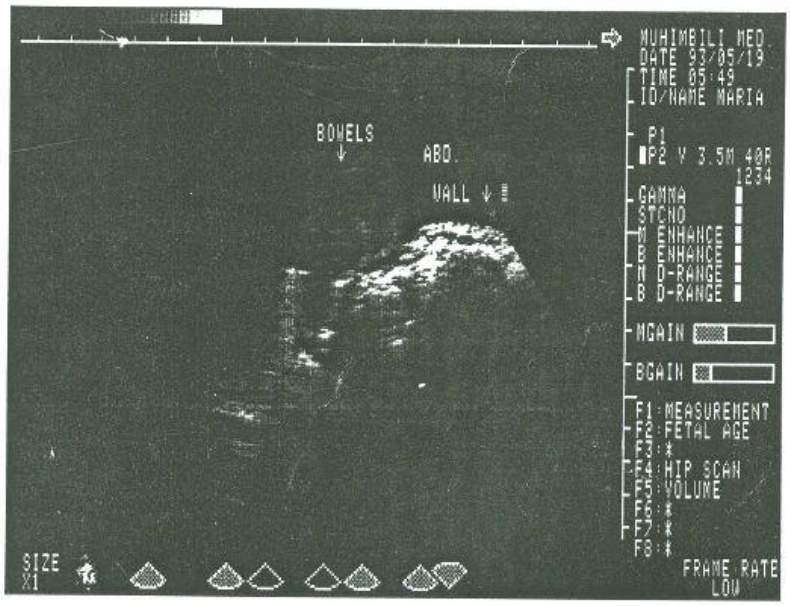


Anencephaly: Plain X-ray abdomen: Section showing the fetal skull with absence of the cranial vault.

A N E N C E P H A L Y: Utrasonographic examination



Coronal sonogram through the face shows the absence of the cranial vault with the classic "frog eye" appearance. Note the excess liquor amnii.



Omphalocele: Bowel herniated through a large abdominal wall defect, with intact membranes. Umbilical cord inserted into the apex of the eviscerated structures.

INDUCTION OF LABOR:

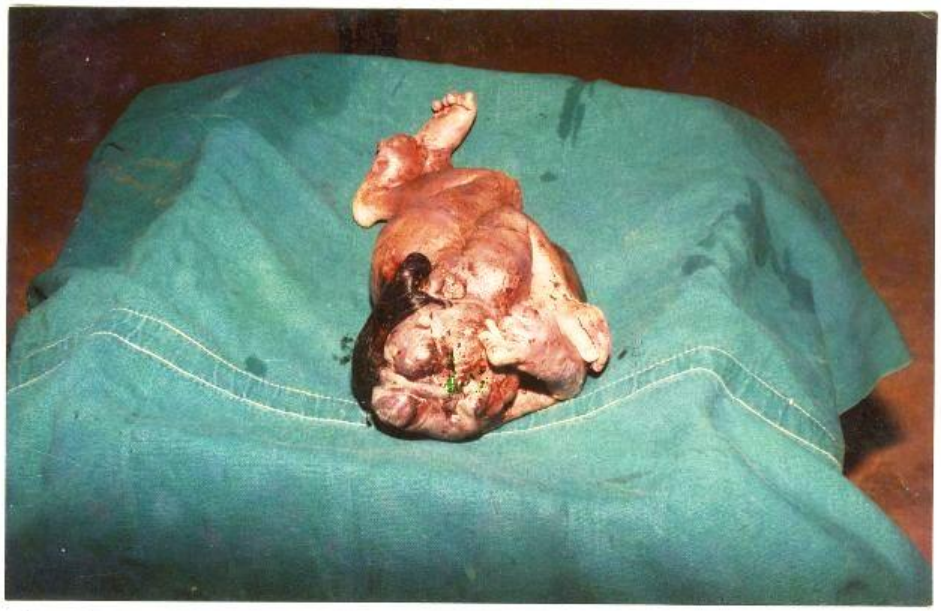
The patient was prepared and taken to the labor ward early the following morning for induction of labor. She was reassessed and the cervix was found to be fully effaced and the os could admit just the tip of a finger. The membranes were intact and bulging. The presenting part could not be appreciated. The following were done:

1. Medical induction was begun with 10 i.u. of syntocinon in 1000 ml of 5% dextrose administered intravenously at 10, 20, 30, 40, 50, 60 drops per minute escalating every 15 minutes.
2. Uterine contractions were monitored half hourly and any abdominal tenderness was watched for.
3. Fetal heart sounds were not monitored.
4. Vital signs were monitored half hourly.
5. A nurse stayed with the patient as often as was possible to maintain the patient's morale.
6. A pelvic assessment was done 4 hourly.

Contractions had not yet begun when the next pelvic assessment was due, so it was deferred. Syntocinon was increased to 12.5 i.u. in 1000 ml 5% dextrose and escalated as above. By 8 hours, regular uterine contractions had been established every 2-3 minutes. Pelvic examination was done and showed the cervix to be fully effaced and 4 cm dilated with the bag of forewaters bulging. A controlled artificial rupture of forewaters was done and about 4 liters of old meconium stained liquor was released very slowly over 15 minutes. The uterine fundal height decreased to 28 weeks size.

An hour after rupture of membranes, she delivered a female fetus, weighing 900 g by assisted breech delivery. The fetus gasped and died

A N E N C E P H A L Y:



Anencephaly: Absence of the cranial vault, prominent eyes bulging from the sockets, tongue hanging from the mouth.

Anencephaly: Excoriation on the back due to flexion defect.

A N E N C E P H A L Y:



Anencephaly: Flexion deformity of neck and limbs seen with a large anterior abdominal wall defect (omphalocele).



Anencephaly: Omphalocele, membrane covering bowels which are visible. Umbilical cord insertion seen.

before delivery of the after-coming head. The baby was growth retarded, anencephalic with an omphalocele. The umbilical cord was attached to a membrane which covered the bowels. The cord had a single artery and vein. Both hands had flexure deformities. There was an excoriation on the back due to flexion defect.

Syntocinon drip was continued right through the third stage of labor and for an hour thereafter. The placenta and membranes were delivered entire by controlled cord traction and the blood loss was about 100 ml. The mother was shown the baby and accepted the situation without fear, as she had received adequate counseling antenatally. She was discharged home on the same day and advised to come for prepregnancy counseling before she decides to conceive again, and that she should book at a high risk antenatal clinic as soon as she conceives.

COMMENTARY:

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

Nothing definite is known about the cause of anencephaly, but it appears that both genetic and environmental factors play a part in its causation. There could be a possible role of folic acid in the genesis of neural tube defects. A genetic factor is suggested by the high frequency with which this malformation recurs in subsequent pregnancies[1].

In Mrs. M. M.'s case, hydramnios with difficulties encountered in

palpation of lie and presentation led to the suspicion of congenital abnormalities which were diagnosed antenatally by radiological and ultrasonographic examinations. Elevated levels of alpha-feto protein in amniotic fluid reliably predict larger neural tube defects, including anencephaly. Closed or very small open neural tube abnormalities may not be detected. Since facilities for estimating alpha-feto protein levels were not available, ultrasonography alone was relied upon in the diagnosis. With advances in ultrasonographic technology, it is possible to give a definitive diagnosis of anencephaly.

Polyhydramnios:

By definition, polyhydramnios is present when amniotic fluid volume exceeds 1500 ml. Calculation by ultrasonographic techniques is possible [total intrauterine volume - (placental volume + fetal volume)], but it is not necessary. Polyhydramnios is a gestalt sonographic observation; in addition to the increased fluid volume, the ultrasonographer would be struck by the detailed visualization of the umbilical cord, limbs, etc. which is facilitated by the increased fluid volume. Approximately 39 per cent of patients with polyhydramnios will have a fetus affected by a developmental anomaly, and many of these anomalies can be detected by ultrasonography. The most common anomalies associated with polyhydramnios are central nervous system abnormalities e.g. anencephaly, hydrocephaly and spina bifida; less common anomalies include gastrointestinal tract and genito-urinary tract obstruction, pulmonary hypoplasia and the hydropic form of erythroblastosis fetalis. Twins will be detected in up to 9 per cent of patients with polyhydramnios and this should redouble the effort to search for fetal anomalies, since the incidence of congenital malformations (with or

without polyhydramnios) is increased in multiple gestations. Diabetes mellitus will be an associated finding in 7 per cent of cases with polyhydramnios, but up to 45 per cent will be associated with a normal mother and fetus[2].

Anencephaly:

The fetal head can be identified as early as the ninth menstrual week and the identification of the midline echo and measurement of the biparietal diameter are possible by 12 - 13 weeks. Anencephaly can be diagnosed by 14 - 15 weeks. If in doubt, amniocentesis can be performed at 15 - 16 weeks for the determination of amniotic fluid alpha feto-protein levels, which are elevated in positive cases. The typical sonographic findings in anencephaly are identification of the facial bones and the base of the skull but a virtual absence of more rostral portions of the head, including the cerebral hemispheres. The polyhydramnios that accompanies this condition makes imaging quite easy and facilitates earlier diagnosis. The only situation in which a false positive diagnosis might be considered is in the third trimester of pregnancy when the head is "lost" in the maternal pelvis. With appropriate bladder filling, this problem can be avoided[2].

Spinal dysraphism:

The optimal time for ultrasonographic examinations of the fetal spine to exclude spina bifida is 17 -18 weeks. Ideally, the fetus should be in a prone position. In cases of spina bifida there is typical flaring of the lateral masses of the vertebral bodies involved. If there is herniation of the meninges (meningocele, myelocele), the result is a mixed echogenic paraspinous mass. Spina bifida usually occurs in the cervical or lumbosacral areas of the fetal spine, but it may also

occasionally involve the thoracic area. Differential diagnosis is from cystic hygroma or sacrococcygeal teratoma[2].

Hernia:

Omphalocele: Is a bulge in the umbilical cord near its entry into the fetus. It is covered by peritoneum and Wharton's jelly, but not by skin[2].

Umbilical cord:

Can be identified as early as the second trimester. The typical appearance is a series of parallel linear echoes; and the cord can be seen to pulsate at the fetal heart rate. When the ultrasonographic beam is directed at right angles to the long axis of the cord, the umbilical vein and two umbilical arteries can be seen. In the full term fetus, the vein is approximately 1 cm in diameter and the arteries are approximately 4 mm in diameter. A single umbilical artery should alert one to the fact that the pregnancy is at an increased risk for fetal congenital anomaly, diabetes or multifetal gestation[2].

Specifics of what to do after detection of a fetal anomaly are as follows:

1. If one anomaly is found, the ultrasonographer should search closely for other anomalies, since these frequently coexist.
2. It should be determined if the condition is compatible with extrauterine survival.
3. The effect of the anomaly on the timing and mode of delivery should be considered.
4. A neonatologist and pediatric surgeon should be alerted so that plans may be made for coping with complications secondary to the anomaly that may occur in the perinatal period.

An anencephalic fetus is usually stillborn, and even when it is born alive, it cannot survive more than a few hours or days[3]. As soon as the diagnosis and implications were explained to the patient, she insisted that the pregnancy be terminated as soon as possible. This was acceded to, but the risks and difficulties were borne in mind. Rupture of membranes could have been followed by abruption, the placenta being sheared off by the sudden reduction in the size of its implantation site. Nevertheless, induction is likely to be difficult and labor ineffective unless the volume of the uterine contents is first reduced. Probably the safest method is to drain the amniotic sac by puncturing the hindwaters with a Drew-Smythe catheter. Usually an escalating oxytocin drip then completes the labor. In our case, since good uterine response was obtained to oxytocin alone, there was no need to drain the hind-waters.

REFERENCES:

1. Cunningham FG, MacDonald PC, Gant NF. Congenital malformations and inherited disorders. Neural tube defects: Anencephaly. Williams Obstetrics 18th edition, 1989. Ch. 32 pg. 574-576. Publishers: Appleton and Lange, 25 Van Zant Street, East Norwalk, Connecticut 06855.

2. Hadlock FP: Ultrasonography in Obstetrics and Gynecology. 2nd edition, 1985. Ch. 6. pg 68. Publisher The C. V. Mosby Co., 11830 Westline Industrial Drive, St. Louis, Missouri 63146.

3. Lawson JB. Clinics of Obstetrics and Gynecology. Vol. 9 No. 3 December 1982. Delivery of the hopelessly malformed fetus. Anencephaly. Pg. 747. Publisher W.B. Saunders Co. Ltd. 1 St. Anne's Road, Eastbourne, East Sussex BN 21 3UN.

OB.10 SPONTANEOUS RUPTURE OF UTERUS: REPAIR AND TUBAL LIGATION

NAME : Mrs. A. P.

AGE : 25 years

GRAVIDITY : 2 para 1

REGISTRATION NO. : 58/92

DELIVERY NO. : 6914

DATE OF ADMISSION : 04.05.92

DATE OF DISCHARGE : 11.05.92

SUMMARY:

Mrs. A. P., a 25 years old gravida 2 para 1 was admitted to the labor ward at 37 weeks of gestation with a history of sudden onset of epigastric pain with cessation of fetal movements. On examination she was found to have features suggestive of hypovolemic shock and abdominal findings suggestive of uterine rupture. A fundal rupture of the uterus was confirmed at laparotomy. Repair of the uterus and tubal ligation were done. She had an uneventful postoperative period and was discharged home on the 7th post operative day. She was advised to come again at the postnatal clinic for follow-up and counseling after 6 weeks.

HISTORY OF PRESENT ILLNESS:

Mrs. A. P., a 25 years old gravida 2 para 1 had her last normal menstrual period on 18.08.92 and her expected date of confinement was on 25.05.92. She was admitted to the labor ward at 37 weeks of gestation with a history of sudden onset of acute epigastric pain and vomiting which was accompanied simultaneously by cessation of fetal movements.

She had attended a peripheral hospital for the same complaints and was referred to our institution as a case of acute abdomen in pregnancy. She arrived at our institution two hours later, having had two episodes of fainting attacks. The pain had become generalized all over the abdomen and she was sweating. She denied having had any trauma prior to the occurrence of these symptoms, neither did she experience any contractions or have any bleeding per vagina.

History of present pregnancy:

She had booked at Kigamboni antenatal clinic at 22 completed weeks of gestation. She had been normotensive at all her visits with a hemoglobin of 10 g/dl. The uterine fundal height corresponded with the gestational age. Slight pedal edema was noted from 32 weeks of gestation. On the day of admission, she had visited the antenatal clinic with complaints of vomiting and abdominal discomfort with palpitations and was referred this center. On arrival three hours later her symptoms had worsened.

Previous Obstetric History:

She had a spontaneous vaginal delivery of a 3.0 kg baby at term in 1985 and the child was healthy. There was no history of abortions.

Gynecological history:

She attained menarche at 14 years of age, and had a regular 28 - 30 days cycle with a normal flow of 4 - 5 days.

She had never used any contraceptives and had secondary infertility for 7 years. She gave a history of having had three diagnostic dilatation and curettage done within the past 5 years in an attempt to investigate into her problem of infertility.

Previous Medical History:

There was no history of any serious illnesses in the past.

Family and Social History:

She was a nurse auxiliary at a District hospital and was married to a businessman. There was no family history of hypertension or diabetes mellitus.

PHYSICAL EXAMINATION IN THE LABOR WARD:

General examination:

She was very pale, restless and sweating. Her extremities were cold and clammy, and there was slight pedal edema.

Cardiorespiratory systems:

The pulse was thready and rapid, with at a rate of 116 per minute. The blood pressure was 70/40 mm of Hg. Both heart sounds were heard and there was tachycardia. She was dyspnoeic and tachypneic, with a respiratory rate of 42 per minute.

Abdominal examination:

The abdomen was irregularly distended and tense. The liver and spleen were not palpable and the renal angles were not tender. There was generalized tenderness over the abdomen. The uterine fundal height corresponded to 36 weeks. The uterus was tender and there were no uterine contractions. Fetal parts were easily palpable and fetal heart sounds were not audible. Signs of free fluid in the peritoneal cavity were elicited. There was rebound tenderness and guarding.

Pelvic examination:

There was no bleeding per vagina and a digital examination was not done.

DIAGNOSIS:

Spontaneous rupture of the uterus.

PLAN OF MANAGEMENT:

1. Grouping and crossmatching for 4 units of blood was requested.
2. Intravenous normal saline 3 liters to run rapidly.
3. An urgent laparotomy was scheduled.
4. Consent was obtained for general anesthesia and surgery.

LAPAROTOMY: REPAIR OF UTERUS AND TUBAL LIGATION:

Anesthesia:

This was administered as described in Obstetric case No. 3.

LAPAROTOMY:

The abdomen was opened as described in the above case.

Findings:

There was a massive hemoperitoneum estimated to 2.5 liters. A fresh still born female baby weighing 3.2 kg lying in the peritoneal cavity. The uterus was ruptured at the fundus from the left to the right cornua, with the sharp edges resembling a surgical incision, not bleeding actively, with the placenta extruding from the uterine cavity into the peritoneal cavity through the rent in the uterus. There was no evidence that the placenta was accreta. The bladder was normal. There were flimsy adhesions on the anterior and posterior uterine surfaces. Both adnexa were normal.

Done:

The baby was delivered and the placenta was removed entire.

The uterus was repaired in three layers, as described in Obstetric case No. 4 and hemostasis was achieved satisfactorily.

Bilateral tubal ligation:

This was done as described in Obstetric case No. 8.

Peritoneal lavage was done with normal saline and the peritoneal cavity was cleaned well. The abdomen was closed in layers as described in Obstetric case No. 3.

The estimated blood loss was approximately 2500 ml.

POST OPERATIVE ORDERS:

1. Monitoring of pulse rate, respiratory rate and blood pressure were done half hourly until stable then 4 hourly.
2. Intravenous dextrose saline 3 liters were infused in 24 hours.
3. Three units of blood were transfused.
4. Injection pethidine 100 mg intramuscularly 6 hourly for 24 hours.
5. Injection ampicillin 500 mg intravenously 6 hourly for 24 hours, then capsules ampicillin 500 mg orally 6 hourly for 4 days.
6. A fluid input/output chart was maintained.

POST OPERATIVE FOLLOW-UP:

She had an uneventful post-operative period. The vital signs remained stable and she was ambulant by the second post operative day. Her hemoglobin was 5.5 g/dl and she was given Imferon injections 10 ml intramuscularly daily for 3 days and oral folic acid 5 mg daily. Her wound healed well, sutures were removed on the seventh post operative day and she was physically fit to be discharged home. She remained depressed for having lost her baby. She was asked to come again to the postnatal clinic 6 weeks later for follow-up and counseling.

FOLLOW-UP:

She came for her follow-up visit earlier than scheduled, and looked calm and well composed. Her wound had healed well and the uterus was well involuted. She was then counseled as to why tubal ligation had to be done and that her obstetric career was over, but her menstrual function was preserved. She was patiently told that the possibility of a similar problem arising in her future was very high and risky to her life and this had led the surgeon to the decision of sterilizing her. She seemed to understand and accept as she was a nurse and was grateful that her own life had been saved.

COMMENTARY:

Rupture of the uterus may be spontaneous or induced by oxytocin or iatrogenically by operations for the relief of obstruction due to prolonged labors, big babies, etc. It is influenced by increase in parity, the peak incidence being in the third and fourth labors [1]. Rupture of the unscarred uterus is usually the end result of obstructed labor in the multigravid patient [2].

Ruptures of the uterus usually start in the lower segment and may extend to the upper segment, and most commonly it is the anterior wall which is involved, the direction being transverse usually, followed by longitudinal ruptures of the lateral wall of the lower uterine segment, which may extend up to the fundus or downwards to the vagina. Posterior ruptures are the least common and occasionally, multiple ruptures may occur[2].

The rupture of uterus in Mrs. A. P.'s case was remarkable in the sense that it occurred in her second pregnancy, without the onset of labor and without any history of trauma. Furthermore, the nature and site of the

rupture were also very uncommon. It has been mentioned in various studies done that fundal ruptures of a similar kind are commonly found in women who have had terminations of pregnancy done by unskilled abortionists. The complication can even occur among experienced gynecologists during dilatation and curettage done for investigative purposes as was done in this case, or during menstrual regulation [3]. Mittal and Misra had an incidence of 4/1000 during medical termination of pregnancy[3]. It is very likely that in Mrs. A. P's case, the dilatation and curettage procedures she had for investigation on infertility may have been more complicated than she claimed and could have caused a scar in her uterus.

The management of rupture of the uterus depends on several factors. The nature and the site of the rupture; that is, vertical versus transverse rupture in the upper or lower uterine segment. Other factors include the patient's parity and her desire for future pregnancies or menstruation. Involvement of the uterine artery in the rupture could govern the mode of management. The skill of the operator and the condition of the patient will also dictate on the treatment modalities. The treatment modalities include: total abdominal hysterectomy, subtotal abdominal hysterectomy and repair of the uterine scar with or without tubal ligation. Leaving the fallopian tubes untied after repair of the uterus should be left to those patients with rupture in the lower uterine segment and in whom adequate antenatal care and timed delivery are possible.

Since Mrs. A. P. was seen at a stage when her uterus had already ruptured, her clinical signs and symptoms made the diagnosis of a ruptured uterus very obvious and an emergency laparotomy was decided upon as a life saving

measure. Since there was no history of prolonged labor, or signs of infection, and the edges in the rent in the uterus were clean and healthy, a decision to repair the uterus was undertaken rather than performing a subtotal hysterectomy, in order to preserve her menstrual function. When repair is done, it is almost always necessary to do a tubal ligation as subsequent pregnancy would be a great risk[2]. Since the rupture in this case was in the upper uterine segment, the surgery was concluded by doing a bilateral tubal ligation despite the fact that the patient was only para 1, because of the fear the scar of a repaired uterus is more likely to rupture in subsequent pregnancies. In this case, because of the urgency of the situation, and the condition of the patient on admission, it was not possible to counsel the patient on the management, and then to obtain her informed consent. The surgeon was hence forced to make a decision intraoperatively of ligating the tubes, for fear of a similar condition arising in future pregnancies and jeopardizing her life.

REFERENCES:

1. Lawson JB: Rupture of the uterus. Sequelae of obstructed labor. Obstetrics and Gynecology in the Tropics and Developing Countries. Reprinted 1988, Ch. 12 pg. 203-205. Publishers ELBS/Edward Arnold Ltd. 41 Bedford Square, London WC 1B 3DQ.
2. Philpot RH: Clinics in Obstetrics and Gynecology Vol. 9 No.3 December 1982 pg 637-638. Publishers ELBS/Edward Arnold Ltd. 41 Bedford Square, London WC 1B 3DQ.
3. Kaali GS, Szigetvani JA, Barrjai GS: The frequency and management of uterine perforations during the first trimester abortions. American

G.1 TUBAL GESTATIONAL TROPHOBLASTIC DISEASE:

ADNEXECTOMY AND CHEMOTHERAPY

NAME : Mrs. A. P.

AGE : 19 years

REGISTRATION NO : 741006

RESIDENCE : Mwanza

DATE OF ADMISSION : 06.03.93

DATE OF DISCHARGE : 10.06.93

SUMMARY:

Mrs. A. P., a 19 years old para 1 presented at Mwanza with a gestational trophoblastic disease of the fallopian tube arising from a tubal pregnancy. Initial treatment consisted of an adnexectomy and she was then referred to our center for chemotherapy. She was worked up and given 5 courses of methotrexate. While on cytotoxic therapy, she developed symptoms suggestive of infection with the HIV (human immunodeficiency virus) which was confirmed serologically. She responded well to treatment and was discharged home well on oral contraceptive pills and advised to continue her follow-up at Mwanza. The possible association between HIV and gestational trophoblastic disease is discussed.

HISTORY OF PRESENTING ILLNESS:

Mrs. A. P., a 19 years old para 1 $^{(+1)}$ was referred from Mwanza with a diagnosis of tubal gestational trophoblastic disease after a laparotomy performed for a suspected ectopic pregnancy three weeks prior to admission at our center.

Three months after spontaneous vaginal delivery of her first child, she complained of lower abdominal pain and spotting per vagina,

which she attributed to lactation. When the pain increased, she also noticed she had symptoms of pregnancy and a growing abdominal mass. She also complained of chest pain and cough with blood stained sputum. She had no headache or blurring of vision.

When she went to Bugando hospital with the above complaints, a provisional diagnosis of an old ectopic pregnancy was arrived at and a laparotomy was performed. Intraoperatively, a right tubal ectopic gestation was noted with encysted hemorrhage and vesicles. The ovaries were normal. Further evaluation postoperatively revealed 'cannon balls' in the chest X-ray and a positive urine for pregnancy test three weeks after the operation.

Obstetric History:

She had a spontaneous vaginal delivery at term with an uneventful puerperium. The female child aged 7 months at admission, was alive and well.

Gynecological History:

She had attained menarche at 13 years of age and her menstrual cycles were regular, with periods lasting 2-4 days and occurring every 28-30 days. She had never used any contraceptives although she was sexually active. She had lactational amenorrhea until October 1992, followed by spotting per vagina up to the time of admission.

Previous Medical History:

She had no serious illnesses in the past.

Family and Social History:

She was separated from her husband who was a miner. She was now cohabitating with a new partner, a businessman, who had fathered the last pregnancy. There was no family history of hypertension or diabetes

mellitus in the family nor was there any history of contact with tuberculosis.

PHYSICAL EXAMINATION:

General condition:

She was lean and weak, but not wasted. She weighed 50 kg and was moderately pale, had no jaundice or edema. There was no generalized lymphadenopathy.

Breast Examination:

Both the breasts were normal and she was lactating.

Cardiorespiratory Systems:

Both lung fields were clinically clear and both heart sounds were normal.

Abdominal Examination:

The abdomen was non distended and the subumbilical midline scar had healed well. The abdomen was soft with no hepatosplenomegaly. The renal angles were not tender. There were no masses palpable per abdomen and there was no tenderness.

Pelvic Examination:

The vulva and vagina and external urethral meatus were normal. The cervix appeared healthy with darkish blood oozing through the os. The cervix was long, firm and closed, cervical excitation test was negative. The uterus was normal sized, and relatively fixed. The adnexa were not palpable and the fornices were free.

INVESTIGATIONS AND RESULTS:

1. Full blood picture:

Hemoglobin = 7.0 g/dl

Platelets = 195,000/mm^3

Red blood cells:

Total count = 3 700 000/mm^3

Morphology : Hypochromasia with microcytosis and few cells with anisocytosis.

White blood cells:

Total leukocyte count = 9,800/mm^3

Differential count:

Neutrophils = 60%

Lymphocytes = 34%

Eosinophils = 1%

Basophils = 0%

2. Liver function tests:

serum bilirubin = 12 umol/l

Alkaline phosphatase = 90 u/l

3. Serum creatinine: 89 umol/l

4. Chest X-ray: Cannon ball deposits were seen.

5. Sputum for acid fast bacilli was NEGATIVE on three occasions.

6. Ultrasonographic Examination:

An empty, normal sized uterus (uterocervical length measuring 69 mm). The right adnexa was not visualized and there was a left ovarian cyst measuring 30 mm x 36 mm.

7. Dilatation and Curettage:

This was done as described for Gynecological case No: 3 using Karman's canula No. 4. The histopathological results of the endometrial curettings showed characteristic decidual changes but no villus formation or trophoblastic tissue.

. Blood group: O Rh Positive

Spouse's blood group not known.

9. Urine for pregnancy test: POSITIVE
10. 24 hour urine sample for HCG (human chorionic gonadotrophin) titres = 95 000 I.U.
11. ELISA for HIV screening: POSITIVE
12. Westernblot Assay: POSITIVE

DIAGNOSIS:

Tubal metastatic gestational trophoblastic disease.

PLAN OF MANAGEMENT:

1. Hematinics were given.

   Injection Imferon 10 ml deep intramuscularly daily for 3 days.

   Tablets folic acid 5 mg daily orally.

2. Single agent chemotherapy was begun.

   Tablets methotrexate were given 2.5 mg thrice daily for 5 days, for 5 courses, with a resting phase of 7 days in between courses.

FOLLOW-UP DURING THE COURSE OF TREATMENT:

After each course of methotrexate, she was given a resting phase of 7-9 days during which time the physical examination and blood investigations were repeated, before starting a new course.

During the second course of methotrexate, she developed stomatitis which was effectively treated with mycostatin oral suspension.

After the third course of methotrexate, she developed oral thrush, pustular skin lesions and left cervical lymphadenopathy with recurrent upper respiratory tract infection. These symptoms could not be explained by the cytotoxic treatment alone, hence serological tests for human immunodeficiency virus (HIV) were requested. These tests showed positive serology for HIV. By this time, the chest X-ray was

normal. The urine for pregnancy test was still positive and the 24 hour urine HCG levels were reduced to 35 000 I.U. The rest of the blood investigations were within normal limits and the hemoglobin had risen to 10.2 g/dl.

Treatment with methotrexate was continued until 5 courses were completed. The urine for pregnancy test became negative after the final course and remained negative at monthly intervals for 3 months while she was still waiting for transport back home.

She was counselled on the new development and was given one year's supply of oral contraceptive pills before being discharged home and was requested to continue follow-up at Mwanza.

COMMENTARY:

Gestational trophoblastic disease of the fallopian tube is difficult to diagnose; it usually masquerades as an ectopic pregnancy, including the presence of an adnexal mass, irregular intermittent bleeding or an acute episode of intra-abdominal bleeding, following amenorrhea, nausea and vomiting with elevated beta-HCG (human chorionic gonadotrophin) titres. Its nature is often not recognized until the excised tube is examined microscopically [1]. In our case, the diagnosis was arrived at intraoperatively by macroscopic examination and the affected adnexa was removed. The opposite ovary, although cystic was conserved. Unfortunately, facilities for histopathology were not available so the specimen was not examined microscopically.

After thorough work up at our center, she was considered as a low risk metastatic gestational trophoblastic disease, using the World Health Organization Scoring System based on Prognostic Factors [2]. As noted she responded well to the treatment regimen despite the fact that she

had Acquired Immune Deficiency Syndrome (AIDS).

One wonders whether there is any correlation between the two diseases or was this just a coincidence. The human immunodeficiency virus (HIV), causing AIDS, while selectively infecting the thymus derived (T) lymphocytes of the helper/inducer subtype, causes qualitative and quantitative deficiencies not only in the cellular limb of immune response but also in the humoral limb as humoral response depends on cellular mechanism[3]. This global immune depression results in derangement of natural killer cells, cytotoxic T cells, monocytes, macrophages, interleukins and cytotoxin, all of which are effectors in tumor immunosurveillance. Hence it is no wonder that certain malignancies are frequently described with AIDS [4]. HIV infection is associated with lymphoreticular malignancies, Kaposi's sarcomas and certain types of squamous cell carcinomas but reports of other cancers described with AIDS are infrequent. Choriocarcinoma has never been described with this entity in the literature previously [5]. There is reason to believe that suppression of cell mediated immunity by HIV infection can significantly hamper effectors of tumor immunity[3]. Can this lead to an increased risk of developing gestational trophoblastic tumors and a poor response to chemotherapy in cases of choriocarcinoma?[5]. Mrs. A. J. was fortunate to have responded to chemotherapy despite being infected with HIV (human immunodeficiency virus), and more studies need to done in find out whether an association exists between the two.

REFERENCES:

1. Dekel A, Iddikinge BV, Isaacson C, Dicker D, Feldberg D, Goldman J: Primary choriocarcinoma of the fallopian tube. Report of a case with survival and postoperative delivery. Review of Literature. Obstetrics and Gynecologic Survey. Vol. 41 NO.3 pg 142-147, March 1986.

2. Mortakis AE, Braga CA: "Poor prognosis" Metastatic Gestational Trophoblastic Disease: The Prognostic Significance of their Scoring System in Predicting Chemotherapy Failures. Obstetrics and Gynecology Vol. 76, No. 2, pg 272-277 August 1990.

3. Beverly P, Sattentau Q: Immunology of AIDS. British Medical Journal 294: 1536, 1987.

4. Smith N, Spittle M: ABC of AIDS: Tumors. British Medical Journal 294: 1274,1987.

5. Ojwang SBO, Otieno MRB, Khan KS: Human immunodeficiency virus in gestational trophoblastic neoplasias - is it a poor prognostic risk factor? The East African Medical Journal. Vol. 69 No. 11, November 1992.

G.3 INCOMPLETE ABORTION IN AN ADOLESCENT WITH DOWN'S SYNDROME: MANUAL VACUUM ASPIRATION FOLLOWED BY NORPLANT INSERTION

NAME : Miss G. A.

AGE : 14 years

REGISTRATION NO : 723112

RESIDENCE : Kinondoni

GRAVIDITY : Primigravida

DATE OF ADMISSION : 15.10.92

DATE OF DISCHARGE : 15.10.92

SUMMARY:

Miss G. A., a 14 year old adolescent with Down's syndrome was brought to the gynecological clinic with complaints of bleeding per vagina with lower abdominal pain. Clinical examination suggested an incomplete abortion. Manual vacuum aspiration followed by postabortal NORPLANT insertion were done, considering the child's mental condition. She was discharged home well on the same day and advised to attend the gynecological outpatient department 6 weeks later for follow-up. Post-abortion family planning in the mentally handicapped is discussed.

HISTORY OF PRESENTING ILLNESS:

Miss G. A., a 14 year old adolescent with Down's syndrome was brought to the gynecological outpatient department by her elder sister with complaints of lower abdominal pain and heavy bleeding per vagina for the past 6 hours. Her sister was not sure whether the patient was pregnant, but she had noticed the child retching after breakfast every morning for the past week. There was no history of fever or micturition

disturbances.

Gynecological History:

She had attained menarche at 13 years and had periods regularly every 30-32 days with a normal flow lasting 2-3 days. Her last normal menstrual period, as noted on her sister's calendar, was on 19.08.93.

Previous Medical History:

There was no history of serious illnesses in the past.

Family and Social History:

She was the last born in a family of 14 children and an orphan. All her sisters and brothers were alive and well. She was not schooling as her sister could not afford to send her to a special school for the mentally handicapped. There was no family history of hypertension or diabetes mellitus.

PHYSICAL EXAMINATION:

General appearance:

She had typical Down's facies. She was short, with her tongue protruding from an open mouth. The palpebral fissures were oblique with inner epicanthic folds, small earlobes, flat occiput and a flat nasal bridge. The hands were short and broad with short fingers and simian palmar creases. There was a wide space between the first and second toes.

General condition:

She was afebrile and moderately pale. She had no edema and there was no lymphadenopathy.

Cardiorespiratory Systems:

These were essentially normal. There were no murmurs.

Abdominal examination:

The abdomen was non-distended and soft. The liver and spleen were not palpable and the renal angles were not tender. Suprapubic tenderness was elicited on deep palpation and the uterus was not palpable.

Pelvic examination:

The vulva was stained with blood but a digital examination was not possible as the child was very apprehensive. An ultrasonographic examination was done to aid in the diagnosis.

INVESTIGATIONS AND RESULTS:

1. An ultrasonographic examination showed a bulky uterus containing a distorted gestation sac situated just above an open cervix. The fetus whose crown-rump length was consistent with a gestational age of only 6 weeks was seen and no fetal heartbeats were detected.
2. Hemoglobin was 11.8 g/dl.

DIAGNOSIS:

Incomplete abortion.

PLAN OF MANAGEMENT:

1. The diagnosis and management was discussed with the sister, with advice and counseling on postabortal family planning.
2. The patient was prepared for manual vacuum aspiration and Norplant insertion under general anesthesia.
3. Consent was obtained for anesthesia, evacuation and Norplant insertion from the sister.

OPERATIVE PROCEDURE:

Anesthesia:

She was induced using thiopentone 250 mg intravenously and maintained on nitrous oxide and oxygen in a ratio of 50:50.

EXAMINATION UNDER ANESTHESIA:

She was put in lithotomy position. The vulva was cleaned using savlon 1:20 solution. She was draped with sterile linen and catheterization was done as follows:

Bladder catheterization:

The labia minora were parted between the left thumb and index finger and the vestibule was swabbed from the urethral meatus to the 'introitus'. While the labia were still held apart, a metal catheter was introduced into the urethra to the bladder and clear urine was obtained. Suprapubic pressure was applied to compress the bladder while the catheter was withdrawn.

Pelvic Examination:

The vulva and vagina were normal. The cervix was bluish in color and fresh blood was seen oozing through the ostium. On digital examination, the cervix was soft, and the os was open. The uterus was about 8 weeks in size and the adnexa were normal. The fornices and the pouch of Douglas were free.

MANUAL VACUUM ASPIRATION:

1. The cervix was stabilized with a tenaculum attached at the 12 o'clock position and the cervical canal was straightened by grasping the tenaculum and applying gentle traction.
2. Using a no-touch technique a cannula No. 8 which fitted snugly into the cervical canal was introduced into the uterine cavity just past the

internal os.

3. The prepared Karman's syringe was attached to the cannula holding the end of the cannula in one hand and the syringe in the other.
4. The cannula was pushed gently into the uterine cavity until the fundus was felt, and then the cannula was withdrawn slightly.
5. The pinch valve on the syringe was released and the vacuum was transferred through the cannula to the uterus.
6. The contents of the uterus were evacuated by moving the cannula gently and slowly back and forth within the uterine cavity until a gritty sensation was felt.
7. All the instruments were removed and the cervix was not bleeding at the site where it was held by the tenaculum. Patient was then made to lie in the supine position in preparation for Norplant insertion.

NORPLANT INSERTION:

The left arm was made to rest on an adjoining arm rest which was covered with a sterile cloth. The area of insertion was washed with soap and water, and swabbed with spirit. The Norplant sterile equipment tray was kept ready.

Sterile surgical drapes were placed under and over the arm, leaving an opening just large enough to expose the area where the implants would be inserted. The Norplant capsules were inserted as follows:

1. A small shallow incision about 2 mm long, just penetrating the dermis was made using a scalpel.
2. With the number 10 on the hub of the trocar facing upward on the trocar so that the bevel was up, the point of the trocar was inserted through

at a shallow angle. Starting at the left end of the imagined fan-like pattern, the trocar was moved forward, stopping as soon the point was completely beneath the skin (about 2-3 mm past the end of the bevel).

3. In order to keep the implants on a superficial plane, the trocar was tilted upward toward the surface of the skin, and the trocar was advanced slowly and smoothly toward mark (1) near the hub.
4. When mark (1) was just at the incision (about 4-4.5 cm into the incision), the trocar was in position to accept an implant.
5. The first implant was loaded into the trocar using the thumb and forefinger, and the implant was pushed down to the top of the hub.
6. The implant was pushed gently with the plunger toward the tip of the trocar until resistance was felt.
7. The plunger was held firmly in place with one hand. The barrel of the trocar was slid back out of the incision until the lower mark just cleared the incision and the barrel touched the handle of the plunger.
8. When the next implant was placed, the trocar was not completely removed. It was swiveled about 15 degrees, establishing a fan-like pattern. The last implant inserted was held with one finger. Another finger was placed next to the first and used as a guide while the trocar was advanced to the mark near the mark (1) on the hub. When mark (1) was reached, the second implant was loaded into the trocar and the steps 5,6 and 7 were repeated. The capsules fanned out approximately 15 degrees apart, so that the outer capsules formed a total angle of about 75 degrees.
9. The ends of the implants were not less than 5 mm from the incision. The

trocar was withdrawn after the last implant was in place.

10. The incision was pressed with a gauzed finger for a minute, and the implants were palpated to ensure all six were in place. The area was cleaned and dressed with two ordinary bandaids in a criss-cross fashion to cover the incision. The insertion area was then covered with a dry compress and enough gauze was wrapped around the arm to ensure hemostasis.

Reversal from anesthesia was uneventful and she was sent back to the ward and discharged home on the same day and the sister was given post-insertion care instructions. She was given an appointment to the gynecology clinic after 3 months and was requested to bring her sister to the family planning clinic for Norplant follow-up at yearly intervals or to come sooner if she has any of the following medical problems: delayed menstrual cycle after a long interval of regular cycles (particularly if accompanied by lower abdominal pain); heavy genital bleeding; arm pain; pus or bleeding at the insertion site; expulsion of an implant, episodes of migraine or severe headaches.

FOLLOW-UP:

She was seen at the outpatient clinic 3 months later and had no complaints. The first period after the abortion had been heavy and lasted for 8 days, but the following period had been normal. The arm incision had healed well and all the 6 implants could be palpated. She was discharged from the clinic and asked to attend the family planning clinic at yearly intervals.

COMMENTARY:

The need for post-abortion contraception is universal. Abortions, whether spontaneous or induced will not disappear and women who do not have access to safe and effective family planning services will continue to face the risk of an unwanted pregnancy. Post-abortion patients form an especially vulnerable group because they are difficult to identify from the general population and are more likely to conceive soon after the abortion unlike their postpartum counterparts, who are expected to get some protection from breast feeding [1].

There are a variety of medical and social issues which must be taken into account when considering appropriate contraceptive options for women following an abortion. Among them are [2]:

- The woman's desire for a subsequent pregnancy;
- The timing of a future planned pregnancy;
- Presence or risk of sepsis, pelvic inflammatory disease or sexually transmitted diseases;
- potential for rapid return to fertility especially in the case of first trimester abortions;
- contraceptive knowledge; education profile and motivation of women regarding contraception in general and the method selected in particular, etc.

The urgency of the need for post-abortion contraception in this patient was felt by the author considering the child's tender age and mental status.

It is not justified to force surgical contraception on patients whose autonomy is irreversibly lost or to coerce or manipulate them into

accepting surgical sterilization, especially since there is now an effective, long-term, implantable, reversible contraceptive device (Norplant) [3].

Secondly, contraceptive interventions need to be effective, given the consequences of unwanted pregnancy in this population of mentally handicapped patients. Because of compliance problems with oral contraceptive pills, this method of contraception might not be effective. Barrier techniques will be less effective and as regards intrauterine devices, a specific concern would be the possibility of increasing the risk of sexually transmitted diseases as they can not be expected to have monogamous, stable relationships. By contrast, Norplant device is significantly more likely to be effective [3].

REFERENCES:

1. Benson J et al: Meeting women's needs for Post-Abortion Family Planning. Issue no. 2. Publishers: International Projects Assistance Services (IPAS), U.S.A.

2. Provision of Immediate Post-abortion Contraception: in The Prevention and Management of Unsafe Abortion. Report of a Technical Working Group, Geneva, 12-15 April 1992, pg 13-14. Publisher: Division of Family Health, WHO, Geneva, 1993.

3. McCullough LB, Coverdale J, Bayer T, Chervenak FA: Ethically justified guidelines for family planning interventions to prevent pregnancy in female patients with chronic mental illness. AJOG Vol. 167 NO. 1 July 1992.

G.4 OBSTETRIC VESICO-VAGINAL FISTULA: SUCCESSFUL REPAIR

NAME : Mrs. M. S.

AGE : 22 years

PARITY : 1^{+0}

RESIDENCE : Dodoma

REGISTRATION NO. : 711841

DATE OF ADMISSION : 16.02.93

DATE OF DISCHARGE : 12.07.93

SUMMARY:

Mrs. M. S., a 22 years old para 1 lady was referred to our hospital from Dodoma with complaints of leaking of urine and difficulty in walking since 8 months. This began one week after a prolonged labor at home with a difficult delivery of a big baby 3 days later at Mpwapwa, which died shortly after birth. An examination under anesthesia revealed a small vesico-vaginal fistula on the anterior vaginal wall. Repair was done in lithotomy position one week later and she had an uneventful post-operative period. She recovered uneventfully and was discharged home with contraceptive provision. She was advised to attend a high risk antenatal clinic when she conceives again and that she will require an abdominal delivery for all subsequent pregnancies. A short discussion on the causes and prevention of obstetric fistulae is presented.

HISTORY OF PRESENTING ILLNESS:

Mrs. M. M., a 22 years old para 1 lady was referred to our hospital from Dodoma with complaints of leaking of urine and difficulty in walking since delivery 8 months prior to admission.

During pregnancy, she had booked at Mpwapwa antenatal clinic at a

gestational age of 5 months and had made regular antenatal visits. During her last visit at term, she was cautioned that her baby was big and that she should come to the hospital early in labor as the possibility of requiring an abdominal delivery was quite high. However, when she went into labor at home, her female relatives decided to go against medical advice and attempted to deliver her at home, and let her labor for 3 whole days in vain. When all their attempts failed, she was taken to the hospital on foot where she was given an episiotomy and delivered vaginally with great difficulty. The baby, which weighed about 4000 g died shortly after birth. She was kept in hospital for continuous catheterization and for parenteral antibiotic administration.

Her complaints began less than a week after delivery. The urine incontinence was total and occurred more when she walked or stood up from a sitting position, and less when she remained seated. About a day after delivery, she noted a tingling sensation over her left foot and lower half of the leg. A few days later she noted that she had to drag her left foot and her toes touched the floor.

There was no history of fecal incontinence, dysuria, pain per abdomen or menstrual disturbances.

Gynecological History:

She had attained menarche at 13 years of age. Her menstrual cycles were regular every 28-30 days with a normal flow lasting 3 - 4 days. Her last normal menstrual period was on 08.02.93.

Previous Medical History:

There were no serious illnesses in the past.

Family and Social History:

She was a housewife, married since 2 years ago to a 22 years old petty businessman who had escorted her all the way from Dodoma to Dar-es-Salaam for treatment and visited her daily at the hospital. Both of them had completed primary education. There was no significant family history.

PHYSICAL EXAMINATION:

General condition:

She was a miserable looking young girl measuring 146 cm in height. She was moderately pale, afebrile with a dragging gait. She had an ammoniacal odor.

Cardiorespiratory System:

These were essentially normal.

Abdominal Examination:

The abdomen was soft, non-distended and not tender. There was no visceromegaly.

Examination of the Nervous System:

She was fully conscious and oriented and walked with a dragging gait, her left foot drawing a circle. The tone and power of the left calf muscles was diminished and there was inability to dorsiflex and invert the left foot, and the toes of the same foot could not be extended. The left ankle jerk was diminished. There was no loss of sensation.

Pelvic examination:

On inspection, the vulva was excoriated, and a healed left medio-lateral episiotomy was noted. Urine was seen leaking from the vagina and was not mixed with fecal matter. With the patient placed in a left lateral position and using a Sims speculum, the anterior and posterior walls of the vagina were inspected. Urine could be seen filling up the

vagina, but the site of the fistula in the vagina could not be appreciated.

DIAGNOSIS:

Obstetrical vesico-vaginal fistula with obstetric palsy (left foot).

PLAN OF MANAGEMENT:

1. Investigations to be done, including an examination under anesthesia.
2. Physiotherapy.
3. Bland petroleum jelly or Vaseline Cream to be applied over the vulva.
4. Hematinics.
5. Repair of the fistula/fistulae.

INVESTIGATIONS AND RESULTS:

1. Hemoglobin : 11.1 g/dl.
2. Urine culture showed no bacterial growth.
3. Stool: no ova or cysts.
4. Chest X-ray: Normal
5. Serum creatinine 68 umol/l
6. Blood group: A Rh positive
7. IVU: Not done as films were not available.
8. Examination under anesthesia:

The aim was to detect the size, site and number of fistulae, and evaluate the state of the surrounding tissues and plan the position of repair.

Examination under anesthesia:

She was examined by the anesthetist and declared fit for anesthesia. Consent was obtained and she was prepared by having her vulval and perineal hair shaved the night before the procedure.

Ketamine 100 mg and atropine 1 mg were administered intravenously and halothane 0.5-2% was administered through a face mask. Oxygen was given at 6 liters per minute.

Procedure:

The patient was placed in lithotomy position, and the vulva was cleaned with antiseptic solution, and draped with sterile linen. The bladder was emptied aseptically and 50 ml of urine were obtained. The vulva was excoriated.

A digital examination showed the cervix to be firm and long. The uterus was normal sized and mobile, the fornices were free and there were no adnexal abnormalities. No fistulae could be appreciated on palpation. A Sims speculum was used to retract the posterior vaginal wall. A small mid-vaginal fistula which admitted just the tip of a probe was noted on the anterior wall, 4 cm from the external urethral orifice. Some fibrosis was also noted. A metal catheter was introduced through the urethra and the communication between the urethra and the fistula was noted. The urethra was of normal length. The posterior vaginal wall was also examined and found to have no defects. No other fistulae were seen. The cervix was normal and healthy and the vagina was spacious. A three gauze dye test was done as follows:

Three sterile dry pieces of gauze were inserted into the vagina. The bladder was filled with about 100 ml of methylene blue dye through a Foley's catheter, taking care not to spill the dye. The gauze pieces from the vagina were removed one after the other using forceps, and the inner two were found to be stained with blue dye. The site of the fistula was confirmed as dye could be seen sprouting from it on removal of the gauze pieces. No other fistulae were noted.

A rectal examination revealed no abnormalities.

Plan:

1. Repair of the fistula in lithotomy position the following week.

2. Tablets nitrofurantoin 100 mg 8 hourly for 7 days.

REPAIR OF VESICO-VAGINAL FISTULA:

Anesthesia:

This was administered as described in Obstetric No. 3.

Procedure:

Patient was laid in the lithotomy position with legs supported on stirrups. The field of operation was cleaned and draped with sterile towels. The labia were held apart by silk sutures which anchored them on the buttocks for adequate exposure. A Foley's catheter with a 10 ml bulb was inserted into the urethra and ballooned. Using a scalpel, the margins of the fistula were incised about 2 mm from the edge of the fistula , sharp dissection was done and fibrotic tissue was removed. The bladder wall was dissected from the vaginal wall all around the incision for about 0.75 cm using fine curved scissors. The fistula was repaired in three layers in an east-west direction. The bladder wall was repaired using interrupted No. 00 chromic catgut, taking care not to penetrate the bladder mucosa. Stitches were tied without tension. The bladder repair was tested by instilling methylene blue dye into the bladder and it was water tight. The vaginal mucosa was repaired with interrupted No. 0 chromic catgut obliterating the dead space by picking the underlying bladder wall to prevent hematoma forming between the layers. The catheter drained freely. A Vaseline gauze was inserted into the vagina.

POST-OPERATIVE ORDERS:

1. Intravenous 5% dextrose saline 3.5 liters in 24 hours.
2. Injection pethidine 100 mg intramuscularly 6 hourly for 24 hours.
3. Injection ampicillin 500 mg intravenously 6 hourly for 24 hours then capsules ampicillin 500 mg 6 hourly for 4 days.
4. Tablets nitrofurantoin 100 mg 8 hourly for 7 days, from the following day.
5. Urine output 2 hourly until urine clears.
6. Maintain input output chart.
7. Monitoring of vital signs 4 hourly.
8. Removal of the Vaseline gauze 6 hours later.
9. Indwelling catheter for 14 days and urine for culture every 5 days.

POST-OPERATIVE PROGRESS:

She recovered smoothly from general anesthesia 6 hours later. The urine was clear and she was afebrile and the bladder drainage was satisfactory. Intravenous fluids were discontinued 24 hours later and she was encouraged to take plenty of fluids orally. The bed remained dry and there was no leakage of urine. Catheter urine specimen taken every 5 days showed no pathogens. The catheter was removed 14 days later. There was no pain on micturition and no incontinence. She was instructed to empty her bladder every 2 hours for the first 2 days, then every 3 hours, and so on.

One week after catheter removal, she was seen in the side room. A speculum examination showed the fistula to be well healed, there was no leakage of urine and the dye test was negative.

She and her husband were strictly advised to abstain from sexual intercourse for 3 months and thereafter avoid pregnancy for at least one year. Her husband shyly suggested she remain in hospital for 3

months until the period of abstinence was over and that he would take her home after she had been provided with family planning.

She remained in hospital for 3 more months during which time she menstruated regularly. Physiotherapy had improved her left foot and she could walk well. She was discharged with a copper IUD after being counseled. She was told to go to the nearest family planning clinic for removal of the IUD after one year. It was also emphasized to her that she would be delivered abdominally in all her forthcoming pregnancies so the importance of attending a high risk antenatal clinic was stressed to her. She went home smiling and very happy indeed.

COMMENTARY:

The predominant obstetric origin of vesico-vaginal fistulae in the tropics is contrasted with the mainly surgical etiology of those in Europe[1]. In the United States, vesico-vaginal and urethro-vaginal fistulae occur secondary to irradiation of neoplasias of the cervix and uterus, hysterectomy and excision of urethral diverticulum, while fistulae owing to obstetrical injury are rarely encountered[2]. The main reason for the higher incidence in tropical countries is due to obstructed labor. Incidence of obstructed labor depends on the incidence of cephalopelvic disproportion present in the community and to the availability and quality of antenatal and intrapartum care[3]. Unfortunately, disproportion is most prevalent in areas where health facilities are deficient as poverty is an underlying cause of both these factors. Where obstetric care is optimal, obstructed labor should never occur, even in communities where disproportion is prevalent[3]. If disproportion is anticipated prenatally, it should not lead to difficult laboring. Even when labor is prolonged at home by

disproportion, reaching the stage of obstruction can be prevented by early transfer to hospital. Unfortunately, it is in the very areas where disproportion is most common that antenatal clinics are few and often ineffective, and hospital care is not accessible and least trusted [1]. In the absence of any obstetric care, obstructed labor in the multipara usually ends in fatal rupture of the uterus. In the primipara, the fetus dies, and after maceration may be delivered spontaneously after many days. The survivors, most but by no means all primiparas, eventually reach the hospital for the treatment of their vesico-vaginal fistulae[1].

Prior to obstruction, there is a delay in the rate of dilatation of the cervix in the active phase of the first stage of labor to a rate of less than 1 cm per hour. If oxytocin augmentation is used and the cephalopelvic disproportion is minimal, the rate of dilatation may increase, but if the cephalopelvic disproportion is gross the rate of dilatation may increase or it may not increase at all. Obstruction usually occurs before full cervical dilatation. If this is neglected, the sequence of events is as follows: Avascular pressure necrosis will develop in a ring in the pelvis and at the level of the obstruction. If this is severe and prolonged, the cervix and even the lower uterine segment, will slough and eventually a dead, compressed and moulded baby will be delivered. This takes 2 or 3 more days. When the ring of pressure necrosis sloughs further this may leave a large vesico-vaginal fistula including the proximal half of the urethra and the bladder neck up to the ureteric orifices. About 15% of those who develop vesico-vaginal fistula also develop recto-vaginal fistulae at the level of the pressure ring. Healing of the ring of necrosis in the vagina leads to

considerable contracture and often almost complete stenosis of the vagina. A few days after delivery, foot drop may develop because of sciatic nerve involvement[3].

This terrible experience causes a considerable degree of psychological trauma to these patients. The fortunate ones will get their fistulae repaired successfully (about 80%) but many will become permanently infertile, some will have so much scarring that further coitus will be impossible [3].

The challenge is to prevent fistulae by improving the health of future mothers in the tropics during childhood and adolescence and by providing acceptable and accessible maternity care for all [1].

REFERENCES:

1. Lawson J: Tropical Obstetrics and Gynecology: Vesico-vaginal fistula - a tropical disease. In: Transaction of the Royal Society of Tropical Medicine and Hygiene. Vol 83 NO. 4 1989 p. 454-456.
2. Patil V, Waterhouse K and Laungani G: Journal of urology Vol. 123 May 1990.
3. Philpott RH: Obstructed labor. Obstetric problems in the developing world. Clinics in Obstetrics and Gynecology. December 1982. Publishers: W. B. Saunders Company Ltd. 1 St. Anne's Road. Eastbourne, East Sussex, BN21 3UN.

21-25. Publishers: Churchill Livingstone Inc. 650 Avenue of the Americas, New York, NY 10011, 1992.

4. Moghissi KS: Hormonal therapy before surgical treatment for uterine leiomyomas. Surgery Gynecology and Obstetrics. Vol 172 No. 6 pg. 497-502, June 1991.

5. Lacey CG: Current Diagnosis and treatment Obstetrics and Gynecology, 1987. Sixth edition. Ch. 36 pg. 660-662. Publishers: Appleton and Lange 25 Van Zant Street, East Norwalk, Connecticut 06855, California, USA.

G.6 CARCINOMA OF THE VULVA:

RADICAL VULVECTOMY FOLLOWED BY RADIOTHERAPY

NAME : Mrs. M. M.

AGE : 56 years - 25 = 31 = 9 children?

REGISTRATION NO : 755021 (Muhimbili); RT 93/0578 (ORH)

RESIDENCE : Mzenga Pwani

DATE OF ADMISSION : 06.07.93

DATE OF DISCHARGE : 22.11.93

SUMMARY:

Mrs. M. M., a 56 years old postmenopausal para 9 lady was admitted with complaints of a huge itchy vulval swelling for the past year. Clinical examination suggested carcinoma of the vulva stage II and a biopsy of the lesion revealed an anaplastic carcinoma of the vulva. Radical vulvectomy was done and when the wound had healed she was sent to the Ocean Road hospital for radiotherapy after 3 weeks. She was given a total of 6000 cGy and was discharged home in a much better condition, and advised to come to the radiotherapy clinic 3 months later. The management of carcinoma of the vulva is discussed.

HISTORY OF PRESENTING ILLNESS:

Mrs. M. M., a 56 years old postmenopausal para 9 lady was admitted to the gynecology ward as a self referral from Mzenga, with complaints of a huge itchy vulval swelling for the past one year. The lesion had begun as a small itching ulcer which progressively enlarged and bled as she scratched. The lesion sometimes bled and discharged pus but she gave no history of micturition or bowel disturbances. There was no history of fever or abnormal vaginal discharge. She did not recall having any variation in coloration of the perineal skin or of having

wart-like growths on the vulva. She had no history of dyspareunia.

Gynecological History:

She attained menarche at about 15 years of age and her menstrual cycles had been regular. She was 3 years postmenopausal. There was no history of abnormal bleeding or discharge per vagina, neither did she give any history suggestive of STD. She had never used any contraceptives throughout her life.

Obstetric History:

She was para 9. She had delivered all children vaginally and they were all alive and well. She could not recall their ages but her last born female child was about 25 years old.

Previous Medical History:

There was no history of serious illnesses in the past. She had no history of pulmonary tuberculosis, diabetes mellitus or hypertension.

Family and Social History:

She was a housewife and lived with her husband who was a peasant. She neither smoked nor took alcohol.

PHYSICAL EXAMINATION:

General examination:

She was lean but not wasted. She was moderately pale, afebrile and had no pedal edema or genralized lymphadenopathy.

Cardiorespiratory Systems:

These were essentially normal.

Abdominal examination:

The abdomen was soft, non distended and non tender. The liver and spleen were not palpable. The renal angles were non tender. There were no palpable masses and the inguinal lymph nodes were not palpable.

Pelvic examination:

There was a cauliflower-like weeping lesion about 8 cm x 10 cm in size on the posterior part of the right labium minorum. The lesion was ulcerated, sessile and freely mobile. On speculum examination, the cervix appeared healthy and the vaginal walls looked normal. On digital examination, the cervix felt firm and regular, the uterus was hypoplastic, anteverted, mobile and the fornices and parametria were free. The clitoris, vaginal mucosa, urethra and anus were not affected. There were no perianal lesions.

DIAGNOSIS:

Carcinoma of the vulva stage II (FIGO 1988).

PLAN OF MANAGEMENT:

1. Investigations including a biopsy of the lesion.
2. Work up as for carcinoma vulva.
3. Hematinics.
4. Sitz baths twice daily.
5. Consultation with the radiotherapists as regarding her mode of treatment.

INVESTIGATIONS AND RESULTS:

1. Full blood picture:

   Hemoglobin was 8.9 g/dl.

   Smear showed hypochromasia, anisocytosis and poikilocytosis.

   Total leukocyte count was 8,900/mm^3.

   Platelets were 205,000/mm^3.

2. Serum creatinine was 98 umol/l
3. VDRL was negative.
4. ECG was normal.

CARCINOMA OF THE VULVA:



Carcinoma of the vulva: The lesion as seen prior to surgery. Note the cauliflower-like weeping lesion.

5. ELISA for human immunodeficiency virus was negative.
6. Biopsy results: HP No. 3325/93 Anaplastic carcinoma of the vulva with many tumor giant cells and wide spread necrosis.

Progress in the Ward:

She was given Imferon injections 10 ml intramuscularly daily for 3 days with oral tablets of folic acid 5 mg daily. Two weeks later her hemoglobin rose to 10.2 g/dl and her blood film now showed the red blood cells to be normocytic and normochromic.

The radiotherapists were consulted and it was decided to perform a radical vulvectomy first prior to radiotherapy.

Prior to the day she was scheduled for operation, her blood was grouped and crossmatched and 3 units of compatible blood were made available. She was informed about the operation and consent was obtained for anesthesia and surgery. The anesthetist was requested to review the patient. She was prepared for surgery.

RADICAL VULVECTOMY: En bloc dissection with a modified butterfly incision

Anesthesia:

This was given as described in Obstetric case No. 3.

Operative procedure:

The patient was positioned lying supine with the feet about 25 cm apart and supported by ankle rests to elevate the calves from the table. She was cleaned with 1:20 savlon and draped with sterile linen.

Skin incision:

A modified butterfly skin incision was made curving down towards the groin from the anterior superior iliac spine to a midpoint over the symphysis pubis, followed by an incision from the anterior superior

iliac spine to a point 2 cm below the pubic tubercle with a curve towards the groin fold. A third incision was made from this last point curving upwards and medially to meet the crural fold. On the right side this incision encompassed the base of the lesion.

Defining the fascial planes:

The band of skin in the groin was picked up and dissected down to the aponeurosis of the external oblique muscle above the groin and over to the fascia over the sartorius muscle which forms the lateral boundary of the femoral triangle. This fascia was incised longitudinally from the anterior superior iliac spine to the apex of the femoral triangle. The medial edge of the fascia was picked up and elevated. The strands of the femoral nerve were seen in the soft tissue at the medial side of the sartorius muscle. Some of these fibers were cut as the femoral nerve was defined and meticulously cleaned from the apex of femoral triangle to the inguinal ligament. This condensation of fascia lateral to the triangle along the inguinal ligament was separated with scissors to leave the external oblique aponeurosis clean.

Removal of the groin nodes from the femoral vessels:

The femoral vein which was seen on the medial side of the femoral artery was cleaned from the inguinal ligament distally; the saphenous vein was clamped, cut and ligated as it entered the femoral vein, and the whole block of tissue containing the groin nodes was turned medially. The fascia over the adductor muscle was incised longitudinally and, having cut through the fat at the apex of the femoral triangle, the fascia was stripped from the adductor muscle as far medially as the gracilis aponeurosis, the subfascial dissection was then completed through to the pubic symphysis. The entire groin nodes

were removed en bloc.

Removal of the vulva:

The patient was then placed in lithotomy position. The vulval incision was modified according to the size of the lesion, in such a way that a wide margin of normal skin surrounded the lesion, the margin was adequate both laterally and medially and all dystrophic skin was removed with the specimen.

The abdominal incision that was carried to the crural fold was then extended laterally to the vulva to end alongside the anus, and the anus was skirted by a curved incision and a similar incision was made on the left side. The urethra and vagina were encircled by the inner incision. The lateral incisions were then deepened down to the deep fascial and periosteum and the entire vulva was removed. Bleeding was controlled with square mattress sutures.

Wound closure:

The abdomen was closed with intermittent nylon sutures and the vulva was closed in layers with chromic catgut suture no. 1 after placing suction drains in the groins and a catheter in the bladder. The wounds were dressed with sterile gauze and the patient was sent to the recovery room after an uneventful reversal from anesthesia.

POSTOPERATIVE ORDERS:

The following were done:

1. Intravenous 5% dextrose saline 3 liters in 24 hours were infused.
2. Injection pethidine 100 mg intramuscularly 6 hourly for 24 hours.
3. The pulse rate, respiratory rate and blood pressure were monitored half hourly until stable the 4 hourly for 24 hours.
4. She received 2 units of compatible blood.

5. Injection ampicillin 500 mg 6 hourly intravenously for the first 24 hours and then oral capsules of ampicillin 500 mg 6 hourly for 5 days.
6. An indwelling catheter was left for 5 days.

POSTOPERATIVE FOLLOW-UP:

She was seen 4 hours post operatively and her condition was stable and the vital signs were normal. The drains were draining well and the urine output was adequate. She started taking oral feeds from the second day and the drains were removed. On the fourth postoperative day, the wound began discharging greenish colored offensive pus and so she was started on oral metronidazole tablets 400 mg 8 hourly for 5 days after a pus specimen from the wound for culture and sensitivity was taken, and the wound was cleansed with Eusol and hydrogen peroxide and dressed with honey at least twice daily. Gram stain of the pus specimen showed +++ gram negative rods with + pus cells. The culture isolated E. coli sensitive to gentamicin, so in addition to the above drugs gentamicin injections 80 mg intramuscularly twice daily were administered for 7 days.

By the 20th postoperative day, the wound had healed fairly well. The mons pubis was indurated and swollen on the medial aspect of the left upper thigh and to a lesser extent on the right. The hemoglobin was 8.0 g/dl. She was sent to the Tanzania Tumor Center for radiotherapy.

RADIOTHERAPY:

She was reviewed 6 weeks post-surgery by the radiotherapists and a residual vulval disease was noted with induration at the right inguinal area. She was evaluated and planned for radiotherapy.

At evaluation, she was found to be 154 cm in height and weighed 44.8 kg. The body surface area was 1.38 m^2. The full blood picture was within

normal limits with a platelet count of 205,000/mm^3, total leukocyte count of 9,650/mm^3 and a hemoglobin of 9.8 g/dl.

Radiotherapy was given in two phases:

Phase I:

External beam therapy with Co^{60} was given to the pelvis at the anterior and posterior fields both measuring 18 cm x 12 cm, at a depth of the midplane. A daily dose of 200 cGy was administered for a total of 4,500 cGy and the field was then coned down.

Patient tolerated the radiation therapy well and when she was re-evaluated after receiving 3,000 cGy and 4,000 cGy, she was found to have mild skin reaction at the vulva, but was otherwise well.

Phase II:

At 4,500 cGy, the field was coned down, with both the anterior and posterior fields measuring 8 cm x 8 cm. A daily dose of 200 cGy was administered for a total of 1,500 cGy at a depth of the midplane.

She was by then complaining of discharge from the vulval wound with severe pain on the left leg and swelling around the medial part of the thigh. The wound was dressed with potassium permanganate and analgesics were given for the pain.

At 6,000 cGy she was reassessed again and was found to have a good overall response.

She was therefore discharged home well and advised to come again after 3 months for a check-up.

COMMENTARY:

The vulva is the fourth most common site for involvement with invasive cancer in the female genital tract[1]. It follows in the order of frequency, the uterine corpus, the ovary and the uterine cervix[1].

However, vulval cancers account for only 3 - 5 % of all genital tract cancers. Although invasive cancer has been reported to occur in the age range of 30-90 years, the median age at presentation is in the seventh decade[1]. Invasive squamous cell carcinoma accounts for about 90% of all cancers seen in the vulva, and most recommendations are based on the pattern of spread and treatment of squamous cell cancer. Melanomas account for 5% of vulval cancers and adenocarcinomas account for only a small percentage of vulval cancers[1].

The etiology of vulvar malignancy remains unknown. Predominant among the possible causative agents suggested are human papilloma virus and genital herpes. Previous suggestions that chronic vulvar dystrophy, either lichen sclerosis or hypertrophic dystrophy predisposes the patient to carcinoma of the vulva have been disproved[2].

Many studies have pointed out the long delay between the onset of symptoms and the diagnosis of cancer[3,4]. This is due not only to reluctance of the older patient to seek attention for this "personal problem" (as occurred in this patient), but also to physician delay in taking a biopsy, and this delay is a significant factor in adverse prognosis[5].

Early biopsy under local anesthesia is encouraged. Use of topical 1% toluidine dye with decolorization by 1% acetic acid results in dye retention by the nuclei in the superficial layers of the atypical epithelium. Thickened, nodular, or ulcerated areas are suspect. Colposcopy may reveal vascular prominence and the use of 3% acetic acid heightens the whitening and delineates more easily the margins of vulvar lesions but does not have the accuracy associated with its use on the cervix and vagina[2].

Surgery is the mainstay of the treatment of vulvar cancer. Radical vulvectomy together with some form of lymphadenectomy is the usual treatment today[5]. Taussig and later, Way and Hennigan had an important influence on the adoption of the radical surgical management of carcinoma of the vulva[6,7]. Although the standard procedure for invasive vulvar cancer 15 years ago was radical vulvectomy and bilateral inguino-femoral and pelvic lymphadenectomy, smaller cancers with fewer lymphatic metastases and the desire to minimize morbidity have led to a selective decrease in the extent of surgery in recent years[5]. It was suggested by Rutledge et al[8] that the relatively low incidence of pelvic lymph node metastases and the complications associated with pelvic lymphadenectomy did not justify its routine use. They recommended retroperitoneal pelvic lymphadenectomy be used only if the inguinal lymph nodes were positive or if the primary tumor was very large. More recently, some have suggested pelvic irradiation rather than lymphadenectomy for patients with positive inguinal nodes. Using an even more conservative approach, Morris[9] suggested that only a unilateral groin dissection be done if the primary cancer is unilateral. If frozen section demonstrates involved nodes on the side of the tumor or if the lesion is close to the midline, a bilateral lymphadenectomy is done. In Mrs. M. M's case, radical vulvectomy with en bloc removal of the inguino-femoral lymph nodes was done because there was no clinical and intraoperative evidence of involvement of the Cloquet's lymph node, but because of the large size of the tumor, postoperative irradiation was given.

Radiation has not been used to any great extent in the treatment of carcinoma of the vulva because the vulva does not tolerate radiation

well, and the low skin tolerance in this area greatly limits the dose that can be given. It has been used on occasion as primary therapy in combination with surgery (as we did in this case) and for palliation of recurrent or metastatic cancer[5]. The fields are placed to include the inguino-femoral and the low external iliac lymph nodes after radical vulvectomy is used to remove the primary tumor. The nodes are treated with a dose of 4,500 to 5000 cGy in 5 weeks. This technique was designed to eliminate the morbidity associated with lymphadenectomy and it has been well tolerated.

Radiation has also been used preoperatively to obtain regression of an extensive primary tumor and thus to minimize the extent of the surgical resection. But surgery in previously irradiated areas is not without risk. In some cases, radiation has been used as the only therapy for carcinoma of the vulva[5].

Since the pathophysiology of the disease is not clearly understood, its etiology and precursor states have not been accurately defined, better treatment will depend on earlier and more accurate diagnosis, appropriate treatment planning including the use of adjunctive radiation therapy and recognition of the aggressive potential of these lesions.

REFERENCES:

1. Gordon AN: Current concepts in the treatment of invasive vulvar carcinoma . Clinical Obstetrics and Gynecology. Vol. 34 No. 3 pg. 587-598, September 1991.

2. Cancer of the vulva. Precis III an update in Obstetrics and Gynecology Chapter 4, pg 232-236. The American College of Obstetricians and Gynecologists, 600 Maryland Avenue, SW Suite

1. Gordon AN: Current concepts in the treatment of invasive vulvar carcinoma . Clinical Obstetrics and Gynecology. Vol. 34 No. 3 pg. 587-598, September 1991.

2. Cancer of the vulva. Precis III an update in Obstetrics and Gynecology Chapter 4, pg 232-236. The American College of Obstetricians and Gynecologists, 600 Maryland Avenue, SW Suite 300 East, Washington DC 20024-2588.

3. Podratz KC, Symmonds RE, Taylor WF, Williams TJ: Carcinoma of the vulva: Analysis of treatment and survival. Obstet Gynecol 61:63-74, 1983.

4. Iversen T, Aalders J, Christensen A, Kolstad P: Squamous cell carcinoma of the vulva: a review of 424 patients, 1956-1974. Gynecol Oncol 9:271-279, 1980.

5. Jones III HW: Malignancies of the vulva and vagina. Novak's Textbook of Gynecology. 11th edition, 1988. Chapter 24 pg 599-620. Publishers Williams and Wilkins, 428 East Preston Street, Baltimore, MD 21202, USA.

6. Taussig F: Diseases of the vulva. New York, Appleton-Century-Crofts, 1921.

7. Way S, Hennigan M: Later results of extended radical vulvectomy for carcinoma of the vulva. J Obstet Gynaecol Br Commonw 73:594-611, 1966.

8. Rutledge F, Smith JP, Franklin EW: Carcinoma of the vulva. Am J Obstet Gynecol 106:1117-1130, 1970.

9. Morris JM: A formula for selective lymphadenectomy: its application to cancer of the vulva. Obstet Gynecol 50:152-158, 1977.

G.7 TWISTED OVARIAN CYST: SALPINGO-OOPHORECTOMY AND TUBAL LIGATION

NAME : Mrs. T. J.

AGE : 39 years

REGISTRATION NO : 762829

PARITY : 5 +1

RESIDENCE : Kurasini, Dar es Salaam

DATE OF ADMISSION : 15.10.93

DATE OF DISCHARGE : 21.10.93

SUMMARY:

Mrs. T. J., a 39 years old para 5 +1 was admitted through the casualty department with complaints of sudden onset of lower abdominal pain with nausea and vomiting without any history of menstrual disturbances. Clinical examination was suggestive of a twisted ovarian cyst. An emergency laparotomy revealed a right twisted ovarian cyst. Right salpingo-oophorectomy was done with left tubal ligation. She had an uneventful postoperative period and was discharged home well on the sixth postoperative day.

HISTORY OF PRESENTING ILLNESS:

Mrs. T. J., a 39 years old para 5 +1 was referred from a private hospital with a provisional diagnosis of an ectopic pregnancy. She had not missed a period, neither did she have any signs and symptoms of pregnancy. She gave a history of vague lower abdominal pain for the past six months. She had not sought any medical advice during this time as the pain was relieved with oral analgesics. On the day of admission she had experienced severe lower abdominal pain accompanied by nausea and two episodes of

vomiting. There was no history of fever, dysuria, fainting attacks or shoulder tip pain. There was no loss of appetite or change in bowel habits.

Gynecological History:

She had attained menarche at 13 years and had regular menses with cycles of 21-24 days lasting for 5-6 days. Her last normal menstrual period was on 19.09.93. She relied on the calendar method for contraception.

Obstetric History:

She was para 5^{+1}. She had 5 full term normal deliveries and the last child birth was 6 years previously. Her last pregnancy one year previously had ended up in a spontaneous abortion at a gestation of 10 weeks, for which the uterus had been evacuated.

Previous Medical History:

There was no history of serious illnesses in the past.

Family and Social History:

She was a housewife, married to a businessman. There was no family history suggestive of hypertension or diabetes mellitus.

PHYSICAL EXAMINATION:

General Examination:

She was in severe pain and was sweating, with warm extremities. She was afebrile and was not pale. There was no generalized lymphadenopathy.

Chest:

Both the breasts were normal with no palpable lumps.

Cardiorespiratory Systems:

She had a pulse rate of 80 beats per minute with a normal volume and a

blood pressure of 110/70 mm of Hg. The respiratory system was essentially normal.

Abdominal Examination:

The abdomen was soft and not distended. The liver and spleen were not palpable and the renal angles were not tender. There was generalized tenderness over the lower abdomen with more tenderness over the right iliac fossa. There was no rebound tenderness or guarding. No convincing masses could be palpated per abdomen. There was no ascites and bowel sounds were normal.

Pelvic Examination:

The vulva and vagina were normal. A speculum examination revealed a physiological discharge. The cervix was parous, firm and closed. On bimanual examination, an excitation test was positive to the right. The uterus was normal sized and the right adnexa was tender with a cystic mass about the size of an orange. The left adnexa was normal. The pouch of Douglas was free.

Rectal Examination:

The anal sphincter was normal. The rectal mucosa was free and the mass was not appreciated per rectum.

PROVISIONAL DIAGNOSIS:

Twisted ovarian cyst; with a differential diagnosis of an appendicular mass,

PLAN OF MANAGEMENT:

1. The diagnosis was explained to the patient and the management discussed.

2. Intravenous 5% dextrose saline 2 liters were infused.

3. Grouping and crossmatching of two units of compatible blood.

4. Investigations to be taken.

5. Prepare for laparotomy.

6. Informed consent for anesthesia and surgery, including tubal ligation was obtained.

INVESTIGATIONS AND RESULTS:

1. Haemoglobin was 12.2 g/dl.

2. Blood group was O Rh positive.

3. Total leukocyte count was 9,800/mm^3.

4. Differential leukocyte count:

   Neutrophils = 63%

   Lymphocytes = 36%

   Eosinophils = 1%

5. ESR was 75 mm/hr (Westergreen)

6. Urine Analysis:

   Urine sugar was negative.

   Microscopy was normal.

   Mid stream urine for culture revealed no significant bacterial growth.

7. Plain abdominal X-ray was normal.

OPERATIVE PROCEDURE:

Anesthesia:

Anesthesia was administered as for Obstetric case No.3.

Right salpingo-oophorectomy and tubal ligation:

The urinary bladder was catheterized as described in Gynecologic case No. 3. The abdomen was cleaned, draped with sterile linen and opened in layers through a subumbilical midline incision as described in Obstetric case No. 3. Both the parietal and visceral peritoneum appeared normal. There was no ascites, and the abdominal viscera were normal. Both the superior and inferior surfaces of the liver were smooth. The omentum was normal with no palpable nodules.

The uterus was normal sized and firm. A right ovarian cyst, about 10 cm x 8 cm in size was seen The right ovarian ligament was twisted thrice, and the whole appendage was gangrenous, although the surface was smooth and the capsule was intact. The right fallopian tube was very edematous. There were no adhesions to the cyst. The left tube and ovary looked healthy. The pouch of Douglas was free of adhesions and deposits.

The pedicle of the right appendage was untwisted and salpingo-oophorectomy was performed as follows:

1. The right tube and ovary were freed from the surrounding structures and two clamps were placed high on the infundibulopelvic ligament about 1 cm apart so as to avoid the ureter, and the ligament was divided between them with scissors.
2. A second pair of clamps were placed in such a way that they took in the remainder of the broad ligament and also the ascending portion of the uterine artery. The tissue between these clamps was similarly divided.
3. Two clamps were placed at the cornual end of the insertion of the tube, including the ascending branch of the uterine artery. An incision was made between the clamps and the tube and ovary were removed.

4. A figure-of-eight 0 chromic catgut suture was placed around the clamps on the infundibulopelvic ligament, a second similar suture was placed around the second clamp. Hemostasis was achieved.

   The cyst was opened up by an assistant and was found to contain thick mucinous material and hair, confirming a dermoid cyst. No teeth or cartilage were seen. The specimen was sent for histopathological examination. No biopsy was taken from the contralateral ovary as it looked normal and because the cyst had looked benign macroscopically.

5. The left fallopian tube was ligated using Modified Pomeroy's method as described in Obstetric case No. 8.
6. The abdominal cavity was cleaned and the abdomen was closed in layers as described in Obstetric case No. 3.

The blood loss was minimal.

Reversal from anesthesia was done with atropine 1.0 mg, neostigmine 2.5 mg and the patient was extubated after suction and observed in the recovery room briefly and then sent to the ward.

POSTOPERATIVE INSTRUCTIONS:

1. Intravenous 5% dextrose saline 2.5 liters were given in 24 hours.
2. Injection pethidine 100 mg 6 hourly intramuscularly for 24 hours.
3. The pulse rate, respiratory rate and blood pressure were monitored half hourly until they were stable, then 4 hourly for 24 hours.
4. An input and output chart was maintained for 24 hours.

POSTOPERATIVE PROGRESS:

She was reviewed six hours postoperatively and found to be drowsy from sedation. The vital signs were normal and the chest was clear. The

G.8 VAGINITIS: FOREIGN BODY REMOVAL

NAME : Miss M. N.

AGE : 4 years

REGISTRATION NO. : 757117

RESIDENCE : Mwenge

DATE OF ADMISSION : 18.08.93

DATE OF DISCHARGE : 19.08.93

SUMMARY:

Miss M. N., a 4 years old girl presented at the gynecological outpatient department with complaints of offensive vaginal discharge and non responsive pruritus vulva. Examination under anesthesia revealed foreign bodies, consisting of two bits of bath sponge which were removed from the vagina. She was discharged home on the same day. Foreign body as a cause of vulvovaginitis in preschool children and its management are discussed.

HISTORY OF PRESENTING ILLNESS:

Miss M. N., a 4 years old girl was brought by her mother to the gynecologic outpatient clinic with complaints of offensive discharge per vagina often blood stained and itching over the perineal region for the past 6 weeks, which the mother noted when undressing the child before giving her a bath. There was no history abdominal pain or fever during the course of the illness. She had attended many clinics for the same symptoms and had been treated with various antibiotics with little or sometimes, no relief. The child recalled no burning sensation or frequency during micturition, there was no history of pruritus ani or passage of worms in stool, nor could she recall having inserted any playthings into her private parts neither

suggestive of sexual abuse. This suggestion was frowned upon by the mother who considered it to be an accusation against her innocent child.

Previous Medical History:

She had suffered from no serious illnesses in the past, apart from contracting chicken-pox at the age of 3 years. She had never suffered from any parasitic infestation.

Family and Social History:

She was the fourth and last-born daughter of a secretary who was married to an electrical engineer. She was studying in a popular kindergarten school in town. Her mother gave no history suggestive of sexually transmitted diseases in herself or in her husband. The child's elder sister was healthy.

PHYSICAL EXAMINATION:

General examination:

She was a well nourished, well groomed child dressed in clean clothes and underwear but emanating a faint offensive odor. She was neither pale nor febrile. She was very apprehensive and wept throughout the examination.

Cardiorespiratory System:

These were essentially normal.

Abdominal examination:

The abdomen was soft and not distended. There was no organomegally or tenderness.

Examination of the genitalia:

The weeping child was placed on her mother's lap and her mother helped separate the thighs to expose the vulva and vestibule by light lateral

and downward pressure on each side of the perineum. The anogenital region was well cleansed and the vulva was normal. There was no evidence of skin lesions, perineal excoriations, ulcers or tumors. No obvious vaginal discharge was seen, but an offensive odor was evident. A vaginal swab was taken hurriedly after distracting the child and it was noted to be blood stained and malodorous.

Rectal examination:

This could not be done as the child was very apprehensive.

INVESTIGATIONS AND RESULTS:

1. Vaginal Swab:

   Wet preparation:

   Pus cells 4 / hpf

   Red blood cells 10 / hpf

   No yeast cells or Trichomonas vaginalis

   Gram stain:

   No pus cells or Gram negative diplococci

   Culture:

   No Neisseria gonorrheae or Candida albicans were isolated.

2. Stool: No ova or cysts were seen.

3. VDRL: Negative

4. Full Blood picture:

Hemoglobin	: 10.4 g/dl
Total leucocyte count	: 6,100 / mm^3.
Differential Leucocyte count	: NORMAL
Red blood cell count	: 5.2 million/mm^3
Red blood cell morphology	: Normochromic, normocytic.
Platelet count	: 245,000/mm^3

5. Plain X-ray abdomen and pelvis: Normal

DIAGNOSIS:

Foreign body vaginitis.

PLAN OF MANAGEMENT:

1. Examination under anesthesia.

2. Consent from mother for anesthesia.

EXAMINATION UNDER ANESTHESIA:

Anesthesia:

A paediatric anesthetist was consulted. Induction was done with halothane 2% and atropine 0.5 mg administered intravenously. Maintenance was done with oxygen inhalation 4 liters per minute.

Operative procedure:

The child was placed in lithotomy position by an assistant and the perineum was cleansed with antiseptic solution and draped with sterile towels. A lubricated paediatric speculum was inserted through the hymenal orifice and the upper third of the vagina was inspected. Two bits of blood stained foreign bodies were retrieved with dissecting forceps. These were later identified as bits of bath sponge measuring 3 x 2 cm and 0.5 x 0.5 cm in size. The vagina was then cleaned with antiseptic solution and inspected again and found to be free of any more foreign bodies. The blood loss was negligible.

POSTOPERATIVE ORDERS:

The patient's mother was shown and given the bits of bath sponge. The patient recovered well from anesthesia and was discharged home on the same day and advised to take ampicillin syrup 125 mg 6 hourly for 5 days. She was requested to attend the gynecologic outpatient department 6 weeks later for follow-up.

POSTOPERATIVE FOLLOW-UP:

The patient was brought to the clinic by her mother and was found to be doing well with no more offensive discharge per vagina.

COMMENTARY:

Although the genital structures are resting during early childhood, they are not immune to disease. Bleeding and infection of the lower genital tract are the two most frequent encountered problems in the preschool pediatric age group[1]. Vulvovaginitis is the most frequent disorder of childhood. This is explained by:

1. The poor resistance to bacteria of the prepubertal atrophic vaginal mucosa that lacks glycogen and lactobacilli and consequently has a neutral ph of 6.5 to 7.
2. The proximity of the anus and the urethra to the vagina facilitating fecal or urinary contamination.
3. Poor hygiene of the area in this pediatric age group.

Vaginal foreign bodies as a cause of offensive blood stained discharge are a common cause of gynecologic disorders in the pediatric age group[2]. Rarely, girls are prone to gonococcal vulvovaginitis following sharing of towels and toilet seats. It is not uncommon for such young girls to acquire sexually transmitted diseases following sexual abuse. Profuse, purulent, bloody, foul smelling discharge is pathognomonic of extraneous material in the vagina[1]. More often than not, the child does not recollect inserting the foreign body, or may not admit to it. Worse still, just the probability of a vaginal foreign body may cause denial from the parent who may take such a suggestion as an accusation against her child and further defer from specific management as so clearly

happened in this case. Valuable time was lost while the mother still tried other forms of treatment for sheer fear of letting her innocent child undergo a gynecologic examination under anesthesia.

Most often the foreign bodies encountered are not radiopaque hence the radiograph done in our case was not useful. The commonly found foreign bodies are toilet paper, bath sponge, beads, seeds like beans and maize, and occasionally hairpins and safety pins[1].

An examination under anesthesia is necessary to discover and remove any foreign bodies and to exclude other causes of bleeding per vagina. It is true that in the past, examination under anesthesia had been undertaken too often for vaginal discharge and vulval soreness in children[3]. In the case of Miss M. N., the examination done at the clinic revealed no reliable information and the apprehension did not allow a rectal examination to "milk down" any discharge to the introitus but because of the nature of the discharge, an examination under anesthesia was indicated and proved to be the proper choice of management.

REFERENCES:

1. Pediatric gynecology, precis III, pg 66. An update in Obstetrics and Gynecology. 1986. The American College of Obstetricians and Gynecologists, 600 Maryland Avenue, SW, Suite 300 East, Washington, DC 20024-2588.

2. Muram D. Pediatric and Adolescent gynecology. Current Obstetrics and Gynecologic Diagnosis and Treatment, 1987. Sixth edition. Ch. 31 pg.572. Publishers: Appleton and Lange. Norwalk, Connecticut / Los Altos, California.

3. Dewhurst Sir John. Group II: Disorders of the low oestrogen years.

Dewhurst's textbook of Obstetrics and Gynecology for postgraduates. 4th edition, 1989. Ch. 4 pg 43. Publishers: ELBS / Blackwell Scientific Publications. Osney Mead, Oxford OX2 OEL.

G.9 PROCIDENTIA: VAGINAL HYSTERECTOMY WITH ANTERIOR AND POSTERIOR COLPORRHAPHY

NAME : Mrs M. H.

AGE : 65 years

REGISTRATION NO. : 709837

RESIDENCE : Pemba

PARITY : 4^{+1}

DATE OF ADMISSION : 26.12.92

DATE OF DISCHARGE : 14.01.93

SUMMARY:

Mrs. M. H., a 65 years old postmenopausal lady, presented with complaints of a mass protruding per vagina for about 2 years with difficulty in micturition and defecation. A diagnosis of procidentia with cystocele and rectocele was made after a clinical examination and she was treated by a vaginal hysterectomy with anterior and posterior colporrhaphy. She had a smooth postoperative recovery and was discharged home well on the sixth postoperative day.

HISTORY OF PRESENTING ILLNESS:

Mrs. M. H., a 65 years old para 4^{+1} lady was admitted to the gynecology ward with complaints of a mass protruding per vagina for about two years. Initially, the mass protruded only on straining and could be reduced easily. Gradually , just prior to the cessation menses, she noticed that the mass became irreducible. There was no history of ulceration of the mass, vaginal discharge or contact bleeding. She had been experiencing incomplete bladder emptying which of late necessitated her to reduce the

neither was there any history of urinary frequency, urgency or incontinence. She had no history of chronic cough. Her bowel habits were normal.

Obstetrical and Gynecologic History:

She was para 4^{+1} and had 4 full term 'uncomplicated' deliveries at home, conducted by her mother. The duration of labor was between 3-6 hours. The babies weights were not recorded but they were relatively 'big'. There was no history of genital tears or prolapse complicating the deliveries. All her children were alive and well. The last pregnancy was aborted spontaneously at a gestation of 5 months. She was about 10 years post menopausal.

Previous Medical History:

There was no history of serious illnesses in the past.

Family and Social History:

She was a housewife, married to a religious leader and was sexually active. There was no history of diabetes mellitus or hypertension in her family. None of her sisters had a similar problem.

PHYSICAL EXAMINATION:

General Examination:

She was an obese lady in a fair general condition. She was not pale.

Cardiorespiratory Systems:

Her pulse rate was regular at 84/minute and the blood pressure was 120/80 mm Hg. The respiratory system was normal.

Abdominal Examination:

The abdomen was soft and flabby with a small umbilical hernia. The liver

and spleen were normal and other hernial orifices were free of masses. The renal angles were not tender. There was no tenderness or palpable masses.

Pelvic Examination:

The vulva and vagina were atrophied. The cervix was seen out of the introitus. It was not elongated but was hyperemic and was not bleeding. There was no ulcer. The uterus was also atrophied and the fundus uteri could be palpated outside the introitus. There was a cystocele and a rectocele. The adnexa were not palpable. The rest of the pelvis was free of other abnormally palpable masses. No stress incontinence was demonstrated on coughing both during lying and standing.

Rectal Examination:

The anterior rectal wall was bulging into the vagina. There was a normal sphincter tone. There was no invagination on the upper anterior rectal wall. There was no fecal impaction.

DIAGNOSIS:

Third degree genital prolapse with cystocele and rectocele.

INVESTIGATIONS:

1. Hemoglobin was 12.8 g/dl.
2. Pap smear was negative for malignancy.
3. Midstream urine culture yielded no significant bacterial growth.
4. Serum creatinine was 78 umol/l.
5. ECG was normal.
6. Fasting blood sugar was 4.2 mmol/l.
7. Chest X-ray was normal.

7. Chest X-ray was normal.

PLAN OF MANAGEMENT:

Vaginal hysterectomy with anterior and posterior perineorrhaphy.

She was admitted a day prior to operation and blood grouping and crossmatching was done. Enema was given the night before. Consent was obtained for anesthesia and surgery.

OPERATIVE PROCEDURE:

Anesthesia:

Under spinal anesthesia with 3 ml bupivacaine 0.5% effect A, height T_8.

Technique:

She was placed in a sitting position with her legs over the side of the operating table, spine vertical and flexed forwards, with an assistant supporting the patient in front. Lumbar puncture was performed between the third and fourth interspinous space as follows:

A small intradermal weal was raised with local anesthetic solution, and through this weal the Sise introducer was passed in the sagittal plane until it impinged on ligamentum flavum. A fine spinal needle was inserted through the Sise introducer and gradually advanced through the ligamentum flavum. A sudden reduction in resistance was noticed when the needle entered the epidural space which was only a few mm deep. This space was crossed and the needle struck the dura, which again momentarily resisted the needle then suddenly yielded. The needle was then halted and cerebrospinal fluid drained out. After aspiration of about 0.25 ml of cerebrospinal fluid to check the position of the needle, 0.5% bupivacaine 3 ml was slowly injected and after injection the needle and introducer

minutes and then laid down after a saddle type of block was achieved.

Operative procedure:

The patient was made to lie in the lithotomy position.

The bladder was emptied as described in Gynecologic case No. 3, and clear urine was obtained. A repeated bimanual examination was done and the preoperative findings were confirmed. The labia majora were sutured to the medial aspects of the thighs. The cervix was grasped with a volsellum forceps and retracted forwards. A metal catheter was introduced into the bladder and the highest point marking the position of the bladder and the cervix was noted. The subepithelial tissues were infiltrated with saline to help define the tissue planes and to reduce minor bleeding.

A circumferential incision was made around the cervix with a concavity following and below the line of the bladder. With blunt dissection the vaginal skin was reflected off the cervix posteriorly, laterally and then anteriorly. This dissection exposed the cervicovesical ligament which was divided. The bladder was then reflected off the cervix until the uterovesical peritoneum was seen. This was opened using a scissor and the opening was extended laterally. A narrow retractor was put to push the bladder and ureters forwards. The cervix was then held in traction forwards and anteriorly and the incision on the cervix completed all around. Another vertical incision was made on the posterior aspect. Dissection was done in a similar manner to the anterior aspect until the posterior fold of posterior cul-de-sac was seen. The peritoneum was incised and a retractor was inserted. The uterosacral ligaments were exposed. The left ligament was doubly clamped with Kocher's forceps, cut

and ligated with No. 1 chromic catgut. The suture was cut long and held with small artery forceps. With the assistant applying enough traction towards the patient's left side, the broad ligament on that side was exposed bringing the uterine vessels into view. These were doubly clamped and suture ligated with the same suture. The broad ligament was then dissected upwards off the uterus. The retractors were then moved to the right side of the patient and the procedure repeated as with the left side.

The uterus was then delivered through the posterior cul de sac opening. The round ligaments, fallopian tubes, ovarian vessels and ovarian ligaments were then doubly clamped on each side and divided so that the uterus could be removed. The pedicles were doubly ligated using a free ligature proximally and a transfixion ligature being pinned to the drapes. The atrophic ovaries were inspected and removed.

The peritoneum was closed with a continuous 0 caliber chromic catgut suture with a purse-string which extraperitonealized the pedicles on the left, joined the anterior and posterior peritoneum and finished with a purse-string which extraperitonealized the pedicles on the right, joined the anterior and posterior peritoneum and finished with a purse string suture on the right.

Vault suspension:

The vaginal vault was closed and supported using the pedicles. The stay suture of the uterine vessels was cut short on each side, the uterosacral and cardinal ligament bundles were approximated by tying their stay sutures together; these sutures were then used to close the center of the

vault while the ovarian pedicles closed and supported the vaginal angles.

Anterior and posterior perineorrhaphy:

The pubovesical fascia of the two sides was next sutured together using a series of catgut No. 1 which were tied in the midline thus elevating the bladder base. The redundant vaginal wall was excised and the anterior vaginal wall was repaired using a series of No. 1 catgut sutures.

Posterior colporrhaphy was then done. The posterior termination of the labia minora was held with Littlewood's forceps and drawn apart, thus putting the perineal skin into a stretch. An incision was then made connecting the two forceps. Dissection of the underlying fascia was made upwards to the level of the forceps and the triangular flap thus made was excised. Dissection was further proceeded upwards to the upper level of the rectocele and another triangular flap was excised. Lateral dissection of these flaps exposed the levator ani muscles. The pre-rectal fascia was sutured to the posterior vaginal wall and the levator ani muscles were also sutured in the midline with chromic catgut No. 1 sutures. The redundant vaginal wall was excised and the walls approximated with intermittent chromic catgut No. 1 leaving the introitus admitting two fingers. The bladder was then catheterized with Foley's catheter No. 16 which was left in situ. A Vaseline gauze pack was left in the vagina.

The estimated blood loss was 400 ml.

The removed uterus was cut open and examined macroscopically. There was no obvious pathology on the endometrium or the myometrium. The specimen was sent for histopathological examination.

POSTOPERATIVE ORDERS:

1. Intravenous 5% dextrose saline 3 liters in 24 hours.
2. Injection pethidine 100 mg 6 hourly intramuscularly for 24 hours.
3. Input/output chart was maintained.
4. Indwelling urethral catheter for 24 hours.
5. Vaginal pack for 24 hours.

POSTOPERATIVE CARE:

She had an uneventful postoperative period. She fared well and had a normal urine output. She ambulated and started oral feeds by the same evening and was on normal diet from the second day. She had no difficulties in micturition. Her postoperative hemoglobin was 10.2 g/dl. She was discharged home well on the sixth postoperative day.

FOLLOW-UP:

She was seen at the gynecological outpatient 6 weeks post hysterectomy. She had no complaints. She was voiding and defecating normally. The vagina was capacious and readily admitted two fingers. The vault had healed well. The histology report was unremarkable. She was advised to avoid sexual intercourse for 3 months. She was then discharged from the clinic.

COMMENTARY:

Genital prolapse is a consequence of the failure of uterine supports[1,2]. These supports include the urogenital diaphragm, the pubourethral ligaments, the levator ani muscles, the cardinal and uterosacral ligaments. The endopelvic fascia is also included in the musculofascial support of the pelvic organs.

Uterovaginal prolapse is a multifactorial disease. The familial tendency

which is sometimes seen in these patients points to a genetic predisposition. Birth injuries and menopausal atrophy when superimposed on a genetically predisposed individual are very likely to result in genital prolapse. Prolapse occurring in infancy and in nulliparous women further points to congenital weakening of the endopelvic fascia and its thickenings which are the main supports of the uterus and the vagina [3,4]. Vaginal delivery has also been cited as a cause. There seems to be a higher incidence in multiparous than in nulliparous women. Mrs. M. H. had no family history of genital prolapse but was a multiparous woman who had repeated, shortly spaced vaginal home deliveries of relatively big babies. Birth injuries coupled with menopausal atrophy and obesity probably predisposed her to a uterovaginal prolapse. The management of uterovaginal prolapse depends on the age of the patient, her parity, desire for more children, menstrual function in premenopausal women and suitability of the patient for surgery. Another factor is the presence of other abdominal or pelvic pathology. In Mrs. M. H., there was incomplete bladder emptying which predisposes to urinary tract infection. For young women who want to preserve their menstrual function and fertility, a Manchester operation would suffice. This consists of amputation of the cervix and strengthening of the uterine supports. However, cervical amputation may result in cervical incompetence [3,4]. Patients with serious medical disorders may be treated with polyvinyl ring pessaries changed every three months to prevent vaginal ulceration and infection. They may also be used in women with decubitus ulcers to encourage healing before operation. In postmenopausal women like Mrs. M. H. vaginal hysterectomy is the

management of choice. An abdominal approach is not favored because although the uterus may be removed and the hernia of the pouch of Douglas dealt with, colpoperineorrhaphy can not be done and the patient will need another operation. Uterovaginal prolapse of a major degree as in this case is usually associated with some degree of cystocele and/or rectocele. Vaginal hysterectomy and perineorrhaphy is thus the treatment of choice as was done in this patient. Indeed, some authors have even advocated prophylactic perineorrhaphy as cystocele and rectocele have been observed to occur at a later stage [1,2,5]. Vault suspension as done in this patient safeguards against vault prolapse after vaginal hysterectomy.

The prevention of genital prolapse to some extent, though it remains debatable, can be achieved by proper support of the perineum and prophylactic episiotomy when necessary during the second stage of labor. Estrogen replacement in menopausal women may prevent atrophy of the pelvic ligaments and hence probably prevent genital prolapse but is fraught with the danger of increasing the incidence of endometrial carcinoma.

REFERENCES:

1. Burnett LS: Relaxation, Malposition, Fistulas and Incontinence. Novak's Textbook of Gynecology. Eleventh edition, 1988. Ch. 17 pg. 455-478. Publisher Williams and Wilkins, 428 East Preston Street, Baltimore MD 21202, USA.

2. Llewellyn-Jones D. Uterine Displacement and Uterovaginal Prolapse. Fundamentals of Obstetrics and Gynecology. Vol II Gynecology. Fifth edition, 1990. Ch. 21 pg 212-220. Publisher Faber and Faber Limited, 3 Queen Square London WC1N 3AU.

3. Symmonds RE: Relaxation of Pelvic supports. Current Obstetrics and Gynecology Diagnosis and Treatment, 1987. Sixth edition. Ch. 40 pg 751-769. Publishers: Appleton and Lange, 25 Van Zant Street, East Norwalk, Connecticut 06855.

4. Warrell DW: Prolapse and Urinary Incontinence. Dewhurst's Textbook of Obstetrics and Gynecology for Postgraduates. Fourth edition, 1986. Ch. 45 pg. 680-699. Publishers: Blackwell Scientific Publications, Osney Mead, Oxford, OX2 OEL.

5. Mattingly RF: Malposition of the uterus cervical stump and Vagina. Te Linde's Operative Gynecology. 5th edition, 1977. Ch. 24 pg 485-530. Publisher J. P. Lippincott and Company. Philadelphia, Toronto.

G.10 PERFORATED UTERUS: SUBTOTAL ABDOMINAL HYSTERECTOMY

NAME : Mrs. R. H.

AGE : 22 years

PARITY : 2^{+1}

REGISTRATION NO : 747782

RESIDENCE : Ilala, Dar-es-Salaam

DATE OF ADMISSION : 02.05.93

DATE OF DISCHARGE : 07.06.93

SUMMARY:

Mrs. R. H., a 22 year old para 2^{+1} was admitted to the gynecology ward with postabortal sepsis. This followed termination of a pregnancy of six months by a quack 3 days prior to admission. She was evacuated at a peripheral hospital 2 days later and was discharged home. Her condition deteriorated and she ultimately came to our center and ended up with a subtotal abdominal hysterectomy, followed by a very stormy postoperative period. She was discharged home after 5 weeks of hospital stay and advised to attend the gynecological clinic 6 weeks later for follow-up.

HISTORY OF PRESENTING ILLNESS:

Mrs. R. H., a 22 year old para 2^{+1} was admitted with complaints of fever, vomiting, lower abdominal pain and offensive blood stained discharge per vagina since 3 days. She readily volunteered that her boyfriend had taken her to a quack for termination of a pregnancy of 6 months. She had been desperate and agreed because her husband, who had been studying abroad was due to arrive in near future. The termination had been performed using a sharp instrument, following which she drained

liquor and bled heavily. She then went to a peripheral hospital 2 days later where she was evacuated and discharged home. Her condition deteriorated and she ultimately came to our center. There was no history of dysuria or frequency of micturition. The bowel habits were normal.

Gynecological History:

She had attained menarche at 13 years. Her periods were regular with a duration of 3-5 days and cycles lasting 28-30 days. The flow was normal and she had no dysmenorrhea. There was no history suggestive of sexually transmitted diseases. She had never used any contraceptives.

Obstetric History:

She had 2 full term normal deliveries and the children were aged 8 years and 6 years respectively. They were alive and well.

Previous Medical History:

There was no history of serious illnesses in the past.

Family and Social History:

She was a housewife married for 9 years to a man who had been studying engineering abroad for the last 4 years. Having completed his final examinations he was expected back soon. She had a steady partner during her husband's absence, who had ben responsible for the last pregnancy. She neither smoked nor took alcohol. There was no history of diabetes mellitus or hypertension in her family.

PHYSICAL EXAMINATION:

General Examination:

She looked sick and in pain. She was febrile with a temperature of 39.6℃, she looked quite pale and was icteric. The extremities were warm.

Cardiorespiratory System:

Her pulse rate was 116/min and her blood pressure was 80/50 mm of Hg. Both heart sounds were audible and the respiratory system was essentially normal.

Abdominal Examination:

The abdomen was distended. The liver and spleen were not palpable and the renal angles were non tender. There was tenderness more pronounced at the suprapubic region with rebound tenderness. Guarding was present. Shifting dullness was equivocal. The uterine size could not be appreciated. The bowel sounds were barely audible.

Pelvic Examination:

The vulva and vagina were normal, cervix looked healthy and untraumatized and some dark colored blood clots were seen protruding through the os. The uterus was enlarged to about 8 weeks size. The adnexa and parametria were tender. There was a very offensive blood stained discharge oozing through the os, but there was no active bleeding.

DIAGNOSIS:

Incomplete septic abortion with a possibility of a perforated uterus.

PLAN OF MANAGEMENT:

1. She was counselled about the diagnosis and the proposed mode of therapy and she consented.
2. She was prepared for examination under anesthesia, re-evacuation and for possible laparotomy.
3. Grouping and crossmatching for 2 units of blood was done.

4. Intravenous injection metronidazole 500 mg 8 hourly was administered for 48 hours.
5. Intravenous injection ampicillin 500 mg 6 hourly for 48 hours.
6. Consent was obtained for anesthesia and surgery.

OPERATIVE DETAILS:

Anesthesia: This was administered as for Obstetric case No. 3.

EXAMINATION UNDER ANESTHESIA:

She was placed in lithotomy position and the examination was conducted as described in Gynecological case No. 3. About 60 ml of clear urine were obtained after catheterization.

Speculum Examination:

The vulva and vagina were normal. The cervix was bluish in color and looked healthy with no apparent signs of injuries. There was offensive dark blood oozing through the os.

Bimanual Examination:

The previous findings were confirmed. The index finger could easily be passed into the cervix and products of conception were felt in the cervical canal.

Evacuation:

The uterus was evacuated digitally and then using ovum forceps. Few septic products were obtained. Finally, a blunt curette was gently introduced into the uterus and the uterine cavity was explored. A definite rent was identified on the anterior lower aspect of the uterus, about 2 cm from the internal os. Blood loss was minimal. Patient was laid in supine position and prepared for laparotomy.

LAPAROTOMY: SUBTOTAL ABDOMINAL HYSTERECTOMY

The abdomen was cleaned, draped with sterile linen and opened through a subumbilical mid line incision as described in Obstetric case No. 3.

Findings:

There was plenty of hazy colored offensive peritoneal fluid. No free pus was found. Subphrenic spaces and paracolic gutters were free of pus. There was a perforation, over the right lower anterior aspect of the uterus about 2 cm from the internal cervical ostium. The right lower part of the uterus was necrosed and friable. The peritoneum over the perforated part of the uterus was undergoing necrosis. Both adnexa were normal, and the rest of the uterus was normal. The bladder was normal and not injured.

Subtotal Abdominal Hysterectomy:

This was done as follows:

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

downwards, off the cervix and toward the vagina by blunt dissection.

5. Kocher clamps were placed at the isthmus and the pedicle between the 2 clamps was incised sharply and sutured, assuring adequate hemostasis of this major branch of the uterine artery. The procedure was repeated on the opposite side.
6. The anterior aspect of the cervix was grasped with a clamp to stabilize the cervix and utilizing a scalpel, the cervix was incised in an angular fashion and the uterus was removed. This incision was carried out proximal to the ligated uterine arteries.
7. As the cervix was stabilized with Allis clamp, deep figure-of-eight sutures of 1 caliber chromic catgut were placed at the angles of the cervix. Additional figure-of-eight sutures were placed between the two angles until adequate hemostasis was achieved.
8. Reperitonization was done by continuous 0 caliber chromic catgut suture from one side to the other.
9. Peritoneal lavage was done with warm normal saline.
10. Corrugated rubber drains were left in the pouch of Douglas.
11. The abdomen was closed in layers as described in Obstetric case No. 3 with vicryl no. 1 to the rectus sheath and interrupted silk to the skin. The wound was dressed with gauze.
12. Reversal from anesthesia was uneventful.

POSTOPERATIVE CARE:

1. The pulse rate, respiratory rate and blood pressure were recorded half hourly until stable then 4 hourly for 24 hours.
2. Intravenous 5% dextrose saline 3 liters in 24 hours were given.

3. Injection metronidazole 500 mg 8 hourly intravenously for 48 hours then oral tablets 400 mg 8 hourly for 5 days.
4. Injection ampicillin 500 mg 6 hourly intravenously for 48 hours then capsules ampicillin 500 mg 6 hourly for 5 days.
5. Injection gentamicin 80 mg 8 hourly intravenously for 48 hours, then intramuscularly for 5 days.
6. One unit of B Rh POSITIVE compatible blood was given intraoperatively.

POSTOPERATIVE FOLLOW-UP:

Her vital signs remained stable but she remained febrile for 48 hours before the temperature subsided to 38^0 C. She passed 1100 ml of clear urine in the first 24 hours and the catheter was removed. Oral fluids were started on the second postoperative day when the drains were removed and she was ambulated. The abdomen was soft. From the fourth postoperative day, the wound started oozing pus and the temperature rose again. There was no discharge per vagina by then, and no dysuria or frequency of micturition or headache.

The following investigations were done postoperatively:

1. Hemoglobin = 8.2 g/dl on the second day.
2. Blood smear for malarial parasites was negative.
3. Urine for culture and sensitivity = No significant bacterial growth was seen.
4. Endocervical swab for culture and sensitivity:

   Wet preparation = No pus cells
   No yeast cells
   No Trichomonas vaginalis.

Gram Stain = No pus cells
No yeast cells
No gram negative diplococci

Culture = No Neisseria gonorrheae or Candida albicans were isolated.

5. Pus swab:

Gram stain = ++ Gram negative rods
++ pus cells

Culture = (1) Escherichia coli were isolated:
sensitive to: sulphonamides and gentamicin
resistant to: augmentin, chloramphenicol, tetracycline.

(2) Pseudomonas aeruginosa were isolated:
sensitive to: gentamicin

6. Blood culture and sensitivity: There was no bacterial growth.

Tab metronidazole 400 mg 8 hourly were continued for 5 days and tablets cotrimoxazole 2 twice daily for 5 days, with tablets chloroquine 4 daily for 2 days then 2 daily for 2 days despite a negative smear for malarial parasites.

The sutures were removed on the sixth postoperative day. The wound was indurated and still oozing pus, and was by then dressed at least twice daily with hydrogen peroxide and Eusol and thereafter it was dressed with honey. After one week she started discharging pus per vagina, but her general condition improved thereafter. She stayed in hospital until the wound was clean and no longer discharged pus, and the vaginal discharge

and fever had subsided. She was discharged home after 5 weeks of hospital stay and advised to come to the gynecologic clinic 6 weeks later for follow-up.

FOLLOW-UP:

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

COMMENTARY:

Globally, abortion is a serious problem as pertains to maternal morbidity and mortality. In our country despite the law remaining restrictive, unsafe abortion had proved itself to be a serious public health problem [1]. Global trends have shown that whether abortion laws are liberal or restrictive, termination of pregnancy will always be sought whenever the need arises regardless of religious and ethical-moral attitudes of a particular society. This was clearly exemplified by Mrs. R. H., who was ashamed of being discovered by her husband and the society and went through such lengths to terminate a very advanced pregnancy. She feared getting divorced and having her children being affected by growing up in a broken family.

Abortion related conditions constitute 50-70 per cent of all gynecological admissions in most public hospitals in Dar es Salaam, and of these induced abortions account for 30-60 per cent [1].

Immediate complications of induced abortions include hemorrhage, sepsis and trauma. Long term complications include infertility, chronic pelvic

inflammatory diseases, cervical incompetence in subsequent pregnancies and even urinary or rectal fistulae in cases where the bladder or bowel had been injured. The treatment modality depends on the age, parity, site and extent of injury. If the uterus is salvageable, it should be left for future fertility and menstruation functions. In our case, the treatment was influenced by the condition of the uterus intraoperatively. Since it was severely infected and damaged, to minimize postoperative morbidity subtotal abdominal hysterectomy was opted for. However, despite this and perioperative coverage with antibiotics and blood transfusion to boost her immunity to combat infection, the postoperative period was very stormy and she was fortunate to be alive.

Local studies have revealed that the maternal mortality rate in Dar es Salaam is very high (578 per 100,000 live births) and abortions rank highest in the causes of maternal deaths [2]. They account for about 15 percent of maternal deaths and they are mainly due to complications from induced abortions. Morbidity rates complicating these abortions have not been documented but higher figures are likely to prevail.

In the same study, only 12 per cent of women dying from abortions had planned pregnancies (88 per cent had unplanned pregnancies) [2]. The current national contraceptive utility rates of modern and traditional family planning methods are 6-10% [3]. These figures point to the preventive nature of deaths caused by abortions and reflect upon the unmet need for family planning in this vulnerable group. Family planning is the single most effective way to reduce the incidence of unwanted pregnancy and the need for abortion.

Conclusively, the figures portrayed above indicate a dangerous trend as pertains to women's reproductive health. It is high time society addressed itself squarely to this problem in order to lower morbidity and reduce these deaths which are largely preventable.

REFERENCES:

1. Mpangile GS, Leshabari MT, Kihwele DJ: Factors associated with induced abortion in Public Hospitals in Dar es Salaam, Tanzania. October 1992.
2. Urassa EJN, Massawe SN: Maternal Mortality in Dar es Salaam, Tanzania. A Case-referent study in Ilala District, March 1991-February 1993. Socioeconomic, obstetric and community risk factors (Unpublished).
3. The National Family Planning Programme (1989). Ministry of Health - United Republic of Tanzania: Plan of Operations 1989-1993.

A COMPARISON OF COMPLICATIONS BETWEEN POSTPARTUM AND INTERVAL INTRAUTERINE DEVICE INSERTIONS AT MUHIMBILI MEDICAL CENTRE FROM JANUARY 1993 TO MARCH 1994

ABSTRACT:

A prospective study was done at Muhimbili Medical Centre from January 1993 to March 1994, to compare complications between postpartum and interval intrauterine device (IUD) insertions. The study population consisted of 250 postpartum patients for postpartum IUD insertions and 254 clients from the family planning clinic for interval insertions. These were selected from the antenatal and family planning clinics after counseling and screening. Data was collected and recorded by the author assisted by 4 trained counselors. The subjects were followed up at six weeks, three months and six months and their experiences were documented, using a standard data collection sheet.

It was found that there was no significant difference in the rate of expulsions, PID, translocations, perforations and discontinuation. There was a significant difference in the proportion of postpartum women complaining of abdominal pain, duration of bleeding at 6 weeks, and of lost strings. The failure rate at 6 months was 1.6% (4/246) in the interval group and 0% in the postpartum group.

This study shows that postpartum IUD insertion is as safe as interval insertion with regard to complications. It is also convenient, effective and acceptable to our women.

INTRODUCTION:

An intrauterine device (IUD) is a small device that is inserted inside a woman's uterus to prevent pregnancy. Using an intrauterine device (IUD) is many times safer than pregnancy and more effective in

preventing pregnancy than contraceptive pills, condoms, spermicides, any barrier method or natural family planning. The current generation of IUDs is safer for most women and about 99% effective over one year of use [1] .

Serious complications from intrauterine devices are preventable. Eight potential complications from intrauterine devices are as listed below, in order of increasing severity [2] :

1. Spotting, bleeding, hemorrhage and anemia.
2. Cramping and pain.
3. IUD expulsion : partial and complete.
4. Lost IUD strings and other string problems.
5. IUD removal difficulties.
6. Pregnancy with IUD in utero.
7. Uterine perforation, embedding and cervical perforation.
8. Pelvic inflammatory disease.

IUDs can be safely and effectively inserted at any time during the menstrual cycle (interval insertion), trans-cesarean section, after spontaneous or induced abortions (postabortion insertion), shortly after one or more acts of unprotected intercourse (postcoital insertion), during lactation, and within a few hours or days after delivery (postpartum insertion) [3]. Postpartum time periods are further subdivided into [4]:

a) postplacental insertion: immediately after expulsion of the placenta (preferably within 10 minutes of placental expulsion). Also known as immediate postplacental insertion (IPPI).

b) Immediate postpartum insertion: after 10 minutes but within 48 hours after delivery. Also known as insertion before hospital discharge

(IBHD).

c) Early postpartum insertion: 48 hours to 6 weeks after delivery.

Postpartum IUD insertion, within a few days after delivery is safe and convenient, with no increased risk of infection, perforation or bleeding [5,6,7,8,9,10,11]. The only serious disadvantage of postpartum insertion is the high expulsion rate [12] and consequent increase in pregnancy rate and translocation.

In rural areas of Tanzania and in some urban clinics, women may need to travel long distances to get to a Family Planning clinic and the inconvenience caused may discourage the woman from attending a Family Planning clinic once she has been discharged from the health center, dispensary or hospital after childbirth or abortion. Postpartum IUD insertions would prove suitable to use in a set-up like ours in which contacts between the client and her medical provider are limited due to poor socio-economic conditions.

It ought to be mentioned that this method of contraception is not suitable for every provider, nor is it suitable for every woman. The provider must screen potential users, give informative and empathetic counseling, insert the IUD correctly and follow-up users.

REVIEW OF LITERATURE:

For women who deliver in hospitals or health centers, IUD insertion in the early postpartum period (after delivery but before discharge) , is a safe and convenient procedure. The risks of infection, perforation or heavy bleeding are no greater at six weeks after childbirth or at a time unrelated to pregnancy [7,8,9,10,13].

The health care provider's skill and experience are probably more important in reducing expulsions and other complications than the type

of device used [8,14,15,16]. A large international study of immediate postpartum insertions found that expulsion rates at three months were almost twice as high for insertions performed during the first half of the study when the practitioners were less experienced, than in the second half[14]. Similarly, a Belgian study found that rates of expulsion, accidental pregnancy, and removal for pain, bleeding and other medical reasons were lower when the intrauterine devices were inserted postpartum by more experienced practitioners [16].

Some investigators - like Thiery M, report low expulsion rates, regardless of the device or time of insertion [7,17,18,19]. In a WHO multicenter trial of postplacental insertion, the Santiago, Chile center reported the lowest expulsion rates. At that center manual examination was performed after each insertion. If the device was palpable, which meant it was incorrectly placed it was immediately removed and reinserted [20].

It is not clear whether insertion by hand or with instruments leads to better placements. When manual insertion was compared with insertion using a special 30 cm -long flexible inserter, there was no difference in expulsion rates [21,22].

The serious disadvantage of postpartum insertion is the high expulsion rate. The intrauterine device is easily expelled after childbirth because the uterus is contracting and the cervix is dilated [12]. When the intrauterine device is inserted immediately postpartum the expulsion rates at six months ranged from 31 to 41 per 100 in a WHO multicenter trial and from 12 to 22 per cent in a Family Health International multicenter trial [6,20]. Insertion one to seven days after delivery results in even higher expulsion rates [6]. In Santiago, Chile,

the 3-month expulsion rate in 1,142 women fitted with T-Cu 200s between 8 hours and 6 days after delivery was 32 per cent compared with 5 to 15 per cent for interval insertion [23]. Intrauterine devices inserted immediately after delivery of the placenta are also frequently expelled. In a WHO multicenter trial the 12-month expulsion rates following postplacental insertion were 44 per cent for the Lippes Loop D and 35 percent for the Cu-7 [20].

Intrauterine devices modified to reduce expulsion after postpartum insertion have met with little success for the most part, research continues however[6,8,14,15,20,24].

BROAD OBJECTIVES:

The broad objective of this study was to compare the rates of complications, failure and discontinuation between postpartum IUD insertions and interval IUD insertions at Muhimbili Medical Centre.

SPECIFIC OBJECTIVES:

1. To determine the differences in expulsion rates of postpartum IUD insertions compared with interval IUD insertions.
2. To determine the differences in rates of pelvic inflammatory disease (PID) following postpartum and interval IUD insertions.
3. To determine the rate of abdominal pain after postpartum IUD insertions compared with interval IUD insertions.
4. To determine the differences in duration heavy bleeding after postpartum IUD insertions compared with interval IUD insertions.
5. To determine the differences in rates of lost string problems following postpartum IUD insertions compared with interval IUD insertions.
6. To determine the differences in rates of perforation and

translocation following postpartum IUD insertions compared with interval IUD insertions.

7. To compare the failure rates between interval IUD insertions and postpartum insertions.
8. To determine the discontinuation rates following interval IUD insertions compared with postpartum IUD insertions.

STUDY DESIGN :

A comparative - prospective study was done. A sample size of 234 was calculated for each group, using 'EpiInfo Version 5.0' assuming a precision of 95% and power of 80%, with the prevalence of complications in the interval group = 13% [25], and prevalence of complications in the postpartum group = 23% [20].

The postpartum group consisted of 250 patients from postnatal wards for postpartum insertions.

The interval group consisted of 254 clients from the Family Planning clinic for interval insertions.

METHODOLOGY:

The study was conducted at the labor ward and the Family Planning Clinic of Muhimbili Hospital. The postpartum group of patients were selected during their antenatal visits and the potential subjects were counseled and those indicating that they wished to have an IUD inserted immediately after delivery were fully informed about the nature of the study, the potential risks and benefits of the timing of insertion and the alternative methods of fertility regulation that were available. The interval group was selected from the clients visiting the family planning clinic, who opted for an IUD after counseling. It was made clear that subjects were free to withdraw from the study at any time

without prejudice.

Four trained family planning counselors were selected for the study. To recruit postpartum clients, counseling was done during the antenatal period for those patients attending antenatal clinics at Muhimbili and for those who visited the hospital at the time of delivery, individual counseling, rather than group talks were given at the postnatal wards, after delivery.

The type of IUD utilized for all subjects and controls was T-Cu 380A and was inserted by the author assisted by 4 trained Family Planning nurses.

CRITERIA FOR SELECTION OF SUBJECTS:

Inclusion criteria:

1. All subjects who met the criteria for interval IUD use.
2. Normal vaginal delivery of $\geq$ 37 weeks of gestation.
3. Immediate postpartum status.
4. Could conveniently return for follow-up.

Exclusion criteria:

1. All patients with standard contraindications to interval IUD insertion:
   - who had active STD or other lower genital tract infection or are at a high risk for STD (i.e. had multiple sexual partners or whose partner had multiple sexual partners).
   - had a history of recurrent episodes of PID (implying an exposure to STDs).
   - had a known or suspected malignancy of the genital tract.
   - had an obstructive uterine abnormality.

   IUDs were also not inserted for those women who:

- had severe anemia
- had an abnormally heavy menstrual flow, severe menstrual cramps or unexplained vaginal bleeding.
- were at a risk for human immunodeficiency virus (HIV) infection.
- had an abnormal Pap smear.
- routinely used steroids.
- had insulin dependant diabetes mellitus.
- had an allergy to copper.
- had a valvular heart disease.
- had a history of a blood clotting disorder.
- had a known history of Wilson's disease.

2. To the above contraindications, the following were added for postpartum insertion:
   - chorioamnionitis or prolonged rupture of membranes (greater than 12 hours).
   - fever or any other signs of infection
   - manual removal of the placenta.
   - antepartum, intrapartum or postpartum hemorrhage ($\geq$ 300 ml) or evidence of postpartum uterine atony characterized by excessive bleeding, fundus too soft and necessited the use of an oxytocic agent for control.
   - moderate or severe pre-eclampsia or eclampsia (until risk of DIC is past).

INSERTION TECHNIQUES:

I. INTERVAL INSERTIONS:

These were done using the standard withdrawal technique [26]:

II. POSTPARTUM INSERTIONS:

Postpartum insertions were done either manually or using ring forceps. The patient was made to lie in the lithotomy position. The vulva was cleansed with an antiseptic. The vagina was dried using dry sterile gauze.

A. Manual insertion:

The manual method for insertion was used for the immediate postplacental insertions.

The IUD was gripped between the index and middle fingers with a sterile-gloved hand. The opposite hand was used to firmly stabilize the uterus externally. The IUD was placed at the top of the uterine fundus. Fundal placement was confirmed with both internal and external hands. As the internal hand was removed, it was rotated so as not to dislodge the IUD. The vagina was then inspected: if the strings were visible, it implied the IUD was placed too low and was removed and reinserted.

B. Ring forceps insertion:

The IUD was loaded by grasping it with the ring forceps, and holding it at a slight angle. Using a Cusco's speculum, the vagina was opened until the anterior cervix was clearly visible. The cervix was kept in view while the IUD was introduced into the lower uterus. The left hand was placed on the lower abdomen. The uterus was stabilized externally with firm pressure on the abdomen. The IUD was advanced to the top of the uterine fundus. Good fundal placement was felt with both the abdominal hand and the hand inserting the IUD. After releasing the IUD, the ring forceps were slightly rotated so as not to dislodge the IUD as the forceps were removed. The vagina was then inspected: if the strings were visible, the IUD was reinserted.

For all methods, prophylactic antibiotics were not given, neither was

any special or additional anesthesia required.

Subjects were discharged soon after the postpartum IUD insertions and then followed up at 6 weeks, 3 months and at 6 months after the IUD insertion or at any time complications occurred. At each follow up visit, subjects were questioned and examined for any complications and these were recorded on the data sheet as shown.

CRITERIA USED IN THIS STUDY:

Expulsion of the IUD:

Partial expulsion: When the stem of the copper device was visualized or could be sounded at the cervical canal.

Complete expulsion: When neither the IUD nor the strings were seen inside the uterus.

Pelvic inflammatory disease (PID): In the interval group, this was indicated as per the WHO clinical trials on intrauterine devices. Any patient with a history of one or more of the following:

- History of recurrent PID
- Pelvic abscess
- Puerperal or postabortal PID
- An episode of PID in the 12 months preceding admission to the trial.

The following diagnostic criteria were used in this study [27]:

A definitive diagnosis of PID was made if (a) and (b) and either (c) or (d) of the following signs will be present:

(a) Oral temperature of 38^{0}C or higher before vaginal examination.

(b) Lower abdominal (suprapubic) tenderness with guarding.

(c) Tenderness on movement of the cervix during vaginal examination.

(d) Uni- or bilateral adnexal tenderness and/or palpable tender adnexal mass.

When a case of PID was reported, clinical details were sought and when they conformed to the above definition they were coded as PID. Otherwise they were coded as pain and/or bleeding.

Abdominal Pain: As complained by the patient and perceived by her to be more than the normal menstrual pain.

Bleeding: The amount of bleeding was recorded as normal if it necessited a change of 2 to 6 sanitary pads per day; scanty if it necessited a change of less than 2 sanitary towels, and heavy if she used more than 6 pads per day.

Lost String problems: When the strings were not visualized despite the IUD confirmed to be in situ (by sounding, X-ray or ultrasound scan).

Translocation: When there was embedding or altered orientation of the device within the uterine cavity diagnosed at the time of removal of the IUD.

Perforation: When the IUD was diagnosed to be outside the uterine cavity by sounding, X-ray or ultrasonography and when the strings were or were not visible.

Discontinuation: Removal of the IUD for medical or personal reasons.

Method failure: Occurrence of pregnancy with the IUD in situ.

DATA COLLECTION:

Questionnaires were filled in by the author or the counselors involved in the study. Follow up was done at 6 weeks, 3 months and 6 months after insertion of the device. Data from both the groups was recorded in the data collection sheet at regular intervals.

DATA ANALYSIS:

The data was coded and analyzed by computer using QUEST programme.

RESULTS:

A. Descriptive Analysis:

250 women with postpartum IUD insertions and 254 women with interval IUD insertions were studied. Their socio-demographic characteristics were recorded as shown in the questionnaire appended (Appendix 1).

Findings of the study:

1. Age:

21.6% (54/250) of the postpartum women were between 35-39 years of age whereas 38.2% (97/254) of women from the interval group were between 25-29 years. The mean age in the postpartum group was 30.8 years whereas in the interval group it was 27.7 years. This showed a significant difference ($p < 0.001$). See Figure 1.

2. Parity:

The mean parity was 5.0 in the postpartum group, and 2.5 in the interval group. This difference in parity was statistically significant, $p < 0.001$. The distribution is illustrated in Figure 2.

3. Educational level and Occupation:

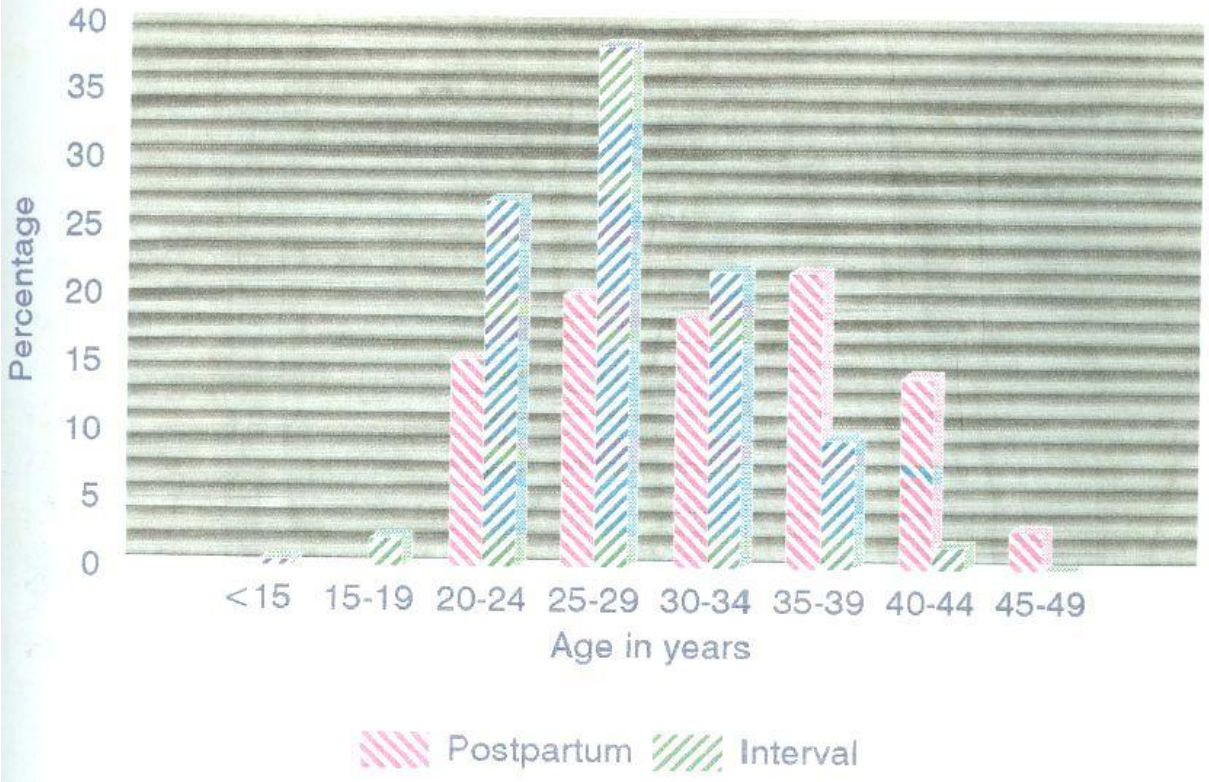
In the postpartum group, 21.6% (54/250) were illiterate, and the remaining had at least been to primary school. In the interval group, only 2% (5/254) in the interval group were illiterate. In the postpartum group, 81.6% (204/250) were housewives and 57% (145/254) were housewives in the interval group.

4. Religion and Marital status:

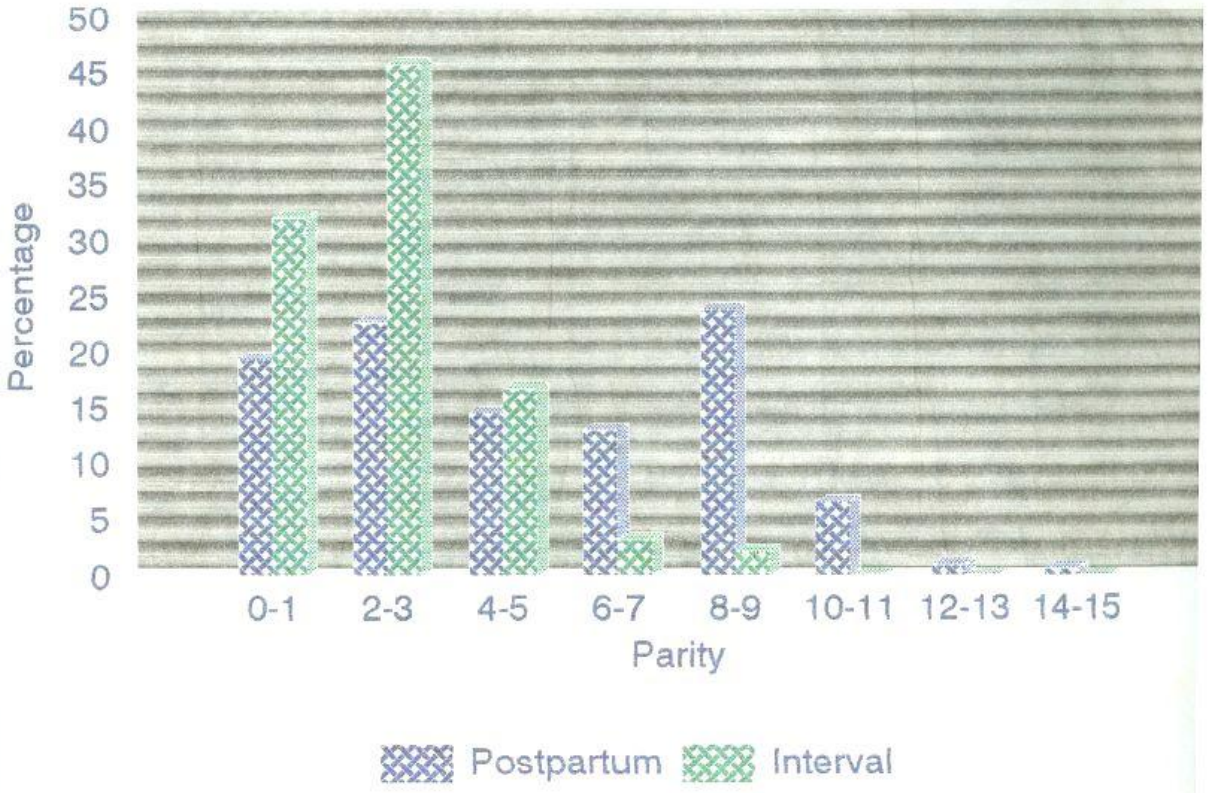
In the postpartum group, 84% (210/250) were married, and in the interval group, 87.7% (223/254) were married. There were more Muslim acceptors in the postpartum group 56.4% (141/250) than in the interval group 34.6% (88/254).

Age Distribution

Figure 1



Parity
Figure 2



B. COMPLICATIONS:

1. Expulsion Rates:

The expulsion rate in the postpartum group was 10.82% and in the interval group it was 9.74%. This showed no significant statistical difference ($p > 0.05$). 50% (10/20) of the expulsions in the postpartum group occurred at 6 weeks and 43.75% (7/16) expulsions occurred in the interval group. At 3 months, 25% expulsions occurred in the postpartum group, and 56.25% (9/16) expulsions occurred in the interval group. There were no expulsions in either group at 6 months. This is shown in Figure 3.

Within the postpartum group, when expulsion rates were compared with the method of insertion, analysis could not be done as the number of women for whom forceps were used was too small (46/250) compared to the manual method (204/250).

When parity of the women was compared with the expulsion rate, it was noted that in the postpartum group, 35% (7/20) of the expulsions occurred in women who were para ≤ 4, while 65% (13/20) of the expulsions occurred in women who were para > 4. In the interval group, 100% of the expulsions occurred in women who were para < 4.

2. Pelvic inflammatory disease:

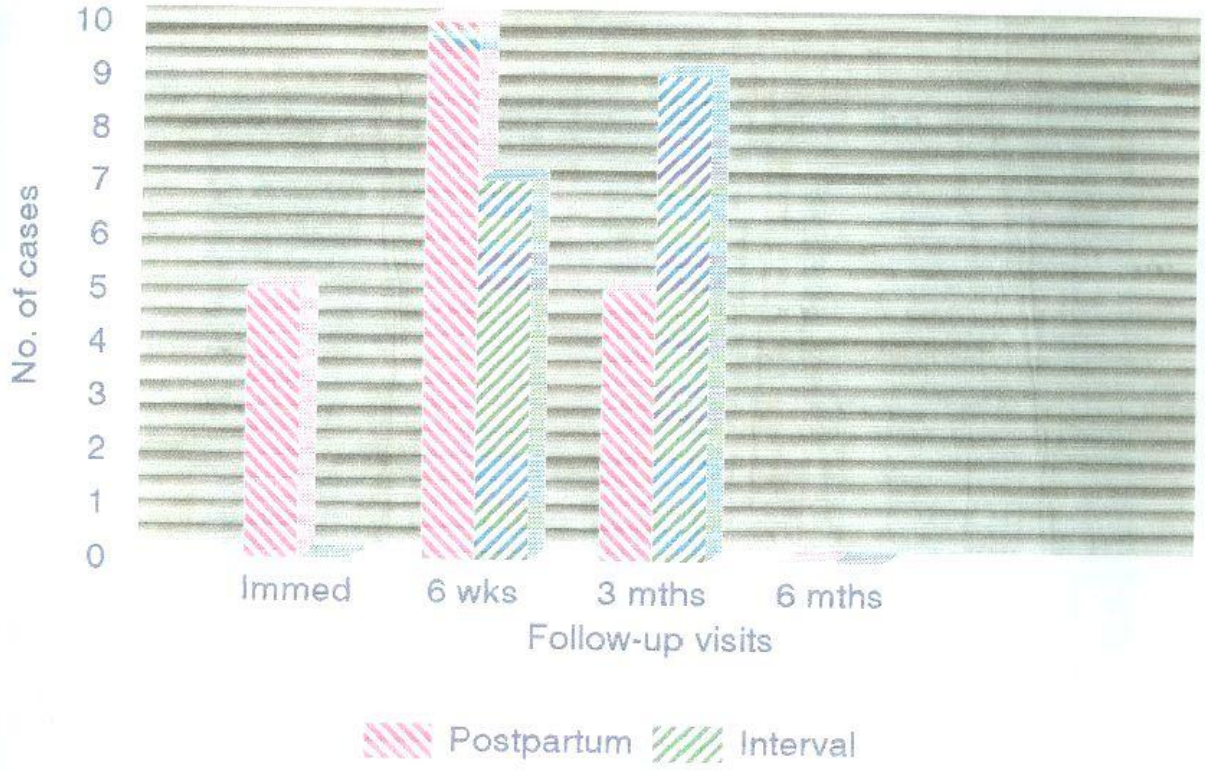
1/230 from the postpartum group had PID at 6 months follow-up and 1/246 from the interval group had PID at 3 months follow-up. This difference was not statistically significant.

3. Abdominal Pain:

Lower abdominal pain was complained of more frequently in the postpartum group 72.57% than in the interval group 35.86%. The difference in abdominal pain rates was statistically significant,

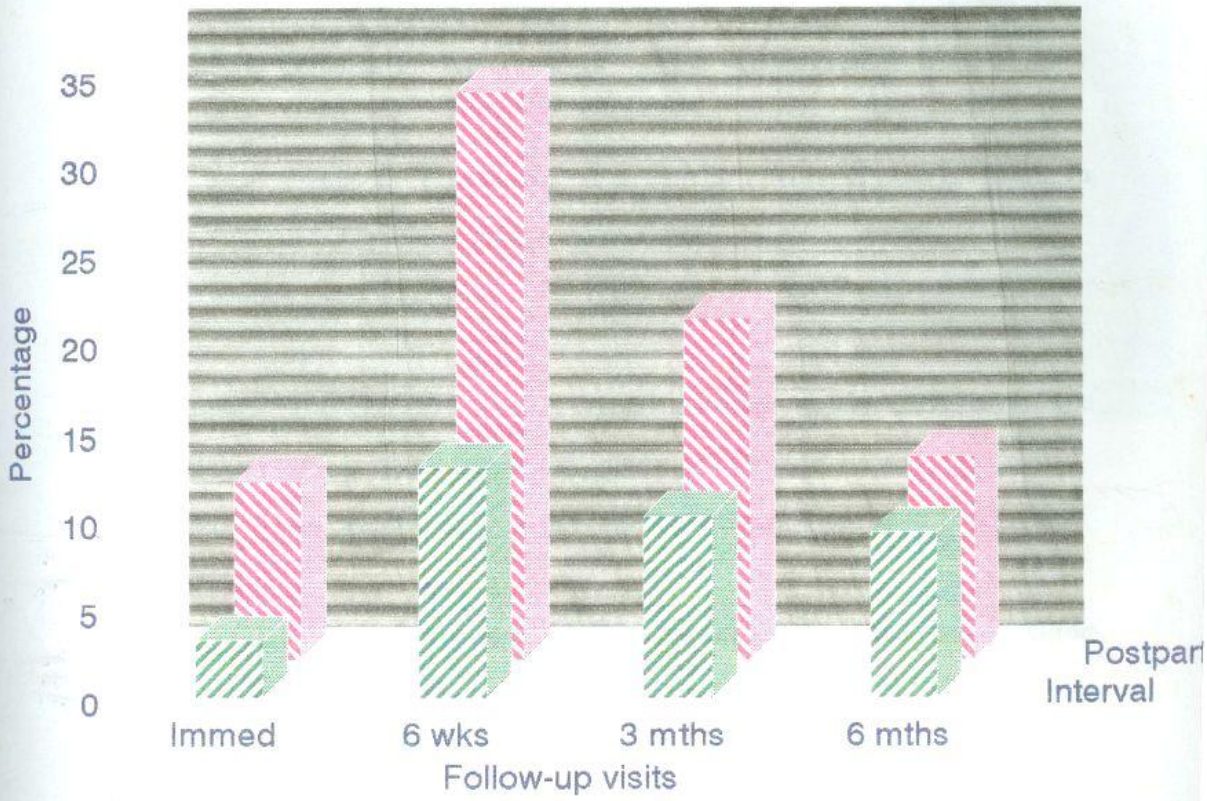
EXPULSION OF IUD

Figure 3



Abdominal pain

Figure 4



$p < 0.001$. Figure 4 illustrates the rates of pain complained by the two different groups of women at each follow-up visit.

4. Duration of Bleeding:

The mean duration of bleeding at 6 weeks follow-up was 1.2 days in the postpartum group and 4.4 days in the interval group. This difference in duration of bleeding between the two groups was significant with a p value < 0.0001.

The mean duration of bleeding at 3 months follow-up was 1.1 days whereas in the interval group it was 4.0 days. The difference in duration of bleeding at 3 months is not statistically significant, $p > 0.1$.

The mean duration of bleeding at 6 months follow-up was 2.3 days in the postpartum group and 4.5 days in the interval group. This difference was not statistically significant, p value > 0.1.

5. Lost strings:

The rate of lost strings in the postpartum group was 9.0% and in the interval group, this was 2.03%. This difference between the two groups was statistically significant, with a p value < 0.001. See Figure 5.

6. There were no translocations or perforations in both groups during the study period.

7. Method failure:

The failure rate was 0% in the postpartum group and 0.16% (4/246) in the interval group. Of the 4 women who got pregnant in the interval group with the IUD in situ, one conceived at 6 weeks, one at 3 months and two at 6 months.

LOST STRINGS

Figure 5

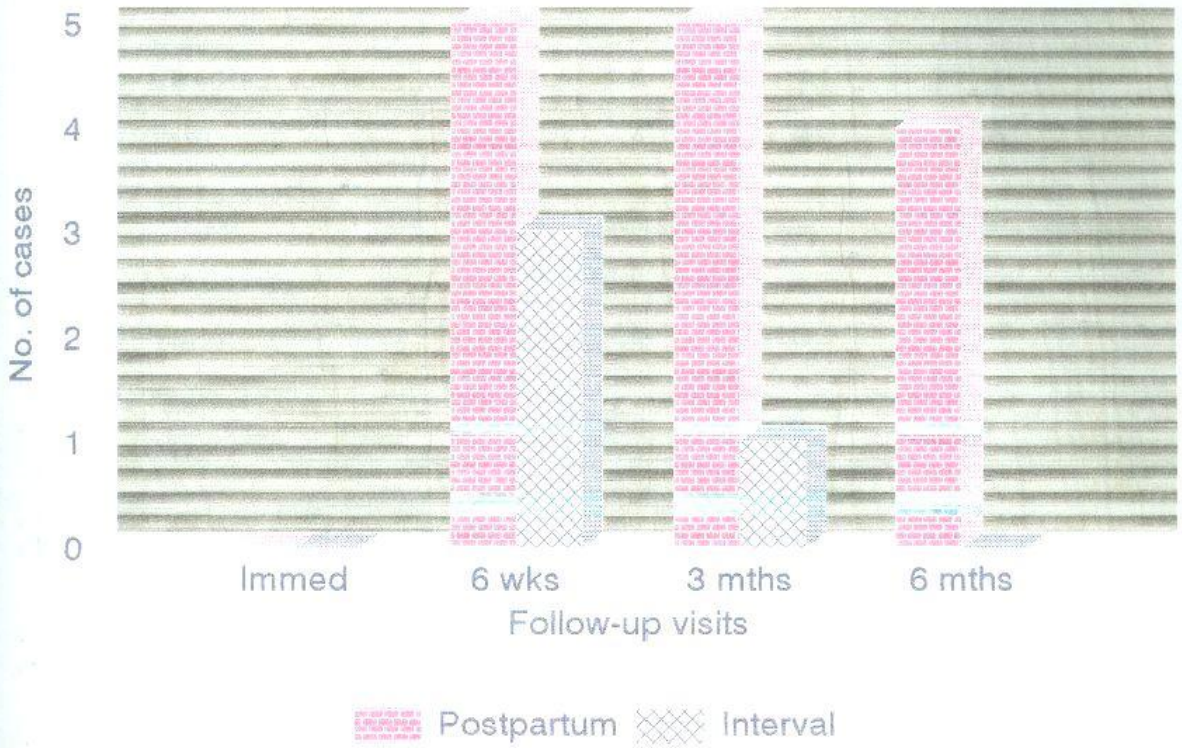


TABLE : The discontinuation rates in postpartum and interval IUD insertions at Muhimbili Medical Centre from January 1993 to March 1994.

REMOVALS	POSTPARTUM N=230	%	INTERVAL N=246	%
1. Expulsion	14	53.8	15	45.45
2. Husband's refusal	5	19.2	4	12.12
3. Heavy bleeding	2	7.6	5	15.15
4. Pain	2	7.6	2	6.06
5. Wants another method	2	3.8	1	3.03
6. Pregnancy	0	0.0	4	12.12
7. PID	0	0.0	0	0.0
8. Wants to conceive	0	0.0	0	0.0
TOTAL	26	100.0	33	100.0

8. Discontinuation Rates:

The discontinuation rates were 11.3% (26/230) in the postpartum group and 13.4% (33/246) in the interval group at the end of 6 months. This difference in discontinuation rates was not statistically significant, p value > 0.05. The reasons for removal of the IUD are as shown in Table XIII. Of the 26 removals in the postpartum group, 7 (26.9%) requested re-insertions and of the 33 removals in the interval group, 6 (18.2%) requested re-insertions.

DISCUSSION:

Intrauterine contraception instituted in the postpartum period is gaining more attention from both the medical profession and those responsible for family planning programmes. IUD insertion is as convenient, safe and effective in the postpartum period as in the interval period. Postpartum IUDs offer women a convenient means of reversible contraception that is effective immediately and does not require extra return visits.

Insertions during the postplacental and immediate postpartum periods have a low incidence of infection, few bleeding problems and low perforation rates.

IUD expulsion rates vary widely and are a function of timing of insertion, type of IUD, and insertion technique [28]. Despite the higher expulsion rates, the method is efficacious provided that expulsion - which usually occurs very early - is diagnosed soon and managed properly. The findings in this study, of an expulsion rate of 10.82% confer with the expulsion rates of 7-15 per 100 users at six months [28].

Most of the expulsions, however, are recognized by the women themselves, and most of them usually want to have re-insertion, as was

evident in this study also. Virtually all expulsions are clustered in the first three months after postpartum IUD insertion as was also seen in this study, and this observation underscores the importance of counseling and follow-up of the acceptors. Contrary to findings in other studies expulsion rates in the postpartum group were not significantly higher than in the interval group. This could be due to the experience of the inserters since only one type of IUD was used for all the patients.

"Lost strings" had a higher rate in the postpartum than in the interval group.

Unplanned pregnancy rates for postplacental insertions range from 2.0-2.8 per 100 users at 24 months [28]. In view of the higher expulsion hazard, it seems paradoxical that postpartum IUD insertion has hardly any effect on pregnancy rates. In this study, at the end of 6 months the failure rate was 0 in the postpartum group, whereas in the interval group, it was 1.6%.

It should however be stressed that postpartum intrauterine contraception can only be optimally effective under several conditions: that the acceptor keeps the early postpartum appointments, refrains from using tampons or pulling on filaments protruding from the introitus, inspects pads before discarding them, and is willing to examine herself diligently.

Limitations of the study:

1. All women who did not turn up at the family planning clinic for follow-up visits could not be followed up to their residences because of lack of time and transport.

2. Follow-up should have been longer (at least 1 year) for better conclusions of some complications. Translocations, for instance can only be diagnosed at the time of removal; and for the postpartum women who were exclusively breast-feeding in the first 6 months, lactation could have played a role in reducing the failure rates.

Recommendations:

1. Postpartum IUD insertion is a safe, convenient and effective reversible method of family planning for ideally counselled clients, when inserted by trained clinicians.
2. Follow-up visits are recommended at 6 weeks post-insertion and then annually.

REFERENCES:

1. Population Reports. Series B. No. 5 March 1988 1p.

2. Family Planning Methods and Practice: Africa. Side effects and complications of IUDs. 188p.

3. Population Reports. Series B. No. 5 March 1988 11p. Timing of IUD insertion.

4. Definitions of postpartum time periods: Postpartum IUD guidelines: From IPPF, 1990.

5. ALVIOR GT Jr: Pregnancy outcome with removal of intrauterine device. Obstetrics/Gynaecology 41(6): 894-896 June 1973.

6. COLE LP, EDELMAN DA, POTT DM, WHEELER RG and LAUFE LE: Postpartum insertion of modified IUDs. Journal of Reproductive Medicine 29(9): 677-682 Sept. 1984.

7. INTERNATIONAL FERTILITY RESEARCH PROGRAM. INTRAUTERINE DEVICE STUDY: Clinical table 4: Events after insertion. [Table] [1982] 1p. Unpublished.

8. ROSENFIELD AG and CASTADOT RG: Early postpartum and immediate postabortion intrauterine contraceptive device insertion. American Journal of Obstetrics and Gynaecology. 118(8): 1104-1114 Apr. 15, 1974.

9. ROSENFIELD AG and VARAKAMIN S: The postpartum approach to Family Planning. American Journal of Obstetrics and Gynaecology 113(1): 1-13 May 1, 1972.

10. THIERY M: Immediate postpartum insertion of IUDs. IPPF Medical Bulletin 15(3): 1-2 Jun 1981.

11. THIERY M: Timing of IUD insertion. In: Zatuchni GI, Goldsmith A, Sciarra JJ and Osborn CK, eds. Intrauterine contraception: Advances

and future prospects. Philadelphia, Harper and Row, 1985 p365-374.

12. SNOWDEN R: The IUD: A woman's guide. London, Unwin Paperbacks, 1986 127p.

13. BANHARN SUPAWAT L and ROSENFIELD AG: Immediate postpartum IUD insertion. Obstetrics and Gynaecology 38(2): 276-285 Aug 1971.

14. CHI I-C, WILKENS L and ROGERS S: Expulsion in immediate postpartum insertions of Lippes Loop D and Cu-T IUDs and their counterpart Delta devices. An epidemiological analysis. Contraception 32(2): 119-134 Aug. 1985.

15. THIERY M, LAUFE L, PAREWICK W, VAN DER PAS H, VAN KETS H, DEROM R and DEFORT, P: Immediate postplacental IUD insertion: a randomized trial of sutured (Lippes Loop and TCu 220C) and non-sutured (TCu 220C) models. Contraception: 28(4): 299-313. Oct. 1983.

16. THIERY M, VAN KETS H and VAN DER PAS H: Immediate postplacental IUD insertion: The expulsion problem. Contraception 31(4): 331-349 April, 1985.

17. THIERY M, and VAN DER PAS H: Randomized comparison of MLCu 375 and TCu 200 inserted immediately postpartum. (Table) 1982. 1p. Unpublished.

18. THIERY M, VAN DER PAS H, DELBEKE L, VANKETS H: Comparative performance of two copper wired IUDs (MLCu 250 and TCu 200): Immediate postpartum and interval insertion. Contraceptive delivery systems. 1(1):27-35. Jan. 1980.

19. STUMPF PG and LENKER RM: Insertion technique, not design, affects expulsion rates of postpartum IUD. Contraception: 30(4): 327-330 Oct.1984.

20. WHO SPECIAL PROGRAM OF RESEARCH, DEVELOPMENT AND RESEARCH

TRAINING IN HUMAN REPRODUCTION. TASK FORCE ON INTRAUTERINE DEVICE FOR FERTILITY REGULATION. Comparative multicenter trial of three IUDs inserted immediately following delivery of the placenta. Contraception 22(1): 9-18 July 1980.

21. COLE L: (INTERNATIONAL FERTILITY RESEARCH PROGRAM) IUD trials. Personnel communication, March 8, 1982.
22. LAUFE LE and FRIEL PG: Improving IUD performance with biodegradable materials. In: Hafez E.S.E. and Van Os, W.A.A. eds. Biodegradables and delivery systems for contraception. Boston, G. K. Hall, 1980. (Progress in Contraceptive Delivery Systems. Vol 1) pg. 97-108.
23. LAVIN P, WASZAK C, BRAVO C: Preliminary report on a postpartum TCu 200 study, Santiago, Chile, 1982 10p.
24. VAN KETS H, THIERY M, VAN DER PAS H and PAREWICK W: Immediate postpartum insertion: performance of the Nova-T postpartum and randomized comparison with the Nova-T. Advances in contraception 3(1): 63-69 March 1987.
25. HATCHER RA, STEWART F, TRUSSELL J, KOWAL D, GUEST F, STEWART GK, CATES W: Contraceptive Technology 1990.1992 15th revised edition. Irvington Publishers, Inc., 522 E. 82nd St., Suite 1, New York.
26. How to insert TCu 380A: Instructions for use. Copper T Model TCu 380A brand of copper contraceptive. Prescribing information.
27. World Health Organization Task Force on Intrauterine Devices of Fertility Regulation, Special Programme of Research, Development and Research Training in Human Reproduction, In press, "PID associated with contraception," Contraception.
28. O'HANLEY K, HUBER DH: Postpartum Intrauterine Devices: Keys for success. Contraception 45: 351-361, 1992.