OBSTETRICS AND GYNAECOLOGY
CASES AND COMMENTARIES

A Dissertation submitted in partial fulfilment of the requirements for the degree of Masters of Medicine in Obstetrics and Gynaecology of the University of Dar es Salaam

(1998)

MELKIZEDEKI S. KIMARO MD (Dar) 1989

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DEDICATION

This dissertation is dedicated to my father, my mother the late Bertha, my wife Lilian and my children Gilbert and Eileen.

ACKNOWLEDGEMENT

I wish to express my gratitude to Dr. E.N.K. Ngwalle and Prof. E.J.N. Urassa for their supervision, constant advice and constructive criticisms during the preparation of this dissertation. I am grateful to other members of staff for their guidance in the management of patients reported in this dissertation, Prof. J.Z.J. Killewo and Mrs. C. Moshiro for their guidance in statistical work. I am also deeply indebted to Mrs. Hilde Shoo for the secretarial services.

ABSTRACT

This dissertation is submitted in partial fulfillment for the award of the degree of Masters in Medicine (Mmed) of the University of Dar es Salaam. It comprises of three sections.

Sections one and two consists of ten gynaecological and ten obstetrics condition which are encountered in the practice of obstetrics and gynaecology. Discussion on the important features is presented in each case.

Section three is a research done over six month period on Comparison between the Misgav Ladach and Munro Kerr's Caesarean Section techniques at Muhimbili Medical Centre.

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GYNAECOLOGICAL CASES

UTERINE PROLAPSE WITH CYSTOCOELE:

TREATED BY VAGINAL HYSTERECTOMY AND ANTERIOR COLPORRHAPHY

Name:	Mrs C.J.
Age:	60 Years
Registration Number:	832336
Residence:	Kipawa, Dar es Salaam
Parity:	Para 10
Date of Admission:	16.10.1995
Date of Operation:	23.10.1995
Date of Discharge:	31.10.1995

SUMMARY:

Mrs C.J. was 60 years old, Para 10, had presented with a two year history of a mass protruding through the vagina. The mass was associated with lower abdominal pain and difficulties in micturation. She had to push back the mass with her fingers to initiate micturation. She was examined and found to have a second degree genital prolapse with cystocoele. She underwent vaginal hysterectomy and anterior colporrhaphy. The healing was uneventful, she was discharged home on the seventh post operative day. At followup six weeks later, she was seen in good health.

HISTORY OF PRESENTING ILLNESS.

Mrs. C.J. a post menopausal woman, para 10 with 7 living children, presented to the gynaecological out patient clinic with a mass protruding through the vagina for a period of two years. The mass was associated with dull lower abdominal pain. The pain was radiating to the back and was relieved on lying down. There was no history of abnormal vaginal discharge or contact bleeding. She had difficulties in micturation, at times she had to push back the mass with her fingers to initiate micturation. She denied to the history of increased urinary frequency,dysuria or incontinence. She had no history of chronic cough and her bowel habits were normal. She was not certain whether any of her female relatives had ever suffered a similar condition.

Menstrual history:

She attained menarche at the age of 14 years, her cycles were regular occurring after every 30 days. Her periods usually lasted between 3 - 4 days. She was 14 years post menopausal.

Gynaecological history:

She had no history of sexually transmitted infections. She never used contraceptives or any hormal replacement therapy.

Obstetric history:

All of her deliveries were spontaneous and vertex.She never had any obstetrics complications. In all of her deliveries the labour used to last between eight to twelve hours. She could not remember the respective birth weights of her babies and did not recall an unduly large baby. Only the last three deliveries were hospital.

Past medical history:

She had no history of major illness and had never underwent a major pelvic operation.

Family history and social history:

She was a housewife, married to a peasant. She denied to the history of hypertension, diabetes mellitus or tuberculosis in the family.

PHYSICAL EXAMINATION:

She was an elderly lady in a fair general condition. She was not pale, dyspnoeic or jaundiced.

Cardiovascular system:

Pulse rate was 84 beats per minute regular with good volume. Her blood pressure was 120/80 mmHg. The apex beat was at fifth left intercostal space along the midclavicular line. First and second heart sounds were normal. There were no murmurs.

Respiratory system:

The respiratory rate was 24 per minute. She had vesicular breath sounds. There were no wheezes or crepitations.

Abdominal examination:

The abdomen was not distended. It was soft and non tender. The renal angles were

free of tenderness and masses. There was no hepatomegaly or splenomegaly. The bowel sounds were normal.

Pelvic examination:

The patient was examined in dorsal position. The vulva were normal. The cervix and a portion of the uterine body were protruding at the vaginal introitus. There was no cervical decubitus ulcer. On straining further descent of the uterus, beyond the introitus was demonstrated. No urinary incontinence could be demonstrated on valsava manoeuver.

The patient was positioned in left lateral position and a lubricated sims speculum was gently introduced. The anterior vaginal wall and the cervix was exposed by retracting the posterior vaginal wall. A cystocoele was demonstrated. The posterior vaginal wall was next exposed by retracting the anterior wall. Neither rectocoele nor enterocoele were evident. Finally, the patient was repositioned in dorsal position. Bimanual pelvic examination was done. The uterus was small and mobile. The adnexa were free of masses.

Rectal examination:

The anal sphincter was normal. No region of tenderness or mass was felt on digital examination. The examining finger was stained with normal fecal material.

Diagnosis of second degree Genital prolapse with cystocoele was entertained.

INVESTIGATIONS AND RESULTS:

- Pap smear was negative for cervical malignancy.
- She had the haemoglobin of 12g/dl.
- Urine taken for culture and sensitivity revealed E. coli with in vitro sensitivity to Nitrofurantoin.
- The serum creatinine was 71 umol/litre.
- The electrocardiogram was normal.
- The random blood sugar was 6mmol/litre.
- The chest X-ray was normal.
- The ultrasonography showed no intraperitoneal tumour or ascites.
- Intravenous urography was not done due to technical problems.

MANAGEMENT PLAN:

The plan was treatment of urinary tract infection and then vaginal hysterectomy and anterior colporrhaphy. She was treated with oral nitrofurantoin 100mg twice daily for five consecutive days. A repeat urinary culture was done, it revealed no bacterial growth.

PRE-OPERATIVE PREPARATION:

She was informed and gave her consent for anaesthesia and surgery. Blood grouping and crossmatch was done. A 1000mls of whole blood group A Rhesus D positive was obtained for operation. Shaving and enema were done early one hour before surgery.

Anaesthesia:

Induction was started with Atropine 1mg followed by Theopentone sodium 300mg both given intravenously. She was then paralysed by scoline 100mg given intravenously. Intubation was done using cuffed endotracheal tube No. 7. She was maintained under anaesthesia with Halothane 0.8% and Oxygen 6 litres per minute. Pethidine 50mg was given intramuscular for analgesia. Pancroniun Bromide 4mg, a long acting muscle relaxant was given intravenously.

SURGICAL PROCEDURE:

She was put in lithotomy position. The perineum, surrounding skin and vagina were cleaned with savlon 1:200, povidone iodine and then ethyl alcohol in spirit.

She was then draped with sterile linen. Aseptic catheterization of the urinary bladder was done using a metal catheter and about 250mls of clear urine were drained out. Examination under anaesthesia was done which confirmed the previous findings. The labia minora were picked -up and anchored each on its respective medial aspect of the thigh using silk suture No. 2 to facilitate exposure.

MOBILIZATION OF URINARY BLADDER:

The cervix was held by a volsellum forceps and pulled downwards. Normal saline about 10mls were injected under the vaginal skin on anterior and lateral aspects of the cervix, avoiding injecting directly into the bladder. This step facilitated easy separation of surgical planes. The cervix was "circumcised" anteriorly about 1 centimetre from the external os. A vertical midline incision was then made on the anterior vaginal wall.

It extended from the urethral fold above to the original incision. The flaps of the vaginal skin were dissected away from the bladder using Mc Indoes scissors. Adequate clear dissection was achieved using a gauze on finger. The base of the bladder was then identified using a metal catheter introduced through the urethra. An incision was then made below the base of the urinary bladder through the vesico-cervical ligament. A blunt dissection was done with a gauze on finger to strip the bladder off the cervix. Dissection was advanced upwards till the uterovesical peritoneum was exposed. The cervix was then pulled upward and circumcision made on the posterior aspect of the cervix. A blunt dissection was done to separate the posterior vaginal skin from the cervix. The dissection was done further to expose the peritoneum of the Pouch of Douglas. The anterior and posterior peritoneal pouches were opened each through a transverse incision. Stay sutures were applied as markers. The paracervical tissues on each side were clamped and divided between Kocher forceps. They were transfixed with chronic catgut No. 1. The sutures were cut long and held by artery forceps.

The uterine vessels were the double clamped and divided between the Kocher forceps, transfixed with chronic catgut No. 1. These were cut short. The index and middle fingers of right hand were inserted the anterior peritoneal opening. The uterus was hooked at the fundus, delivered through this opening. The broad ligament including the round ligaments, the ovarian ligaments and the fallopian tubes were clamped together. They were divided between the Kocher forceps and transfixed with chronic catgut No. 1 on each side. These suture were cut long and their end held by small artery forceps. The ovaries appeared normal on inspection and were left in situ.

CLOSURE OF PERITONEUM AND VAULT.

Using the peritoneal stay suture as markers, the peritoneum was closed transversely using chronic catgut No. 0. The anterior edge of the uterovesical peritoneum was approximated to that from pouch of Douglas. The cut edges of other appendages were kept extra peritoneal. The sutures holding the pedicles of the broad ligaments, uterosacral and cardinal ligaments were then tied together to strengthen the pelvic floor extraperitoneally. The remain vaginal vault was closed by intermittent suture using catgut No. 1.

ANTERIOR COLPORRHAPHY.

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

The introitus could admit two fingers. The bladder was then catheterized with Foley's catheter No. 16 and it was ballooned with 10cc of Normal saline. A Vaseline gauze roll was left in the vagina. Estimated blood loss was 250mls. The removed uterus was cut open, there was no obvious abnormality of the endometrium or myometrium. The whole specimen was immersed in formalin and submitted for histological examination.

Reversal of anaesthesia:

Neostigmine 2.5mg followed by Atropine 1mg were given intravenously. The oral-pharyngeal secretions were sucked out. Extubation was done after deflation of endotracheal tube balloon. She was transferred out of theatre after she had responded to verbal commands. At the recovery room the blood pressure was 110/80 mmHg. The pulse rate was 90 per minute regular and the volume was good. The respiration rate was normal. She was returned to gynaecological ward for postoperative care.

POSTOPERATIVE CARE:

She received Dextrose saline 3000 mls intravenously in the first 24 hours and had urine output of 1700 mls. The blood pressure was monitored 4 hourly and remain 110/80mmHg. She remained afebrile. She received Pethidine 100mg intramuscular injection 6 hourly for 24 hours.

POSTOPERATIVE FOLLOW UP.

She fared well, the urinary catheter was removed on third post-operative day. She had no micturation difficulties. She was ambulant, feeding well. The postoperative haemoglobin was 12g/dl. She was discharged and advised to abstain from sexual intercourse for a period of 3 months on a day of discharge.

POSTOPERATIVE OUTPATIENT FOLLOW UP.

She was seen at the gynaecological outpatient six weeks later. She was voiding well. The vaginal was capacious, admitting two examining fingers. The vault had healed

well. The haemoglobin was 12.5g/dl. The histological report showed no area of malignancy. She was discharged from the clinic.

COMMENTARY:

Prolapse of genital organs occurs as a consequence of loss of musculofascial and ligamentous support of the pelvic organs. The endopelvic fascia is the most important tissue supporting the pelvic organs. It is divided into visceral and parietal endopelvic fascia. A condensation of endopelvic fascia results to ligaments. The visceral endopelvic fascia condensation form the pubocervical fascia, the fascia around the urethra and bladder base, the rectovaginal septum and anorectal fascia. The parietal endopelvic fascia condensation form the cardinal ligament and the uterosacral ligaments. Parietal endopelvic fascia also provide the origin of the levator ani muscle on each side of the pelvis. Hence any weakness whether congenital or acquired to endopelvic fascia results to genital prolapse. (1,2)

A number of factor have been know to predispose to genital prolapse. There is a familial tendency to occurrence of genital prolapse, this points to possibility of genetic defect in formation of endopelvic fascia. Genital prolapse is seen in postmenopausal atrophy of fascial and muscular support. Oestrogen withdrawal in postmenopausal women is implicated. Obstetrics trauma and multiple delivers have been known to be acquired causes of weaking of the endopelvic fascia. Hence the higher incidence of genital prolapse among multiparous women.

This patient belongs to the high parity group. There is no evidence of familial factor in her history. Hence postmenopausal withdrawal atrophy remains a most probable aetiological factor. There is no much evidence from the history which supports birth trauma being a causative factor of genital prolapse in this patient.

The line of management of genital prolapse is influenced by age, whether the patient has completed the family, desire for menstruation and the general condition of the patients. (1,5,7). The general condition of the patient meaning suitability of the patient for respective surgery. Conservative measures are usually applied for temporary relief. These include Kegel exercises and the use of pessaries. Surgical procedures including Le Forte, Watkins interposition operation, Spaulding - Richardson operation,

Manchester Fothergill operation and Vaginal hysterectomy with pelvic floor repair (1,4) are permanent measures of treatment. Operations like Le Forte are reserved for very elderly patient who cannot tolerate major surgical procedures and are no longer sexually active (4). The Manchester operation would suffice for young women to preserve their menstrual function and to allow them to complete their families (3). Difficulties in conception and cervical incompetencies are associated with Manchester - Fothergill operation. In a post-menopausal woman like Mrs. C.J. hysterectomy and repair of cystocoele was the treatment of choice. This was achieved through vaginal approach and perineorrhaphy. Vault suspension is important in order to prevent vaginal vault prolapse. (6)

Papanicolaou smear and endometrial curettage are important to rule out existence of malignancy. Endometrial curettage could not be done in this patient because of technical problems, however the author feels it was important. This patient had to reduce the cystocoele to initiate micturation, such symptoms including difficult in maintaining good steams are due to obstruction of lower urinary tract due to kinking. (1)Such patient usually have residual urine. There is a popular misconception that significant residual urine is the cause of cystitis as associated with genital prolapse. Cystitis is said to result from venous, capillary congestion and edema of tissue associated with genital prolapse and not residual urine. (1,3) Hence correction of genital prolapse is usually followed by disappearance of recurrent cystitis.

Prevention of genital prolapse to some extent can be achieved by proper management of labour and in some cases early hormonal replacement therapy for postmenopausal women. Once it has occurred and the patient has completed the family, surgery should be considered. Surgery is not without complications. Iatrogenic traumatization of urinary bladder may occur. Urine will usually start to leak immediately. Immediate repair is indicated using absorbable suture material (4) latrogenic injuries to the rectum cannot always be repaired immediately. Two schools of thought exist, one advocate for conservative approach hopping the fistula will eventually close. Failure to close after a period of time will lead to colostomy and fistula repair. Then closure of colostomy when fistula was closed. Another school of thought advocate for urgent

colostomy, then immediate repair of the fistula and interval closure of colostomy later. Vascular injuries which may cause profuse bleeding may occur especially if the pudendal venous plexus is injured (6). Identification of the bleeder and ligation is always indicated.

Like any other pelvic operation, the risk of thromboembolism is high. Early ambulation n advocated. In high risk patient, that is patient with diabetes melltus, obese, those in steroid and those with varicose veins, heparin may be used, a day before surgery and in days of immobilization this patient has neither of these conditions. (6). Sepsis can occur, though uncommon but may lead to pelvic abscess. Hence any indication of sepsis should be treated vigorously. Other rare complications like, persistent granulomatous lesion on the vault and vault necrosis may need surgical intervention.

Urinary incontinence postvaginal hysterectomy is also known to occur in some cases, especially if there is a distortion of the posterior urethral vesicle angle. Such distortion may occur if there was extensive damage to the vault which was followed by retracting scar. In such cases a repeat operation is indicated possible Marshall -Marchett-Krantz or Stamey's procedure if the patient is elderly and obese (4).

Prevention of genital prolapse to some extent can be achieved by proper management of labour. Hormonal replacement therapy for high risk postmenopausal women who can afford. Once it has occurred treatment should be individualized. Non surgical methods are temporary and palliative. While surgical management in most cases ensues permanent recovery.

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MISSED ABORTION:

CERVICAL DILATATION AND EVACUATION OF THE UTERUS

Name:	Mrs F.S
Registration Number:	861118
Residence:	Magomeni
Age:	28 years
Date of Admission:	11.12.1997
Date of Operation:	16.12.1997
Date of Discharge:	17.12.1997

SUMMARY:

Mrs. F.S was referred to Muhimbili Medical Centre - Gynaecological clinic with complaints of cessation of pregnancy symptoms for about a month. She had amenorrhea of sixteen weeks. Clinical examination and subsequent investigations confirmed a missed abortion. Dilatation and evacuation of the uterus was done using Manual vacuum aspirator. She developed no complication and was discharged a day after evacuation.

HISTORY OF PRESENTING ILLNESS:

Mrs. F.S. a 28 years old, Gravida 3, Para 2 + o was seen at Gynaecological clinic with complaints of abscence of pregnancy symptom for a month. She had amenorrhea of sixteen weeks. She had experienced nausea, occasional vomiting and breast engorgement from eighth week of amenorrhea. The symptoms had started to disappear on twelveth week. Following regression of pregnancy symptoms she had also noted vaginal discharge. The discharge was brownish in colour, moderate in amount not smelling or itching. She denied to the history of vaginal bleeding, dysuria or febrile illness. She denied to the history of bleeding from the gums or mucus membranes. She denied to the history any interference to the pregnancy.

PAST MEDICAL HISTORY:

She has no history suggestive of tuberculosis, renal failure, diabetes mellitus or hypertension.

MENSTRUAL HISTORY:

She attained menarche at the age of 16 years. Her cycles were regular, occurring after 28 days. She had menstrual period lasting 3 - 4 days an the flow was normal.

GYNAECOLOGICAL HISTORY:

She had no history of sexually transmitted infection. She had been on oral contraceptive pills. She stopped on her will to conceive.

OBSTETRIC HISTORY:

She had normal spontaneous vertex deliveries. Her children were well.

PHYSICAL EXAMINATION:

GENERAL EXAMINATION:

She was in good nutritional status. She was not pale or febrile. She was not dyspnoeic, jaundiced and had no lymphadenopathy. The thyroid gland was not enlarged. The breasts were well developed. The nipples were normal and on expression they secreted clear colostrum.

RESPIRATION SYSTEM:

Respiratory rate was 15 per minute. The trachea was central. The chest was symmetrical. The air entry was normal in both lungs. The breath sounds were vesicular and there were no crepitations.

CARDIOVASCULAR SYSTEM:

The pulse was 80 beats per minute, regular and in good volume. The blood pressure was 110/70 mmHg. The apex beat was palpable at 5th left intercostal space in the mid-clavicular line. The heart sounds were normal and there were no murmurs.

VAGINAL EXAMINATION:

The vulva was normal. A scant brownish discharge was seen on the vulva. A bivalve cusco's speculum was gently introduced into the vagina. The vaginal walls were health with no lesions. The cervix was exposed it was health. There was a brownish discharge oosing from the cervical ostium. Endocervical swab was taken for culture and sensitivity. Bimanual examination was done which revealed a closed cervix, the uterus was anteverted and bulky. It was corresponding to ten weeks of gestation. There were no adnexa masses.

DIAGNOSIS:

The diagnosis of missed abortion was reached with a differential diagnosis of threatened abortion.

The following were the investigations and respective results.

- The haemoglobin was 10.5g/dl.
- The platelet count wa 165,000/mm3.
- Serum fibrinogen level was not estimated due to technical problems.
- The endocervical swab revealed no organisms.
- The ultrasound scanning showed. An intrauterine gestational sac with excessive fund no viable fetus. In two occasions, 2 weeks apart. Diagnosis MISSED ABORTION.
- Blood group A Rhesus D positive.

In view of cessation of pregnancy symptoms. Small uterus for gestation and ultrasound findings the diagnosis of MISSED ABORTION was reached.

PLAN OF MANAGEMENT:

The patient was counselled about the findings. She was planned for cervical dilatation and evacuation of the uterus. She agreed and gave a written consent. She was prepare for cervical dilatation and evacuation of uterus with manual vacuum aspirator.

PREOPERATIVE PREPARATIONS:

- She was admitted in the gynaecological ward the day before the procedure.
- Two units of blood group O Rhesus D positive were reserved.

PROCEDURE:

The patient was brought in the manual aspiration room and was placed in lithotomy position. The perineum was cleaned with savlon 1:200. The abdomen and lower limbs were covered with clean dressing sheet. Pelvic examination was done and confirmed the previous findings. A cusco's bivalve speculum was gently introduced into the vagina to expose the cervix. The cervix and vagina were then cleaned with povidone iodine mixture using sponge holding forceps. The anterior cervical lip was held with volsellum forceps. Paracervical block was attained by injection 5 mls of 0.5% lidocaine submucosal at the 4 o'clock and 8 o'clock positions. Care was taken not to

inject lidocaine intravascularly. Four minutes were left to elapse to make sure the paracervical block had taken.

Cervical dilatation:

Using pratt dilators the cervix was dilated progressively. Dilation was started with smallest pratt dilator and ended with number 8. When the dilators were introduced care was taken not to injure the cervix, perforate the uterus or introduce infection. Only the movement of thumb and index finger together with wrist joint were involved in introducing the dilator into the cervical canal.

UTERINE ASPIRATION:

Gentle traction was applied on pulling the anterior cervical lip. The sterile Karman cannula of 8 mm was gently introduced into the uterine cavity just past the internal ostium. Vacuum was established in already mounted double valve vacuum syringe. It was connected to the Karman cannula with the help of ivory coloured adapter. While connecting the two no forward movement was done. The Aspirator was now gently pushed forward to the fundus. Then it was withdraw slightly to the midcavity. The punch valves were released the vacuum was then transferred through the cannular to the uterine cavity. By moving the cannula back and forth within the uterine cavity and simultaneously rotating it, the products of conception were aspirated and collected in the syringe. The vacuum capacity had dropped. The valve were closed and it was disconnected living the cannula introduced to the uterine cavity. The contents were emptied in kidney dish. The syringe was mounted again to the cannula, valve opened and the procedure repeated. A gritty sensation was felt as the cannula was passing over the surface of evacuated uterus.When gritty sensation was felt all around, Ergometrine 0.5mg was given intravenously the uterus had contracted and gripping the cannula. The process was stopped.

The cervix was mopped with dry gauze after removal of volsellum forceps no tear was seen. No undue bleeding was seen from the os.

The aspirated material was taken for histopathological analysis.

POST OPERATIVE CARE.

The blood pressure was checked hourly or the first 6 hour and it remained

110/70mmHg. The pulse was 80 beats per minute regular in good volume. There was no abdominal distension. There was no vaginal bleeding she was started on oral ampicillin 500mg 8 hourly for five days and oral metronidazole 400mg 8 hourly for five days.

She remained stable and was discharged in the following day to attend Gynecological. Clinic after two weeks.

FOLLOW UP:

She was seen at Gynaecological clinic after two weeks. She had no vaginal bleeding or discharge. The uterus was normal in size and the adnexa were free of tenderness and masses. She was counselled for family planning she had opted to continue with oral contraceptive pills.

Histology results confirmed the clinical diagnosis of missed abortion. No evidence of abnormal or hydrotropic vill were seen.

COMMENTARY:

A missed abortion is defined as retention of dead products of conceptus in utero for several weeks (1) usually after death of an embryo spontaneous expulsion follows. The reason, some abortion do not terminate after death, while others do, is not clear. The use of potent progestational compound to treat threatened abortion has been associated. Piver and colleagues (2) had treated 57 women for threatened abortion with injectable medroxyprogesterone acetate, more than one third had retained dead featus for more than 8 weeks. However this patient hadno history of taking progestational compounds, hence the reason for retention remained obscured.

In typical instance of missed abortion nausea, vomiting, breast engorgement and fundal growth cause after fetal death. The patient remain amenorrheic. However in some patient scant to moderate brownish vaginal discharge is commonly seen (3) as it was in this patient.

Ultrasound although is an important equipment for confirming diagnosis, it has some limitation. Abscence of cardiac activity after 10th week. Clamping of fetal parts, coupled with excessive amniotic fluid per the gestation (4) is indicative of missed abortion. If doubt exists, the test is repeated after two weeks as it was done in this

patient. Usually a repeat ultrasound will show no advancement. A negative urine for pregnancy test has a limited diagnostic value. It takes two to three weeks for the test to be negative. A negative test, between seventh and twelveth week of gestation, in presence of intrauterine gestation is indicative of missed abortion. Mrs. F.S. had amenorrhea of sixteen weeks, hence the test was not important.

Prolonged retention of dead products of conception may result to serious coagulation defects. The thromboplastin is released and enter into maternal circulation from dead products of conception. These induce intravascular coagulation with fibrin deposition. Hence there is fibrinogen consumption. This complication is seen in only about 25 per cent (5) of the patients. Thrombocytopenia may occur but is not a constant feature. If coagulopathy has occurred the patient usually presents with abnormal bleeding from the gums and other mucous membranes.

The management of missed abortion where the uterus is less than twelve weeks of gestation is dilatation and suction curettage as it was done in this patient. Egarter and colleagues(6) worked on the use of Prostaglandin E1 to induce a complete abortion in defined dead conceptus before twelve weeks of gestation.

PGE 1 was effective in 76.7 per cent of allocated group and surgical management was effective in 90.9 per cent. He concluded his study by requesting further investigations as regard to the use of PGE 1 in terminating missed abortion.

In this case the cervix was dilated using pratt's dilators. It has been suggested that the use of a tapered dilator (Pratt) as opposed to one with blunt end-Hegars minimize some complication associated with serial dilatation (7). Pratts dilator when applied there is no sudden give which is associated with passing the internal os. Hence the incidence of perforation is minimal.

Manual vacuum aspiration is said to be safe, easy to use and suitable in evacuating less than twelve weeks in size uterine cavity (8). Mrs. F.S. didn't require additional analgesia apart from that which was given as cervical block. She also had no undue bleeding. The author recommends the use of suction curettage in evacuating missed abortion when the uterus size is less that of twelve weeks of gestation.

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ECTOPIC PREGNANCY FOLLOWING SURGICAL STERILIZATION

Name:	Mrs. E.N.
Age:	41 years
Registration Number:	859165
Residence:	Buguruni
Date of Admission:	15.5.1996
Date of Discharge:	20.5.1996

SUMMARY:

Mrs. E.N. was gravida 7, Para 5 plus one abortion. She was admitted from a private clinic in town on account of lower abdominal pain and vaginal bleeding which had persisted for three days prior to admission. She had been amenorrheic for eight weeks and experienced nausea and breast engorgement. The signs were surprising to her since she had bilateral tubal ligation three years ago. Subsequent physical examination and urine for pregnancy test were both consistency with pregnancy state. Ultrasound negated existence of intrauterine gestation, however demonstrated a fluid collection in the Pouch of Douglas. Laparotomy confirmed an ectopic pregnancy.

History of Present Illness.

Mrs. E.N. was admitted with history of lower abdominal pain for the past three days. The pains were crampy in nature and non-radiating. Associated with the pain she had scant vaginal bleeding darkish brown in colour without evidence of products of conception. There was no history of fainting attack, or febrile illness.

These symptoms were preceded by eight weeks of amenorrhea, breast engorgement, early morning nausea and at times vomiting.

Menstrual History:

Her menarche was at the age of 14 years. Her last normal menstrual period had started on 10 the March, 1996. She used to have 3-4 days of menstrual period in 28 day cycles.

Gynaecological History:

She had no history suggestive of sexually transmitted disease. Three years ago she had surgical sterilization. The procedure was done in minilaparotomy in pueperium.

Obstetric History

All her previous deliveries were spontaneous and vertex. The babies weight ranged from 2.9kg to 3.5kg. All were uneventful. However she remembered her fifth pregnancy ended in abortion which occurred at 10 weeks. Evacuation was done. The abortion was preceded with high grade fever bleeding and later passage of products of conceptus.

Past Medical History

She had been hypertensive for the past three years and was under medication. She used to take bendrofrusemide tablet daily. Her blood pressure had ranged between 150/100 to 130/90 mmHg. She had an allergy to penicillines.

Family History And Social History

She was a primary school teacher, married to a civil servant. She never used to drink alcohol or smoke cigarettes. She had no history of diabetes mellitus or tuberculosis in her family.

Physical Examination

She was middle aged woman, afebrile, not pale. Her thyroid was not enlarged. The breasts appeared engorged.

Cardiovascular system

The pulse was 90 beats per minute regular in normal volume. The blood pressure was 130/90 mmHg. First and second heart sounds were normal.

Respiratory system

The respiratory rate was 20 per minute. The trachea was central, breath sounds were vesicular and there was no crepitations.

Abdominal Examination

The abdomen was uniformly distended due to obesity. A small minilaparotomy scar was seen below the umbilicus. The abdomen was soft and except for the right iliac fossa where there was some tenderness but no guarding. The spleen and liver were not palpably enlarged. The renal angles were free of tenderness and masses. There was no fluid thrill or shifting dullness.

Pelvic Examination

The vulva was stained with darkish brown blood. Speculum inspection demonstrated a healthy looking cervix with blood oosing from external ostium. Digital examination demonstrated a tender right adnexum with a soft mass. There was no bulging on the posterior fornix.

On the basis of the history and physical findings, a slow leaking ectopic gestation was suspected.

Investigation And Results

A pelvic ultrasound scan demonstrated decidual reaction of the endometrium. No intrauterine gestational sac seen. A fluid collection in the Pouch of Douglas was demonstrated.

The haemoglobin was 9 g/dl.

Urine for pregnancy test which was done using immunoassay technique (pregnosticon-organon diagnostic test) was positive in two different occasions.

Plan of management

Clinically this was surgical abdomen hence laparotomy was decided. The provisional diagnosis was **slow leaking ectopic pregnancy.**

Pre-operative Management

The diagnosis and management plan was communicated to the patient in a simple language and she consented for anaesthesia and operation. 1000 mls of group O Rhesus D positive blood was cross-matched and reserved. She was shaved.

The Operative Procedure

Premedication, induction of anaesthesia and maintenance were done as for gynaecological case No. 1.

Procedure

The abdomen was cleaned with povidone iodine and excess was wiped out with spirit. She was draped with sterile drapes. A longitudinal subumbilical midline incision was mad through the skin and subcutaneous fat down to the pubic symphysis using a scalpel No. 10. Another similar scalpel was used to make an incision in the midline of rectus fascia. Then a Mayo scissors was inserted below the fascia and then open up to

separate it from underlying rectus muscles. The fascia was then dissected distally and proximally to the desired length. The rectus muscle were retracted laterally to the right. Using a straight long artery forceps the peritoneum picked up as high as possible near the umbilicus, to avoid the urinary bladder. A nich was made with a scalpel. Care was taken not to injure the bowel. The finger was inserted to palpate for adhesions. Then incision on parietal peritoneum was extended to the desired length. Haemoperitoneum was encountered. Using automatic suction machine, blood was sucked out. Simultaneously the uterus and ectopic gestation on the right side were brought out . Using the Kocher clamps haemostasis was achieved through direct clamping of the mesosalpinx in double throughout the whole length. The mesosalpinx in between the clamps was then divided. Right salpingectomy was done. The mesosalpinx was sutured with chromic catgut No 0. in continuous stitch. The distal stoma was double ligated with the same suture.

Inspection of other pelvic organs revealed normal working ovaries. The left fallopian tube was well segmented.

Abdominal wound closure

The peritoneium was closed using chromic catgut suture No. 2 in a continuous running stitch. The rectus sheath was closed using vicryl No. 1 in a continuous running stitch and the skin was closed in mattress suture using silk No. 1. Reversal of anaesthesia was done as in gynaecological case No. 1.

The total blood loss was 650mls. The operation had taken fourty five minutes. The resected tube together with conceptus was subjected for histopathology for forensic purpose.

Histology Results

A portion of fallopian tube with a conceptus, of equivalent to 8-9 weeks of gestation with well formed villi

POST OPERATIVE CARE

She received intramuscular injection of pethidine 100 mg eight hourly for a total of three doses. She was maintained on intravenous fluid for twelve hours before she was allowed to oral intake. Her recovery was uneventful.

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Postoperative Progress

The haemoglobin checked on third post operative day was 9g/ld. She remained normotensive, she continued on taking oral haematenics, ferrous sulphate 200 mg twice and folic acid 5mg once daily for two weeks. The skin stitches were removed on the firth postoperative day. The wound had healed. She was discharged and appointed for gynaecological clinic in six weeks time.

Follow Up

She was seen at gynaecological outpatient clinic six weeks later in good nutritional status. She had haemoglobin of 11g/dl. Her blood pressure was 130/80 mmHg. She had resumed her menstruation.

COMMENTARY:

Ectopic pregnancy results from the implantation of a blastocyst anywhere else except in the endometrial lining of the uterine cavity. (1) It is potentially catastrophic condition. In the study reported by Atrash and colleagues (2) over 80 per cent of death due to ectopic died from haemorrhage. Delay in diagnosis and therapy were particularly pointed out as direct contributory factor to maternal death. Clinical manifestation of ectopic pregnancy are diverse and depend on whether ruptured has occurred. Amenorrhea, abdominal or pelvic pain, vaginal bleeding and tender abdomen remain distinct characteristic of ectopic pregnancy. A high index of suspicion is required in reaching the diagnosis (1). It is more so in situation like this of Mrs. E.N. who had had bilateral tubal ligation. Tubal surgery, including sterilization is known to predispose to ectopic implantation. The incidence of ectopic pregnancy among all pregnancies following tubal sterilization range from 15 to 20 per cent (3). The pregnancy is thought to occur in the distal tubal segment after formation of a tuboperitoneal fistula or recanalization, allowing passage of sperm but not the large fertilized ovum. (4)

Ectopic pregnancy had occurred three years post sterilization in this patient hence fistula or recanalization may have caused it. Failures reported in interval sterilization are largely from pre-operative conception. Ectopic pregnancy, in its early stages may mimic the symptoms of other gynaecological conditions such as pelvic inflammatory

disease, ruptured corpus luteum, dysfunctional uterine bleeding and threatened or incomplete abortion. Abdominal pain is the commonest symptom of ectopic pregnancy, present even before rupture. Pain is caused by tubal dilatation by the pregnancy or peritoneal irritation caused by trickling blood from a leaking ectopic. (1) Pain is usually diffused in ectopic pregnancy. Mrs E.N had crampy pain leading to confusion with that of spontaneous abortion or dysfunctional uterine bleeding. Irregular vaginal bleeding is noted in 50 to 80 per cent of (1,5) patient, and is characteristically scanty as it is in this patient. It results from the uterine decidual slough. Amenorrhea is reported in 75 to 95 per cent of patient. (5)

The commonest physical sign is abdominal tenderness and often associated with rebound tenderness. An adnexal mass is usually present in approximately half of the patients, associated occasionally with a contralateral mass which represent a corpus luteum cyst. Mrs. E.N. had abdominal tenderness and right adnexal mass.

The primary role of ultrasound in diagnosis is debatable. It cannot reliably diagnose ectopic pregnancy except when a live fetus is demonstrated outside the uterine cavity using a real time equipment. (6) It also depends on the competence of sonographer and resolution capacity of the equipment. Some sonographic signs when seen, raise the index of suspicion for ectopic pregnancy, these include visualization of complex cystic adnexal masses, free fluid in the peritoneal cavity and decidual reaction. (5,6) In this patient the fluid in the pouch of Douglas and decidual reaction were reported by ultrasound. This had assisted in the diagnosis.

Ectopic pregnancies generally produce lower level of human chronomic gonadotrophin (hCG) than normal pregnancies. (5,7) Normal hCG values are found more often in early and ruptured ectopic pregnancy. A negative serum hCG level should not be equated with the abscence of an ectopic pregnancy unless the detection limit of the assay used is below 3IU/litre. Most of the conventional test can not go to such level. Mrs. E.N. had a positive urine for pregnancy test (pregnosticon-organon). This gives use an impression that she had higher than 2,500IU/litre of hCG in the serum. Though not a reliable test in Ectopic pregnancy. It had added more suspicion for the diagnosis. Recent advancement have shown human chronomic gonadotrophin can be used for

diagnosis of ectopic pregnancy. (7,8) hCG is a glycoprotein hormone with 2 dissimilar submits alpha and beta free beta submit is a principal immunoreactive in serum and urine sample. Modern test demonstrate beta core fragment. In ectopic pregnancy beta submit is low as much as 1/38th of normal pregnancy and beta core fragment fall to 1/413th of normal pregnancy (8). While the level of hCG are reduced in ectopic pregnancy, beta core fragments are reduced further. Demonstration of such reduction can now be demonstrated even in emergency form urine sample. Such test are not yet available at this Centre. Hence, in high index of suspicious followed by exploratory laparotomy is still justified.

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VESICO - VAGINAL FISTULA SUCCESSFUL REPAIR.

Name:	Mrs C.K.
Age:	21 years
Registration Number:	837954
Residence:	Serengeti
Date of Admission:	28.2.1997
Date of Operation:	20.3.1997
Date of discharge:	3.4.1997

SUMMARY:

Mrs C.K. a primipara was referred from Mugumu district hospital Serengeti with the diagnosis of obstetric vesico-vaginal fistula. She had been admitted to that hospital after labour of two days at home. She delivered a still born child weighing 3.4 kilograms by vacuum pump extraction. She started leaking urine through the vagina from the sixth day after delivery despite continuous bladder drainage for 14 days postpartum. On examination a vesico-vaginal fistula was confirmed. The fistula was successful repaired.

HISTORY OF PRESENT ILLNESS

This patient was referred from Mugumu district hospital with complaints of continuous leakage of urine for six months and subsequent amenorrhea. This condition had followed a 48 hours of difficult and prolonged labour at home. She was attended to by a traditional birth attendant who later transferred her to a district hospital. The district hospital was 40 kilometres from her home. On arrival, the labour pain had already ceased. She admitted to have made no antenatal clinic attendence, hence no delivery plans were made prior to the onset of labour. She was examined and found to have no fetal heart tone. An assisted vaginal delivery with vacuum pump was done. A fresh still born baby weighing 3.4 kilograms was extracted. She was started with oral ampicillin and Flagyl three times a day for five days. She was catheterized and continuous bladder drainage was maintained for two weeks. The initial drained urine was blood stained. She noted a spontaneous wetting of the bed on the sixth day. She

had no history of loss of consciousness or walking in ~~abnominal~~ abnormal gait on discharge. She was discharged after two weeks after having been advised on diet. During a monthly follow up she did not complain of fever, loin pain, suprapubic pain or difficult in walking. Six month later she was referred to Muhimbili Medical Centre for possible repair.

Past Medical History

There was no history suggestive of genital tuberculosis or schistosomiasis. She never had irradiation therapy.

Menstrual History

She attained menarche at 14 years of age. She used to have periods lasting for 3 - 4 days, after every 28 - 30 days. She had been amenorrheic since delivery.

Gynaecological History

She had not been on contraception and had no contraception and had no history of sexually transmitted infection.

Family and Social History

She was a housewife. Her husband was a peasant. She had studied up to standard four. She used to drink occasionally. There was no history of diabetes mellitus or hypertension in the family.

PHYSICAL EXAMINATION ON ADMISSION AT MUHIMBILI.

She was a young lady, in good nutritional status. Her height was 143 centimetres. She was not pale, febrile or dyspnoeic. She had a normal gait

Cardiovascular system

Her radial pulse was 73 beats per minute, regular with good volume. She had a blood pressure of 110/70 mmHg. The heart sounds were normal and there were no murmurs.

Respiratory system

The respiratory rate was 20 per minute, trachea was central. She had vesicular breath sound and had no crepitations.

Musculoskeletal system

She had normal muscle power and tone in both her lower limbs.

Abdominal Examination

The abdomen was not distended, and there were no surgical scars. The liver and spleen were not palpable. The renal angles were free of tenderness and masses.

Pelvic examination

The patient was first examined in lithotomy position. The vulva were inspected and there was ammoniacal smell. Mild excoriation of the skin was seen. Episiotomy wound had healed well. On parting the labia the urethral orifice was seen and appeared normal. Urine was leaking from the vaginal introitus.

Digital Examination

A vent was felt with an index finger. It was on anterior aspect of mid-vaginal wall. There was no fibrosis felt around the fistula. The vaginal was not stenotic. The cervix was felt to be normal, firm and the ostium was closed. On Bimanual examinations the uterus was normal in size and anteverted. The adnexa were not tender, and there was no adnexal mass palpable.

Speculum Examination

The patient was then turned into left lateral position. Sims speculum was introduced into the vaginal gently. The anterior vaginal wall was exposed by retracting the posterior vaginal wall. A two centimetres fistula was seen on anterior vaginal wall in the mid vagina. A sterile pipette was used to draw urine specimen for culture and sensitivity. The speculum was applied to retract anterior vaginal wall, the posterior wall was visualized. No fistula was seen.

Rectal Examination

The anal verge was normal. The sphincter tone was normal. There was no mass palpated in the rectum.

Diagnosis: Obstetrical Vesico-vaginal fistula

PLAN OF MANAGEMENT.

Decision was to complete investigations, examination under anaesthesia and repair.

Investigations and Results

- The haemoglobin was 12g/dl

- She was blood group 0 Rhesus factor "D" positive
- The white blood cell count was
  - Total count was 8 x 10g/l
  - Differential count

    Neutrophils 50%

    Eosinophils 4%

    Basophils 6%

    Lymphocytes 40%

The count was essentially normal.

- Blood urea Nitrogen was 2.6mmol/L and serum creatinine was 73 umol/L.
- Urine specimen revealed no sugar or protein. It was also negative for schistosoma ova.
- Urine for culture revealed as bacterial growth.
- Plan abdominal X-ray revealed no calculi.

EXAMINATION UNDER ANAESTHESIA.

Premedication and induction of anaesthesia were performed as in gynaecological case No. 1 with an exception of intubation. Face mask was used to deliver Halothane 2%, mixed with oxygen flowing at a rate of 6 litres per minute. The patient was placed in lithotomy position, the head was tilted down. The perineum was cleaned with obstetric hibitine solution. There was perineal skin excoriation and urine was dribbling from the vaginal introitus. The external urethral meatus appearance was normal.

Digital examination revealed spacious vagina without fibrotic bands. Sims speculum was introduced and posterior vaginal was retracted downwards. A fistula of about 2 centimetres in diametre was visualized on the upper third of the anterior vaginal wall. There was minimal fibrosis of fistula edges. A metal catheter was introduced through the urethra and it was found patient. The Cervix was healthy. There was no fistula identified on the posterior fornix or posterior vaginal wall. Bimanual palpation revealed normal size uterus with free adnexa.

Rectal Examination: There were no fistulae identified. No rectal masses

CONCLUSION:

AN UPPER VAGINAL; VESICO-VAGINAL FISTULA.

The most suitable route of repair was thought to be transvaginal in lithotomy position. The need for episiotomy was unnecessary.

PRE-OPERATIVE MANAGEMENT

The patient was informed about the fistula closure and that she will have an indwelling catheter for a period of two weeks. She consented for the operation and general anaesthesia. Blood was taken for grouping and crossmatching. One litre was reserved. She was starved from 10.00pm the day before operation.

OPERATION:

Premedication and induction of anaesthesia were done as in gynaecological case No 1. She was placed in lithotomy position and head was tilted down.

Procedure

The perineum and vulva were cleaned with savlon (1: 200) dilution, povidone iodine and alcohol in spirit respectively. She was draped with sterile towels. The right and left labia minora were stitches each to its respective thigh with silk No. 1.

This enable free access to vaginal introitus. Preliminary infiltration with dilute adrenaline with saline 1: 200,000, 5 millilitres between vaginal wall and bladder, around the fistula was done. It helped on reducing bleeding. The edges of the fistula were excised, removing the fibrotic tissue. The bladder wall and vaginal skin were dissected and separated using McIndole's scissors. There was minimal bleeding. The bladder was then closed in a transverse direction continuously using extrachromic catgut No 2/0 on an atraumatic round bodied needle. The muscular layer of the bladder inverting the mucosa. Using the same stitch a second layer of interrupted sutures was done. This had strengthened the first layer and made it water light. The vaginal skin was then closed with extrachromic catgut No 0. The anterior wall was well adapted. Haemostasis was well achieved. Nelaton catheter size 14 was introduced and anchored on the right thigh with silk No 0. Methylene blue dye was introduced into the bladder through the nelaton catheter and there was no leakage of a dye through the line of repair. The catheter was then connected to the collecting bag. The sutures that had

anchored the labia minora were released. A sterile pad was placed over the vulva. Reversal of anaesthesia was done as in gynaecological case No. 1. She was sent to the ward with intravenous fluid, 5% Dextrose running at the rate of 30 drops per minute.

POSTOPERATIVE CARE:

The blood pressure, pulse and respiratory rate were monitored hourly for the first 6 hours and then two hourly for 24 hours. They remained 110/70 - 110/80, 75 per minute with good volume and 14 -15 per minute respectively.

She was given intravenous fluid amounting to 4.5 litres (5% dextrose) in a period of 24 hours, and had clear urinary output of 4 litres, for the same period.

She received intramuscular pethidine injection 100mg, thrice, eight hours apart. There was no vaginal bleeding or urinary incontinence which was reported.

Oral Nitrofurantoin 100mg three times a day was given for two weeks.

POST OPERATIVE PROGRESS.

She had generally good condition, the blood pressure and body temperative remained within normal limits. During have first four days of confinement to the bed there was no bed wetting. In rest of fourteen days no incontinence was reported.

Urine for culture and sensitivity was taken once weekly and revealed no pathological organisms. The indwelling catheter was removed on fourteenth day.

She was continent. She was instructed to pass urine as frequent as possible and to drink as much fluid as she could. She did so. There was no reported stress incontinence.

On the 21st day post operative she was examined under anaesthesia in lithotomy position. She was catheterized and about 250 millilitres of clear urine was obtained. Through the catheter the bladder was filled with sterile diluted methylene blue. Sims speculum was introduced pulling the posterior vaginal wall downwards no leakage of dye was noted. The patient was discharged with the following information.

- To refrain from sexual intercourse for a period of not less than three months.
- Circumstances leading to vesico-vaginal fistula were clearly explained. The importance of early and regular attendance to Antenatal Clinic was explained. She was also told about elective caesarean section as a mode of delivery for any subsequent pregnancy.

She was referred back to Mugumu district hospital with letter including the management and follow up advice.

COMMENTARY:

Urinary incontinence originating from obstetric urogenital fistula is an indicator of inadequate health-care system (1). In such a system there is reliance to traditional health-care customs and treatments that often delay or prevent access to contemporary obstetric care. Poor transportation and communication system often hinder the patient form coming into contact with appropriate care. It is such conditions which had surrounded this patient.

In developing countries, vesico-vaginal fistula remain a common sequelae of obstructed labour (1,2). Mrs. CK had obstructed labor most likely due to cephalopelvic disproportion. She was a woman of short stature. In addition she had a big baby weighing 3.4 kilograms.

During labour the bladder is displaced upwards into the abdomen and the bladder base and urethra are compressed between the presenting part and the posterior surface of the pubis. If this continues for a long time as in unrelieved obstructed labour, the intervening soft tissues becomes devitalized by ischaemia. The devitalized areas separate as a slough, usually between the 3rd and 10th day of the puerperium (3). The urinary incontinence had occurred on 6th day in this patient.

Pressure necrosis is preventable by efficient obstetric care. Anticipation of difficulty before labour begins and termination by caesarean section of labours prolonged by disproportion, eliminate the fistula formation. Mrs C.K. was under the care of traditional birth attendant who had no facilities for relieving obstruction. Fistula formation is directly related to the length of time the patient had been in obstructed labour.

Keeping the bladder at rest after delivery by continuous drainage, and controlling sepsis by systemic broad spectrum antibiotics, usually prevent full thickness sloughing of the bladder wall, however a fistula may still occur as it was the case in this patient.

Early childbearing, poor childhood nutrition, inherited anthropoid/andropoid pelvis with lumbar lordosis indicate impending cephalopelvic disproportion (4). Hence such

patient should be referred to a Centre with operative facility. It was unfortunate that this patient didn't attend Antenatal Clinic at all hence missing early anticipation and planned delivery.

Injury to the anterior wall of the vagina during a difficult operative delivery may involve the underlying bladder wall, particularly if the tissue are already devitalized by prolonged pressure. It is adviceable to inspect the anterior vaginal wall at the end of operative vaginal delivery. Injury caused by operative delivery usually manifest as a first day urinary incontinence (4). This was not the case with Mrs. C.K.

It is still thought to be most unwise to repair a vesico-vaginal fistula too soon after a causative trauma. Conservative approach help in achieving a reduction in size of the fistula or even a spontaneous healing. Delay usually allow sloughs to separate and inflammation to subside. The local blood supply usually improve and tissue planes reappear, producing a favourable condition of surgery (5).

Vaginal examination is best performed in the lateral position, as anterior vaginal wall cannot easily visualized in dorsal position. Digital examination precede the passage of speculum, this enable assessment of scarring and stenosis. Examination under anaesthesia enable good access to genital regions. It is in this examination the number of fistulae are known, their location and extent of fibrosis around each. The suitable position for repair is also determined. Miller (6) consider lithotomy position with slightly tilted head to be suitable position for the repair of fistula located in upper third of anterior vagina wall. This was evident in this case. The infiltration of dilute adrenalin solution reduces the amount of bleeding particularly form the bladder mucosa due local vasoconstrictive effect. Sharp and blunt dissection are usually done depending on the nature of the area. The repair fails following inadequate tissue mobilization hence resulting suturing tissue in tension. Excessive mobilization produce devitalized tissue hence prone for infection (7). Placing the stitches too close together and continuous or purse-string suture tends to impair the blood supply, and interfere with healing. However the bladder wall closure must be watertight as it was when tested in this patient. The vaginal layer is then repaired with interrupted sutures obliterating dead space and prevent haematoma formation.

Catheterization is important as it facilitate continuous bladder drainage. This eliminate tissue tension. However infection remains a problem. The use of urinary antiseptic is advised as long as the catheter is in situ as it was in this patient. So also intermittent collection of urine for culture and sensitivity.

New concerns in fistula surgery apart form successful closure include abscence of stress incontinence, and capacious genitalia (8). All were achieved in this patient. Traumatic amenorrhea was still persisting when she was refereed back to her district.

This patient was cured in first attempt of repair. At least 80 percent of vesico-vaginal fistulae are cured at first attempt 10 percent will be closed by second attempt. After that successful closure remain less, as repeated closure provoke more scar tissue. Effort should be directed on achieving a complete cure in first attempt.

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POSTPARTUM TUBAL LIGATION UNDER LOCAL ANAESTHESIA IN GRAND MULTIPARA:

Name:	Mrs N.K
Age:	40 years
Reg No:	E/103/97
Address:	Kawe, Dar es Salaam
Date of Admission:	1.12.1997
Date of Operation:	2.12.1997
Date of Discharge:	2.12.1997

SUMMARY:

Mrs. N.K, 40 years old Para 9 + 0 with 8 living children was counselled for tubal ligation during the antenatal visits on account of grand multiparity. She gave a written consent for the procedure. A day post delivery, bilateral tubal ligation was done using Pomeroy's method under local anaesthesia. She recovered uneventfully and was discharged home 6 hours after the procedure.

ANTENATAL SUMMARY:

Mrs. N.K was gravida 9 with 8 living children. She was refereed to Muhimbili Medical Centre high risk antenatal clinic on account of grand multiparity at 30 weeks of gestation. She denied to the history suggestive of hypertension, diabetes mellitus, tuberculosis or previous operative delivery. Non of her past delivery was complicated with postpartum haemorrhage. The initial antenatal systemic examination revealed normal blood pressure and pulse. She was not pale, jaundiced or dyspnoeic. Her blood group was O Rhesus D positive. She used to take Ferrous sulphate 200mgs orally and Folic acid 5mg tablet daily throughout the index pregnancy. Antenataly, together with her husband they were counselled on different methods of family planning. They opted for tubal ligation and they gave a written consent for the procedure.

Physical Examination

She was in good nutritional status. She was not pale or febrile she was not dyspnoeic, jaundiced and had no lymphadenopathy. The thyroid gland was not enlarged. The breasts and nipple were normal.

RESPIRATION SYSTEM

Respiratory rate was 15 per minute. The trachea was central. The chest was symetrical. The air entry was normal in both lung. The breath sounds were vesicular and there were no crepitations.

CARDIOVASCULAR SYSTEM

The pulse was 80 beats per minute, regular in good volume. The blood pressure was 110/70 mmHg. The apex beat was palpate at 5th left intercostal space in midclavicular line . The heart sounds were normal there were no murmurs.

Abdominal Examination

The abdomen was distended. The liver and spleen were not enlarge. The fundal height was corresponding to 36 weeks of gestation. The presentation was cephalic and the lie was longitudinal. The fetal heart rate was 142 beats per minute and regular.

Menstrual History

She attained menarche at the age of 14 years. She used to have 28 days cycles, of 4 - 5 days of menstrual periods. The flow was normal. The Last Normal menstrual period was 10th March, 1997. The Expected Date of Delivery was 17th December, 1997.

Gynaecological History

She had no history suggestive of sexually transmitted infections or pelvic inflammatory diseases. Had no history of contraception in the past.

Past Medical History

She had no history of previous abdominal or pelvic surgery. She had no any chronic illness.

FAMILY AND SOCIAL HISTORY:

She was a housewife and had no formal education. Husband had studied up to standard 8 and was bus driver. She neither smoked cigarette or drank alcohol. There was no history of Diabetes mellitus, hypertension or tuberculosis in the family.

LABOUR SUMMARY:

She had started spontaneous labour at 38 weeks of gestation. She was admitted in labour ward. Artificial Rupture of membrane was done. Labour had progressed well.

She eventually delivered a male baby weighing 3.2 kilogram. The baby had an Apgar score of 8,10 at first and fifth minute respectively. Third stage was actively managed with Ergometrine 0.25mg IV given on delivery of the anterior shoulder. The blood loss was estimated to be 200mls. The post delivery blood pressure was 120/90 mmHg. She was transferred to postnatal ward after four hours.

POSTPARTUM ASSESSMENT:

She was not pale, postpartum haemoglobin wa 10.9 g/dl. She had blood pressure of 120/90 mmHg. She remained afebrile. She had normal breast secreting milk. The chest was clear. The heart sounds were normal. The abdomen was pendulous, moving with respiration with no scars. There was no organomegally. The uterus was well contracted corresponding to 18 weeks size. The sanitary pad was stained with red non-foul smelling lochia. A speculum and digital examination were not done. The patient was re-counselled and advised to take bath just before going to theatre.

OPERATIVE PROCEDURE:

It was performed a day following delivery. She voided before she entered to the theatre. In the theatre she was placed in supine position on the operating table. The abdomen was cleaned with savlon 1:200 and spirit. She was then draped with sterile linen. The operating table was tilted in slight Trendelenburg position. This enable the bowels to move towards the diaphragm, and let the uterus more accessible.

Lignocaine 1% about 10mls was drawn into the sterile syringe. It was infiltrated subdermally in the region just inferior to the umbilicus. When three minutes had elapsed, adequacy of analgesia was assessed by grasping the skin with an Allis clamp. Then two Allis clamps were placed 5cm apart grasping a skin fold inferior to the umbilicus.

A 3 cm transverse incision was made through the skin between the two Allis clamps. The Allis clamps were used retract the margins of the incision. A small subcutaneous tissue was encountered, it was bluntly dissected up to the underlying rectus fascia. The rectus fascia was then infiltrated with lignocaine. It was grasped with two straight Kocher's clamps. A horizontal incision about 3cm was made. The under-health peritoneum was visualized. Two straight Artery forceps were used to elevate the

peritoneum after it had been bathed with lignocaine. The patient was instructed to relax the abdomen. The peritoneal tent was opened and widened with fingers, then two Langenbeck's retractors were introduced.

The retractors were moved to the right while applying a gentle traction. The right cornu and adnexal were visualized. The right oviduct was grasped with a Babcock clamp at the isthmus portion. It was brought out, after identification of its fimbriae end. The tubal serosa and mesosalpinx around the isthmus portion was bathed with lignocaine. The avascular area of mesosalpinx was identified around the isthmus. Using a small round bodied needle with chronic catgut No O, one end of the loop of oviduct was ligated, then both were tied together. The isolated mesosalpinx together with its loop were incised about 5mm from the catgut tie. The haemostasis was verified. The same procedure was repeated on the contralateral oviduct.

A purse string suture using chromic catgut No O. The skin was closed with silk 00 and a pressure dressing was applied. The patient was requested to stand with support and instructed to cough gently so as to restore the displaced intestines.

The procedure had taken 20 minute. The patient was taken to recovery room for resting. The vital signs were monitored quarter hourly for 2 hours. She remained stable, the pulse was 86 beats per minute, regular in normal volume. The Blood pressure was 120/80mmHg. The respiratory rate was 15 per minute. She was discharged after 6 hours on paracetamol 1 gram thrice a day for three days and was instructed to come after 7 days for removal of stitches.

FOLLOW UP:

She was seen after seven days. The wound had healed well. The skin stitches were removed. The lochia was non smelling. She was requested to continue with regular postnatal visits.

COMMENTARY:

Grand multiparity is associated with high risk of postpartum haemorrhage, multiple pregnancy, ruptured uterus, malpresentation, polyhydrommious and fetal malformations. (1). One of the major objectives of the antenatal care is to identify at risk obstetric patient and manage them appropriately. Grand multipara women need

to be counselled about family planning and most important a permanent method. In voluntary sterilization: An International fact Book, Tanzania is listed among the countries, where before a permanent method of sterilization is done, a couple consent must be obtained in a case of married woman (2) as it was in this patient.

Postpartum tubal ligation is one of the most effective female sterilization techniques. The failure rate in the first year of the procedure stand at 0.05 pregnancies per 100 women. Within ten years is 0.75 pregnancies per 100 women (3). It is immediately effective and doesn't interfere with infant care. Technically, there is easy access to fallopian tubes because of the uterine size and position immediately postpartum, hence the procedure become simple.

Tubal ligation is a unique contraceptive technique as it ends fertility permanetly. The process needs informed consent from the client. Informed consent ensures not only the client had received a needed information about the procedure but she has well considered her decisions regarding fertility and had made decision on her own free will.

Despite a well known grandmultipanty risks it is than

important for the health provide to take time during Antenatal visits and do counselling on family planning as it was doen although very late in this patient. In counselling health provider focusing in demand is required to furnish the client with a good knowlegde about family planning and in case of Mrs NK the permanent and other contraceptive methods. It then remain important for a counselor to determine if the client had understood be he lets her made a choice. A decision concerning sterilization should not be made when the judgement is impaired (4). The decision for postpartum tubal ligation should not be done when labour has started, since stress may unduly influence decison and subsequent regret later. Therefore the client should be counseled and her informed consent obtained well before her admission for delivery as it was done in this patient.

Complication such as fever, infection, haemorrhage and even death have been reported with tubal ligation. Mortality rate to tubal ligation has been estimated to range rom 6 to 20 per 100,000 procedures globally (5). Long term complications include hydrosalpinx and peritubal adhesions. Prospective studies have shown that these

problems are no more common than in women who have not undergone sterilization (2,5). Hence the grand-multipara women should be encouraged for permanent method of sterilization when seen at Antenatal clinic.

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PELVIC ABSCESS IN IMMUNOCOMPROMISED PATIENT POSTERIOR COLPOTOMY AND ANTIBIOTICS.

Name:	Mrs M.L.
Age:	28 years
Registration Number:	861103
Date of Admission:	8.12.1995
Date of Operation:	1.12.1995
Date of Discharge:	17.12.1995

SUMMARY:

Mrs. M.L. a 28 years old para 4 + 0 was admitted with history of progressive painful lower abdominal swelling and dysuria for a week. On clinical examination she was found febrile, wasted with generalized lymphadenopathy. Guarding was felt over a cystic mass in lower 0abdomen. Vaginal examination revealed a bulging, tender swelling on posterior fornix which on needle aspiration revealed pus. Posterior colpotomy was done, and cupions pus was drained.

She faired well with antibiotics. She was discharged on nineth postoperative day.

HISTORY OF PRESENT ILLNESS.

Mrs. M.L. was referred from Chalinze dispensary with history of lower abdominal pain, fever, dysuria and a painful abdominal swelling for six days. She admitted to have had evening fevers for a period of about six months. She also complained to have lost weight. She denied to the history of diarrhoea. She had had several episodes of foul smelling vaginal discharge for the past six months. Despite treatment with ampicillin, clotrimazole and tetracyclines, the condition kept on repeating. No high vaginal or endocervical culture had been taken before. These severe symptoms had just followed her menstrual period. She denied to the history of loin pain.

Menstrual History.

She attained her menarche at 14 years of age. Her periods were of 3 - 4 days, her cycles come after every 28/29 days. In the last four cycles, she had experienced heavy flow with dysmenorrhea.

Obstetric History.

She was para 4, all of deliveries were spontaneous and vertex. Three of her children were alive. The last child died of pulmonary tuberculosis.

Past Medical History

When her child was suffering, from tuberculosis. She had a chance to check her sputum for mycobacterium tuberculosis. It was negative in three occasions. She also had a chest X-ray taken 14 days ago. It was normal.

Social and Family History

She was a widow. Her husband had died a year ago due to complications of pulmonary tuberculosis. She was a peasant. Her husband was a truck driver. She neither smoked cigarette nor drank alcohol. There was no history of hypertension or diabetes mellitus in the family.

PHYSICAL EXAMINATION:

She was a middle aged woman. She was wasted and had oral thrush. She was not pale or jaundiced. She had fever. (T 39^{0}C). She had maculo-papulo rashes on her lower limbs. She had generalized lymphadenopathy the nodes were firm, non tender and discrete.

Respiratory system

The respiratory rate was 24 per minute, the air entry was good on both sides and there were no crepitations.

Cardiovascular System

The pulse rate was 90 per minute regular of normal volume. The blood pressure was 110/70 mmHg. The apex beat was in fifth left intercostal space along the mid clavicular line. First and second heart sounds were normal. There were no murmurs.

Abdominal Examination

There was a uniform swelling in the hypogastrium extending to the umbilicus. The swelling was tender, cystic and with guarding. The liver and spleen were not palpably enlarged. The renal angles were free of tenderness and masses. There was no evidence of free fluid in the abdomen.

Vaginal Examination

The external genitalia was normal. There was tenderness on digital examination. A bulging posterior fornix was encounted with an area of maximum fluctuation. The cervix appeared smooth and firm. Attempt to perform bimanual palpation was limited by tenderness.

Speculum

A gentle retraction of anterior vaginal wall with sims speculum exposed a bulge in posterior fornix with induration of the vaginal mucous. The cervix was smooth with no lesion. There was a mucoid discharge from external ostium.

Rectal Examination

The rectal mucosa was smooth and tender in digital examination and collection was appreciated in the Pouch of Douglas.

DIAGNOSIS

Pelvic Abscess and Immunodeficiency state.

Investigations and Results

. The haemoglobin was 11gm/dl. The leucocytes count, total was 9,300 cells/mm^3

. Differential cell count revealed:

- Neutrophil 75%
- Eosinophil 2%
- Lymphocytes 20%
- Monocytes 2%
- Basophils 1%

. Urinalysis revealed no protein or sugar in the urine, 25 leucocytes were seen per high power field.

. Urine for culture (results obtained after 72 hours) revealed significant growth of E. coli with in vitro sensitivity to gentamicin, doxycycline, tobramycin and clindamycin resistant to tetracycline, ampicillin and nitrofurantoin.

. The blood slides (six slides) for malaria parasite revealed no plasmodium.

. Ultrasound revealed a collection fluid in the pouch of Douglas. The collection measured 15 x 18cm. Highly suggestive of Pelvic Abscess.

. She was pre-counselled and blood was taken for HIV tests.

. She was started with Ampicillin 1 gram and Metronidazole at the dosage of 500mg 6 hourly IV and Gentamicin 80mg twice a day.

PLAN OF MANAGEMENT.

She was planned for Examination under anaesthesia, culdocentesis and subsequent colpotomy.

Preparation.

The procedure was explained to the patient and she agreed and signed a written consent for anaesthesia and operation.

In theatre

Induction and maintenance of anaesthesia was done as in gynaecological case No. 1.

Procedure

She was put in lithotomy position. The vulva, vaginal and perineum were cleaned with savlon 1:20. She was draped with sterile linen. The urinary bladder was catheterized and clear urine was obtained. Examination under anaesthesia was done, pre-operative findings were confirmed. The upper margins of the swelling could be felt extending to midway to the umbilicus.

The cervix was exposed with a sims speculum. The posterior tip was the grasped with a volsellum forceps and pulled forward and upward. The bulging on posterior fornix was evident. The area was cleaned with savlon 1:20. Using a large-bore needle the posterior fornix was punctured. About 2mls of thick whitish pus was aspirated and taken for culture and sensitivity. A transverse incision 1.5cm in length was made were the puncture was done, cutting through vaginal skin. A closed artery forceps was inserted through the incision and opened. Thick pus under pressure gushed out. About 880mls was collected. Then an index finger was introduced into the abscess cavity breaking the loculi. More pus was drained out. A tubular drain was then inserted and was enchoed to the incisional edge with silk No 0.

POST OPERATIVE CARE:

The pulse rate, blood pressure and temperature were monitored 2 hourly for 12 hours,

then 4 hourly for the remaining 12 hours. All remained normal.

She continued with a combination of Ampicillin, and metronidazole at the dosage of 1gram, and 500mg six hourly all given intravenously. Gentamicin 80mg twice daily for seven days.

Pethidine 100mg was given intramuscularly as analgesia, six hourly, four doses.

She was nursed in prop up position to facilitate drainage of the pus.

She received additional 1.5 litre of dextrose saline in 12 hours. Nystatin oral suspension 10,000IU was also given thrice a day for seven days.

Laboratory Results

Initial result were received 24 hours after operation. Gram stain revealed gram negative bacilli in abundance. Aerobic culture and sensitivity test showed a significant growth of Escherichia coli sensitive to chloramphenicol,erythromycin, gentamicin and kanamycin. Resistant to penicillin and tetracyclines . Anaerobic culture could not be processed.

. Serology for Human Immunodeficiency Virus was positive in ELISA and WESTERNBLOT tests.

  The result were communicated to her after post test counselling.

. CD4 + Tcells, CD8 + T cells, neopterin were not tested due to operational problems.

. Midstream urine for culture and sensitivity showed significant growth of E. Coli, with similar sensitivity pattern to that of pus culture.

Post operative Progress.

Ampicillin was stoped and Erythromycin 1gram thrice a day was introduced.

She became afebrile on the third day post operative. The abdomen was soft and midly tender. The swelling had reduced. The drain was discharging serosanguinous fluid on the fifth day. It was removed. The haemoglobin was 10g/dl.

She was discharged home on the nineth post operative day to attend gynaecological outpatient and medical outpatient clinic in four weeks time.

Follow up at Gynaecological Clinic

She was wasted, the skin lesion were all over her body. She had no abnormal vaginal

discharge. She had not resumed her menses yet. The abdomen was soft and there was no region of tenderness. Vaginal examination revealed normal vulva vagina no adnexa tenderness or mass. The speculum examination revealed healed posterior fornix incision. She was counselled on HIV results and safe sexual activity which involved abstinence or permancent use of condoms.

COMMENTARY:

Pelvic abscess formation is one of the more dramatic, distinguishable and deadly sequence of pelvic infections. It is attributed to poor hygiene, post-abortal and postdelivery infections. The incidence of pelvic abscess has a positive correlation with the high frequency of venereal infections (1). It denotes inability to mount adequate immune response to infections this may have played a role in this patient especially when considering her HIV status.

In this patient pelvic abscess had followed menstruation. This is rare as she was not sexually active. Although during menstruation the cervix is opened, the rate of ascending infection is low because of local immune mechanisms in the uterus (3). In this patient immunodeficiency, may have contributed to the formation of pelvic abscess. Formerly, it was believed that most of pelvic inflammatory disease were caused by Neisseria gonorrhoea, but it is now clear that in most parts of the world, Chlamydia trachomatis is a more common cause (4). Other organism which may be involved include Mycoplasma hominis and bacteroides species. Actinomyces israelii causes a severe infection, usually in association with long term use of IUCD (5). However in 20% of cases, no microorganisms have been found (4). Following a primary infection, there is a superinfection with other organisms hence a mixed infection. E.Coli in most cases cause a superinfection, but in immunocompromized patient it can be a primary infective agent (6) as it was in this patient.

As it was in Mrs ML, it is mandatory that culture and sensitivity is done on the material recovered at cul-de-sac centesis. The results of culture and sensitivity indicate appropriate antibiotic therapy. In this patient Ampicillin was changed due to in vitro resistance results. The antibiotics are initially selected while considering the local epidemiological pattern of microbial agent commonly associated with pelvic

inflammatory disease. This is particularly important in cases where the patient has variety of antibiotics before reporting to the hospital.

Although apparently good drainage of the cul-de-sac is achieved by posterior colpotomy (5). It is often difficult to ensure that complete abscess drainage has been achieved because of multilocular abscess, microabscess in pelvic viscera a pyosalpinx. Hence are repeat ultrasound is indicated if fever persist or the patient's condition deteriorates. In such situation drainage can be accomplished under guidence of ultrasound (7).

Culdocentesis was done shortly before colpotomy in this patient in order to rule out pelvic haematocoele, usually result from a slow leaking ectopic, ruptured cyst or superficial endometriosis as the conditions would be best managed with laparotomy.

Colpotomy is advocated as it has less morbidity compared to laparotomy, so particularly in this patient with immunodeficiency. Insertion of a tubular drain of good diameter facilitate drainage of the pus. The duration of stay is still controversial as some authority prefer to leave it in situ till no more pus drains out. Others in fear of creating a sinus or perforation to the rectum advocate removal of the tube on third day. The author prefer living it till it drains no more, as removing it while there is pus means creating chances for recollection.

In serious infection like pelvic abscess in immunodeficient patient due to HIV infection, CD4 + Tcells, CD8 + Tcells and Neopterin (a product of stimulated mecrophages) need to be ascertained (8). A low level of CD4 + Tcell/CD8 + Tcell ratio, a low level of neopterin indicate poor prognosis and higher risk of repeated infection such as abscesses. Hence supportive antiviral therapy is indicated especially if CD + T cell comH is less than 200/ mm3 (8). To avoid recurrence possible drugs like Zidovudine should be offered to these patients.

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AMBIGUOUS SEX: GENDER SELECTION:

Name:	K.A
Age:	6 years
Registration Number:	835634
Residence:	Iringa Town
Date of Admission:	9.10.1995
Date of Operation:	16.10.1995
Date of Discharge:	23.10.1995

SUMMARY:

K.A. was referred from Iringa Regional hospital to Muhimbili Medical Centre with provisional diagnosis of ambiguous genitalia noted since birth. K.A was reared as a female. On admission, the physical appearance was that of six years female except for the genitalia. There was clitoromegally. The urethral meatus was at the base of frenulum. There was no vaginal opening. There was right external ovotestis. Barr bodies count revealed she was genotypically male. Removal of external ovotestis and clitoral reduction was done. The patient recovered uneventful. She was discharged for vaginal reconstruction at puberty.

HISTORY OF PRESENT ILLNESS:

The informant was the mother. K.A. was a first born in the family of three sisters. She was delivered at Iringa regional hospital. The mother noted a rather long phallus. The abscence of clearly hanging testicles made her rear the child as a female. She could pass urine without difficulties. She denied to the history of hormonal therapy and irradiation when pregnant.

None among her relatives had been born with abnormal genitalia for the best of her knowledge. The rest of the siblings were normal.

The child had no history suggestive of failure to thrive, excessive body growth or early development of secondary sexual characteristics. She had no history of polyuria or polydypsia. The micturation and bowel habits were normal.

Past Medical History

There was no history of previous surgery or major illness.

Family and Social History

Both of her parents were peasants. There was no history of consanguinity in their marriage. The patient was in kindergarten associating well with females. There was no history of tuberculosis, hypertension or diabetes mellitus in the family.

Physical Examination

Had a feminine habitus. There was no webbing of the neck. She was not pale, jaundiced or febrile. There was no thyroid gland enlargement.

Chest Examination

She had normal chest cage. The breast buds were normal.

Cardiovascular System

The pulse rate was 73 beats per minute regular and good volume. The apex beat was in fifth left intercostal space along the midclavicular line. The first and second heart sounds were normal and there were no murmurs.

Abdominal Examination

The abdomen was scaphoid moving with respiration. The liver and spleen were not enlarged. The renal angles were free of tenderness and masses. There was no free peritoneal fluid. Bowel sounds were normal.

Pelvic Examination

She had no pubic hair. Clitoromegally was evident, with a single frenulum interiorly situated. The urethral meatus was below the base of the clitoris. She had labia folds with scrotal like skin. The right one had a bean sized gonad. The labia minor appeared as just an impression. A depression was felt along the median raphe but there was no vaginal introitus.

DIAGNOSIS:

AMBIGUOUS SEX - True Haemophrodite.

Investigation and Results

. The haemoglobin was 13g/L

. The urine was negative for sugar and protein.

. Serum creatinine was 70 mmol/L

. Serum electrolyte, K^+ was 4 mmol/l sodium Na^+ 140mmol/L, Chloride Ions

100mmol/L all were normal.

- Serum Hormones, aldosterone, cortisol, estradiol, estrone, testosterone and progesterone were not estimated due to lack of facilities.
- The intravenous urogram (IVU) showed normal calices, normal renal pelves, normal ureter normal urinary bladder No structural malformation.
- Buccal smear for Barr bodies revealed no barr bodies seen in 300 cell counted. The results showed a genotypical male.
- Enzyme assay 11 and 21 hydroxylases, 5 alpha - reductase, 3 - dehydrogenase and urinary 17 or 11 ketosteroids were not estimated due to lack of facilities.
- Ultrasound scan reported abscence of uterus and adnexa.

PLAN OF MANAGEMENT:

Laparotomy was decided to assess the internal malformations and possible correction.

LAPAROTOMY:

The problem was explained to the mother and written consent was obtained. The patient was taken to theatre.

Induction

The patient was placed on operating table in supine position. Atropine, 0.5mg was given intramuscularly. Intravenous line was established using canula NO 22. A drip of dextrose saline was started. Gas induction was done using a balance mixture of oxygen, nitrous oxide and halothane flowing at the rate of 1.5, 2.5, 1.5 Litres per minute respectively. The gases were provided via a face mask. When the reflexes had disappeared, the patient was intubated by a cuffed endotracheal tube size 5. The patient was then maintained with halothane 1% flowing per minute, nitrous oxide 2 Litres and oxygen 1 litre per minute. The thighs were separated, so did the labial folds, The patient was then catheterized with a smallest Foley catheter.

Procedure

The abdomen was cleaned with povidone iodine and alcohol 50% in spirit, then draped in sterile linen. A pfanneinsteil incision was made using a surgical blade No. 10. Subcutaneous tissue was separated with fingers. Blunt dissection was carried out to expose the fascia. It was transversely opened and the muscle bellies were laterally

separated. The parietal peritoneum was exposed and longitudinally opened. Paediatric self retaining retractors were placed. The bowels were retracted cephalad.

Findings

There was no uterus or intraabdominal gonads. The left fallopian tube with fimbria was seen. On right side a glittering tubular structure with dead ends was visualised. The fallopian tube was dissected after clamping of mesosalpinx with strong artery forceps. The right tubular structure was then bluntly dissected out using mayo scissors (It was suspected to be a remnant abdominal part of Vas deferens). Some few bleeders were clamped with strong artery forceps and ligated with catgut 2 - 0.

The parietal peritoneum was then closed using chromic catgut No 2/0 in continuous running suture. The rectus fascia was closed with Vicryl No O. also in continuous running suture. The skin was closed using prolene 2 - 0 monofilament subcuticular continuous stitch.

Both tissues were taken for histological analysis.

CORRECTIVE SURGERY (Phase I)

The clitoris was identified, the skin and subcutenous tissue were striped away from the body of the clitoris. The blood vessels entering from ventral surface and the nerve supply running in the inferior were separated from adjacent corpora cavenorsa and preserved. The corpora cavenosa was excised leaving the glans and a small remnant stump. The glans was stitched to the remnant stump using vicryl No 2/0 in interrupted stitches all around. The neurovascular bundle was the plicated to the shorted clitois using catgut No 2/0. The skin was trimed and re-sutured back using vicry 2/0.

The transverse incision was made right over the right gonad in the right labial fold. Then blunt dissection was done using an artery forceps. The artery forceps was then inserted below the gonad and clamp the vessels. It was excised using mayo scissors, transacting between the gonad and artery forceps. The stump with vessels were transfixed with chromic catgut No 2/0. The incision was closed with silk No 2/0 in mattress stitches.

The patient was left with indwelling catheter.

Reversal of Anaesthesia.

The gas flow was switched off. As the patient started to struggle. Extubation of endotracheal tube was done.

The gonad was sent for histological analysis.

The histological results: Revealed a tubular structure with fimbria with features consistent with Fallopian tube.

A second specimen: A section showing Primordial follicles of different sizes. A well defined Turnica albuginea is seen A medulla with vessels and blood sells by dermacated out of cortex. Attached a portion showing Leydig cells located adjacent to seminiferous tubule small capillaries also seen. Conclusion Ovarian -Testicular tissue.

POST OPERATIVE CARE:

The pulse rate remained between 75-86 beats per minute, regular and in good volume. She was given pethidine injection 50mg, 6 hourly intramuscular for analgesia. She received four doses of pethidine. She had received intravenous fluid dextrose saline 1.5 litres in first 24 hours. The urine output was 900 mls. She had no fever.

POST OPERATIVE PROGRESS:

The haemoglobin was 13g/dl as measured on the third postoperative day. The urine for culture and sensitivity was taken on a third day, on removal of the catheter. The specimen revealed no organisms. The child was discharged on the sixth day when the stitches had been removed. She was scheduled for a next visit after six weeks.

Follow Up.

She was seen again after six weeks at gynaecological clinic. The wound had healed well. She was adviced to come again at the age of 14 years for vaginal reconstruction.

COMMENTARY:

A true hermaphrodite is an individual in whom both testicular and ovarian tissue are present (1). In subsaharan Africa the condition seems to be more common if compared to Europe and United states of America (1,3). The testicular and ovarian tissue can either occur separately or more commonly together as ovotestes as it was in this patient. Most true hermaphrodite (50 - 70%) have female genotype 46xx, others 46xx/xy (13% (2) 46xy(11%), 46xy/47xxy(6%) and 45x/46xy(4%). A failure on demonstration of

Barr bodies, highly suggest this patient had either 46xy, 45x/46xy or 45x, but the later is seen in Turner syndrome. This patient had no features suggestive of Turner syndrome, example webbing of the neck.

Rebar (2) noted about 2/3 of true hermaphrodites are raised like males, only 1/3 as female. This patient was reared as a female because of the external features of her genitalia, abscence of hanging testicles and the presence of labia scrotal feld resembling the labia.

Ambiguous genitalia is a constant feature (3) in true hermaphroditism, the main differential diagnosis is congenital adrenal hyperplasia. Congenital adrenal hyperplasia or androgen stimulation from other source is usually incompatible with life, unless urgently treated. These conditions are associated with inability to retain the salts and hence electrolyte imbalance. (4). Additionally, in congenital adrenal hyperplasia, in a genotypic female the ovaries are found intraabdominally (5). This was not so in this patient. Although true hermaphroditism account for less than 10% of intersex patient (6) it stands as a diagnostic challenge.

Effort to reach diagnosis at birth is important to exclude congenital adrenal hyperplasia, electrolyte imbalance and elevated level of cortisol associated the congenital adrenal hyperplasia. Ultrasound is important on reporting on the presence of uterus and the gonads. Hormonal assay 21-hydroxylase, 11 beta hydroxylase and 3 beta hydroxylase deficiency point female pseudohemophrooditism. While 20,22 desmolase, 5-alpha reductase, 17-alpha hydroxylase deficiency point male pseudohermophroditism (3,7). Facilities for such demonstration were lacking in Muhimbili Medical Centre. However demonstration of true hemophrodite was reached in this patient after biopsy results which had shown ovarian and testicular tissue. Gonad biopsy is not done to determine the sex of rearing. The decision is made by suitability of external genitalia during surgery, sexual life, patient view and the gender she was reared. After selection of the gender the inappropriate gonadal tissue is removed. Failure to remove in portion necessitate the whole gonad to be removed as it was done in this patient. However in such decision hormone replacement therapy is indicated at puberty.Generally, if the child is to be raised as a female, clitoral recession, labioscrotal reductions and

vaginoplasties are required (8). Federrnan 7(1995) advocate accomplishment of all these procedure in infancy and single stage. This is contrary to Dewhust (4), who suggested, a clitoral reduction in neonatal period before that child is discharged from hospital and vaginaplasty at puberty. The author supports Dewhust suggestion, as it reduces the traumatic serial vaginal dilatations in childhood. Also it eases surgery. This patient had no corrective surgery in infancy, however it was done in six years of age. The author doubts if the clitomegally had no impact psychologically in this girl who had seen her younger sister's genital organs. Lastly, a most important element in the care of these patient is the psychological support that given to the families and to the patient (7). It has to be delivered with sensitivity.

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MENORRHAGIA CAUSED BY HUGE FIBROID MANAGED BY TOTAL ABDOMINAL HYSTERECTOMY:

Name:	Mrs F.E
File Number:	870041
Age:	40years
Residence:	Ilala
Date of Admission:	10.12.1996
Date of Operation:	11.12.1996
Date of Discharge:	17.12.1996

SUMMARY:

Mrs. F.E. Para 3 presented with history of heavy and prolonged menstrual bleeding associated with abdominal swelling. The menorrhagia had been there for a period of two years. She was examined and found to be anaemic. She was also found to have a huge fibroid of equivalent size to 24 weeks of gestation, endometrial currettage for histological analysis and papanicolao smear revealed no feature suggestive of malignancy. Total hysterectomy was perfomed, she recovered uneventiful. This case is presented for discussion on surgical aspects of total hysterectomy.

HISTORY OF PRESENT ILLNESS:

The patient was referred to Muhimbili Gynaecological outpatient clinic from a district hospital on account of heavy and prolonged menstrual bleeding. She had had this problem for 2 years. She had noted a mass since a year ago, which was not painful but was increasing in size gradually. The mass was not associated with symptoms of pregnancy. She denied history of intermenstrual or contact bleeding. She had no history of vaginal discharge. Her bowel habits were normal. There was no history of heamoptysis or hematuria. She gave history of increased frequency of micturition which was not associated with polydypsia or polyphagia. She denied to history of recurrent fevers or loss of body weight.

Past Medical History

The was no history of hospital admission or major operation. There was no history suggestive of diabetes mellitus, hypertension or tuberculosis.

Menstrual History

She attained her menarche at the age of 15 years. In first two years post menarche she experienced irregular cycles. Later she had 28 days cycle with 3 to 5 day of normal flow.

Gynaecological History

She had no history of sexually transmitted disease. She had never used any contraception.

Obstetrics History

She had had three normal spontaneous vertex deliveries. The last born child was ten years old.

Social And Family History

She was married to a Senior Government Administrative Officer. She had attained secondary school level of education. She neither smoked cigarette nor drank alcohol. There was no history of diabetes mellitus hypertension of tuberculosis in the family.

PHYSICAL EXAMINATION:

She was healthy looking middle aged lady; afebrile, moderately pale but was not jaundiced. She was not dyspnoeic. Her breasts were normal with no palpable nodule.

The Respiratory System

The respiratory rate was 18 per minute. She had vesicular breath sound on both sides and there were no crepitations.

The cardiovascular system

She had the blood pressure of 130/80 mmHg. Her pulse was 80 beats per minutes regular, in good volume. The jugular venous pressure was not raised. The first and second heart sound were normal and there were no murmurs.

Abdominal Examination

The abdomen was asymetrically distended. The umbilical and suprapubic regions were more prominent. Palpation confirmed a firm, irregular, non tender abdominal mass arising from the pelvis. The mass was not fixed to related structures. The size of the mass was equivalent to 26 weeks of gestation. The liver and spleen were not palpably enlarged. The renal angles were free of tenderness and masses. There were no fluid

thrill or shifting dullness.

Vaginal Examination and Papanicolaou Smear.

The vulva was normal. Cusco's speculum was inserted. It revealed normal vaginal introtus and a health looking cervix. Avres speculum was taken and applied to the cervix. It was rotated clockwise into 360^0. The specimen obtained was smeared on clean glass slide and fixed with alcohol in spirit 50:50. The specimen was taken for cytological analysis. The speculum was removed. On digital examination the cervix was firm and closed. It was countinuous with the mass. The mass was firm, non tender and irregular.

DIAGNOSIS: Uterine Fibroids and Moderate Anaemia.

PLAN OF MANAGEMENT:

Laboratory investigation and results.

- The haemoglobin was 8.7 gm per decilitre.
- The Red blood cells morphology revealed hypochromic, microcytic cells and relatively increased reticulocytes.
- The white blood cell count was normal and the differential count was normal.
- The serum creatinine level was 83umol/L (normal).
- Urine for cuture revealed no organism.
- Chest X-ray revealed normal lung fields, and cardiothoracic ratio.
- The intravenous urogram revealed both kidneys excreted the dye normally. There was slight hydronephrosis on both sides. The ureters appeared to be displaced laterally on both sides in middle and lower third portions.

Management of the Anaemia

The patient was started with ferrous sulphate 200mg twice daily. She was also given Depo provera injection. 300mg intramuscular single dose. This had induced amenorrhea. On a second week the haemoglobin was 9.8gldl. She was taken to theatre for endometrial curettage.

Endometrial curettage

The surgeon had scrubbed and dressed in sterile linen and gloves. Anaesthesia was given as in gynaecological case No. 1, except she was maintaned under face mask,

with halothane and oxygen. The patient was then placed in lithotomy position. The perineum was cleaned with hibitine, and she was draped with sterile towels. The urinary bladder was emptied with a metal catheter. Examination confirmed the previous findings. A sims speculum was introduced into the vagina and the cervix was exposed. Using the volsellulm forceps, the cervix was grasped on its anterior lip and draw forward and downward. The cervical canal was the dilated using Hegar's dilator up to No 8. The curette was introduced into the uterine cavity. A gauze was placed into the vaginal to obtained the curettage. The uterine cavity was curetted systematically starting at 12 o'clock and moving around the cavity clockwise. Normal looking endometrial tissue was obtained. The uterine cavity appeared irregular. Anaesthesia was reversed as in gynaecological case 1.

Cytology result

Normal pap smear

History results

Normal endometrium in secretory phase.

Preoperative Preparation

Haemoglobin was rechecked and was found to be 9.9g/dl. Blood was obtained and taken for grouping and crossmatching. Two units of group O Rhesus D positive were reserved. Counselling was done. She was told that her uterus would be removed. She would stop menstruating but her sexual life would continue as usual. She consented.

OPERATION

Induction and mainatenance of anaesthesia was done as described in gynaecological case No.1. Catheterization was done with Foley's catheter No. 18. Then the abdomen was cleaned with povidone iodine and spirit. The patient was draped on sterile green linen. Using surgial blade No 10 mounted on scalpel handle. The abdomen was opened in layer through subumbilical midline incision which was extended cephalad above the umbilicus about 4 centimetres.

Findings

Huge multinodular fibroids with right hydrosalpinx was seen, the left and right ovary were normal.

Hysterectomy

A myoma screw was inserted in the fundus to aid in lifting the tumour during operation. A self retaining retractor was placed. The uterus was delivered out of the incision. Both ovaries were normal and appeared health in inspection, it was decided to conserve both ovaries. Two wet mops were inserted to push the bowels. The right round ligament was identified double clamped and divided between two clamps. The procedure was repeated on the left side. The lateral stumps were ligated with No 1 chromic catgut and the suture were left long while held with small artery forceps outside the abdomen.

The right broad ligament was opened and the loose areolar tissue was pushed downwards by a gauze on sponge holding forceps. The ureter was identified by palpation on the posterior leaf of broad ligament. The procedure was repeated on the left side. Having ensured that the ureter were out of operative field. The incision on the anterior leaf of broad ligament was extended anteriorly and medially, from each side till the met. The right infindubulopelvic ligament was identified. It was triple clamped with curved Kocher's forceps and cut between the middle and medial forceps. The pedicle was transfixed with No 1 chromic catgut. The procedure was repeated for the left infindibulopelvic ligament.

Having opened the anterior leaves of the broad ligaments, the uterovesicle peritoneum was reflected downwards by combined blunt and scissor dissection of vesico-cervical fascia. Thus the bladder was pushed down with the assistant holding the uterus in traction toward the patient left side, the right uterine vessels were triple clamped with three curved Kocher's forceps and cut. The pedicle was transfixed with No 1 chromic catgut sutured and doubly secured with a free tie. The procedure was repeated on the left side while the uterus was held in traction towards the patient right side. The parametrial tissue and the cardinal ligaments were then doubly clamped with straight Kocher's forceps cut and tied in succession.

The posterior leaf of the broad ligament was them divided from either side towards the posterior aspect of the uterus. The rectouterine peritoneal reflection was gently pushed downwards. The cervix was then palpated between the index fingers to identify its

lowest point, while uterus was held in traction upwards and backwards. The anterior vaginal wall at the lower level of the cervix was opened with a knife. The cut anterior vaginal wall was held with a littlewood's tissue forceps. The incision on the vagina was extended laterally and towards the posterior aspect. As the posterior aspect was approached the uterus was held in traction upwards and fowards. The uterosacral ligaments were thus exposed. Curved Kocher's forceps were applied to the vagina angles including the ipsilateral uterosacral ligament. The intervening tissue between the uterus and the clamp were cut thus completing removal of the uterus. Straight Kocher's forceps were applied to bleeding site of vaginal vault. An iodine gauze was then pushed into the vagina from above. The uterosacral ligaments and vaginal angles were transfixed. Bleeders on the vaginal vault were tied and haemostasis was closed by interrupted sutures. The abdominal packs and self retaining retractor were removed and peritoneal cavity was mopped dry. After ensuring a correct swab and instrument count. The parietal peritoneum was closed with catgut 2/0 in running suture. The rectus fascia was closed with continuous locked suture using vicryl
No 1, and the subcutenous tissue was apposed with plain catgut No O. The skin was closed in mattres suture with silk No O. The wound was then covered with sterile dry gauzes. The intraoperative estimated blood loss was 450 millilitres. The anaesthesia was reversed as in gynaecological case No1. She was taken to recovery room then to the gynaecological ward.

POSTOPERATIVE CARE:

She was not transfused with reserved blood. She was given intravenous flund, Dextrose saline 3 litre in the first 24 hours. Her blood pressure remained between 120/70 - 120/70 mmHg. The pulse rate was 80 - 88 per minute regular in good volume. She received intramuscular pethidine injection of 100mg 6hourly for 24 hours for analgesia. She had a total output of 2000mls in the first 24 hours. The urethral catheter was removed after the first day. Her haemoglobin on the third day was 9.0g/dl. The abdominal wound was inspected on 4th day post operative and there was no signs of sepsis. The covering gauzed was replaced. She had the stitches removed on the seventh day. The speculum examination on the same day revealed a nicely

healed vaginal vault. She was discharged on the same day and given an appointment to be seen in Gynaecological outpatient clinic after six weeks.

Follow Up

Six weeks later, the haemoglobin was 12g/dl she had nicely healed abdominal wound. The speculum examination revealed a healed vaginal vault.

COMMENTARY:

Uterine fibroids are the most common neoplasm of the female genital tract. An estimated 20 percent of women above 35 years of age have fibroids (1). The incidence has been reported to be much higher in black women. Among women who have fibroids 20 to 40 percent are estimated to be symptomatic. At Muhimbili Medical Centre is a commonest tumour operated in gynaecological theatre. In 1996/1997 nearly all the operating list had at least one case for myomectomy or hysterectomy due to fibroids.

The etiology of uterine fibroids is still debatable, although observation of their natural history provide clues to pathogenesis. Fibroids are rare before menarche, are more common in later reproductive life and usually increase in size during pregnancy, and often regress after menopause, all of which suggest a responsiveness to oestrogen. Studies have not documented that patient with fibroids have increased serum levels of estradiol or total estrogens (1,3). High level of epidermal growth factor (EGF) as well as receptors specific for this hormone in the cells within myometrium have been implicated in pathogenesis of these benign tumours (1,2). More recent studies of the chromosomes from fibroids have shown that approximately two-thirds of fibroids have deletions of portion of chromosome 12 (2). Although chromosomal abnormalities are commonly found in malignant neoplasms, the finding of a reproducible chromosomal deletion in a benign tumour indicate that not all chromosomal changes prompt malignant neoplastic transformation. Collectively, this information suggests growth of uterine fibroid involves several factors, many of which are still unknown (1,2).

Most women with uterine fibroids are asymptomatic. Women with symptoms associated with uterine fibroid may complain of menorrhagia, dysmenorrhea and pressure symptoms as related to the urinary or bowel habits. Menorrhagia is the

commonest symptoms. As it was in this patient. Endometrial hyperplasia, endometrial arteriolar and venular ectasia interfering with menstrual haemostasis, are among suggested causes of menorrhagia (4). Less commonly, uterine myomas may undergo torsion or acute degeneration, referred to as red degeration, under these circumstances, the patient may present with signs of acute abdomen.

In evaluation of the tumour, pelvic examination is important, the size of the uterus is carefully documented. By convention, myoma is expressed in terms of the equivalent size of gravid uterus like in this patient were it was corresponding to 24 weeks of gestation. Fibroid usually grow very slowly, A rapid growth is most associated with sarcomatous change. If the clinical examination permit the confident estimate of uterine size and there is no suggested adnexal pathology additional diagnotic study such as pelvic ultrasound, computed tomography (CT) and magnetic resonance imaging (MRI) contribute very little to clinical decision making (5). Pap smear and Endometrial curretage are very important diagnostic procedure aimed at screening for malignancy. Both procedures were done in this patient and no malignancy was detected. Intravenous pyelogram remain important especially in huge fibroids. Compression of ureter result to hydronephrosis as it was apparent in this patient. However in longstanding extrinsic ureteral compression renal dysfunciton may occur. Hence it is also important to ascertain the renal function tests. (6).

When uterine fibroids become symptomatic in a woman whom preservation of fertility may not be an issue, hysterectomy is generally the treatment of choice, particularly for symptomatic patient with large myoma, as it was in this patient. Unless technically beyond the skill of the surgeon, subtotal hysterectomy is discouraged. A residual cervical stump and lower uterine segment may give rise to subsequent myomas and are sites for potential preneoplastic and neoplastic conditions. The hysterectomy is usually less complicated, although the presence of lower segment or cervical myoma may make surgical exposure difficult and increase the risk of injury to the ureter. In such situation, myomectomy before hysterectomy may improve the surgical exposure. (7,8). The issue of prophylactic or incidental bilateral salpingo-oopherectomy remain controversial. Proponents of the procedure argue that it decrease the risk of ovarian

cancer and obviates the risk of residual ovarian syndrome. Opponents of this procedure argue that the postmenopausal ovary contibutes androgens that are important and primary papillary peritoneal neoplasia may still occur even after oophorectomy (1). The author prefer to leave the ovaries in situ unless obvious pathology is seen during surgery.

Preoperative work up is important as some patient are anaemic as it was in this patient. Recently, the use of Gonadotropin Releasing Hormone has been suggested. It is said to be indicated when there is a need to reduce the fibroid size to alleviate pressure symptoms or there is hypermenorrhea (9). This permits the correction of iron deficiency anaemia. Buserelin is commonly used GnRH agonists for 3 to 6 months as it causes a decrease in the size of fibroid. The rapid growth of fibroids to previous size is documented after the use of GnRH if surgery is not done in time. (1,9). It is in authors view that Muhimbili Medical Centre should further research on the use of GnRH agonist as we see patient with huge fibroids, anaemic, waiting for surgery as it was in this case.

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SEVERE GENITAL BLEEDING SECONDARY TO COITAL LACERATION:

Name:	Mrs. S.A.
Registration Number:	849901
Residence:	Mwananyamala A.
Age:	31 years
Date of Admission:	30.11.1995
Date of Discharge:	3.12.1995

SUMMARY:

Mrs. S.A. was admitted in Gynaecological ward from emergency medicine department where she had presented with severe vaginal bleeding resulting from coitus. An examination under anaesthesia was done in theatre; and a laceration on the posterior vaginal fornix was demonstrated. It was directly repaired. She faired well and was discharged in good state.

HISTORY OF PRESENTING ILLNESS

The patient was admitted in the middle of the night as an emergency case from casuality. On admission in gynaecological ward she had already received two litre and half of normal saline.

She complained of vaginal bleeding which had started while she was having sexual intercourse with her husband. She suddenly experienced a stabbing pain which radiated to the back. It had occured as she started the act. Soon she noted profuse vaginal bleeding. It is estimated she lost about a litre in a period of two hours

She had lactational amenorrhea; and this was a first act of coitus since she had delivered four months ago. She denied to any history of previous post coital bleeding or dyspareunia. She admitted that the husband was rather vigorous compared to the past. None of them was under the influence of alcohol.

Past Medical History

She had no history of vaginal operation previously. She had no history of bleeding tendencies.

Menstrual History

She had no history of sexually transmitted disease. She was also on oral contraceptive pills.

Obstetric History

She had a spontaneous vertex delivery four months ago. She had a left midlateral "J" shapped episiotomy which had healed.

Social And Family History

She was a hoursewife. The husband was working with Cocacola Company as a lorry driver. Neither of them smoked or drank alcohol. There was no history of bleeding tendencies, diabetes mellitus, hypertension or tuberculosis in the family.

PHYSICAL EXAMINATION:

She was a young lady, slightly pale, afebrile. She was not jaundiced and had no ankle or pretibial edema.

The thyroid gland was not enlearged. The breast were engorged and could produce milk on expression.

SYSTEMIC EXAMINATION

The Respiratory System

Respiratory rate was 20 per minute. The breath sounds were vesicular and there were no crepitations.

The Cardiovascular System

The pulse rate was 100 per minute, with good volume, and it was regular. The blood pressure was 100/60 mmHg. The apex beat was on 5th left intecostal space along the mid-clavicular line. First and second heart sounds were normal and there was no murmur.

Abdominal Examination

The abdomen was scaphoid. It was moving with respiration. The liver and spleen were not palpably enlarged. The Renal angles were free of tenderness and masses. There was no evidence of free fluid in the peritoneal cavity. The bowel sounds were normal.

Vaginal Examination:

The vulva were soaked with blood. The introitus was packed with gauze. Removal of the pack initiated some bleeding re-packing was done.

PROVISION DIAGNOSIS

Genital injury secondary to coitus.

Definitive plan: In view of active bleeding, Examination under anaesthesia was decided and possible repair.

PRE-OPERATIVE MANAGEMENT:

Blood had already been taken for grouping and cross-matching and an intravenous drip of Normal Saline was running. A unit of blood group O Rhesus factor D positive was reserved. Consent for the operation was obtained. The patient was taken to theatre.

Operative Procedure

General anaesthesia was administered as described in Gynaecological case No. 1

The patient was placed in lithotomy position with the legs held in stirrups. The perineum was cleaned with savlon 1:200. The urine was emptied using a metal catheter, about 150mls of clear urine was emptied.

Inspection revealed no leaking urine or fecal matter.

The vaginal gauze pack was removed and vagina was cleaned with savlon 1:200. Povidone iodine was used to paint the introtus and then the vulva. Finally ethyl alcohol 50% in spirit was used to clean the region. The patient was draped. An Auvard speculum was inserted into the vagina. The posterior lip of the cervix was grasped with volsellum forceps and held upwards to enable visualization of the vault.

Findings

A sharp transverse laceration was seen extending from mid vagina to the posterior fornix. It transected the vaginal skin but there was no peritoneal tear. The arterial bleeders actively sputting were identified. They were immediated clamped with long artery forceps. Examination of the cervix revealed no lesion.

Procedure

While exposing the posterior fornix by upward and anterior retraction of the cervix. The arterial bleeders were ligated and transfixed using a chromic catgut No O. While swabbing the area with sterile gauze held in a sponge holding forceps. The laceration

was repeared interruptedly with chromic catgut suture No. O.

Gentle digital examination revealed a normal anteverted uterus. The adnexal were free of masses. The rectal examination findings were normal.

POSTOPERATIVE CARE AND PROGRESS

The pulse rate was 90 - 96 beets per minute, regular and in good volume. The blood pressure remained 110/60mmHg. She received additional litre of Dextrose saline in 12 hours. The urine output was 1650 mililitres. Ampicillin 500mg was gives intravenously six hourly for the first 24 hours and then she continued with oral ampicillin 500mg four times a day for four days. Her haemoglobin checked on the second day was 9.5g/dl. She was adviced to continue on breast feeding. She was discharged on a third day with folic acid 5mg once daily for two weeks and Ferrous sulphate 200mg twice daily for two weeks. She was instructed to attend outpatient Gynaecology Clinic after two weeks together with her husband.

She was seen again after two weeks, her general condition was good. She had no history of vagina bleeding or discharge. Speculum examination revealed a healed wound. They were adviced on the importance foreplay before intercouse.

COMMENTARY:

Minor injuries of vaginal introitus during defloweration are fairly common. Severe vaginal injuries are seen in sexual assault and in rapes. But injuries resulting from voluntary coitus like this are rare. The incidence of coital trauma is difficult to determine. Many such cases are hidden and managed privately except for situation where life is endanged due to haemorrhage (1,2) like in this patient.

Babarinsa and colleagues (2) reported death occured from haemorrhage and sepsis caused by coital injury. Pain at time of injury as was experienced by this patient is not a constant feature (1) Sivaling and colleagues(3) implicated penile thrust and air as the causative. They argued that during vigorous intercourse, the woman reacts by increasing intraabdominal pressure. This pressure cause tension in cul de sac. As penile thrust and entraped air dilate the fornices, the posterior fornix gives due its elasticity. This could be the mechanism of injury in this patient. It has been observed, Right lateral fornix to have also high incidence of laceration. This has been altributed

to its roomy hence readly accepting the glans penis.

Several explanation have been suggested regarding the aetiology of coital trauma, these include; Genital disproportional during intercourse, long abstinence and hyperexcitement leading to vigorous coitus, Male roughness especially under the influency of alcohol,and coitus position dorsal decubitus with maximum flexion and abduction of thighs (4). But such history is usually hidden by the patient. Post menopausal atrophy, gynaetresia resulting from chronic infections, gynaecological operations and genital malfomation, has also been implicated.

Dao and collegues(5) studied vaginal injuries during coitus in 98 cases. Injuries during gynaecological period was found to be more than in postpartum period. Also higher incidence was found among couple who had absteined for more than six months. The mean age was 25 years. Only the first factor is relevant in this patient.

Injury may vary from a small rupture to a big with viscera prolapse. Viscera prolapse is usually seen in those patient who had hysterectomy. (5)

Packing of the introitus with clean gauzes may reduce amount of blood hence minimize the need for transfusion as it was in this patient. However intraperitonieal bleeding have been reported in some condition and packing. (6)

Primary surgical repair of laceration is immediately indicated, even when the laceration is small as it could be communicating with peritoneal cavity. Immediate repair is also indicated in cases which involve ano-rectal injuries (7).

Antibiotics are indicated as the area is densely populated with organisms, preferably the broad spectum antibiotics, in case of delayed and obvious infections swab for culture and sensitivity will enable better selection of antibiotics (8). Fortunately this patient fared well with Ampicillin. Certainly there is a need to the couple to be counselled about the importance of foreplay and gentleness to prevent a repeat laceration.

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CARCINOMA OF THE UTERINE CERVIX.

MANAGED WITH RADIOTHERAPY.

Name:	Mrs. A.S
Age:	40 years
Registration Number:	886294
Date of Admission:	16.12.1996
Radiotherapy commencing date:	23.12.1996
Date of Discharge:	21.1.1997

upper 2/3 of the vaginal parametrium.

SUMMARY:

Mrs. A.S. was referred from Kondoa District Hospital to Muhimbili Medical Centre because of cervical cancer. Staging done under anaesthesia was consistent with FIGO stage IIB. Biopsy revealed a well differentiated squamous cell carcinoma. After a work up, she was sent to Ocean Road Hospital for radiotherapy. She received two contact irradiation sessions using intracavitary remote controlled after-load Cs 137 and external beam irradiations with cobalt 60. A total dose of 5700 rads was provided. The response was clinically good. The case is presented for discussion centred mainly on place of radiotherapy in treatment of cervical cancer.

HISTORY OF PRESENTING ILLNESS.

Mrs. A.S was referred to Muhimbili Medical Centre from Kondoa District Hospital, Where she had presented with post coital vaginal bleeding, foul smelling vaginal discharge and mild lower abdominal pain of five month duration. Of recent she had noted some vaginal bleeding even on straining. The foul smelling vaginal discharge was yellow in colour and non itching. She had used clotrimazole and metronidazole pessaries without relief. She admitted to have lost weight significantly. She denied to the history of previous major pelvic surgery, she denied to the history of chronic cough, haemoptysis, dysuria, haematuria, dyspareunia or genital sores.

Menstrual History

She attained menarche at 15 years of age. She used to have regular 28 - 29 days cycles. Her menstrual period lasted for 4 days. The flow was normal.

Gynaecological History

She had no history suggestive of sexually transmitted bacterial infection. She had her first sexual exposure immediately after menarche. She was circumcised on the same year as per traditions. She had never used contraceptives.

Obstetric History

She was para 7 + 0. All were full term spontaneous vertex deliveries. Six of her children were alive. One died of measles at the age of one year. Paediatric death

Past Medical History

She had no history of major operation, diabetes mellitus, tuberculosis or hypertension.

Family and Social History

She was a housewife, married to a polygamous husband. Her husband had other two wives, she did not smoke cigarettes but she used to drink alcohol occasionally. There was no history of tuberculosis, diabetes mellitus or hypertension in the family.

PHYSICAL EXAMINATION:

She was middle age woman, slightly wasted, not pale or jaundiced. She was not dyspnoeic. She was afebrile. She had no lymphadenopathy or edema of lower limbs. Her breasts were normal.

Respiratory system

The respiratory rate was 18 per minute, there was good air entry on both side. She had vesicular breath sounds and there were no crepitations.

Cardiovascular system

The pulse rate was 78 per minute, regular with good volume. The blood pressure was 110/60mmHg. The apex was on 5th left intercostal space along the midclavicular line. First and second heart sounds were normal. She had no murmurs.

Abdominal examination

The abdomen was scaphoid, it was moving with respiration. It was soft and non tender. Liver and spleen were not enlarged. Renal angles were free of masses and tenderness.

Vaginal examination

The clitoris and parts of labia minor were traditional excised. A foul smelling blood

mixed with purulent discharge was draining from the introitus. Digital examination revealed non stenotic vagina. The cervix was irregular and firm. The irregular mass was extending to the posterior fornix. Cuscos bivalve speculum was introduced. The cervix was seen. It had fungating friable mass with bleeding sites. It was on posterior cervical lip extending to posterior vault. The lower 1/3 of vagina was normal.

Rectal Examination

The anal verge was normal. Rectal mucosa was smooth and mobile. Palpation of parametrium in between two fingers, one in the rectum and another in the vagina revealed indurated parametrium.

Diagnosis: Carcinoma of the uterine cervix stage IIB.

MANAGEMENT PLAN:

It was decided to do a work up, examination under anaesthesia for staging and biopsy, and radiotherapy.

Investigations and Results

- The haemoglobin level was 9.5g/dl
- The serum creatinine was 70 Umol/l
- Intravenous Urography, showed normal renal calices, pelvis, ureter, bladder.
- Blood was taken for grouping and crossmatching 1000mls of blood group A Rhesus positive were requested.
- White blood cell count was 6000/mm^3. Differential count was lymphocytes 50%, Neutrophil 48%, Eosinophils 1%, Basophils 1%.
- The platelet count was 250,000/mm^3.
- Urine for microscopy revealed no more than 2 pus cells per high power field. Culture and sensitivity revealed no organism.
- Pus swab for culture and sensitivity from endocervical swab, revealed mixed growth, predominantly gram negative organisms.

General Management

She was treated with Doxycycline 100mg twice a day for five days. She was also treated with Metronidazole 400mg three times a day for five days to eradicate the mixed genital infection. She was transfixed with blood group O Rhesus D positive

1000mls. Ferrous sulphate 200mg and folic acid 5mg once daily were given. After a week of hospital stay the haemoglobin had risen to 10.2g/dl. She was immediately scheduled for examination under anaesthesia.

Examination under Anaesthesia

General anaesthesia was given as in gynaecological case No 1. The patient was placed in lithotomy position, vagina and perineum were cleaned with savlon 1:20. She was draped with sterile linen. Urinary bladder was emptied with a metal catheter. Two sims speculum were introduced to expose the cervix. One was placed to retract the posterior vaginal wall and another was used to retract anterior wall. An exophytic friable mass involving the whole of posterior cervical lip extending to the upper 1/3 of the vagina was visualized. A light scalpel with a long hand fixed with bistoury blade No 12 was used to biopsy. The biopsed tissue was fixed in formalin. Bimanual palpation revealed a smooth, normal sized uterus. It was anteverted and mobile. The tumour was not extending to the pelvic walls. Introduction of one finger into the vagina and another in the rectum revealed an indurated parametrium. No tumour satellites were felt . After examination there was minimal bleeding from cervical lesion. The vagina was packed with sterile gauzes underpressure. Anaesthesia was reversed as in gynaecological case No 1.

Progress in the ward

She remained stable. The blood pressure was 120/80 mmHg, The pulse rate was 80 per minute, regular with good volume.She was afebrile.

The vaginal pack was removed after eight hours. The bleeding had stopped. The haemoglobin was 10.1g/dl in the fifth post operative day. The repeated urine culture showed no organism. She was sent to Ocean Road Cancer Institute on the seventh day and the biopsy was followed.

Biopsy Results

Adequate tissue, the specimen showed large hyperchromic nuclei, there was increased nucleus - cytoplasmic ratio. Epithelial pearls and prickle cells are seen. Features are consistent with WELL DIFFERENTIATED SQUAMOUS CELL CARCINOMA.

Final diagnosis was

Well differentiated squamous cell carcinoma of the cervix, stage II B.

RADIOTHERAPY:

The patient was counselled for radiotherapy. A written consent was obtained. She was treated by two contact radiation sessions using intracavitary remote controlled after loaded Cs 137. The sessions were 2 days apart. She had received a dose of 850 rads. The urinary bladder and rectum were packed away with intravaginal gauzes. This had minimized radiation reaching them from intracavitary irradiation.

She had a two week resting interval. White blood cell count, platelets count and haemoglobin were done and all were within normal limits. External beam irradiations were started using cobalt 60 in 15 x 15 cm opposing anterior and posterior field she received 200 rads daily for a period of 20 days. Hence she had received a total external dose of 4000 rads. The beam was directed to the cervix, parametrium and pelvic nodes.

The brachytherapy was aimed not to exceed tolerance doses to the rectum and urinary bladder. While on treatment, weekly estimation of white blood count, platelets and haemoglobin were done. They were within the normal limits. She remained stable throughout the treatment without complications such as diarrhoea, skin rashes, vomiting or haematuria.

Final evaluation of the patient was done. It revealed no evidence of residual disease. The patient was discharged with a Medical Report directed to the Kondoa District Medical Officer on what had been achieved.

COMMENTARY:

Carcinoma of the uterine cervix is the commonest malignancy seen at Muhimbili Medical Centre and account for 85% of all gynaecological malignancies (1). The incidence of the disease varies according to the sociodemographic characteristic of the population. Presentation to the hospital in advanced stage is a common feature especially where screening is not done. The peak incidence for the invasive carcinoma is between 44 to 53 years (2). However even younger age group are susceptible as it

was in this patient.

The disease stage greatly influence the treatment modality. Although many FIGO stage I and stage II A may be treated effectively with radiation or radical surgery, advanced lesions are best treated with radiation (3). Treatment modality and technique must be individualized on the basis of numerous clinical, anatomic and social factors. The anatomic distortion produced by these lesion is an important consideration in determining the optional sequence of therapy. Large exophytic lesions require initial transvaginal or external radiation therapy to shrink the tumour and allow close approximation of the subsequent intracavitary system to the cervix (4). Fortunately, in this patient the anatomic distortion was not much, hence, the issue of shrinking the tumour before providing a therapeutic dose was not important.

This patient had carcinoma of cervix stage II B, it has 30% chances of lymphnode involvement. Hence even without application of other diagnostic facilities like lymphangiography or magnetic resonance imaging, irradiation to the pelvic node is indicated (6) as it was done in this patient.

Work up of these patient is important this include investigations like IVP. (Intravenous pyelogram) with cost sharing there is a tendency to limit investigations, but IVP remains important despite demonstrating the urologic system, it gives information on actual position of kidneys and presence of absence of diverticular or polyps, that may influence treatment by acting as foci for infection or bleeding points respectively. Cystoscopic examination, proctoscopy or barium enema are important to rule out advance stages of the disease, although they were not done in this patient due to technical problems.

The radiotherapeutic management of carcinoma of the cervix involves some combination of external beam radiotherapy (EBRT) and intracavitary irradiation (ICRT). Different types of equipment are available for the delivery of EBRT, 60Co provide one of the earliest source of high energy, deep penetrating beam. However there are new linear accelerators now provide a wide variety of higher energy photon beams that permit homogenous delivery of radiation to deep tissue with relative sparing of superficial tissue (7) EBRT is used to "sterilize" disease (paracentral and nodal) that

lies beyond the reach of the intracavitary system. EBRT improves tumour geometry by shrinking an exophytic tumour that may distort anatomy. A bulky endocervical tumour is brought within the range of the high dose portion of ICRT dose distribution. EBRT was used in this patient for paracentral and nodal irradiation. ICRT, is delivered by Fletcher-suit-Delcos application which consists of rigid metal tandem, with adjustable flange. It is set to correspond with the length of uterine cavity. It has also colpostats which are positioned in vaginal fornices. Remote afterloading units are available to reduce radiation exposure to personnel. Fletcher had described the following conditions that should be met for successful intracavitary therapy (4,8).

. The geometry of the radium sources must prevent underdosing regions on and around the cervix.
. An adequate dose must be delivered to paracervical areas.
. Mucosal tolerance must be respected.

Respecting the above standard complications like proctitis, radiation vaginitis, radiation cystitis and urogenital fistula can be prevented.

Luande (9) advocated for brachytherapy, giving the radiation dose in fraction. He argued, it allow tissues to "generate" and usually they do so faster than tumour cells. The process minimize the degree of fibrosis, gyneatrecia and pelvic adhesions. Hence, also reduces post-radiotherapy pelvic pain.

Rogo (10) reported vesico-vaginal fistula post radiotherapy. In 100 patient with cervical cancer, 4% had developed vesicovaginal fistula after they had received afterload low dose rate brachytherapy. However all of the four had tumour extending to the urinary bladder before irradiation. This call for the importance of cystoscopy before radiotherapy.

A combination of intracavitary and external irradiation is said to have good outcome. Further more of the former is provided in hour dose rate brachytherapy as it was done in this patient. The only disadvantage, one patient require more hours for treatment. Hence patient may have to wait for a number of days in the Centre.

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PREMATURE RUPTURE OF MEMBRANES AT 38 WEEKS OF GESTATION, INDUCTION OF LABOUR AND SUCCESSFUL VAGINAL DELIVERY.

Name:	Mrs. A. M.
Age:	20 Years
Gravidity:	Primigravida
Delivery No:	23.6.1997
Date of Admission:	10.12.1997
Date of Delivery:	10.12.1997
Date of Discharge:	11.12.1997

SUMMARY:

Mrs. A.M. a primigravida at 38 weeks of gestation, was admitted to the labour ward with history of draining for 9 hours before admission. She had no uterine contraction on admission. She had attended Muhimbili Medical Centre high risk clinic, General examination revealed a normal woman at term. Abdominal examination revealed a uterine fundus corresponding with 36 week of gestation in size. Pelvic examination revealed fully effaced cervix dilated 1 centimetre. Induction of labour was done. Labour progressed well and she delivered a male baby with Apgar score 9,10 at first and fifth minute respectively. The baby was weighing 3.0 kilogram. A following day post delivery they were discharged in good condition.

HISTORY OF INDEX PREGNANCY:

She was a primigravida at gestational age of 38 weeks. Her LNMP was 20.3.1997 her calculated expected date of delivery was 27.12.1997. Prior to that pregnancy her cycles were regular occuring after every 28 days. She had booked for antenatal care at 18 weeks of gestation. Her booking blood pressure was 110/70 mmHg and her haemoglobin was 11g/dl. The uterine fundus corresponded to dates and her height was 159 centimentres. She made 7 subsequent visits. She remained normaltensive. She was taking oral haematenics regularly. Her last haemoglobin before induction was 10.6g/dl taken 2 days before admission. The fundal growth was in proportion to gestational age throughout pregnancy.

Nine hours before admission she found herself draining cupions clear fluid per vagina.

It was estimated to be about 500mls. She had no abdominal pain or vaginal bleeding. She had no fever or dysuria. There was no history of immediate preceeding coitus, abnormal discharge or urinary incontinence. Fetal movement were normally felt.

Past Medical History

There was no history of chronic illness.

Menstrual history

She attained menarche at 14 years of age. She used to have 28 days cycles. Her menstrual period lasted 4 - 5 days. No history of dysmenorrhea.

Gynaecological History

Sexually transmitted infection. Had never used contraceptives.

Family and Social History

She was a receptionist at a tourist hotel. She had attained O'Level secondary education. Her husband was a secondary school teacher. She neither smoked cigarette nor drank alcohol. There was no history of diabetes mellitus, hypertension or tuberculosis in the family.

PHYSICAL EXAMINATION:

General.

She was of good nutritional status, afebrile not pale, not jaundiced and was not dyspnoeic.

Cardiovascular system

Her pulse was regular at a rate of 80 beats per minute and good volume. The blood pressure was 110/70 mmHg. She had normal first and second heart sounds and there were no murmurs.

Respiratory System.

The respiratory rate was 15 per minute and she had vesicular breath sounds. There were no crepitations.

Abdominal Examination

The Abdomen was uniformaly distended. Liver and spleen were not enlarged. Renal angles were free of tenderness and masses. The uterus was enlarged corresponding to 36 weeks of gestation. It was not tender. The fetal lie was longitudinal with cephalic

presentation. The fetal head was ballotable 4/5 above the pelvic brim. There was still some liquor. The estimated baby size was medium. The fetal heart beat were 144 per minute and regular.

Pelvic Assessment

The Vulva was normal. The medial aspect of thighs were wet. Swabbing of the vulva was done. The left hand swabbed the labia majora anterioposteriorly using different sterile swab soaked in 1:20 savlon solution on each side. Then the left thumb and index finger were used to part the labia minora. The vestibule was exposed. The right hand holding a third sterile swab clean the vestibule from anterior to the posterior fourchette. A clear fluid with flecks of vernix caseosa was seen dribbling from introitus. A sterile bivalve speculum was gently intoduced into the vagina. The cervix was visualized. The cervix appeared healthy and amniotic fluid was seen oosing from the external cervical ostium. Some fluid had collected in posterior fornix. There was no prolapse of the cord. No other test was done to verify the liquor as its clinical presentation was straightfoward. A digital examination was done (as the patient was at term). The cervix was fully effaced, centrally placed, stretchable and 1 centimetre dilated. Membranes were not felt over fetal heard. The pelvis was adequate for vaginal delivery.

Diagnosis

Premature rupture of membrane at 38 weeks of gestation.

Management Plan.

She was planned for induction of labour with oxytocin on grounds that she was at term with favourable cervix. She was explained of the necessity of induction of labour and that if it failed caesarean section was a possibility. She agreed.

Induction and monitoring of labour.

Induction was done with intravenous oxytocin 10IU in one litre of 5% Dextrose. The drip was set to run at initial rate of 20 drops per minute, equivalent to 10 millinuits. The speed of the drip was stepped up by 10 drops every 1/4 an hour. Maternal condition was monitored by checking the pulse rate, temperature and blood pressure half hourly. The abdomen was examined for contraction and tenderness, the colour

of liquor was monitored at each vaginal examination.

Labour Progress.

She had active labour after 45 minutes of the oxytocin drip. The rate was 25 milliunits per minute. The contractions were becoming strong. After the first hour the rate of contraction. One lasting for 20 seconds in a period of 10 minutes. She was given 100mg of pethidine injection and promethazine 25mg injection both intramuscularly. There was no deceleration of fetal heart beat. Four hours later a second vaginal examination was done. The cervix was found to be 4 centimetres dilated. There was no caput or moulding. The position of presenting part was left occipital transverse (LOT), decent of presenting part was 4/5. A 3rd vaginal examination was done after another 4 hours. The cervix was found to be fully dilated. The whole head was below the pelvic brim. There was no caput or moulding. The contractions were more frequent. She was encourage to push while still in left lateral position. In half an hour the cervix was fully dilated and the perineum had gaped. A mediolateral episiotomy was done. The skin of the perineum was swabbed with savlon 1:20 solution. 5cc of 1% lignocaine were infiltrated to the perineum over the area the episiotomy was to be done. With the index and middle fingers of the left hand inserted to guard the fetal head. The perineum was cut using a curved scissor. The incission was mediolateral away from anus. The crowned head was advancing out. The perineum was supported against. she delivered a male baby. The cord was double tied and divided in betwen. The baby's Apgar score was 9,10 at 1 and 5 minute respectively. The baby weighed 3.0 kilogram. The speed of the oxytocin drip was increased following delivery of the baby. The placenta and membranes were delivered by controlled cord traction. The Episiotomy was then repaired by first repairing the vaginal skin with continuous chromic catgut stitch No O. The repair was from the apex to the posterior fourchette. The perineal muscles and deeper tissues of the vaginal were approximated with interrupted stitches using chromic catgut No O. The perineal skin was repaired last with interrupted stitches using the same material. The estimated blood loss was 250mls. Her postdelivery blood pressure was 110/70 mmHg.

Postpartum Period.

She was observed for 24 hours in postpartum ward. She was afebrile, the pulse rate was 80 per minute regualr and in good volume. Her blood pressure remained stable 110/70 - 110/80 mmHg. There was no undue vaginal bleeding. The baby was breastfeeding well and had received initial immunization. She was discharged after 24 hours to be seen after 6 weeks at post natal clinic. Family planning counselling was done on discharge.

COMMENTARY:

Premature rupture of membrane (PROM) also called Amniorrhexis is defined as rupture of membrane prior to the onset of labour, with resultant leakage of amniotic fluid through and out the vagina (1). The definition does not indicate gestational age at which the problem occurs, and when referring PROM prior to 37 weeks preterm PROM is usually used. The interval between PROM and the onset of labour is referred to as latency period (1,2). Although some authors proposed some arbitrary time for definetion of latent period such as 1 to 4 hours, majority define PROM as simply rupture of membrane prior to onset of labour. Hamudu (3) proposed a cut off point of 6 hours to minimize overcrowding in the labour ward, but this has disadvantage of missing patient with cord prolapse or malpresentation. He also found majority of patient present to hospital ward 6 - 10 hours of rupture of membrane. This patient had presented 9 hours after rupture of membrane. Hamudu, found cord prolapse ranking first as a cause of still birth. Fortunately this patient had no such complication.

The cause of PROM in most cases is not clearly understood, although early in pregnancy chorioamniotic membranes are extremely strong, as term approach the membrane undergo biochemical and biophysical changes, which substantially weaken them, thus Garite (1) argues it is not suprising that membrane rupture prior to the onset of normal term labour is no more than a physiological variant. Clinically PROM is associated with polyhydromnious, incompetent cervix, postamniocentesis, cigarette smoking and preterm labour. Furthermore, some inconclusive risk factor associated with PROM include, Coitus, the proteolytic enzymes in seminal fluid is thought to digest the collagen of the fetal membranes. Ascending intraamniotic or decidual bacterial infections, leading to weakening of the membrane by proteases produced by

bacteria and as a result of the local inflammatory reaction. Other causes include are mineral and vitamin deficiency, cervical examination and fetal gender (male) (4) A familial tendency has been observed (5). In this case apart from gender contribution majority of other associated factors are difficult to be implicated.

The main issue with PROM is associated maternal and fetal complications. Febrile mobidity due to chorioamnionitis remain a top cause of maternal complication of PROM. Fetal complication include intrauterine infections, fetal distress due to cord compression, abnomal posture due to oligohydrominious and neonatal infections. The occurence of these complications is proportinal to the length of latency period. Hence induction of labour was the best option to Mrs. AM. GA 38

The vast majority of patient who reach term (> 90 percent) go into spontenous labour within 24 hours of membrane rupture (6). However, it has been recognized for years that as the duration of the latency period increases in patient at term, the neonatal infection rate and mortality rise (1,3,6). The incidence of chorioamnionitis has also been reported to double for each successive 24 hours of latency. (6). For this reason, induction is important to avoid maternal sepsis.

The use of antibiotics in term PROM has been found not to decrease neonatal infections but only saves to increase the rate of caesarean section and postoperative maternal infection (7). Opponents of expectant management of PROM at term stress on monitoring for maternal infection and fetal well being. They argue that 90% of woman with PROM at term will go into spontenous labour within 24 -48 hours (4,5). This minimising the chances for abdominal deliveries which may result from failed induction. Monitoring remain a difficult issue, C-reactive protein is a sensitive indication of setting maternal infection (8), Maternal pulse and temperature, monitored 4 hourly may show early sign of impending infection. Daily palpation of the uterine tenderness helps also in detecting cases of chorio-amnionitis. In addition the liquor is inspected, the smell and colour is noted change may indicate infection or distress. Fetal monitoring include daily biophysical profile which include non stress test, fetal climb movement, fetal breathing movements, amniotic fluid column and placenta grading. A profile score of 8 or more assures fetal well being whereas a score of 7 or less

indicate fetal in jeopady(9).

Such monitoring is not possible in our Centre due to lack of facilities and overcrowding of patient. That is why induction was opted in Mrs. A.M.

Once in labour, the PROM patient may have high rate of morbidity. These patient have high incidence of variable decelerations in labour due to umbilical cord compression associated with oligohydramnios (10). Recently amnionifusion, a technique that substantially reduces the frequency of cord compression in labour has come in use (1). By instilling warmed saline through an intrauterine pressure catheter, and a device to monitor uterine contractions, variable decelerations caused by umbilical cord compression can be averted. This technique, is used prophylactically once the onset of labour is certain. It has been shown not only to decrease the incidence and severity of variable decelerations but also improve Apgar scores and cord pH values at birth and to decrease the frequency of cesarean section for fetal distress (9). This recent technique is not yet in use at our centre but from Hamudu and Mberesero (11) studies, cord accidents cause considerable contribution in fetal mortality in PROM hence researches on this technique may be considered in our centre.

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RECURRENT MIDTRIMESTER ABORTIONS DUE TO CERVICAL INCOMPETENCE MANAGED BY MC DONALD CERCLAGE

Name:	Mrs. H.K
Age:	23 Years
Registration Number:	16015
Residence:	Kurasini
Date of 1st admission:	10.4.1997
Date of Procedure:	16.4.1997
Date of 2nd Admission:	2.10.1997
Date of Delivery:	4.10.1997

SUMMARY:

Mrs. HK Gravida 3 Para 0 + 2 was admitted on account of cervical shortening at the gestation of 13 weeks. She had history of two previous midtrimester abortions prior to the index pregnancy. Cervical incompletence was highly suspected. A cervical cerclage was applied at 14 weeks of gestation. She delivered a healthy baby at 38 weeks of gestation.

Present Obstetric History

She booked for antenatal care at Muhimbili high risk at 13 weeks of gestation. In view of bad past obstetric history she was examined and several investigations were done these included Venereal disease research laboratory test (VDRL) for syphilis, Random blood sugar, Urinalysis, white blood count-total and differential, serum creatinine and high vaginal swab for cuture and sensitivity. Non of these test were conclusive. Her last normal menstrual period had started on 10th January, 1997, so her expected date of delivery was 17th October, 1997. On 10th April, 1997 visit, she had no history of vaginal discharge or bleeding. There was no history of abdominal pain or dysuria.

Past Obstetric History

She was gravida 3 Para 0 + 2. Her first pregnancy was in 1995, it end in abortion at 5 months gestation, this was preceeded by slight abdominal pain, a gush of liquor and expulsion of live fetus. It died after half an hour. The placenta, then came out

spontaneously. There was no history of trauma prior to the event. There was no history of fever or dysuria.

She had a second abortion in 1996, it had occured at 4 months of gestation this stated with a gush of liquor, slight abdominal pain and expulsion of fetus. She continued to bleed and was taken to theatre were evacuation of the uterine cavity was done. There were no history of fever or dysuria.

There were no investigations done in between the pregnancies.

Gynaecological History

She attained menarche at 14 years of age. Her periods were 3 - 4 days. She had normal regular cycles of 28 - 30 days. She never had operations on the uterine cervix, and she had never used any contraceptives.

Past Medical History

She had no history of major illness.

Family and Social History

She had a sister, who had no similar problem. She was married, her husband was a prison officer. There was no history of diabetes mellitus, hypertension or tuberculosis in the family. She did not smoke cigarattes or drank alcohol.

Physical Examination

Her general condition was good, she was not pale. She was afebrile. She had no pedal edema or lymphadenopathy. Her height was 160 centimetres. Her breasts were normal.

Cardiovascular System

He pulse rate was 80 per minute, regular and of normal volume. Her blood pressure was 120/80mmHg. The apex beet was located at 5th left intercostal space along the midclavicular line. The heart sounds were normal and there were no murmurs.

Respiratory System

Respiratory rate was 18 per minute, the trachea was centrally placed. The breath sounds were vesicular and there were no crepitations.

Abdominal Examination

There were no scars. It was scaphoid moving with respiration. The liver and spleen

were not palpably enlarged. There was no renal angle tenderness. The fundal height was equivalent to 12 weeks of gestation.

Perineum Inspection

The vulva and vagina were normal. No bleeding was seen.

Speculum Examination

The cervix was partially effaced. The cervical canal was opened, it was 1.5 centimetre dilated. There was no obvious cervical tear or any lesion. Membranes were not bulging. Bimanual examination was not done for fear of rupturing the delicate membranes.

Diagnosis

In view of the history and physical findings, a diagnosis of pregnancy in a patient with cervical incompetence was reached.

Plan of Management

She was decided for cervical cerclage. She was admitted antenatal ward for a complete bed rest.

Investigation and Results

. The haemoglobin was 11g/dl.
. Random blood sugar was 6mmol/l.
. Serum creatinine was 53 u/dl
. VDRL was negative
. Her blood group was O Rhesus D positive
. The ultrasound revealed Intrauterine pregnancy, with crown-rump length corresponding to 12 weeks of gestation. Cardiac activity was seen.

Preoperative preparation

She was communicated about her problem and the recommended management. She gave a consent for anaesthesia and operation.

The procedure was: Cervical cerclage.

Method: Mc Donald's cerclage

Procedure

The patient was taken to theatre Anaesthesia was given as gynaecological case No. 1. She was positioned in lithotomy. The perineum, vulva and vagina were cleaned with savlon 1:20 solution. She was draped with sterile linen. The bladder was aseptically catheterized and about 250mls of clear urine was drained out.

The vulva and vagina were normal. The cervix was exposed using a sims speculum and previous fundings were confirmed. The table was tilted to slight trendelenberg's position, in order to keep the membranes away from cervical ostium.

The cervix was gently drawn down with two sponge holding forcepts, applied to the anterior and posterior lips of the cervix. A round bodied needle threaded with No. 2 prolene suture was used to insert a purse string suture round the cervix, taking four bites (at 12,3, 6, 9 C'clock) at the cervical vaginal junction. A Hegars dilator No 6 was gently introduced into the internal ostium and the ligature tightened over it, then the dilator was removed. The knot was tied anteriorly. This procedure ensured that the cervix was not so tight as to compromise blood supply. The ligature ends were trimmed to about 2 centimetre in length for easy identification and removal later.

The anaesthesia was reversed as in gynaecological case No. 1 and the patient was taken back to antenatal ward.

Post operative Management

. The patient had complained of pain and intramuscular Pethidine Injection 100mg was given.
. She continued with bed rest.
. Her pulse and blood pressure were checked hourly and remained normal.

Post Operative Progress.

Her postoperative period was uneventful. She experienced no abdominal pain or vaginal discharge. She was discharged home on tenth post operative day and advised:-

. To have bed rest at home
. To avoid coitus
. To report immediately to the hospital if she experience abdominal pain, vaginal discharge or bleeding.
. To attend High risk Antenatal clinic as per schedule.

Antenatal Progress

She was seen at the antenatal clinic four weeks after discharge. Her general condition was good. The fundal height was 20 weeks and quickening had started.

Speculum Examination

The cervix was normal, there was no discharge and the suture was in place. A midstream urine was taken for bacteriological cuture and it was negative. She was given ferrous sulphate 200mg daily orally and folic acid 5 mg enough to last her to the next visit.

She was seen monthly up to 30 weeks of gestation. Then two weekly up to 36 weeks. Interval speculum examinations revealed cervical suture in place.

Antenatal Progress

She gained 7 kilograms in weight which was normal. Her haemoglobin was always above 10g/dl. The blood pressure was 110/70 mmHg. She had no pedal edema. The fundal growth was normal. She was readmitted at 38 completed weeks for removal of suture.

Examination on Admission

She was in good general condition. She was not pale. Her pulse was 80 per minute regular in normal volume. The blood pressure was 110/70mmHg. The fundal height was 36+ weeks longitudinal lie, cephalic presentation. The fetus was of medium size.

Removal of stitch and delivery

The patient was put in lithotomy position and the legs were supported with stirrups. The perineum, vulva and vagina were cleaned with savlon. She was then draped with sterile linen.

A cuscos bivalve speculum was inserted into vagina to expose the cervix. The ends of the stitch were easily viewed, and held with a dissecting forceps. The knot was cut to release the cerclage and it was pulled out. There was no undue bleeding. The membranes were intact, the cervix was 2 centimetres dilated, the bony pelvis was adequate for the baby. She was returned to antenatal ward.

She remained in the ward for two days before she went into spontenous labour.

She was taken to labour ward and vaginal examination was done as it was decribed in

Obstetric case No.1. The cervix was found to be 4 centimetres dilated, soft and 80% effaced, there was no cord presentation. Artificial rupture of membrane was done. The position was Left Occipital Anterior and the station was +1. Pelvic assesment was then repeated after 4 hours and the cervix was found to have dilated 8 centimetres. The station was +2 there was no caput or moulding. Two hours later she had spontaneous vaginal delivery, of a male baby weighing 2.8 kilogram and the Apgar score was 8,10 in first and five minute respectively. The had been given 0.25mg of ergometrine at delivery of anterior shoulder. The placenta was delivered by Brandt Andrew's method. The perineum had no laceration. The blood loss was estimated to be 160mls. The postdelivery blood pressure was 110/70mmHg.

Pueperium

She had no complications. She started breast feeding her baby immediately. The baby had received the initial course of primary immunization. She was discharged with her baby in good health.

Postnatal Follow Up

She was seen at the postnatal clinic six weeks later, her general condition was good. She was not pale. The baby had started gaining neight. She was informed that a cerclage would be necessary in all her subsequent pregnancies. She was also counselled on family planning.

COMMENTARY

Uterine cervical incompletence is defined as the iniability of the cervix to maintain a pregnancy to term because of a structural or functional defect. (1). It is characterized by repeated abortions in the second trimester or begining of third, without pain, contractions or bleeding, is generally accompanied by rupture of membranes or protrusion of the fetal membranes into the vagina.

Incompetence of the internal ostium of the uterine cervix according to various estimates, is 0.05 to 1 per cent of all pregnancies (1,2). This phenomenon accounts for 0.2 per cent of all abortions and 16 to 20 percent of abortions in second trimester (2). In women with a history of habitual abortion, the incidence of cervical incompetence is approximiately 12 percent.

History of recurrent abortions causes great distress to the patient and the family as a whole. Recurrent abortions usually have same causative factor (3). It requires meticulous clinical approach in order to establish the cause.

It is cited that there is no substitute for medical and obstetrical history for the diagnosis of cervical incompetence. Typical history is characterized by premature rupture of membrane - evident as a gush of liquor, without uterine contractions, relatively short and painless labour and usually a live fetus at birth, as it was in Mrs. H.K's first abortion.

It is not aways possible to get an exact typical history of the progress of the abortion or premature birth. Some women report premature rupture of membranes and premature labour at the beginning of the third trimester (1).

Bleeding in cervical incompetence occurs only as a terminal event as the placenta separates. In Mrs. HK, torrential bleeding occured in the second abortion due to retention of placenta which had necessitated evacuation. This is not a common future.

History of cervical trauma resulted from cervical dilatation and currettage, termination of pregnancy, or history of precipitate labour, instrumental deliveries, cervical lacerations, cone biopsy need to be ellicited, as it is associated with cervical incompetence. Mrs. HK however had no such history.

In woman with history of recurrent abortions, it is important to identify vaginal septum, morphological anomaly of the cervix and abnormal configuration of the uterus, before conception. There is no evidence that this was done before this patient had conceived.

Danforth (4) had suggested, that detection of fetal membranes protruding beyond the dilated cervix without uterine contractions in the second trimester, is conclusive of cervical incompetence. However Barth (5) cited that when cervical incompetence is suspected in a pregnant woman, it is imperative to identify effacement or/and dilation of the cervix. This was evident in this patient.

At time the history and clinical examination is not conclusive in such cases the use of laboratory techniques may be helpful (1,6). The case of passage of a No. 8 Hegar dilator through the internal ostium was proposed as an index of cervical incompetence. Another test consisted of pulling a foley catheter balloned passing internal ostium. If

the traction force required was less than 600g, this is considered suggestive of incompetent cervix (7). None of these techniques have been subjected to confirmatiory trials (1). They were not used in this patient for the same reason. Hysterosalpingiography has been used for visualizing the integrity of the cervix and uterus, as well as the cervical lenght and width in non pregnant state. Two thirds of habitual abortion had shown widened internal OS in one study (8) This investigation could not be done in this patient as she presented with pregnancy.

The use of ultrasonographic imaging of the cervix during pregnancy is advocated. (9). Various characteristic can be noted including cervical length, width of internal OS and bulging of membranes into endocervical. The width of internal cervical OS which is greater, than 2 centimetre in second trimester is suggestive of cervical incompetence (1,9). It is unfortunate that the sonographic report in this patient did not include cervical characteristics.

The recognized treatment for incompetent cervix is cerclage. Currently this consists almost exclusively of technique developed by Mc Donald and Shirodkar, with a small number of patients having transabdominal cerclage. Regarding the two transvaginal cerclage, despite strongly held opinion there are few objective data to show that one is better that the other (1,2,8). The Mc Donald cerclage is a simple purse string suture, dipping into the cervix. It is removed prior to term. This patient had Mc Donald suture simply because of being easier to place during surgery.

Cerclage is usually placed at 14 weeks at this stage the integrity of pregnancy is confirmed, the cervix is usually firm, effacement had not began and uterus is quiscent. When cerclage is peformed at 14 weeks of gestation prophylactic antibiotics or tocolytics are not recommended except for patient with signs of vulva-vaginitis (1). This is the reason Mrs. H.K was not given antibiotics or tocolytics.

Although cerclage is relatively simple surgical procedure, it is not without complications. Bleeding and traumatic rupture of the membranes during the procedure are amongst early complication while premature contraction, chorioamnionitis, suture displacement and cervical dystocia are late complication.

Close postoperative care and well designed follow up protocol with subsequent sterile

speculum examination prevents complications as it was in this patient.

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SICKLE CELL ANAEMIA AND PREGNANCY

Name:	Mrs M.M
Age:	23 years
Residence:	Yombo Vituka
Date of Admission:	11.4.1996
Date of Discharge:	30.4.1996
Delivery Number:	6486

SUMMARY:

Mrs. M.M was referred to Muhimbili Medical Centre because of severe anaemia at 36 weeks of gestation. On examination she was found to be pale and jaundiced. A peripheral blood smear showed sickle shaped erythrocytes. Sickling was confirmed by application of 2% sodium metabisulphate on fresh blood specimen. Haemoglobin electrophoresis confirmed Hb SS genotype. While still in Hospital she developed gestroenteritis followed by vasooclusive crisis. She was managed with intravenous fluids and blood transfusion. In the course of management she went into labour and delivered a female baby, weighing 1.6 kilogram. Her apgar score was 8, 10 at 1 and 5 minute respectively. The case is presented for discussion on importance of high index of suspicious for the diasease in severe anaemia in pregnancy in Subsahara countries.

PRESENT OBSTETRIC HISTORY

Mrs. M.M. a primigravida was referred to Muhimbili with the diagnosis of severe anaemia at 36 weeks of gestation. She had booked at peripheral clinic at a gestation of 12 weeks. In all her previous visits, she was found to have low haemoglobin level not responding to the haematenic therapy. She was using Ferrous sulphate 200mg daily, Folic acid 5mg daily and chloroquine 300mg weekly. On the day of admission, she had complained of general body weakness and faiure to lie flat. She experienced breathlessness on minor exertion. She denied to the history of low pain but she gave history of low grade fever and occasional joint pain.

She had complained of poor appetite, her diet composed of mainly stiff porridge with beans or vegetables. Occasionaly rice with meat. As inpatient, she had abdominal pain which was cutting in nature accompanied with offensive mucoid diarrhoea. Stool

culture was taken and revealed pathogenic E.Coli, with in vitro sensitivity to cotrimoxazole. She was treated with cotrimoxazole tablets 960mg twice daily for five days. Her condition worsened on third day, she developed very severe abdominal pain with mild guarding. Her joints were also painful and tender especially the elbows and knees. Vasooclusive crisis was diagnosed. She was treated with injection pethidine 100mg eight hourly intramuscularly 4 doses, Intravenous 5% Dextrose-saline 4 litres in 24 hours but pain continued. She was transfused a litre of blood group A rhesus D positive and she had a marked improved 12 hours post transfusion.

Menstrual History

She attained menarche at the age of 17 years. The cycles were regularly occuring after every 28 days, with a menstrual flow lasting between 4 - 5 days, it was normal.

Gynaecological History

She had no history of sexually transmitted disease, and had never used contraceptives.

Past Medical History

She never had history of blood transfusions before this admission.

Family History and Social History

She was a single child when her parents divorced. In childhood she used to live with her mother. Her mother had remarried and had three other siblings. Non of the siblings had similar disease. She was a housewife. Husband was a taxi driver. There was no history of sickle cell disease in her husband family. There was no history of diabetes mellitus, tuberculosis or hypertension.

PHYSICAL EXAMINATION ON ADMISSION:

She looked pale with a tinge of jaudice. She had no pedal edema. She was not dyspnoeic. She had no clubbing of finger or malooculusion of teeth. She did not have bossing of fore head.

The thyroid gland was not enlarged and the jugular venous pressure was not raised.

Respiratory System

The respiratory rate was 24 per minute. The chest excussion was normal. There was normal air entry on both lung. The breath sounds were vesicular and there were no crepitaions.

Cardiovascular System.

The blood pressure was 110/70 mmHg. The pulse was 90 beats per minute, regular in good volume. The apex beat was located at 5th left intercostal space along the midclavicular line. The first and second heart sounds were normal and she had mild functional murmur.

Abdominal Examination

The abdomen was distended. The linear nigra and striae gravidarum were all present. The liver was enlarged to 2cm below the right costal margin along the midclavicular line. In surface and margins were smooth. The liver was non tender. The spleen was not palpable. The fundus was equivalent to 36/40 weeks of gestation. The lie was longitudinal and the presentation was cephalic. She had normal fetal heart tones.

DIAGNOSIS: ANAEMIA IN PREGNANCY AN 36 WEEKS, PATIENT NOT IN HEART FAILURE

MANAGEMENT PLAN:

INVESTIGATE CAUSE OF ANAEMIA AND TREAT ACCORDING TO THE CAUSE

Investigations and Results.

Blood smear for malaria parasites was negative in 6 occasions.

Blood analysis:

The following results were reported.

. The haemoglobin was 6g/dl.

Peripheral blood film showed.

. Sickle cells about 60%

. Target cells were present.

Sickling tests.

. 2% sodium metabisulphate in fresh blood specimen showed sickling of cells.

. Haemoglobin electrophoresis revealed Hb SS - for Mrs. M.M.

. Husband had HbA

White blood cell count.

. Total count 8 x 10^9/L

. No giant polymorphous seen.

. Differential count.

Neutrophil 50%

Basophil 10%

Eosinophil 1%

Lymphocytes 39%

. Red Blood cells: showed sickling

Poly-chromasia.

Reticulocytes 8%

Other investigations

. Serology for syphilis was NEGATIVE (VDRL)

. She was blood group O, Rhesus factor D positive.

. Urinalysis revealed no pus cells or granular casts.

. Midstream urine for culture did not reveal bacterial growth.

. Stool was taken for culture and sensitivity and pathogenic E. coli sensitive to co-trimoxazole. No salmonella or shigella.

. Stool for direct microscopy did not reveal any ova.

FINAL DIAGNOSIS

SICKLE CELL ANAEMIA

Hb SS.

At 36 weeks of gestation.

Treatment plan

She was counselled about the disease and started on Folic acid 5mg orally twice daily and chloroquine for malaria prophylaxis 300mg weekly. She was maintained on normal diet. Conservative management till labour had started.

ANTENATAL CARE:

Baseline workup without blood transfusion managed to elevate her haemoglobin to 7.0g/dl. However when she had vasoocclusive crisis her haemoglobin had fallen to 5g/dl. She was managed with fluids and transfusion.

She was normotensive and had no pedal edema. She had no proteinuria. She continued

with folic acid and antimalarials.

She had abdominal ultrasound which revealed a small fetus with Biparietal diameter corresponding to 36 weeks of gestation. The amniotic fluid was adequate. The placenta was fundal, fetal activity was good. The fetal heart rate was normal.

PROGRESS IN THE ANTENATAL AND LABOUR WARD.

She had started spontenuous labour at 38 completed weeks of gestation. She was transfered to the labour ward. Clinical examination revealed she was pale and afebrile. The blood pressure was 110/70 mmHg. The pulse was 80 beats per minute regular with normal volume.

The abdomen was distended. The fetal size was small, the presentation was cephalic the lie was longitudinal and fetal heart tone was 144 per minute.

Pelvic examination revealed a normal perineum, fully effaced cervix which was 4 centimeters dilated. The fetus head was at O station. The bony pelvis was adequate for the baby. Artificial rupture of membrane was done. Clear liquor gushed out. There was no cord prolapse.

Second Examination. After 4 hours

The contraction were still not very strong. The fetal heart rte was 142 beats per minute, the level of the presenting part was 4/5. Vaginal examination revealed 5 centimetres dilated cervix. There was no caput or moulding. Argumentation with oxytocin was decided in view of poor contraction and dilation of cervix. These were signs of protracted labour. Oxytocin 5IU in 500mililitres of 5% dextrose was started in a titration of 20,30, 40, 50,60 drops per minute. The titration was stepped up quarter hourly.

Four hours later she was fully dilated. Delivery was conducted as in obstetric case No. 1. She delivered a female baby weighing 1.6 kilograms. The baby's Apgar score was 8, 10 in 1 and 5 minute. The blood loss was 130millilitres. Post delivery she remained stable. The blood pressure was 110/60mmHg. In view of low birth weight. The baby was transfered to postnatal nursery.

POSTNATAL PROGRESS

The lochia was normal. Postnatal haemoglobin taken on third day was 7.2g/dl. She remained afebrile, not dyspnoeic and active. The breasts were producing milk. The chest was clear the breath sounds were vesicular and there were no crepitation. The abdomen was not distended. The uterus had stated to involute. The bowel sounds were normal. The baby was fine at the nursery. She was discharged on the sixth day postpartum.

Follow up

She was seen again two week later, and was fine. The haemoglobin was 8g/dl. The baby was fine and had started to gain weight. She was adviced to start regular altendance to Haemotological clinic. She was also advised on family planning.

COMMENTARY

In the abnormal haemoglobins, there may be variations in the structure of the alpha, beta, delta and gamma chains. Most common abnormal haemoglobins differ from normal haemoglobin by substitution of a single amino acid by another or by suppression of the production one pair of amino acid chains. Thus in haemoglobin(S) valine replaces glutamic acid in beta chain. The term "sickle cell disease" refers to individuals who are S homozygotes (Hb SS), SC heterozygotes (Hb SC) and other who are S-betathalassamea. HbS had its highest gene frequency in Uganda and other part of tropical Africa (3). There is no a recent study which shows a prevalence of the disease among adult in Tanzania. It is known that HbSS, HbSC and HbS-beta thalassaemia have similar clinical feature. Nevertheless, as regards complications during pregnancy Hb - S betathalassaemia carries the best prognosis and HbSS is most dangerous (1,2). Under normal conditions all the haemoglobin within every red cell is in solution. Crystallization occur for HbS, and red cells appear "tactoids" when there is low oxygen tension, low pH and increased osmolarity (1,3). When sickling occurs, the viscosity of the blood is increased and the blood flow in the microcirculation diminishes. This causes further deoxygenation of blood and fall in pH, a vicious cycle is set in which end with intravascular coagulatuon of blood, with resultant vascular occlusion and tissue infaction (1,2). As it was in this patient diarrhoea had precipitated sickling,

dehydration and subsequent vasooclusive crisis mimicking acute abdomen (4).

The other effect of sickle cells is also related to the formation of the tactoids. In their presence, red cell life span is reduced to 12 days from 120 days. Hence a state of chronic haemotylic anaemia, although it is only in HbSS that anaemia is constant feature throghout life (1,2,3). In pregnancy there is also an increase in demand of Iron hence anaemia become profound, as it was seen in this patient. It is because of haemolysis, these patients present with enlarged liver due to storage of free iron in tissues. (1,4)

The spleen is often enlarged in childhood, but by the time adult age is reached, the spleen often shrinks down due auto splenolysis and become impalpable as it was in this patient. However, in malaria endemic area Hbss may have splenomegally (1,5).

Bones and joints are often involved in sickle cell disease. Particularly in HbSS growth may be stunted, some patient may have abnormal gait due to avascular necrosis of femoral head. In HbSS, contraction of pelvis, android pelvis and straight sacrum may be seen, but cephalopelvic disproportion is not a constant feature due to the fact that they deliver small babies due to placenta bed infactions(6). Mrs. M.M, child weighed 1.6kilogram at term. Despite big placenta. This was an anatomical adaptation to meet the fetal demands.

Sickle cell disease influences reproductive performance, (1,3) menarche is usually delayed for unknown reasons as it was in this patient. Subfertility is also seen in many cases. Fetal wastage is high. Thus sickle cell disease creates special problems and so long as account is taken for them, the diagnosis can often be suspected even on clinical grounds.

Final diagnosis however can only be made on haematological features. Haemoglobin electrophoresis is a confimatory test (7) where it cannot be performed, simple sickling test of all anaemic women followed by examination of blood films of those who sickle, would be better than nothing (1). In HbSS the blood film usually will show polychromasia nucleated red cells and target cells in addition to sickle cell forms. (1,2,8) This was seen in this patient. In HbSC because of present of present of haemoglonin C, target cells, but sickle cell form will no be seen unless the patient as

acutely anaemic. Target cells are also seen in Hb S-beta thelassaemia.

Sickler have increased liability to develop bacterial infection, especially gastrointestinal, respiratory or urinary tract infection and is part of natural history of sickle cell disease. In pregnancy these infections are of increased significance for two reasons. (1,8). They are more difficult to control particularly in puerperium, and the associated fever and acidosis which may accelerate sickling process. Bacterial infection are most marked in sickle cell disease when the anaemia is severe less 7g/dl as it was in this patient. (2,3)

Harrison (1) recommend close antenatal supervision in sickle cell patients. He advocate that they should attend the antenatal clinic once fortnight until the thirtieth week and there after once weekly. Careful search for evidence of crisis, bacterial infection and trauma is part of the routine examination. At each attendace haemoglobin is estimated and enlargement of liver and spleen is looked for. Once a complication is found, treatment in hospital is recommended. Prevention of severe anaemia is most important. Haematenics and antimalaria are provided to maintain hemoglobin concetration at the level of 6 to 9 g/dl in HbSS(9). All sickler require Folic acid to prevent megaloblastic anaemia, this is provided as 5mg twice daily as it in this patient unless a severe exacerbation of anaemia occurs usually there is no need to transfuse the patient as many of them are well adjusted to their low haemoglobin level. (1,3) Nevertheless, repeated transfusions to keep the haemoglobin concetration artificially high may have a place in the management a sickle cell disease. Those who advocate such transfusion stress that by keeping the haemoglobin level high, they manage to depress bone marrow activity and suppress the synthesis of HbS, thereby lowering the risk of both obstetric complications and the incidence of crises. (1) However transfusions involve considerable labour and is expensive, It is associated with induction of uterine contractions, febrile reactions, hepatitis and Human immunodeficiency virus (HIV) infection (1,2). It is the author's view that transfusion ought to be considered important in unresolving crisis hence increasing percentage of HbA, as it was done in this patient when she was having a vasooclusive crisis.

Following antenatal care, patient with sickle cell disease are expected to have

uncomplicated labours. Incidence of intrapartum eclampsia in HbSS is nearly four times higher than in general population (2,3).

Extra care is needed during labour since prolonged labour is dangerous because dehydration and acidosis which accompany it may precipitate painful crisis. Hence it was important to establish an active management of labour when Mrs. MM. had shown sign of impending protracted labour. When conductiong third stage, active management is required to reduce blood loss. Harrison advocate blood transfusion if blood loss exceeds 150mls. (1) Fortunately Mrs. MM. had blood loss of 130mls. The use of prophylactic antibiotic in puerperium is controversial some authority advocate it, other are not in favour. It is the authors view that aseptic condition should be facilitated rather than giving the patient prophylactic antibiotics. As for breast feeding there is no contraindication. The issue of family planning is important however, the use of oral contraceptive may cause thromboembolism in women with sickle cell disease (1,2) and for this reason, other methods of contraception such as intrauterine contraceptive device may have to be used (1,3). Screening of the partiner is also important for future counselling (1).

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PLACENTA PREVIA AT TERM

EXAMINATION UNDER ANAESTHESIA IN THEATRE AND SUBSEQUENT DIFFICULT CAESAREAN SECTION.

Name:	Mrs. R.S
Age:	38 years
Registration Number:	795/95
Residence:	Buguruni
Date of Admission:	30.7.1996
Date of Operation:	30.7.1996
Date of Discharge:	6.8.1996

SUMMARY:

Mrs. RS gravida 7 para 6 was admitted into the labour ward with history of unprovoked painless vaginal bleeding of considerable amount. She had completed 37 weeks of gestation. Clinical examination reveled a soft uterus which was non tender. The presenting part was high. The fetal heart tone was present. She was not in labour. Examination under anaesthesia in theatre revealed placenta previa totalis. A difficult caesarean section which involved cutting through the placenta was done. A male baby weighing 3.9 kilograms with Apgar score 8,9 was delivered. This case is presented for discussion on management of placenta previa at term.

HISTORY OF PRESENT ILLNESS

Mrs RS had noted a gush of blood early morning as she was taking bath. Bleeding had continued from that time till admission. She lost about 500mls of blood. It was a first episode of vaginal bleeding. She had no history of abdominal pain or distension. The bleeding had started spontaneously. She reported to have felt fetal movements normally.

She booked for antenatal care at peripheral clinic at 20 weeks of amenorrhea. On booking her blood pressure was 120/70mmHg. Her haemoglobin was 12g/dl. She made five consecutive visits, there was no abnormality which was detected.

Gynaecological History

There was no history suggestive of sexually transmitted infection, and had never used contraceptives.

Menstrual History

She attained her menarche at the age of 15 years. Her menstral period used to last for 5 days, her cycles were 28 days. The flow was normal.

Obstetric History

All her past six delivery were spontaneous vertex. She had no history of postpartum haemorrhage.

Past Medical History

There was no history of any major surgical or medical illness.

Social and Family History

She was a housewife. Her husband was a housekeeper to a businessman in town. She neither smoked or drank alcohol. There was no family history of hypertension, diabetes mellitus or tuberculosis.

Physical Examination

She was anxious, afebrile, and was not pale. Her nutritional status was good. She had no pedal or edema.

Cardiovascular System

The pulse was 96 beats per minute regular and of good volume. Her blood pressure was 120/70mmHg. The apex beat was on fourth left intercostal space along the midclavicular line. The heart sounds were normal and there were no murmurs.

Respiratory System

The respiratory rate was 24 per minuter, the trachea was central. The air entry was good on both side. She had to vesicular breath sounds and there were no crepitations.

Abdominal Examination

The abdomen was distended. The liver and spleen were not enlarged. The renal angles were free of tenderness and masses. The uterine size corresponded to 36 weeks of gestation. The presentation of the fetus was cephalic and the lie was longitudinal. The presenting part was high. The fetal heart rate was 142 beats per minute and it was

regular.

Perineal inspection

Stricks of blood were seen on both thighs. Few clots and fresh blood were trickling from the vaginal introitus.

PROVISIONAL DIAGNOSIS:

ANTEPARTUM HAEMORRHAGE Possibly due to placenta previa.

MANAGEMENT PLAN:

The patient was resuscitated and planned for examination under anaesthesia and subsequent delivery as she was at term.

RESUSCITATION

An intravenous drip of normal saline was set using a cannula size 16 on patient left arm. Blood was obtained for grouping and crossimatching, 1500mls of blood group O rhesus D positive was reserved in the blood bank. She was given a litre of normal saline. Then patient was prepared for examination under anaesthesia and if necessary operative delivery.

Pre-operative Preparation

She was shaved and signed a written consent, after she was explained in simple language about her problem and the desired management. She was taken to theatre.

Examination Under Anaesthesia

Premedication, induction and maintenance was done as in gynaecological case No 1. The instrument were laid for examination under anaesthesia and caesarean section. A 'double set' up was organized. One team scrubbed and dressed ready for an emergency caesarean section, the next for examination. The patient was positioned in lithotomy, the perineum and vulva were cleaned with hibitine solution. She was draped in sterile towels. Catheterization was done and 700mls of clear urine was obtained.

Using the left hand, on the lower abdomen, the fetal head was pushed into the pelvic brim. The index and middle fingers of the right hand were introduced simultaneously and carefully into the vaginal introitus. The four fornices were gently and systematically palpated. The soft, duffy mass was felt between the presenting part and examining fingers all around.

The index finger was then introduced carefully and meticulously through the cervical ostium. Past the internal ostium, a duffy mass covering the whole ostium was felt. No free edge could be identified. The fresh brisk bleeding started. Hence still placing the examining finger into the ostium. The patient was repositioned to supine for lower segment caesarean section.

Caesarean section

The abdomen was cleaned with povidone iodine followed by 75% alcohol in spirit. The patient was draped in sterile linen. A subumbilical midline incision was made using scalpel No 10. The rectus sheath was exposed, a stab was made with another scalpel

No 10. The using Mayo scissors the sheath was incised caudal- cranial to the pubic symphysis and umbilicus. The rectus and pyramidalis muscle at caudal end were both separated bluntly laterally. The transversalis fascia and preperitoneum fat were careful dissected using Mayo scissors. The underlying peritoneum was now visible. Two artery forceps were used to elevate the peritoneum. The centred fold of peritoneum was palpated to rule out any inclusion of the bowel. The peritoneum was then incised superiorly and inferiorly to just above the peritoneal reflection over the urinary bladder. The uterus was palpated to identify the size of the presenting part. Two wet mops were inserted one on each side. The visceral peritoneum over the lower segment was incised and the incision was extended using the Mayo scissors. The flaps of visceral peritoneum were pushed one inferiorly and another superiorly to expose the bare lower segment.

A 2 centimetre incision was made transversely on the lower segment, using two index fingers, it was extended laterally. The placenta was visible with spurting sinuses. The whole surgical field was haemorrhagic. Using four fingers of the right hand, the surgeon surged through he placenta and uplift the fetus head and delivered the baby. The cord was double clamped with strong artery forceps when the baby was held had down. It was cut using McIndoe scissors. The baby was handed over to an assistant. It was male weighing 3.9 kilogram. Apgar score 9,10 at 1 and 5 minutes. The placenta was manually evacuated. Green armitage were put for temporary haemostasis.

Double layer closure of the uterus was done using chromic catgut No 1. in locked stitch and chromic catgut No. O for continuous running stitch. Peritonization was done with chromic catgut No 2 - 0. The mops were removed. Bilateral tubal ligation was done using pameroy's method as explained in gynaecological case No . The parietal peritoneum was identified and marked with four artery forceps. From distal end it was closed in continuous running suture using catgut No 2 - 0. The fascia was the closed with locked stitch using vicryl No 1. The skin was closed with silk in mattress stitch using silk No 1. Intraoperative blood loss was estimated 750mls. Anaesthesia was reversed as in gynaecological case No 1. The patient was sent to postpartum ward after fully recovery.

POSTOPERATIVE CARE

The patient received intramuscular pethidine injection of 100mg 6 hourly in 24 hours. The blood pressure was 110/70 mmHg, her pulse rate remained 80 beats per minute regular and in good volume. She received a total of 4.5 litres of crystalloids in 24 hours. She had produced 1030mls of urine. She remained afebrile. On second day she started taking orally. Intravenous fluid was stopped. She started ambulating. She continued on breast feeding her baby. Her haemoglobin on third day was 8g/dl. She was afebrile, not dyspnoeic, slightly pale, the abdomen was not distended. The uterus was at the level of 16 weeks of gestation. The lochia was normal. She continued with haematenics. The stitches were removed on the 7th day postoperative. She was discharged in good health with let baby. She was scheduled to attend postnatal clinic in six weeks time.

Follow up

Both the mother and the child were in good health when seen at postnatal clinic. Her haemoglobin was 12g/dl. The uterus had involuted completely. The baby was weighing 4.6 kilograms. She was advised to attend paediatric clinic regularly up to when the child is five years.

COMMENTARY:

Placenta previa occurs when the placenta presents in advance of the fetus as a result of implantation over or near cervical os (1). This condition was correctly described by

Portal in 1683, although it was demonstrated by Schacher in 1709 for the first time on the dead subject (1).

Placenta previa complicates 3 to 5 of every 1,000 pregnancies world wide with approximately 20 percent of previous being classified as complete (1,2). Major risk factors for placenta previa are previous previa, increased parity, previous caesarean delivery and multifetal gestation (3). Among all this only increased parity was applicable in this patient. Several attempts have been done to relate these associations by stating that decidual damage or atrophy results in aberrant implantation (2).

Despite advances in maternal and fetal care, placenta previa is still associated with substantial morbidity and even mortality (3). With advent of blood transfusion and caesarean section delivery, the mortality rate still stands to 2 percent world wide (4).

The classical presentation of placenta previa is painless vaginal bleeding in third trimester. The first bleeding episode usually may occur spontaneously as it was in this patient or may be initiated by vaginal examination or intercourse. A subset of patient may bleed at term with the onset of labour. The initial bleeding is rarely large enough to cause fetal demise. (1,2). Partial separation of placenta secondary to development of the lower uterine segment has been implicated as a course of bleeding. Bleeding of placenta previa is usually painless. Nevertheless, patient may have initial bleeding with onset of uterine contraction hence make it difficult to differentiate placenta previa and abruptio placenta.

Abdominal palpation is useful when suspecting placenta previa. The uterus of patients with previa is often not tender and relaxes well between contractions. Malpresentation, breech and transverse presentation are common (1). However Mrs RS had only high placed presenting part. Digital examination however slightest can result in severe bleeding.

Ultrasonography allows for the safe diagnosis of placenta previa. Careful scanning of the lower uterine segment, cervix and bladder can accurately determine placental location in the majority of patients. Posterior or lateral placentation and maternal obesity make placental visualization more difficult (1,3). Colour doppler ultrasound has been found to be helpful but currently Muhimbili Medical Centre has no such a

machine. Endovaginal ultrasonography although is was not done in this case permit visualization of posterior and lower uterine segment(3).

The natural history of placenta previa is one of repetitive bleeding episodes with resolution of the process in a small subset of patient (4). In this case the bleeding was in single episode at term, this is seen mostly in placenta previa totalis, against a repetitive which is seen in marginal placenta.

The natural history of placenta previa allows expectant management when the fetus is premature. The most important being lung maturity. Fetal distress is a contraindication to expectant management (1,2,3) but the preterm patient with moderate haemorrhage and mild contractions may be successfully managed with fluid or blood transfusion and tocolytics (1,3). Brenner et al (5) advocated delivery at 36 week's gestation, as this allows for elective rather than emergent delivery in up to 50 per cent of patient.

Conservative management of patient with placenta previa include restriction of activity, although recently it has been argued that complete bed rest is not necessary (1,6). Intercourse is prohibited. In some places patient are managed at home, with a condition that there must be a 24 hours available transport to the hospital, and the blood bank is aware of the patient and has reserved blood. Such a policy is not yet feasible at Muhimbili Medical Centre.

Caesarean section is the option of choice. It has high rate of maternal morbidity than vaginal delivery. Hence it remain necessary to exclude those patient who can deliver vaginally. This limit the number of caesarean sections. Caesarean section is indicated from type II B and above. Several units of cross-matched blood are made available at the start of the procedure.

Incidentally the placenta may be found to occupy directly the incisional site, a lot of bleeding is usually encountered as is was in this patient. The author advocated surging directly through the placenta to deliver the baby instead of struggling and ascend to obtain a placenta free margin. Such move usually cause more bleeding and time.

Examination under anaesthesia is indicated in emergency like it was in this patient, in patients whose ultrasound examination have demonstrated marginal or low-lying

placenta. It is also indicate in excluding other cause of bleeding such bleeding from malignant, inflammatory lesion and polyps. (7). A double set up examination is always recommended. (8) The examination is performed in operating room with the patient prepared for abdominal delivery. If insertion of the finger though the cervical ostium does not result in contact with the placenta, an attempt to vaginal delivery may be initiated. If the placenta is palpated then abdominal delivery is accomplished as it was in this patient. In patient with high parity and those who have requested, surgical sterilization can be accomplished in the same operation, but it should not be the indication for abdominal delivery when considering the morbidity and mortality risks involved.

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SEVERE ANAEMIA WITH CARDIAC FAILURE:

Management in Labour

Name:	Miss R.A
Residence:	Kisarawe
Date of Admission:	23.2.1997
Date of Delivery:	23.2.1997
Delivery Number:	2898
Date of Discharge:	5.3.1997

SUMMARY:

Miss R.A. with history of poor antenatal attendancy was referred to Muhimbili while in labour from a district hospital with uncorrected severe anaemia. She was restless and pale on admission. The jugular venous pressure was raised, the liver was tender and congested. She also had fine basal lung crepitations and a third heart sound. The diagnosis of cardiac failure secondary to Anaemia in labour was reached. She was managed with diuretics, blood transfusion and assisted vertex delivery by vacuum extractor. She delivered a female baby with an Apgar score of 7,8,. at first and fifth minute respectively.

Aspects of management of severe anaemia with cardiac failure in labour are discussed.

HISTORY OF PRESENTING ILLNESS.

Miss R.A. a form two student had became pregnant while in school. She had stopped attending school at the gestation of 24 weeks, then moved to stay with her grandmother at Kisarawe following misunderstanding with her parents. At that time she had made only two Antenatal visits and had received one injection of tetanus toxoid, her hemoglobin was 8.4/dl and she was taking oral ferrous sulphate 200mg and folic acid 5mg once daily. She took the haematenics for a period of two weeks only.

At Kisarawe she made no further Antenatal visits. She had recurrent episodes of febrile illness, However she managed herself with chloroquine and paracetamol tablets.

As she approached the day of confinement she started experiencing headache, dizziness, palpitations, easy fatigability and breathlessness on exertion. She also noted edema of lower limbs. She returned to her parents. On a third day the labour had started she

was taken to a district hospital which referred her directly to Muhimbili labour ward. On account of severe anaemia with impending cardiac failure in labour.

Menstural History

She attained menarche at the age of 14 years. She used to have regular 28 days menstrual cycles, with period of 3 to 4 days. The menstrual loss was normal.

Gynaecology History

She had no history of sexually transmitted disease. She never used contraceptives.

Past Medical History

She had no history of diabetes, mellitus, tuberculosis or other major illness.

Social And Family History

She was a form two pupil. She had a boyfriend who was in form six in the same school. He was responsible for the pregnancy. She was born in a family of six children. Her father was a long vehicle driver and her mother a housewife. Her father was hypertensive and was on daily medication. The was no history of diabetes, mellitus or tuberculosis in the family.

ADMISSION IN LABOUR WARD

She presented with only two column filled antenatal card. The past haemoglobin taken 14 weeks ago was 8g/dl. She gave history of spontaneous rupture of membrane 2 hours prior to admission. She had contraction which were moderately strong. Apart from signs of cardiac failure she appeared apprehensive.

PHYSICAL EXAMINATION

A young lady in her teenage presenting with labour pains. She was restless, severely pale, afebrile, with tinge of jaundice. Tongue papillae appeared atrophic, no koilonychia, no finger clubbing. Had pitting pretibial edema. She had no generalized lymphadenopathy or thyroid enlargement. Her breasts were normal.

Respiratory system

The respiratory rate was 28 per minute trachea was centrally placed. The breath sounds were vesicular. There were fine crepitations on both lung bases.

The Cardiovascular System

She had a pulse rate of 100 beats per minute rebounding in character. The blood

pressure was 130/80mmHg. The jugular venous pressure was raised 6cm from horizontal when she was kept on cardiac position. There was a third heart sound.

Abdominal Examination

The abdomen was distended. The uterine contractions were palpable. The fundal height was equivalent to 36 weeks of gestation. The presentation was cephalic and fetal lie was longitudinal. The fetal head had sunken to the pelvis. The liver was enlarged, 4 centimetres below the right costal margin. It was tender on deep palpation. The spleen was also enlarged palpable 5 centimentres below the left costal margin, it was soft and non tender. The fetal heart rate was 150 beats per minute and regular.

Initial Vaginal Examination

The vulva and vagina were cleaned with savlon 1:200 vaginal examination was performed as described in Obstetric case No. 1.

Fundings:

The cervix was fully effaced. The dilatation was 6 centimetres. It was vertex presentation. There was no cord. The position of the head was left occipital transverse. There was no caput or moulding and the liquor was clear. The bony pelvis was adequate for the size of the baby. The baby was estimated to be medium in size.

Diagnosis: Severe Anaemia with cardiac failure in labour.

Investigation and result.

The haemoglobin was 3.8 g/dl. Urine showed trace albuminuria. There was no acetone or sugar in the urine.

Management Plan

. Urgent blood transfussion with packed cells.

  3 units of blood group O Rhesus "D" positive were available and were transfused slowly (a unit of packed cell equals to 250mls)

. The patient was nursed in cardiac position (prop up).

. Assisted second stage with vaccuum pump extraction.

. Investigation for the cause of Anaemia. It included blood slide for malaria parasite. Red blood cell morphology, white blood cells- count and differential and urinalysis.

Supportive Measures

The patient was nursed in cardiac position. Intravenous cannula gauge 16 was inserted on the left arm. Frusemide 120mg was administered intravenoulsly for diuresis to reduce circulating volume. Transfusion with packed cell was started at the rate of 10 drops per minute. She was given 10mg of morphia intramuscularly. Urinary bladder catheterization was done using foley's catheter size 16. One hour later she had produced about 600mls of urine. By the end of 4 hours the first 300mls of packed cells were already transfused.

Second Assessment

The assessement was done 4 hours later. The level of the head was 2/5 above the pelvis the brim. The uterine contractions were frequent, regular with an average of 3 contractions in every 10 minutes and each contraction could last for about 20 to 40 seconds. The cervix was fully dilated. There was no caput, but there was some moulding. (+1). The liquor was still clear.

Procedure For The Vacuum Extraction Of Baby

The author had scrabbed and put on sterile gloves. The patient was supported by two assistant in a modified lithotomy position. The perineum was cleaned. The vacuum cap size No 6 was insinuated into vaginal introitus and applied to the fetal scalp. The third assistant pump steadily to 0.2 kg per centimetre and we waited for 2 minutes thus a chignon could be formed. Then she pumped -0.1kg per centimetre in each minute for 6 minutes. At -0.8kg per centimetre, a traction force was applied against the patient. The operator checked around the cap ensure no maternal tissues were sucked. The traction along the vaginal axis was synchronised with the uterine contraction. Crowning of the head was then visible. Two per cent lignocaine was infiltrated on the medial lateral aspect interiorly on the perineum. A 'J' shapped episiotomy was performed. The baby was delivered with a final upwards traction. The pressure was immediately released and the cap withdrawn leaving the baby with a chignon. The cord was double clamped and divided in between the clamps. It was handed to an assistant. The third stage was completed with removal of placenta through controlled cord traction. Placenta and membranes were removed and inspected. No cotyledon was found missing. The uterus had not contracted well hence 5 International Unit of

oxytocin was given intramuscularly. The uterus had then contracted. The episiotomy was immediately repaired in two layers as described in obstetric case No 2. Estimated blood loss was 150 millilitres.

The delivered baby was female, she had an Apgar score of 7,8 in first and fifth minute respectively. She was weighing 2.75 kilogram. She had no congenital malformation.

Immediate Postpartum Period

Transfusion with packed cells continued. Additional dose of 80mg Frusemide was given. She had produced a litre of urine and she was feeling much better. She had no signs of transfussion reactions. Temperature, pulse and blood pressure were checked and recorded half hourly. They remained normal. She stayed in labour ward for another 24 hours. A second unit of blood transfusion, was completed. She was sent to postnatal wards.

Postnatal Ward Follow Up

She had no signs of infection, the lochia was normal. Blood slide of malaria parasite showed 20 trophozoites per 200 white blood cells. She was started with chloroquine tables, she took a total dose of 600mg, 600mg, 300mg in the first, second and third day respectively. A peripheral blood film taken on a day of admission revealed hypochromic microcytic picture with features of anisocytosis and poikilocytosis. This is consistent with Iron deficience anaemia. Stool was negative for hookworm ova. Post transfusional haemoglobin level was 6g/dl. The signs of cardiac failure had disappeared on the second day. She was then given heamatenics. Ferrous sulphate tables 200mg thrice daily. Folic acid once daily through out puerperium. Ampicillin 500mg (orally) eight hourly for five days. She was discharged tenth day with haemoglobin level of 7g/dl.

Follow Up

The patient was seen again 6 weeks later at postnatal clinic. Her general condition was good. She had heamoglobin level of 10g/dl. The baby was normal and had gained 700grams. She was advised on family planning.

COMMENTARY:

In the great majority of cases of anaemia in pregnancy, appropriate medical treatment achieves full correction of anaemia before the onset of labour. However a proportion of patient, especially those who had no effective treatment, is seen for first time with anaemia of very severe degree and some in cardiac failure in labour (1).

Labour and first two weeks of puerperium is the period of greatest danger to anaemia mother, and more than half of deaths occur in the first twelve hours after delivery(1). It is because there is suddenly increase in cardiac function to keep pace with the strain of labour and increased metabolic demand. The venous return is also suddenly increased due to autotransfusion of blood from the uterus to the circulation in third stage. There is also closure of arterio- venous shunt behind the placental bed this contributes by increasing peripheral circulatory resistance. Hence the heart has to pump to overcome this resistance. A hypoxic heart with limited functional capacity fall to meet these additions demand hence a progressive failure starts (1,2,3).

Immediate correction of anaemia depends entirely on transfusion. In ideal state exchange transfusion is most suitable (1,4) but is requires a huge volume of blood for transfusion. In Muhimbili Medical Centre, Such amount is not available. The risks of transmitting diseases is high with massive transfusion. Hence slow transfusion with packed cells is the method of choice at Muhimbili as it was done in this patient. Duiretics are given to facilitate duiresis just before transfusion. Transfusion is done careful to avoid overloading the circulatory system. The patient is also nursed in cardiac position or prop up position, to minimize lung congestions.

Lawson (1) advocated transfusion not exceeding 500mls of packed cells in a single sitting. But with diuretic and slow transfusion, this amount can be exceeded. He also advocated the use of aminophylline to be given at intervals intravenously four hourly to improve pulmonary congestion. However this drug like theophylline is associated with neonatal apnoea (5). Hence the author had prefered to elevate the dose of diurentics to prevent pulmonary congestion.

High doses of diuretics predispose the patient to hypokalemia (5). But the blood used for transfusion usually has excess potassium ions hence giving an advantage. (4,6).

Provision of oxygen in face mask in labour is said to assist on increasing the partial pressure of oxygen in maternal blood hence assuring maximum saturation even though the haemoglobin level is low (1). It is also argued that provision of oxygen by face mask is of no use when the haemoglobin level is low as fetal haemoglobin is capable of extracting oxygen from maternal blood even when it is in low level and unbound oxygen doesn't help the mother either. The author favours giving oxygen mask. It was unfortunate that oxygen was not available.

Assistance of second stage of labour remains important. The use of vacuum pump extraction or low forceps delivery, shortens the second stage of labour. It also minimizes the energy required on straining to push out the baby. It was for these reason vacuum pump extraction was done in this patient. The advantage of vacuum pump over the obstetric forceps is that, patient remain cardiac position during the procedure. Regarding the vacuum pump caps, silastic caps when compared to metal caps have been found to cause less trauma to the vertex. The metal caps have also been associated with increased incidence of accidental maternal tissue injury (1,7).

Active management of third stage is also indicated, but the use of ergometrine is restricted to only when there is haemorrhage. Ergometrine caused tonic contraction of the uterus hence sideline a rapid autotransfusion of blood from uterine placental bed to maternal circulation. Oxytocin is altenatively given, as it cause intermittent uterine contractions.

Anaemia dimishes immunity to infection, according to Lawson, (1) particularly during puerperium. Respiratory infection, urinary tract infection and endometritis are common and dangerous. Hence he advocated antibiotics cover during puerperium. The idea was also supported by Montague (8) who found a decrease of 50% in infection rate for a group covered by penicillins, compared to uncovered group. It was for this reason, this patient was given a course of antibiotics.

Provision of haematenics, and appropriate monitoring of patient responce in puerperium (1) is crucial part of management of these anaemia after delivery. The responce is usual seen after few week as it was in this patient. Babies born by anaemia mother are advised to be given haematinics because of poor iron stores. This prevents infantile

anaemia (1).

Anaemia in pregnancy and its complication is preventable. It needs a medico-social approach. The provision of appropriate reproductive health education to this patient could have prevented a teenage pregnancy.

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MULTIPLE PREGNANCY COMPLICATED BY AN ANTEPARTUM SINGLE FETUS DEMISE: CONSERVATIVE MANAGEMENT LEADING TO DELIVERY OF LIVE FETUS AT TERM.

Name:	Mrs. R.A Gravida 2 Para 1 + 0
Residence:	Temeke
Date of Admission:	2.6.1996
Date of Delivery:	9.7.1996
Date of Discharge:	16.7.1997

SUMMARY:

Mrs. RA was attending high risk antenatal clinic at Muhimbili Medical Centre. She was referred at 28 weeks of gestation due to history and clinical feature suggestive of multiple pregnancy. Ultrasound at that gestation revealed double fetuses, both breech and placenta was fundal. On the third visit, at 32 weeks she presented with relatively decreased fetal movement and lower abdominal pain. Repeated ultrasound revealed loss of fetal activity and heart tone in one of the fetuses. Plain abdominal X-Ray revealed hyperflexed spinal bones, overriding of cranial boned and air shadow in big vessel in one fetus. The diagnosis of fetal demise was reached. Coagulation profile was assessed after every two weeks. She was started on Heparin in the last weeks. At exactly 37 weeks she had caesarean section due breech estimated to weigh more than 3.5 kilogram. She delivered male baby weighing 3.8 kilogram and Apgar score 9,10 at first and firth minutes and a macerated still birth weight 1.9 kilogram. The management of multiple gestation complicated by fetal demise is discussed.

HISTORY OF PRESENTING ILLNESS

Mrs. RA was gravida 2, para 1. had presented in a third antenatal visits with a complaint of a sudden and relative reduction in fetal activity. She denied to the history of generalized abdominal pain, vaginal bleeding or fever. She also denied to the history of dysuria, polyuria or polyphagia. She had no history of headache, blurred vision or epigastric pain. She had painless swelling of lower limbs and difficulties in breathing when lying on bed. Prior to the above symptoms she had noted excessive growth of her fundus, together with exaggerated pregnancy symptoms especially vomiting. She

had completed immunization course for tetanus. Her haemoglobin was above 11g/dl in all of her previous visits. Her blood pressure was normal.

Past Medical History

She had no history or major illness or surgery.

Menstrual History

She had her menarche at 14 years of age. Her periods were of 4 days and were normal. She used to have a cycle after every 28 - 29 days.

Gynaecological History

She had no history of sexually transmitted disease and she never used contraceptives.

Obstetric History

She had spontaneous vertex delivery of male baby three years ago. The delivery was uneventful and the baby weighed 2.7 kilograms.

Family And Social History

She was a housewife. The husband was a peasant. She never smoked cigarette or drank alcohol. There was no history of diabetes mellitus, hypertension or tuberculosis, there was no history of twinning in her family.

PHYSICAL EXAMINATION

She was healthy looking, not pale or jaundiced. She had pitting edema of lower limbs. She weighed 65 kilograms, her height was 165 centimetre. Her thyroid gland was not enlarged. She had normal developed breasts and nipples. Clear fluid was expressed out on squeezing the breasts.

Cardiovascular System

The pulse was 80 beats per minute, regular in good volume. The blood pressure was 120/80mmHg. The apex beat was on fourth left intercostal space along the midclavicular line. The heart size and sound were normal.

Respiratory System

The respiratory rate was 20 per minute. The trachea was centrally placed. The breathing sound was vesicular and there were no crepitations.

Abdominal Examination

The abdomen was distended. The linea nigra and strae albicantis were visible. The

spleen and liver were not palpable enlarged. The renal angles were free of tenderness and masses. The fundal height was equivalent to 36 weeks of gestation. The lie was longitudinal, and three fetal poles could be palpated on left and right hypochondrium. The fetal heart rate was 140 beats per minute and regular.

OLD INVESTIGATIONS

She had two week old plain abdominal X-ray taken at periphery which showed double fetuses, both breech with no sign of fetal demise.

DIAGNOSIS:

Multiple Pregnancy.

INVESTIGATIONS AND RESULTS:

. The haemoglobin was 11g/d/L

. The urinalysis showed no more than four cell cast per high power field.

. The venereal disease research laboratory (VDRL) was negative.

. Ultrasound scan, showed multiple pregnancy both breech, with different biparietal diameter. First twin BPD equivalent to 29 weeks, no fetal activity no fetal heart tone. Second twin BPD equivalent with 32 weeks of gestation, good fetal activity, heart rate 145 per minute, regular rhythm. The results are consistent with Intrauterine single fetus demise in multiple gestation. Plain abdominal X-Ray showed discontinuation of alienment of big bones, overriding of scalp bones, abnormally acute angulation of spinal bones and air in big vessels in one fetus. Second fetus showed flexed spinal bones in continuity and normal apposition of scalp bone. Results were consistence of single fetus demise in multiple pregnancy.

In view of the history, clinical examination and investigation, the diagnosis of Single **Fetus Demise In Multiple Pregnancy At 32 Weeks Of Gestation** was reached.

PLAN OF MANAGEMENT

It was decided to institute conservation management to let the survived twin to term while monitoring maternal and fetal welbeing.

Progress in The Antenatal Ward

. She had bed rest.

. Her body weight was measured weekly and in five weeks she gained 0.5 kilograms.

. The bleeding indices were checked after every two weeks. The results were as follows.

At 32 weeks

The platelets count was 400,000 per mm^3, bleeding time was 8 minutes (up to 10 minutes) prothrombin ration was 1.2 (1.0 - 1.3) and partial thromboplastin time was 40 (38 - 45). Clotting time was 5 minutes (10 minutes). These results were normal.

At 34 weeks

The platelets counts 200,000 per mm^3, bleeding time was 9 minutes, prothrombin ration 1, Partial thromboplastin time 32 minutes, clotting time was 18 minutes, the results showes a slightly decrease in platelets and prolonged clotting time. Hence heparin 10,000 IU subcutancous injection was given in alternate days.

At 36 weeks

The platelets count 200,000 per mm^3, bleeding time was 9 minutes, prothrombin ratio 1, partial thromboplastin time 30 minute, clotting time 12 minutes. The clotting time had improved.

The auscultation of fetal heart tone was done twice daily. It remained between 140 - 150 beats per minute. The heart rate was regular. The pulse rate between 75 - 85 beats per minute regular in good volume.

The blood was measured and recorded eight hourly and it was between 120/70 - 120/80 mmHg. At 37 week of gestation, caesarean section was decided as the mode of delivery since the uterine cervix was unfavourable and the breech was big as it was estimated to weigh more than 3.5 kilograms.

Preparation for caesarean section

The decision was communicated to the patient decision was communicated to the patient. A written consent was obtained. Grouping and crossmatching was done and two units of fresh whole blood group O Rhesus D positive were reserved. She was given protamine sulphate 6 hours before operation.

Caesarean section

The premedication, Induction and maintenance of anaesthesia was done as in Gynaecological case 1. Caesarean section was done as described in Obstetric case No

4. After opening the uterus, two male breech fetuses were encountered in one amniotic sac. First twin weighed 3.8 kilogram and had an Apgar score 9,10 in first and fifth minute respectively. Second fetus was macerated, weighed 1.9 kilogram. Both cords were arising from a single placenta. The uterus was mopped well, and was repaired in double layer. The abdomen was closed in layers as described in Obstetrics case 3. The anaesthesia was reversed as described in Gynaecological case

No 1.

The neonatal care

The baby was given injection Vitamin K, 10mg subcutaneously immediately to improve the coagulation profile. It was transferred to neonatal ward where it stayed for two days. No bleeding tendencies were reported.

POSTOPERATIVE CARE

She was given pethidine injection 100mg intramuscularly for analgesia. She also received intravenous fluid, 3 litres of dextrose saline in 24 hours. The urinary output was 1.5litres in 24 hours. The pulse was 80 beats per minute regular and in good volume. The blood pressure was 120/70 mmHg. The blood pressure and pulse were measured and recorded hourly. She remained afebrile and was started on oral sips after 12 hours.

Postoperative progress

She remained in good health. On the fifth day the stitches were removed. The wound had healed well, her haemoglobin on fifth day was 10g/dl. She was breastfeeding, she was discharged and appointed to attend postnatal clinic after six weeks.

Follow up

She was seen at postnatal clinic after six weeks. Her haemoglobin was 11g/dl and the baby was fine he had gained 0.5 kilogram. She advised on contraceptives and she opted for progestrone only contraceptive pills.

COMMENTARY

Management of multifetal pregnancy can be challenging because of their high risk nature. Perhaps one of the most compelling situation arises when an intrauterine fetal demise is diagnosed in multiple pregnancy. The assessment of the gestational period

of fetal death in pregnancy is said to be essential because of the implications for the remaining course of pregnancy. Zorlu (1) reviewed 81,340 deliveries in a period of 46 month in Turkey, nine patient, that is 0.01 percent had death of one twin remote from term. In this study it has been shown the magnitude of the problem is small. He also found the difference in birth weight between surviving and dead fetuses (2260 VS 1520 grams) in average. This suggested that the death may have taken place earlier in pregnancy or there was existence of fetus to fetus transfusion. This proportional in weight is not different from that seen in this patient.

Evidence suggest that first trimester vanishing twins are associated with good prognosis for surviving singleton (2). In contrast, formation of fetal papyraceous, resulting from death usually in second trimester, has been associated with a hostile intrauterine environment and some morbidity in surviving fetus (3). Management of multiple pregnancies in which a fetal demise had occurred in third trimester depends on the capacity of the centre to care for the premature babies. That is why a conservative approach was decided in this patient leaving her to go to term.

Zorlu (1) in his study found in some patient with one twin demise a diamniotic - dichorionic placenta and others monoamniotic dichorionic placenta. Because of small study population it was not possible to conclude whether these condition influence the outcome in twin pregnancies with one dead fetus. Preterm delivery occurs in approximately 50 percent of such patients, and neonatal mortality is related to gestational age, this is according to Kilby and colleagues (4). coagulopathy is one of the important clinical complication of in the these patients. Maternal consumptive coagulopathy is noted with retention of a dead fetus 3 to 12 weeks. (5). Mrs RA deterioration at 34th week of gestation this necessitated the use of heparin. Hence it is important to ascertain the coagulation profile of the patient at least fortnight as it was done in this patient. The coagulopathy is mediated by release of tissue thromboplastin from dead fetus and its placenta with activation of extrinsic coagulation pathway (6). With disseminated intravascular coagulation DIC, coagulation factors and platelets are depressed in a varying degree that probably depend on the intensity of stimulus (7). Fibrin deposit can occur throughout the body. Coagulation triggers the activation of

plasminogen to plasmin, which lyses fibrinogen, fibrin monomers and polymers. Thus forming fibrin degradation products. Spontaneous correction may occur with retention of fetus but occur slowly (8). In cases were coagulopathy is feared, Romero et al (9), advocated the use of heparin. He advocated heparin for 29 to 36 weeks of gestation and the protamine sulphate when labour has started or 6 hours before caesarean section as it was done in this patient. In his series a child was found to have evidence of coagulopathy as heparin does not cross placenta. The child was reported to be normal at (4 months of age). Hence immediately follow up of survived twin for bleeding tendency is of prime importance. It is also adviced to give vitamin K, 10mg immediately post delivery as it was done in this case.

Caesarean section was decided for this patient on account of big breech, otherwise there is no contraindication for vaginal delivery. Fetus to Fetus transfusion stands as a main cause of single fetus demise in multiple pregnancy, (1,3). This condition can be suspected earlier on if there is a discrepancy in fetal size which is confirmed by ultrasound by measuring the head, thorax and abdominal diameters/circumferences. Serial examination will enable early intervation. The outcome will depend on whether the hospital has facilities for care of preterm babies.

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BREECH PRESENTATION IN LABOUR:

MANAGEMENT.

Name:	Mrs. A.S
Age:	25 Years
Gravida:	2 Para 1 + 0
Date of Admission:	21.7.1997
Date of Delivery:	21.7.1997
Date of Dischage:	23.7.1997

SUMMARY:

Mrs.A.S. Gravida 2, Para 1 + 0 was referred from private hospital to Muhimbili Medical Centre on account of malpresentation in labour. She was examined and found to be in well established labour and had breech presentation. She had an assisted breech delivery. She delivered a male baby with Apgar score 7,9 at one and five munte respectively. She was discharged together with her baby in good condition after 24 hours.

Present Obstetric History

Mrs. A.S. Gravida 2 Para 1 + 0 had booked for antenatal care at 20 weeks of gestation. She had hemoglobin of 11.0g/dl and the blood pressure of 120/80mmHg. She remained normaltensive throughout pregnancy all her visits the fundal hieght was corresponding to the gestation. The presentation was detected to be breech on 28 weeks of gestation. However she was counselled that spontaneous version could occur. For unknown reason she stopped attending antenatal clinical from 34 weeks of gestation only to be seen in labour. There was no history of loss of fetal movement or vaginal bleeding. Six hours before admission she had started draining. The labour pains started two hours later. She was referred to Muhimbili because of breech presentation from a private hospital.

Past Medical History

She had no history of diabetes mellitus, hypertension or tuberculosis.

Menstrual History

She attained menarche at the age of 14 years. She had regular cycles, occuring after

28 - 29 days she had 4 - 5 days of menstrual flow. The flow was normal.

Gynaecology History

She had no history of sexually transmitted infection. She had never used contraceptives.

Obstetric History

She had delivered a male baby weighing 2.7kg three years ago. It was spontaneous and vertex delivery. The child was alive and well.

Social and Family History

She was a housewife. Her husband was a carpenter. She neither smoked or drank alcohol. There was no family history of hypertension, diabetes mellitus or tuberculosis.

Physical Examination during admission to labour ward

She was in good general condition, was not pale. She was afebrile and was not dyspnoeic. The thyroid gland was not enlarged. The breasts and nipples were normal.

Cardiorespiratory system

The blood pressure was 120/80mmHg. She had a regular pulse with normal volume the rate was 80 beats per minute. The first and second heart sound were normal. There were no murmurs.

Respiratory System.

The respiratory rate was 20 per minute. The trachea was centrally placed. The breath sound were vesicular there were no crepitations.

Abdominal Examination.

The abdomen was distended with uterine fundus corresponding to 36 weeks. The head was ballotable above the umbilicus. The soft pole was palpated above the pelvic brim. The presentation was breech and lie was longitudinal. The fetal heart tone was heard loudest above the umbilicus. The fetal heart rate was 140/minute. The baby's size was estimated 2.7 kilograms. Uterine contraction were palpable after every 15 minute and lasted for 20 seconds.

Pelvic assessment

Vaginal examination and pelvic assessment were done as described in obstetric case No 1. There was thick meconium. The cervix was 6 centimetres dilated, the fetal feet

could be palpated. No cord was palpated. Further palpation revealed right sacrum anterior at position O. The subpubic angle admitted two fingers, the sacrum curve was normal and intertuberosity diameter admitted four nuckles readly. The pelvis was adequate.

PROGRESS OF LABOUR

Labour was monitored closely. It progressed well with time, uterine contractions were increasing in frequency and intensity. A repeat vaginal examination was done 4 hours later, the cervix was 9 centimetres dilated. The umbilical cord was not felt. She started to having urge to bear down with contraction. She was transfered to a high bed.

Management of the second stage.

The patient was positioned in lithotomy. The perineum was cleaned with hibitine. She was draped with clean towels. The perineum was infitrated with 1% lignocaine read for episiotomy. As the patient started bearing down, the breech started crowning. The "J" shaped episiotomy was made using Mayo's curved scissors. There was no major bleeding vessel to necessitate ligation. The breech was left to come out spontaneusly. No manipulations were done till when the umbiliacal cord was seen. The legs which were extended were then gently disengaged. One by one then the loop of cord was pulled down. Spontaneous dissent occured. With the sterile towel wrapped around the fetal body to prevent slippery, the body was gentle assisted to turn so that the back faces upwards. The angle of right scapular became visible. The trunk was turned a little anticlockwise to bring the right shoulder under the symphisis pubis. The index finger was introduced under the symphisis and gently hooked down the right arm and shoulder. The trunk was ten gently rotated clockwise so that the left shoulder came to lie under the symphisis and the index finger again introduced to gently hook down the left hand and shoulder. The whole trunk was delivered. The body was allowed to hang by its own weight for about 6 minutes. This enabled the aftercoming head to descend and engage in the pelvis. The nuchal hair at the baby's neck became visible. The baby's legs were grasped and lifted with left hand and the truck extended towards the mother's symphisis pubis. The right hand was at the same time guarding the perineum and the fetal head, not to allow it coming too quickly. The nose and mouth were then

visible. An assistant wiped the face with sterile gauze. The nostril and oropharynx were sucked. The head was slowly delivered and the baby was held upside down to facilitate drain of mucous in airway at the end. The cord was double clamped and divided between the two applied clamps. The baby rescusitation continued. The Apgar score was 7,9 at one and five minute respectively.

Ergometrine 0.25mg was administered intravenously and the placenta was delivered by controlled cord traction. The maternal surface of the placenta was inspected, all the cotyledons were intact. The perineum was inspected and there were no tears apart form the episiotomy. There were also no undue bleeding from the introitus. Blood loss was estimated to be 120mls. Post delivery blood pressure was 120.80mmHg.

Repair of Episiotomy

The episiotomy was repaired immediately as described in obstetric case No 2.

The Infant

It was weighing 2.8 kilograms it fared well. There was no twitching or excessive cry. It had no congental anomalies.

Postpartum care

The mother started to feed the baby immediately. She remained afebrile. The blood pressure was 120/80mmHg and the pulse was 78 beats per minute normal volume and character. The baby received a first course of primary immunization. They were discharged after 24 hours. They were scheduled for postnatal visit after one month.

Follow Up

After a month, the episiotomy had healed well. No more discharge. The baby was in good healthy. The mother was adviced on family planning.

COMMENTARY:

Breech presentation is common remote from term. The incidence is 33.3per cent at the gestation of 21 - 24 weeks, but this is reduced to only 3 - 4 percent at term due to spontaneous version (1). The frank or extended breech which is commonest is encountered more in primigravida. Flexed breech is more common in other parity. Mrs. A.S. had extended breech.

Etiological factors predisposing to breech positioning can be categorized as uterine,

placental and fetal. Anomalies of uterine shape, including mullerian abnormalities (bicornuate, septate, didelphys) as well as tumour like fibrods, predispose to breech positioning, possibly by limiting fetal movement(1,2). Certain placental implantation (placenta previa and fundal placentas) alter the shape of the gestational cavity and increase the risk of breech(2). Fetal factors assocated with breech include prematurity, structural anomalies like hydrocephalus, and chromosomal anomalies like trisomy -18 (2). Non of the above factor could be implicated directly as a cause of breech presentation in this patient.

Breech delivery carries an increased risk of fetal injury and death. Morgan and Kane (3) demonstrated a fivefold increase in perinatal mortality when breech deliveries were compared with vertex delivery in their study.

Brenner and colleagues (4), supported the cortetion that vaginal delivery of the breech produces fetal injuries that would be avoided with caesarean section. Gimovsky, (5) argued breech delivery by caesarean section also requires manipulation on the fetus such as version and extraction. Two of four cases with brachial plexus injury were delivered abdominally in his series published 1982. It was also noted that the rate of asphyxia in term have remained higher than in vertex delivery, even with increased caesarean sections. Caesarean section was then found to be more promising delivery route for the low birth weight breeches, those with less than 1.5 kilograms as they have higher incidence of cerebral haemorrhage (6). Fetus weighing more than 3 kilogram also benefited from caesarean section delivery (5,6). Mrs. A.S. fetus was estimated to weigh 2.5 kilogram hence suitable for assisted breech delivery. Weight alone is not important but also pelvic diameter, hence the importance of having a guidence protocol. X-ray pelvimetry is argued to be satisfactory predictor of possible fetal passage. X-ray also determine the altitude of the fetus when taken near term. This patient came late in labour hence she could not benefit from this investigation.

Artificial rupture of membranes, especially in incomplete breech is associated with prolapse of the cord (7). The risk involved in this procedure is still controversial. Late rupture of the membranes may be advantageous because the intact membranes also dilate the cervix in away similar to the fetal head. Some authors, however, practiced

early artificial rupture of the membranes without any attributable fetal or materal morbidity (8). This patient had early spontaneous rupture of membrane and there was no cord prolapse.

The use of oxytocin in inducation and augumentation is still controversial some author associate it with high incidence of entrapment of aftercomming head. Gimovsky used oxytocin in a series of nine patient with breech, only two delivered vaginally, one of those involved had entrapment of aftercoming head and fetal asphyxia. He concluded if oxytocin is used in protracted labour, care should be taken to ensure that cervical dilation is greater 1cm per hour and that second stage is limited to 2 hours. It is the authors view that oxytocin should restricted till further supportive data is available.

External version of breech is still practised in some centres, factors associated with failure include obesity, nulliparity, engagement of the breech and advanced gestational age with relative oligohydromnious (9). Although Mrs. A.S. had come late and in labour. The author is not in favour of external version due to its failure rate, incidence of abruptio placenta and cord accident which are high (9). It is the author's view that successful management of breech delivery depend on careful meliculous pre-delivery evaluation. Minimal interference during delivery. If manipulation then should come late when there is sign of impending fetal distress. Adequate rescussitation of the fetus is important immediately after delivery.

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CARDIAC DISEASE IN PREGNANCY.

MITRAL STENOSIS LESION: PREGNANCY AND DELIVERY

Name:	Mrs. AG
Age:	31 years
Registration Number:	5032/95
Delivery Number:	2629
Date of Admission:	12.2.1996
Date of Delivery:	22.2.1996
Date of Discharge:	26.2.1996

SUMMARY:

Mrs. A.G. a 31 years old Gravida 2 Para 1 was a known patient with rheumatic valvular heart disease complicated with arrthmias. She had been on propanolol 30mg daily from the time of she was diagnosed. She had booked for antenatal care at twelve weeks of gestation. Towards term she developed severe atrial fibrillation which had necessitated digitalization. She had spontenous labour at 38 weeks of gestation. She had uneventful assisted vaginal delivery. A female baby weighing 2.95 kilograms was delivered with Apgar score 9,10 at one and five minutes respectively. They were observed for three days and discharged home in good condition.

HISTORY OF PRESENTING ILLNESS

Mrs AG a 31 year old Gravida 2 was known to have mitral stenosis confirmed by echo-cardiogram. She had presented with intermittent and severe palpitation at 36 weeks of gestation. The palpitations were not in association with fever. She denied to the history of dry cough or haemoptysis. She denied to the history of fainting attacks, puffy face or persistent swelling of extremities. She was taking her antiarrhythmic drugs regularly but the condition kept on deteriorating. However she admitted to have had good fetal activity.

She booked for Antenatal Care, at the gestation of 12 weeks, her blood pressure was 110/60mmHg. The haemoglobin was 10.6g/dl. She was weighing 62 kilograms. She had trace albuminuria. After consultations to **physician** she was advised to continue with propanolol 30mg daily. She was also started on oral ferrous sulphate 200mg daily

and folic acid 5mg daily. She had made a total of 8 visits,

Menstrual History

She attained menarche at 14 years of age. Her period lasted for 5 days. She had regular cycles occuring after 28 days. She had no history of hypermenorrhea.

Gynaecological History

She had no history of sexually transmitted infection. She used barrier methods on unsafe days for contraception.

Obstetric History

She had delivered three years ago. She had an elective induction by amniotomy and oxytocin drip due to postdatism. The second stage was assisted with vacuum extractor. The labour had lasted for exacty 8 hours. The baby was weighing 2.8 kilograms. It was male. The antenatal, delivery and puerperium was complicated with mild palpitations but no heart failure

Past Medical History

She was diagnosed to have Mitral stenosis 8 years ago with arrythmias and she was started with propanolol 20mg daily. She had severe amoebic dysentery a year ago, which compicated the arrythmias. She was admitted at KCMC and treated. She had appendicectomy and haemorrhoidectomy on the same year.

Family and Social History

She was a Nurse officer at Temeke District hospital. She was married to a pharmacist. Her husband had his own Pharmacy. There was no history of hypertension, diabetes, mellitus or tuberculosis in the family. She used to drink occasionally. She did not smoke cigarettes.

Physical Examination on Admission to Antenatal Ward

On 12th February, 1996. She was brought to the admitting firm with severe palpitations. She was of good nutritional status. The pulse was 105 beats per minute, irregular - regular in normal volume. She was not dyspnoeic, pale or febrile. The thyroid gland was in normal size.

Cardiovascular System

The pulse rate was 105 beats per minute, irregular - regular in normal volume. The

blood pressure was 120/70mmHg. The jugular venous pressure was not elevated. The apex beat was on the fourth left intercostal space within the midclavicular line. There was a rough rumbling mid-diastolic murmur. The murmur was accentuated on turning the patient to left lateral position.

Respiratory System

The respiratory rate was 25 per minute. The trachea was centrally placed. The chest movement was symmetrical and normal. The breath sounds were vesicular. There were no crepitations.

Central Nervous System

The cranial nerves were normal. There were no muscle weaknesses. No lateralizing signs. There was no hyperflexia.

Abdominal Examination

The abdomen was distended. The liver and spleen were not palpably enlarged. Both renal angles were non-tender and there were no masses. The fundal height was equivalent to 36 weeks of gestation. It was corresponding to the dates. The lie was longitudinal and presentation was cephalic. The fetal heart rate was 140 beats per minute and it was regular.

Diagnosis:

Cardiac disease in Pregnancy (Mitral stenosis with arhythmias).

Medication

She was started with the following drugs

- Tablets of digoxin 0.5mg single dose for three days then 0.25mg as maintanence dose daily.
- Propanolol 40mg orally, once daily.
- Ferrous sulphate 200mg orally, once daily
- Folic acid 5mg orally, once daily

Investigations and Results

- Electrocardiogram (ECG) which had showed features of Atrial Fibrillation.
- Blood for malaria parasite was negative
- Venerial disease Research laboratory (VDRL) was negative.

. Serum creatinine was 63Umol/l.

. Serum electrolytes were not done due to technical problems.

. She was blood group O Rhesus "D" positive.

. White blood cells.

Total 7,500 per mm3

Differential: Lymphocytes 53%

Neutrophil 44%

Eosinophil 20%

Basophil 1%

. Platelets counts was 400,000/mm3.

. Urine revealed no sugar or protein

. Urine for culture and sensitivity revealed no pathological organisms.

PROGRESS

On third day of hospitalization, she had no more palpitations. Her pulse and blood pressure were normal. The body temperature was 37^{0}C, Jugular venous pressure was not raised, no peripheral edema and lungs were free of crepitation. The fetal movement remained normal. She continued with antenatal care weekly. She was maintained on her drugs. She continued receiving her monthly dosage of penadur 2.4MU intramuscularly injection. Ten days later she started labour and was taken to labour ward.

Physical Examination in labour ward

She was in agonizing labour pains. She was not anaemic. The haemoglobin was 12g/dl. She had no peripheral edema. She was afebrile and not dyspnoeic. Her pulse rate was 90 per minute regular in good volume. The blood pressure was 110/70mmHg. The jugular venous pressure was not raised.

Abdominal Examination

The abdomen was distended. The liver and spleen were not enlarged. Both renal angles were free of tenderness and masses. The fundal height was equivalent to 36 weeks of gestation. She had three to four contraction which were palpable within every 10 minutes. The presentation was cephalic and the lie was longitudinal. The head was

4/5 above the pelvic brim. The fetal heart rate was 142 beats per minute and it was regular.

Vaginal examination

The vulva and vagina wer normal. There was a mucoid vaginal discharge mixed with spots of blood. Digital examination revealed a 3 centimetres dilated cervix, 80 per cent effaced. There was no cord presentation. The membranes were ruptured with curved Kocher's forceps. The liquor was clear. The position was left occipital anterior. The bony pelvis was adequate for the baby. She was catheterized with Foley's catheter No. 16 connected to a collecting bag.

PROGRESS OF LABOUR

The intravenous line was established on the left hand. She was positioned in propped up position (cardiac position) using a triangular support with pillows. She was sedated with 10mg of morphine given intramuscularly. An Ampicillin dose of 1 gram was given intravenously. An hour after admission to labour ward she started complaining of breathlessness. The respiratory rate was 35 per minuter and shallow. An impending pulmonary congestion was suspected. She was given 80mg of Frusemide intravenously start.

Second Assessment

Four hours later, the patient had very strong contractions about 4 - 5 every 10 minutes. Digital examination revealed fully dilated cervix. There was no moulding or caput. The fetal head was at +2 station. The patient was advised not to bear down. The vacuum extraction was performed as in obstetric case No 5.

There was no need for episiotomy. No ergometrine was given. The third stage was completed with removal of placenta through controlled cord traction. Inspection of membrane and placenta revealed all had come out. The total blood pressure was 110/65mmHg. The pulse was 86 per minute regular in normal volume.

The Infant

It was female baby weighing 2.95 kilograms. It had no signs of bradycardia or hypoglycaemia. It had an Apgar score of 9, 10 in first and fifth minute respectively.

Postpartum Care

The mother was observed in the postnatal ward for 3 more days. Her blood pressure remained 110/70 mmHg. She was afebrile. The pulse was 80 per minute regular in normal volume. She continued with the drugs. The lochia was normal. She was discharged and told to continue with propanolol and Frusemide 40mg daily for two weeks. She was scheduled for a next visit after two weeks.

Follow Up

She was seen after two weeks. She did not report any episode of severe palpitation. The child was fine. She was adviced to continue with Propanolol and attending Cardiac clinic. She was also adviced on family planning. She has opted for a permanent surgical contraceptive method.

COMMENTARY:

The overall mortality with mitral stenosis is less than 1 per cent but higher for most severe stenotic lesions. Coexistent atrial fibrillation increase the risk of serious morbidity or mortality to 15 per cent. This is primarily due to embolic phenomena (1).

Mrs A.G was in a greater risk of embolism because of the atrial fibrillation. However recent studies have shown black race is somehow protected from the risk of embolic phenomena for unknown reasons (1).

Rheumatic heart disease still account for 83 percent of patient with cardiac disease during pregnancy worldwide (2). The proportion of patients with congental heart disease in pregnancy is gradually increasing as the frequency of rheumantic heart disease becomes less in developed world (1,2).

The management of heart disease during pregnancy is no different from that in non pregnant women except that consideration must be given to the extra work which pregnancy imposed on the heart (3). Cardiac output is increased during pregnancy. By the 20th to 24th week of pregnancy cardiac output is increased by 8 percent. By the 7th to 8th month of pregnancy it is increased about 14 percent, and by term it is increased by 30percent. Heart rate increases during pregnancy being about 10 beats per minute faster at term (4). This is seen in 20 per cent of singleton pregnancies. These changes could be attributed to the severely of arrythmias at term, which had

necessitated digitalization in this patient. Blood volume may increase about 40 percent during normal pregnacy, most of the increase is plasma. Haemoglobin concetration decreases parthly due to haemodilution. Hence it is imperative to use all the effort to increase the haemoglobin level before 20th weeks of gestation, it is for this reason this patient was started with haematenics right from start.

Valvular heart disease in pregnancy is usually managed medically as it was in this patient. A close cooperation between **Obstetician** and **Cardiologist** is required. It must be remembered that, physiological changes of pregnancy affect therapeutic effectiveness of various drugs. Increased blood volume, changes in hepatic function, reduction in plasma protein levels and increased renal clearance are features seen in pregnancy. Most antibiotics agent are removed from the body by the kidney. During pregnancy, there is an increase in clearance of such drugs as ampicillin, this necessitate an increase in dosage (4). Hence Mrs. AG was given a whole gram of Amplicillin intrapartum. The disposition of propranolol seems to remain unchanged from the nonpregnant state. No alteration of dose is then required. (4). In case of severe arrythmias additional digoxin is indicated. Digoxin clearance is increased in pregnancy hence it is recomended to start with a loading dose and then maintanance as it was in this patient.

The presence of organic heart disease predisposea the patient to arrhythmias and probably more in pregnant ones (5). Pregnant patient with arrythmias should be admitted immediately, in fear of thromboembolic phenomena, in worse state anticoagulants are indicated (4,5). Heparin is the anticoagulant of choice, but it should be stopped at least on the day of delivery or protamine sulphate is given at least 6 hours before anticipated time for delivery(5). Fortunately this patient had responded well after digitalization.

The role of caesarean section in the management of patient with valvular or any type of heart disease should be restricted to obstetric reasons rather than cardiac (6). The use of oxytocin agent is usually permissible but in low and carefully administered doses. Caesarean section always carries a risk of haemorrhage, infection, anaesthesia, pulmonary embolism and pneumonia.

Acute pulmonary edema is a severe complication of congestive heart failure and should be prevented (7) when occur the prognosis is worse that is why immediate and vigorous treatment is indicated. Mrs. A.G had shown signs of pulmonary congestion in labour. It necessitated Frusemide therapy in order to reduce the blood volume and easy pulmonary congestion.

Vaginal delivery is always assisted in the second stage by either forceps or vacuum as it was in this patient. This reduces stress to the heart.

In order to prevent subacute bacterial endocarditis in the puerperium, patient with valvular heart disease are given prophylactic penicillins intrapartum and during the first postpartum week (8) as it was in this patient.

Cardiac patients are adviced to limit the number of pregnancies they undertake. Their organic lesions usually become progressively worse with years, and mortality rate varies from 0.17 per cent to almost 6 percent, depending on the functional classification of the heart disease. Tubal ligation is recommended to be performed 6 to 12 weeks after delivery (8). The anaesthetic risks are higher at immediate postpartum when compared to 6 weeks later. Although the procedure can be done under local anaesthesia is not infrequent the procedure has been changed intraoperatively to general anaesthesia due to some operative reasons.

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ACUTE UTERINE INVERSION: MANAGEMENT

Name:	Mrs H.M
Age:	25 years
Registration Number:	137/95
Date of Admission:	2.8.1995
Date of the procedure:	29.8.1995
Date of Discharge:	4.9.1995

SUMMARY:

Mrs. H.M. was admitted into labour ward with history of draining of liquor at term. She had drained for the past 18 hours. She was examined and found to be moderate pale. The size of the baby was medium and the pelvis was adequate. Induction was started. She progressed well and delivered a female baby weighing 2.8 kilograms with Apgar score 9.10 at first and fifth minute. Following delivery she developed a postpartum haemorrhage which did not respond to an oxytocin infusion. She persistent complained of severe lower abdominal pain. Examination revealed a "dimple" on the fundus of the uterus. Rescuscitative measures were instituted and examination under anaesthesia was perfomed. It confirmed acute uterine inversion, with the fundus of the uterus at external os. It was reduced. She received blood transfusion. In this case the management of partial uterine inversion is discussed.

HISTORY OF PRESENT PREGNANCY

Mrs. H.M. gravida 2, para 1 had booked for antenatal care at Ilala district hospital at the gestation of 20 weeks. She made five subsequent visits during which her blood pressure was found to be normal. Her haemoglobin was 8.5g/dl in three different occasions. She was kept on Ferrous sulphate 200mg and folic acid 5mg daily both orally. The haemoglobin had then risen to 9g/dl in the last visit. She denied to history suggestive of recurrent malaria attacks or urinary tract infection. She used to have two meal daily. She denied to the history suggestive of bleeding disorder or blood transfusion before. At exactly 39 weeks of gestation she spontenously started draining liquor. The fluid was clear and had fishy smell. About a half litre had drained out in 18 hours. She had no labour pain or cord prolapse. With above history she was

admitted to the labour ward.

Menstrual History

She attained menarche at the age of 15 years, her cycles used to last 28 days, with a menstrual period of 4 days. There was no history of menorrhagia or dysmenorrhea.

Gynaecological History

She had no history of sexually transmitted infection. She had intrauterine contraceptive device inserted postpartum which was removed following a desire for pregnancy.

Obstetrics History

She had uneventful spontenous verted delivery of male baby three years age. There was no history of postpartum haemorrhage. The baby's weight wa 2.7 kilograms.

Past Medical History

There was no history of present or past major illness or surgical procedure.

Family and Social History

She was a housewife. Her husband was a taxi driver. She never used to drink alcohol or smoke cigarettes. There was no history of diabetes mellitus, hypertension or tuberculosis in the family.

PHYSICAL EXAMINATION ON ADMISSION.

The patient was in fair nutritional status moderately pale, afebrile with no peripheral edema. The thyroid gland was no enlarged.

Cardiovascular system.

The pulse was 80 per minute, regular in good volume. The blood pressure was 120/80 mmHg. The apex beat was in fourth left intercostal space along the midclavicular line. First and second heart sounds were normal. There were no murmurs.

Respiratory System

Respiratory rate was 25 per minute. There was good air entry on both side. The breath sound were vesicular. There were no crepitations.

Abdominal Examination

The abdomen was distended. The liver was not enlarged. The spleen was not enlarged. The renal angles were free of tenderness or masses. The fundal height was above 36

weeks of gestation the presentation was cephalic and lie was longitudinal. The fetal heart tone was normal.

Pelvic examination.

It was done as in obstetric case No. 1. The vulva was soaked with amniotic fluid. Speculum revealed fluid leaking from cervial os. Digital examinal revealed full effaced cervix, 1 centimetre dilated. It was difficult to appreciate the position. The bony pelvis assessment showed the ischial spines were not prominent the subpubic angle was normal and sacrum could not be reached with examining finger at 10 centimetre. The sacral curve was normal. The fetal head was found engaged.

Diagnosis: Draining at term and moderate anaemia.

Plan of management

Induction of labour, intrapartum management of moderate anaemia and subsequent delivery.

Blood was taken for grouping and crossmatching and one litre of blood group A rhesus D positive was stored.

INDUCTION:

An intravenous line was inserted on her left arm using cannula gauge 16. Oxytocin drip was started with a dosage of 10 IU in 1000 millilitres of 5% Dextrose. Initial titration was 20 drops per minute which is equivalent to 10 millinuts. The speed of the drip was stepped up by 10 drops every quarter an hour. Pethidine injection 100mg and promethazine 25 mg were given intramuscularly. She had another two pelvic assessment. In both the labour was progressing well. She had a full cervical dilatation after nine hours. A second stage of labour lasted for 45 minutes. She delivered female baby weighing 2.8 kilogram. The condition of the baby was good she had Apgar scores 9 and 10 at 1 minute and 5minute respectively. An episiotomy was not required and no perineal tears were sustained. In third stage, there was a delay on seen a gush of blood and lengthening of the cord, but though, a controlled cord traction was used to deliver the placenta. The placenta weighed 400 grams. All the cotyledons were seen in maternal surface of the placenta. A part from traction there was no fundal pressure exerted. In 10 minutes she had torrential vaginal bleeding, urgent double intravenous

COPY

MINISTRY OF HEALTH – TANZANIA

MUHIMBILI MEDICAL CENTRE
P.O. Box 65.000
DAR ES SALAAM
Phone 26211

Record of Labour

Hospital reg number: 137/95

Surname (in capitals): M.
Other names: Mrs H.
Postal/residential address: Ilala, Sharifu-shamba
Date of birth: 1970 Sex: F
Religion: Moslem
Clinic/ward: 34

Husband's name: Mr A.M.

Hypersensitivity, special observation:

Risk factors: 1. Anaemia 2. Draining 3.

General information about the stay

Admission, date: 2 8 1995 time: 1000 HRS
Admitted by, name (in capitals): MAKANYIKA C.
Delivery No.: 10125

Reason for admission: 18 hours of draining at term.

Onset of labour, date: – – – time: –
Rupture of membranes, date: 1 8 95 time: 1600 HRS
Admitted from: ☑ home ☐ hosp transfer ☐ anten ward

Summary of antenatal problems:

Low haemoglobin level.
Latest Hb 9 g/dL.

Obstetric history

LMP, date	EDD, date	Gravida	Para	Living children
1 11 94	8 8 95	2	1	1.

Past pregnancy complications: Nil

Past labour complications: Nil.

Examination

General condition: fairly good.
Height: 157 cm Temperature: 37 °C
Blood pressure: 120/80 mm Hg
Urine, protein: NIL acetone: NIL
Oedema: NIL
Height of fundus: 36/40
Size of fetus: Medium
Presentation/lie: Cephalic/longitudinal
Fetal heart rate: 140 per minute
Liquor: Adequate

Initial vaginal examination

Examined, date: 2 8 1995 time: 1005 HRS
Examined by doctor, name (in capitals): DR KIMARO M. S.
Cervix, state: 80% effaced
dilatation: 1. cm
Position: –
Level: 4/5
Moulding: –
Caput: –
Membranes/liquor: Spontenous rupture of membranes

Bony pelvis
Sacral promontory: ☐ not reached ☐ just reached at.... .....cm
Sacral curve: ☐ flat ☑ normal
Ischial spines: ☐ prominent ☑ normal
Subpubic arch: ☐ narrow ☑ normal
Intertuberous distance: 4 knuckles
Remarks: ☑ adequate pelvis ☐ borderline pelvis

Resident's or registrar's opinion and management

Start Oxytocin drip 10IU in 1000 millilitres of 5% Dextrose. Initial titration 20 drops per minute, step up 10 drops every 15 minutes. Inj Ampicillin 1g Intravenous statim.

Consultant's opinion

Clinical Notes

Date (day, month, year) and time Search words	Notes. Each entry should be dated and bear name and signature of the doctor.
2.8.95 2047	Reviewed. A patient has delivered, there was a delay in seen a gush of blood and lengthening of the cord. Traction was applied to the cord. The placenta came out. The cotyledons were counted on fetal surface and found to be correct in number. She is bleeding transvaginally from time to time. Estimated 1000 mls of blood in amount. O/E Restless, In pain Pulse – rapid 110–115 per minute BP 80/60 mmHg Pallor. Afebrile P/A Not distended. soft. Liver Spleen not palpable Normal percussion Uterus – small with dimple on top. P/V Blood coming from uterus no clots. Impression Uterine Inversion Lacerated cervix Ruptured uterus Plan ① Establishment of Extra line post cystalloids 2L N/S for Oxytocin continue ② Blood for grouping & x-matching extra 4 units requested. ③ Signed consent ④ To theatre for Examination under Anesthesia

Partogram

Date (day, month, year): 2 8 95

Time: 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400

Fetal Heart Rate: 180 170 160 150 140 130 120 110 100 90 80

Liquor (I, C, M): C C C C

Moulding: +/− − − +

Cervix Descent: 10 9 8 7 6 5 4 3 2 1

ACTION LINE

Contractions per 10 minutes: 5 4 3 2 1
- More than 40 seconds
- 20 – 40 seconds
- Up to 20 seconds

Drugs and intravenous fluids: Inj Ampicillin 1g stat im

Oxytacic drops/minute	20	40	60	60	→							
Pulse per minute	86		83		86		84	86	100	110		
Temperature °C	37	36		37		36.5		37		37	36	
Blood pressure mm Hg	120/80	130/70	120/80	130/70	120/70	120/70	130/80	130/80	120/80	120/80	80/60	
Protein +/−	+	−	+			−			−		−	

ii Medical Centre, Form No. A 015

Neonate

Date of birth: 2 8 95 — Time of birth: 1945 HRS

Method of delivery plus reason for operation: Spontaneous vertex delivery

Birth weight: 2800 grams — Sex: Female.

Apgar score at 1 minute: 9 — Apgar score at 5 minutes: 10.

Condition at birth and resuscitation:
- Suction of the mucus from mouth & nose done
- General condition good

Summary of labour

Duration: First stage 7 hours — Second stage 45 minutes — Third stage ~ 30 minutes

Placenta and membranes: ☑ complete ☐ incomplete — weight 400 grams

Measured blood loss: 1000 mls — Post delivery blood pressure: 80/60 mm Hg

Oxytocic, name and dosage: ☐ IM ☑ IV

Perineum: INTACT.

Repaired by, name: —

Delivered by, name and signature: SR N. M.

Supervised by, name: SR C.M.

Notes and special remarks:

2025 HRS
PATIENT BLEEDING PROFUSELY FROM VAGINA IN SHOCK.
CALL DOCTOR ON CALL.

DR KIMARO INFORMED RESUSCITATION STARTED.

line were inserted. She had lost about 1.8 litres of blood. Blood bank was informed, rescusitation continued with copious saline and dextran 70. 40 IU oxytocin was put in a drip, she continued to bleed. Theatre was organized. Her blood pressure was 80/20mmHg. The pulse was 110 beats per minute regular.

Abdominal Examination

The abdomen was slightly distended. There was no signs of fluid accumulation. The fundus was felt at 16 weeks of gestation a "dimple" sign was felt on the fundus.

Diagnosis: Partial uterine inversion in shock.

Plan of Management

Vigilant resuscitation and reduction in theatre.

The consent was signed by the author/doctor on behalf of the Director General of the hospital, who was later informed. Three units of 500mls of blood group A rhesus D positive were available. She was taken to theatre.

Induction of Anaesthesia and maintanence was done as in Gynaecological case No. 1. She was placed in lithotomy position. The perineum was cleaned with savlon 1:20. Catheterization was done with Foley's catheter No 18.

Reduction Procedure.

The left hand of the clinician was used to palpate for the fundus. The ring was appreciated. The same hand stabilized the fundus. Using the fingers of the right hand a steady pressure was applied to reduce the inverted portion. The procedure was done transcervical. The lastly inverted portion was first to reduced. The procedure was completed in 10 minutes. The patient was transfused with three units of blood in theatre.

Reversal of anaesthesia was as in gynaecological case No.1. The blood pressure was 100/50 mmHg she was taken to postnatal ward.

POST-OPERATIVE CARE

She received a total of five litre of crystalloids and 1500mls of whole blood in 24 hours. The urinary output was 1800mls. The blood pressure remained 100/60mmHg. She continued with Ampicilline 500mg intravenous injection for 24 hours before taking orally of the remained five days. She faired well.

Post operative progress

Her general condition progressed well. She had no fever or dysuria. The lochia remained normal. The uterine involution was good. Her haemoglobin checked on third day was 6g/dl. She continued with Ferrous sulphate 200mg and Folic acid 5mg daily orally. A repeat haemoglobin in discharge was 7.5g/dl. She was advised on diet and haematenics. Her baby remained in good health.

Follow up

She was seen again after six weeks at postnatal clinic, her nutritinal status was good. The haemoglobin was 10.3g/dl. She was adviced on family planning and she was ready for progestrone only pills. She was also counselled on chances of subsequent recurrence in future pregnancies which stands at the rate of 40 per cent.

COMMENTARY.

Acute puerperal uterine inversion is fortunately rare, with a reported incidence that varies from 1 in 551 to 1 in 19,998 (1,2,3). However it is claimed that the incidence is increasing (3,4). The reason for this is unknown, but it suggests that clinicians may be presented increasingly with this potentially fatal condition. Therefore any technique that improve the management of this condition is appreciated.

The major complication for uterine inversion is postpartum haemorrhage as it had presented in this patient. Previous some authors had suggested that the shock seen is always out of proportional to blood loss. This suggesting a neurogenic component. Recent studies have demonstrated that the shock is directly related to the volume loss (5) and volume replacement remains a corner stone for rescussitation as it was done in this patient. Acute uterine inversion can occur spontenously but is frequently associated with fundal pressure. In about four-fifths of the cases some error of management is responsible, although existence of spontaneous inversion cannot be denied. The fundal placenta insertion and uterine atomy allows the condition to occur if excessive and pre-mature traction force is applied in attempt to deliver the placenta. This could be implicated in this patient. Hence call for proper management of third stage.

Immediate recognition of uterine inversion and prompt replacement of blood volume is extremely important in prevention morbidity and mortality (1,2). Depend on blood

loss, transfussion of whole blood is indicated especially when the blood loss has exceeded 1.5litres (6,8) as it was in this patient. Below that amount in patient who is not anaemic crystalloids will suffice. (1.6).

The conventional methods of managing acute postpartum uterine inversion include digital replacement, hydrostatic replacement and occasionally surgical correction (1,3). Replacement of the uterus is achieved through application of steady pressure pushing the last portion out first in. This procedure is done in theatre under general anaesthesia. Replacing the inverted uterus by using hydrostatic involve directing the tip of the nozzle, towards posterior fornix, at the same time blocking the vaginal orifice. Releasing of fluid in pressure will ballon the vagina and subsequently the uterus. This reduces the inverted uterus. In another modification, the vaginal introitus is covered with silastic ventous cup which is effectively applied by the surgeon. Fluid is pumped into the vagina, adequate hydrostatic pressure is generated which effectively reduce the inversion. This technique is said to be simple as there is availability of silastic ventouse cups in labour wards where these emergencies occur.(7). If surgery is resolted, Hantington (3) technique is used, after laparotomy, the cup of inversion is identified and Allis clamps are placed 2 cm below the ring inwards. Gentle upward traction is exerted on the clamps, and new clamps should be placed 2cm below the previous clamps and traction applied. This process is repeated until replacement has been completed. Alternatively Han (3) procedure may be used, in this technique, a longitudinal incision is made posterior portion of the uterine wall over the ring. This increases the size of the opening of the funnel and facilitate uterine replacement by Huntington method. After replacement, the hysterotomy site is repaired.

Following manual replacement the next issue is prevention of reinverison in acute state, immediate provision of ergometrine to attain uterine contraction is recommended (7). Recurrency in subsequent pregnancies is reported and it stands at the rate or 40% (1) hence on discharging the patient this vital information is communicated to the patient. She is then required to have planned delivery and blood is reserved in case of such emergency.

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ADVANCED EXTAUTERINE PREGNANCY. PATHOGENESIS, DELIVERY AND MANAGEMENT OF PLACENTA.

Name:	Mrs M.M
Age:	32 years
Registration Number:	E/103/94
Residence:	Kiwalani
Date of Admission:	20.11.1995
Date of Operation	21.11.1995
Date of Discharge:	27.11.1995

SUMMARY:

Mrs. MM, was 32 years old, Gravida 3 Para 2 was referred at 36 weeks of gestation due to low abdominal pain. The pains were assocated with fetal activity. She remembered to have had an episode of vaginal bleeding at twelveth week of gestation. Abdominal examination revealed a fetus in transverse lie, with easily palpable fetal parts. Pelvic examination revealed a distinctly palpable uterus with anteriorly displaced cervix. Extauterine Pregnancy was suspected which was confirmed radiologically. Laparotomy was done, a male baby weighing 2.5 kilogram was delivered. Placenta was successful removed.

HISTORY OF PRESENT ILLNESS.

Mrs. M.M was referred from Lugalo Military Hospital with history of low abdominal pain associated with fetal activity. She had amenorrhea of 36 weeks. The pain had started at the gestation of 7 months and increased in intensity gradually with time. It was non radiation pain.

She had no history suggestive of intestinal obstruction.

She had episode of vaginal bleeding which was painless at twelve weeks of gestation. The bleeding had lasted for 5 days. It subsided on bed rest.

She had normal micturation and bowel habit.

She denied to the history of chronic pelvic pain or dyspareunia.

She had booked for antenatal care at 20 weeks of gestation. Her booking haemoglobin was 11.7g/dl. The blood pressure was 110/70mmHg. She gained six kilogram in the

second and third trimester. Her fundal growth was corresponding with gestation.

Past Medical History

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

Menstrual History

She had attained menarche at 14 years of age. She used to have regular cycles, occuring after every 28 days. Her periods used to last for 4 - 5 days. She had no history of dysmenorrhea.

Gynaecological History

She had no history of sexually transmitted diseases and had never used any contraceptives.

Obstetric History

She had two previous spontenous vertex delivery which were uneventiful. The weight of the babies were 2.7 kilograms and 2.9 kilograms respectively.

Family and Social History

She was housewife married to a Primary School teacher. She neither used to drink alcohol or smoke cigaraties. There was no history of tuberculosis, diabetes mellitus or hypertension in the family.

PHYSICAL EXAMINATION

She was a middle age patient with good nutritional status, she was not pale, and had no edema. She was afebrile. She was weighing 62 kilograms. Her height was 160cm. Her breast and nipples were normal. The thyroid gland wasn't enlarged.

Cardiovascular System

She had a pulse rate of 80 per minutes regular with normal volume. The blood pressure was 100/70 mmHg. the first and second heart sounds were normal and there were no murmurs.

Respiratory system

The respiration rate was 19 minute the trachea was central. The chest was symmetrical and the breath sounds were vesicular and there were no crepitations.

Abdominal Examinations

The abdomen was distended up to the xiphisternum. The linea nigra was visible

together with striae albicantis. Two distinct masses were palpable. A bigger mass occupied the umbilical, epigastric and flanks, in this the fetal poles were palpated on flanks, and fetal part were easily appreciated. The fetal heart tone was heard. The fetal heart rate was 140 per minute and it was regular. A distinct mass was palpated, arising from the pelvis about 16 weeks of gestation in size and it was fixed.

Vaginal Examination

The vulva and vagina were normal. Digital examintion revealed a soft closed cervix which was anterosuperiorly displaced. Bimanual palpation revealed a bulky soft uterus of about 16 weeks of gestation. No adnexa masses.

DIAGNOSIS

Advanced abdominal pregnancy

INVESTIGATION AND RESULTS

Blood The Haemoglonin wa 10.2g/dl

She was blood group O, Rhesus 'D' positive

Urine The was no sugar or protein in the urinary specimen.

Plain Abdominal X-Ray

Anteroposterior view showed maternal intestinal shadow overlying the fetus. There was abnormally high fetal postion with absence of uterine shadow. The fetal skull configuration was normal. Lateral projection showed. The fetal skull overlapping the maternal spine.

The Radiological Diagnosis

Abdominocyesis in view of the above findings the patient was prepared for laparotomy. The consent was obtained after explaining to the patient in simple language about her obstetric complication and recommended management. She was shaved and taken to theatre.

Prepartion for laparotomy

Premedication induction and maintanance of anaesthesia was done as in gynaecological case No 1.

Laparotomy

The abdomen was cleaned with povidone iodine and spirit, then the patient was draped

in sterile linen . A subumbilical midline incision was made to open the abdomen. It was later extended round and above the umbilicus. The fetal membranes were accidentally punctured on opening the parietal peritoneum. The amniotic fluid was sucked out. A live baby was delivered and suspended head - down. The cord was identified, double clamped with straight and long artery forceps. The cord was cut in between the clamps with a pair of strong scissors. The baby was passed to an assisting nurse.

Further inspection revealed the placenta was attached to the right broad ligament, extending and englulfing the right ovary and part of the omentum. Partial omentectomy together with salpingoophorectomy was perfomed. The ascending branches of Right ovarian artery were clamped, cut and ligated with chromic catgut No. 1. The placenta and membranes were then delivered. The blood loss was estimated to be a litre. Peritoneum was inspected, no bledder was identified. The gauze count was correct. The peritoneum was closed with continuous stitch using chronic catgut No. 2-0. The fascia was identified and closed with continuous stitch suture from inferior edge to the superior using vicryl suture No. 1. The subcuntenous tissue was approximated with simple stitch using chromic catgut suture No. 0. The skin was closed with mattress stitches using silk No. 0.

The delivered baby was male weighing 2.5 kilograms. The Apgar score was 6,8 in one and five minute respectively. No congental anomalies were identified.

Anaesthesia was reversed as in gynaecological case No. 1. She was transfered later to the postnatal ward.

Post Operative

The pulse was 80 beats per minute with regular and good volume. The blood pressure was 120/70 mmHg in the first 24 hours. The respiratory rate was 18 per minute. She remained afebrile. The urine output was 1.8l. The in 24 hours. She received 3.5 litres of crystolloids. She reveived four doses of injection pethidine 100mg intramuscularly in 24 hours. She also had received a prophylaxis. Ampicillin 1g intravenous injection 8 hourly for 24 hours.

Puerperium

She remained afebrile. There was no history of abdominal distension. She was ambulant after 24 hours, and had started oral sips. She continued with ferrous sulphate 200mg twice daily and folic acid 5mg once daily for two weeks. The haemoglobin checked on third day was 9g/dl. The gauze covering the wound was changed on the third day postoperative. The skin stitches were removed on the seventh day and the patient was discharge together with her baby in good health.

COMMENTARY

The first description of Advanced Extrauterine Pregnancy was given by an Arab surgeon (1000AC) (1). In 1500 the first laparotomy for an abdominal pregnancy was performed in Switzeland by Jacob Nufer on his own wife, Elizabeth. She had five other children later on, and the baby born after the abdominal pregnancy, reached a respectable age of 77 years (1).

A literature survey produces an incidence varying from one for every 402 to one for every 50,200 deliveries (1,2). In western countries, this obstetric complication is observed in approximately one out of 10,000 deliveries (2).

A primary abdominal pregnancy is qualified by the presence of normal fallopian tubes and ovaries, without signs of rupture. No evidence of uteroplacenta fistula and the pregnancy is attached exclusively to the peritoneal surface. A secondary abdominal pregnancy occurs after tubal abortion or rupture (3). According to the history, and operative fundings, Mrs. MM pregnancy was a secondary abdominal pregnancy.

In secondary abdominal pregnancy, the critical moment is the end of first trimester, due to the rapidly growth of the embryo, also influenced by the location in the tube. The fallopian tube ruptures, the embryo, amniotic sac and the chorionic vill are then released to the abdominal cavity. A scantly vaginal bleeding may occur due to shedding off of endometrium as it was in this patient.

The conceptus gets attached to peritoneal organs and obtain a secondary blood supply. The most important factor in the pathogenesis is the presence of an adequate blood supply for the growing fetus.

The duration of the pregnancy and anatomical location mainly determine the clinical picture. Slight vaginal bleeding is only limited to the late weeks of first trimester and

at time the early weeks of second trimester. In advanced gestation abnormal lie is mostly seen. (3).

In some cases incorrect diagnosis are reached, acute appendicitis, duodenal ulcer and pelvic peritonitis especially in early gestations. While ovarian mass, mesenteric tumour, demoid cysts are differentials in far advanced gestations.

Palpation of two distinct masses, a uterus maily with displaced cervix and a soft abdominal mass with easily palpable fetal part is the key for diagnosis (2,4).

Painful fetal movements are found in advanced extrauterine pregnancy (4).

Radiological diagnosis is based on combination of different abnormalities, the main radiological sign in anteroposterior and lateral projections are, fetal overlap of maternal spine, persisting hyperflexion with transeverse or oblique lie, maternal interstinal shaddows overlying the fetus, abnormally high position of the fetus, abscence of uterine shaddow and unusual position of the fetal limbs. Hysterosalpingiograms and pelvic angiograms are reserved to condition where the dead fetus is highly suspected (5).

Ultrasonographic features include, a pelvic mass, identified as the uterus, separate from the fetus, No visible uterine wall between maternal urinary bladder and the fetus, placenta outside the uterus, abnormal fetal lie and no amniotic fluid between placenta and the fetal chest or head.

The diagnosis forms only part of the obstetric management. The most important is final management, that is assessment of the fetal condition and selection of optional time for delivery. Most authors advise a laparatomy from the moment the diagnosis in confirmed, due to the unpredictability of complications in this situation. Separation of the placenta followed by massive intraabdominal haemorrhage can occur at any moment. However postponement of laparotomy is recommended in selected cases in order ot obtain a matured fetus. Ombelet (1) recommend a criteria for conservative management, a living fetus, abscence of major congenital malformation, no signs of fetal or maternal distress and normal fetal growth during consecutive sonographic examinations.

Laparotomy and subsequent delivery, is the only altenative, in advance extrauterine pregnancy as it was in this patient. Management of the placenta is controversial as it

is influenced by its location, blood supply and vitality. (6) Complete removal of the placenta appear most logical approach when the blood supply to the placenta can easily be controlled as it was in this patient. On the other hand if doubt exists about safety, it is better to leave the placenta untouched, ligate the cord and close the abdomen. In emergency condition where there has been partial separation already followed by heavy intraabdominal haemorrhage temporary clamping or even ligation of branches of internal iliac is life saving. In some occasions, after removal of placenta the rough surface tends to oose continuously this may necessitate the use of artificial coagulating agents or abdominal pack under pressure.

Bajo (7) advocate leaving the placenta if implanted on the dorsal peritoneal surface, the mesentery or a vascular area. Total absorption is usually completed within four months. Hormonal follow up is a good indicator for the vanishing placenta.

17-B-estradiol, estriol,alpha-1-fetoprotein and human placenta lactogen. They are known to fall in the patient serum in logarithmic pattern. A colour doppler imaging is also used. A progressive increase in resistance index of utero-ovarian and subplacental vessels is indicative of vanishing placenta. Most of these surveillance method are lacking at Muhimbili Medical Centre.

In a case, where placenta is left in situ a second laparotomy is indicated to remove avascular placenta remnants particularly if the patient continue to have abdominal complaints. When a placenta is left in situ secondary haemorrhage, hypofibrinogenemia, intestinal obstruction, paralytic ileus, perforation of the bowel and persisting abdominal sinuses can occur.(4) it was for these complications and the fact that placenta was attached on surgically accessible place, it was removed in this patient. Methotraxate is advocated in patient whom the placenta is in situ by some authors (8). Rahman (9), describe the possible disadvantage due to accumulation of large quantity of necrotic tissue an ideal medium for bacterial growth. It is for similar reason intra-abdominal drainage is contraindicated. It is the authors view that methotraxate should be reserved to placenta persisting more than 4 months after operation and those with features of trophoblastic inversion.

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LONG OBSTETRICS COMMENTARY.

A COMPARISON BETWEEN THE MISGAV LADACH AND MUNRO KERR'S CAESAREAN SEGION TECHNIQUES AT MUHIMBILI MEDICAL CENTRE.

Background: In line with the resolutions of XIV world congress of Gynaecology and Obstetrics 1994, Montreal, Canada. The department of Obstetrics and Gynaecology of Muhimbili Medical Centre, had introduced a new technique of ceasarean section, Misgav Ladach. Previously Munro Kerr's subumbilical midline incision was mostly performed. The introduction was an attempt aimed at establishing a simplest, safe and economical technique. The author had find it imperative to compare the two techniques.

Objectives: To compare the operating time short term morbidity and selected economic advantages between the two techniques at Muhimbili Medical Centre.

Study design: Prospective randomized controlled comparative study.

Material and Methods: In this study 340 women undergoing caesarean section were recruited. Out of them 169 were randomly allocated to Misgav Ladach technique against 175 for Munro Kerr. In all cases a pre-informed consent was obtained. Diabetics, known sicklers, women with previous caesarean section scar and those who had bleeding disorders were excluded.

Main outcome

The operating time, amount of bleeding, rate of postoperative wound sepsis, ambulatomy time and the average postoperative hospital stay. All were compared.

Main results

The difference was demonstrated in operating time, ambulatory time and postoperative hospotal stay. No statistical difference was demonstrated in amount of blood loss and wound sepsis in amount of blood loss and wound sepsis. In Misgav Ladach 75% of women had operating time less than 30 minutes compared to 8.8% in Munro Kerr (P=0.0000). While 70.&% in Misgav Ladach could get out of bit within intial 24 hours compared to 15.3% (P=0.0001). On postoperative hospital stay 68.6% in Misgav compared to 46.1 in Munro Kerr had stayed in less then six days (P=0.0001). A total of 86.9% in Misgav and 87.7% in Munro Kerr had blood loss within acceptable

limit (P=0.84). Sepsis rate was 13% in Misgav and 15% in Munro Kerr (P=0.64).

Conclusion

Misgav Ladach has short operating time, out of bed time and postoperative hospital stay when compared to Munro Kerr at Muhimbili Medical Centre.

Recommendation

To improve efficiency and to achieve economic benefits, Misgav Ladach technique should be encouraged.

INTRODUCTION AND LITERATURE REVIEW

The term caesarean section, contrary to popularly belief is derived neither from fabulous story of the birth of Julius Caesar in 100 B.C nor from Roman Law which prescribe the operation when a mother died near term with a fetus still alive. It is said to have come into being during the middle ages from the Latin verb "Caedere" to cut (1).

Rousset (2) in 1581, worked seriously in Caesarean section but mortality was extremely high, hence the procedure was almost prohibited.

Lepage (3) in 1878 stated that: not a single woman operated upon in Paris between 1799 to 1877 had recovered. Measures like symphysiotomy, craniotomy and even embryotomy were preferred. In Lepage time, the uterine incision which was midline, (classical) was left unsutured as it was widely believed that suture material encourage suppuration as a complication.

Porro(4) 1876 introduced an alternative approach, after extraction of the fetus, he amputated the body of the uterus, remove ovaries and fix the cervical stump to the lower end of abdominal wound. Bleeding was controlled, but such procedure marked the end of obstetric carrier of the patient. However, statistically, mortality was significantly reduced to a rate of less than a half of the previous.

The satisfactory method of suturing the classical incision was popularised by Sanger (5) 1882; and consisted of deep and superficial rows of sutures, with some addition of antiseptic techniques, the mortality was further reduced by 3 per cent.

Although previously described by Kehrer (1) 1882, it was accepted universally as Munro Kerr's lower segment Caesarean section. He contended that the lower uterine

segment scar was stronger and less liable to rupture.

Munro Kerr's vindication came at 12th British Congress of Obstetrician and Gynaecologist 1949 (1), several papers were read demonstrating wide adoption of the procedure and significant reduction of maternal mortality rate. Although retired, he attended and ended by saying "Alleluia". The strife is over, the battle is done. Despite Munro Kerr gratification, Caesarean section is known not to be so safe.

Potentially avoidable death do occur. The main causes of morbidity and mortality are said to be haemorrhage, sepsis, pulmonary embolism and anaesthetic accidents (6).

Refinement is necessary to make caesarean section as safer as possible, through local researches.

CAESAREAN SECTION AT MUHIMBILI MEDICAL CENTRE.

The rate of Caesarean section at Muhimbili is 12 per cent according to 1996/1997 local theatre reports. The average number of Caesarean section per month is 193. The rate of 12 percent is high but comparable to other Centres in the world with high rates. FIGO conference report of 1994 in Canada had shown various caesarean delivery rates in big hospitals (7). Ireland Maternity Hospital Dublin 1987 it was 10%, in Zaria Teaching hospital - Nigeria 9.8%, in Kuwait Hospitals 9 - 10%, In University Teaching hospital

Singapore 10 - 12%, In India SJH - Delhi hospital 8.1%, KEM - Bombay 9.8%, KMCH - Madras 10.7%, RGK - Calcutta 21.3% and MCH - GOA 36.1% which was the highest.

The main indications for caesarean section at Muhimbili includes fetal distress, due to various causes, obstructed labour due to cephalo- pelvic disproportion, failed induction, cervical dystocia, malpresentation, previous caesarean section, cord prolapse, placenta previa and bad obstetric history.

The rate of classical caesarean section is low, in 1996 it was 1.03 per cent. Before introduction of this study. All caesarean sections were done according to Munro Kerr's tradition procedure, except for the abdominal incision, 77 per cents were sub-umbilical midline incision and 23 per cent were pfanneinsteil incisions.

The average operating time from incision to the last stitch was 30 - 45 minutes.

Signing an informed consent before the operation is a pre-requisite.

Documentation and estimation of blood loss intraoperatively was relatively poor but it appeared to vary from 300mls to 1500mls according to patient postoperative reports.

Nearly all the caesarean section in 1996/97 were done under general anaesthesia. Halothane gas was the main anesthetic agent. Halothane has a property of relaxing the myometrium hence causing undue bleeding (4).

Postoperative the patient were taken to postnatal ward, and were separated from their infant at least for 24 hours. During this acute period, the mothers were given pethidine 100mg six hourly for analgesia. Also were maintained on intravenous fluids. Oral feeds and ambulation started after 24 hours if there were no complications like febrile illness, ileus, hypotension or bleeding. Antibiotics were given if were indicated.

Patients were usually discharged on 7th day, after removal of the stitches on the same day. The discharging doctor had to inspect the wound and rule out any sero-sanguinous discharge, pus discharge bleeding or failure to heal. The general condition of the patient, which include, body temperature, pulse, pressure, chest condition, involuting uterus and lochia were also checked. If normal the patient was discharged to be seen at postnatal clinic after six weeks.

MISGAV LADACH AND MUNRO KERR'S TRADITIONAL CAESAREAN SECTION.

Early, December, 1996, the Department of Obstetrics and Gynaecology of Muhimbili University College of Health Sciences had organized a two weeks intensive course on Misgav Ladach procedure.

Dr. Kenneth Bjoklund from Uppsala Sweden was the instructor. A group of six postgraduate doctors (Resident doctors) underwent the training. At the end of two weeks all of them were capable of performing Misgav Ladach caesarean section independently.

Technical Details.

Misgav Ladach:

Right handed surgeon on right hand of the patient. A straight transverse skin incision is made 3 centimetres below the level of anterior superior iliac spine. The incision length is about 17 centimetres.

A deeper incision of about 3 - 4 centimetres is made transversely at the middle. This incision is deepened to the rectus sheath without disturbing much of the sub-cutenous tissue. With a knife the fascia is slightly opened. Using the tip of partly opened scissors placed in a cut fascia the scissors is advanced laterally in both directions. Then the two index fingers are insinuated between the rectus muscles. Meticulously one finger is advanced caudally and the other cranially. The rectus muscle bellies are now separated. The surgeon and the assistant pull the muscles and sub-cutenous tissue forcefully and laterally.

A small perforation is the made in the parietal peritoneum bluntly using the surgeons index finger. It is then widened by using other fingers.

Having excluded uterine torsion or dextro rotation and confirm the presentation. A Doyen's retractor is introduced.

A centimetre or so of loose uterovesicle fold is identified picked up with artery forceps above and below the midline. The scissors is shipped underneath the visceral peritoneum laterally on both side to free the peritoneum. It is withdrawn opened and advanced to cutting the visceral peritoneum transversely in full width.

The upper forceps is removed, the lower is held up by the assistant and the upper end of the urinary bladder is gently separated by two fingers. The lower forceps is also removed. Pushing the bladder down with swab may cause much oozing and is not recommended.

The Doyen's retractor is then slipped into the retrovesical space thus formed.

A 3 - 4 centimetres transverse incision is then made in the lower segment using several gentle strokes of the scalpel, keeping the scalpel at right angle to the uterine wall until the membranes are seen. Shinning through. The incision is extended using 7 inch curved mayo scissors (The membrane should now bulge). The fingers are finally used

to stretch the incision to its full length.

The membranes are ruptured and the hand is used to fish out the head in cephalic presentation.

The cord is double clamped with straight artery forceps and cut in between using 7 inch scissors. The baby is handed to a nurse for rescussitation. Placenta is removed manually. The uterus is exteriorized and massaged.

Haemostasis on uterine incision is temporary achieved with green armitage.

The uterus is sutured from the surgeons side in a single layer using chronic catgut No 1 in locked stitch.

The visceral and parietal peritoneum are never sutured.

The greater omentum is pulled down and extended to cover the uterine incision.

The fascia is identified and is sutured with vicryl No 1 or any equivalent absorbable material. The fascia is closed in continuous running suture.

The skin is closed with only about 3 - 4 mattress suture. In suturing the skin a non absorbable stitch mainly silk No. 3 is used.

Patient start feeding immediately as the anaesthetic worn off.

Stitches are usually removed on the 5th day.

Munro Kerr's Operative Technique

A sub-umbilical midline incision is made. The abdominal wall is opened in layers from above to the upper margin of the symphysis pubis. The length of the incision should be long enough to allow the fetus to be delivered without difficulties. Sharp dissection is performed to be level of the anterior rectus sheath, which is then freed from the sub-cutenous tissue.

A full strip of fascia is now exposed. Incision on the rectus sheath is done with either a scalpel or a pair of scissors. Then it is extended throughout the length. The rectus and pyramidalis muscle at caudal end of the incision are separated in midline.

The transversalis fascia and preperitoneal fat are careful dissected beginning near the upper pole of the incision to reach the underlying peritoneum.

The peritoneum near to the cranial end of the incision is then elevated with two haemostatic forceps placed 2cm apart. The tended fold of peritoneum is palpated to

rule out any inclusion of the omentum or even the bowel which could have adhered to the peritoneum. The peritoneum is then incised superiorly and inferiorly to just above the peritoneal reflection over the urinary bladder. Bleeding site are immediately clamped and ligated with chronic catgut No 2- 0.

The uterus is quickly but carefully palpated to identify the size and presenting part of the fetus. The degree of dextrorotation which is commonly there is ascertained. This enables the surgeon to put his incision properly at the middle. Moistened laparotomy pack is put in each lateral side of the uterus to mop up amniotic fluid and blood spilled off, during the procedure.

The uterus is opened in a similar pattern as in Misgav Ladach. There is no difference in delivering the baby between the two methods, except the placenta which is delivered by controlled cord traction. The uterine cavity is mopped with dry pack to remove all remained clots and membranes. Temporary haemostasis is achieved with the help of green armitage. At Muhimbili, the uterus is closed in double layer without being exteriorized. The initial layer is done on locked stitch and the second layer in continuous suture both with chromic catgut No 0.

The visceral peritoneum is closed with catgut No 2 - 0.

The packs are then removed. The closure of parietal peritoneum is done using catgut No. 2-0.

The rectus muscles are allowed to fall into place and the overlying rectus fascia is closed with continuous running suture using vicryl No. 1.

The subcutaneous tissue is usually need not to be closed separately if it is 2 cm or less in depth. If sutured then catgut No 2 - 0 is usually used. The skin is then closed with vertical mattress suture using silk 3 - 0 or 4 - 0 their equivalent non absorbable suture. The stitches are usually removed on the seventh day.

The Review of literature and discussion on distinctive features between Misgav Ladach and Munro Kerr's caesarean section as it is done in Muhimbili Medical Centre.

Misgav Ladach is a new technique named after Misgav Ladach Hospital in Jerusalem, Israel. It was advocated by Dr. Michael Stark. He based on Professor Joel Cohen's

time and motion studies in improving Obstetrics - Gynaecological surgery (7).

Dr. Stark had based his ideas on the principle of surgical minimalism (8) only those surgical manoeuvers that are shown to be necessary are performed and hence minimal tissue disruption, minimal bleeding, short operating time and economical utilization of surgical consumable material. The second principle is that of operating in harmony with physiological and anatomical considerations (8). Thus the level of skin incision and the level of separation of the rectus muscles is chosen carefully to be well away from muscle insertion sites. This means that the least force is needed at separation and the least disruption is likely of blood vessels and nerves which are most vulnerable near the site of muscle fixation (7,8,13). Following these arguments Misgav Ladach procedure is anticipated to be quicker and with minimal bleeding.

In previous studies, the rate of wound sepsis had been compared between pfanneinstiel incision and Joel Cohen incision. Mowat and Bonnar (9) had shown less wound sepsis in Joel Cohen incision. In this study the subumbilical midline (vertical) incision is compared to Joel Cohen, although not as a single factor.

In Misgav Ladach procedure the sub-cutenous tissue is not disrupted except in the middle and hence chances for haematoma formation are minimal this is according to Stark and Finkel (10) local tissue damage due to ischaemia resulting from haemostatic tying of vessels is not seen, as the vessels are only stretched away taking advantage of their elasticity (10). Hence minimal bleeding and postoperative analgesia requirement is anticipated in Misgav Ladach procedure. Depp (11) had argued, a low vertical incision (as one in traditional Munro Kerr's caesarean section), allows expedient access to the lower segment, better exposure, good accessibility to a bleeding vessels - hence enable quick steps to be taken to facilitate haemostasis, hence less bleeding. In Depp's point of view, a vertical incision has less bleeding.

In Misgav Ladach procedure the parietal peritoneum is opened using fingers thus the risk for traumatizing the underlying bowel omentum or urinary bladder is slim (12) unlike Munro Kerr where the parietal peritoneum is opened with a knife and scissors. In Misgav Ladach, the use of packs and towel is avoided. The peritoneal cavity is left undisturbed as much as possible. The spillage of non - infected liquor and blood is not

mopped.

In Misgav Ladach procedure the uterus is exteriorized and massage. This facilitates contractions and hence minimal bleeding (6,7). Although exteriorization and traction on the uterus after delivery of the fetus facilitate suturing and decrease blood loss, it is argued more benefit may be gained by avoiding it (16). Patient are commonly observed to complain of pain or to be more nauseous. Furthermore Handler and Bromadge (17) using Doppler monitoring, demonstrated a higher incidence of venous air embolism when the uterus is exteriorized rather than left inside. Possible explanations may be that traction could enlarge the uterine air sinuses, providing more exposure to air, and that exteriorization raises, the uterine incision above the level of the heart, thereby increasing hydrostatic gradient between the two areas and promoting venous air embolism (18,19) in traditional Munro Kerr's caesarean section the uterus is sutured without exteriorization.

The uterine incision is closed in two layers in traditional Munro Kerr's caesarean section. This is contrary to Misgav Ladach were a single layer closure is a used. Hauth et al (20) analysed outcomes of 906 woman who underwent a low transverse uterine incision in a prospective randomized study. He found a one layer closure was safe and effective as two layer closure(14,15,16).

Neff (21) found the rate of postoperative febrile morbidity to be directly related to number of foreign material (suture) used. It is then anticipated Munro Kerr's group to have more incidences of postoperative febrile morbidity.

Unlike Munro Kerr's caesarean section the neither visceral nor parietal peritoneum are closed in Misgav Ladach. Pietrautoni (22) left only the parietal peritoneum unsutured in a study of 248 caesarean section. He found no differences when compared to controls in maternal postoperative complication. Hull et al (23) in a study of 113 caesarean sections reported shorter operation times, less oral analgesia and less bowel stimulants administered when visceral and parietal peritoneum were left open. No adverse effects on immediate postoperative recovery were found. However in both of these studies the allocation to study groups was based on the last digit of the woman medical record. This failure to blind randomization could have led to a selection bias.

Irion et al (24) found postoperative ileus to resolve more rapidly in non-closure group. However he found febrile morbidity to be similar between the two groups. Irion et al (24) confirmed a shorter operating time when peritoneum is left unsutured. The difference of 6 minutes in operating time. He commented that this difference is not of clinical importance although it is statistically significant.

Closure of the fascia is commonly performed in a standard single layer using synthetic suture. A rule of thumb in both methods is to place the suture as far apart as they are from the wound edge, at least 1 centimetre from the edge(27). There is an area of collagenolysis, that occur up to 10 mm from the edge of incised fascia. The wound closure constructed within this zones are weaker (27). The rate of wound dehiscence had shown to be less in transverse when compared to the vertical incision (28).

The skin is closed with a few large stitches in Misgav Ladach procedure and multiple mattress about 6 - 10 in Munro Kerr's procedure. A simple closure like that of Misgav Ladach is said to be quick and associated with low incidence of serosangnium fluid collection underneath.

In Misgav Ladach the patient is rapidly mobilized and is allowed to drink straight after operation. This attributes to a quick recovery and shorter hospital stay for the patient. Also has less risk of thrombosis, infection and ileus (28).

In summary the use of cohen incision in opening the abdomen, suturing of uterine incision in single layer and non-closure of peritoneum distinguishes Misgav Ladach from Munro Kerr's technique. In the later either subumbilical or pfanneinsteil incision is used to open the abdomen, uterus is closed in double layer and the peritoneum is closed.

Radionale.

Among other resolutions of the XIV world congress of Gynaecology and Obstetrics of September 1994, Montreal, Canada, had called for obstetricians to constantly sought for a simplest and safest method of caesarean section. The department of Obstetrics and Gynaecology of Muhimbili Medical Centre responded by introducing a newer method, Misgav Ladach. Studies have been published indicating that, the new procedure has less, postoperative febrile morbidity, rate of wound sepsis, postoperative

pain, rate of wound dehiscence and adhesions. Also it has shorter operating time and postoperative hospital stay. Holmgren (6,9) and Stalk (8) had demonstrated the above properties in different comparative studies done in Sweden and Israel respectively.

The author had find it important to compare the newer procedure with Munro Kerr traditional caesarean section which is widely done at Muhimbili. The reasons for comparison, were based on the argument that the circumstance on which the previous studies were done were different when compared to Muhimbili in following aspects.

(i) The previous studies were based on Elective cases. In Muhimbili the majority of cases are secondary (Emergency) caesarean section. It has been demonstrated that emergency caesarean section are associated with increased rate of postoperative febrile morbidity, wound infections and wound dehiscence (6,10).

(ii) The mode of anaesthesia in Muhimbili is General Anaesthesia and halothane is the main anaesthetic agent. Halothane has a property of relaxing myometrium hence causing more bleeding. In Sweden and Israel, epidural and spinal anaesthesia are mainly used. These procedures lower the blood pressure hence minimal intraoperative bleeding.

(iii) No single study has compared Misgav Ladach with subumbilical (Vertical) midline incision -Munro Kerr caesarean section. The previous studies had compared it with pfanneinsteil Munro Kerr's.

This study also could establish a baseline data for future use. Such data could be use to ascertain the progress made with time.

Misgav Ladach and Munro Kerr technique as there done at Muhimbili Medical Centre are equally efficient, cheaper and economical hence:-

Null Hypothesis.

1. There is no difference in operating time between Munro Kerr traditional caesarean section and Misgav Ladach caesarean section.
2. There is no difference between the two methods (Munro Kerr and Misgav Ladach) caesarean section in the amount of intraoperative bleeding.
3. The rate of abdominal wound sepsis is same between Munro Kerr and Misgav Ladach caesarean sections.

4. The rate of wound dehiscence is same between Munro Kerr and Misgav Ladach Caesarean sections.
5. The postoperative analgesic need is same in patient who had Munro Kerr caesarean section when compared to Misgav Ladach caesarean section.
6. The average number of surgical sutures used per procedure is similar in both techniques.

Broad Objective

To compare the operating time, short term morbidity and selected economic advantages between the two methods in Muhimbili Medical Centre.

METHODOLOGY

STUDY DESIGN: Prospective, randomized controlled comparative study.

STUDY PLACE: Muhimbili Medical Centre, Obstetrics operating theatre and Obstetrics wards.

STUDY POPULATION: Patient admitted between 15th December 1996 to 14th June, 1997 with a condition requiring caesarean section as a mode of delivery.

STUDY PERIOD: Six calendar months. 15th December, 1996 to 14th June, 1997.

SAMPLE SIZE: It was calculated using the following formula.

$$N = \frac{(Za/_2 + Zb^2\ [P^1 - (1 - P^1) + P^2(1 - P^2)]}{(P^1 - P^2)^2}$$

In August 1996, A pilot study was conducted to test the protocol, 63 patient were analysed. The rate of postoperative wound sepsis (Abdominal wound) was found to be 6% in Misgav Ladach and 15% in Munro Kerr's group.

Hence P1 = 0.06

P2 = 0.15

$$N = \frac{10.4\ [0.06\ (1 - 0.06 + 0.15\ 91 - 0.15)]}{(0.06 - 0.15)^2}$$

N = 170

Outcomes for comparisons

. Amount of bleeding.

. Operating time.

- Postoperative wound sepsis.
- Rate of wound dehiscence.
- Ambulatory time (post operative out of bed time).
- Average postoperative hospital stay related to the healing of abdominal wound, febrile morbidity and vaginal discharge.

A sample size of 170 in each arm of the study was enough. Testing intraoperative bleeding

N = 80, operating time N = 19. Hence, Postoperative wound sepsis was the most powerful factor in determination of the sample size in this study.

Inclusion Criteria:

Patient with obstetric condition required caesarean section. They were explained in simple language about respective indication for caesarean section and some aspects of the study. They had to agree and sign a written consent.

Exclusion Criteria:

Patient with bleeding disorders, diabetes mellitus, sickle cell anaemia and those who had previous caesarean section were excluded from the study.

Allocation:

Patient were allocated to arm 1 and 2. Arm 1 consisted of Misgav Ladach caesarean section group and Arm 2 Munro Kerr traditional caesarean section group.

Selection:

Women qualifying for the study were randomly allocated to either of the procedure. the randomization was done by computer. A system of sequentially numbered sealed opaque envelopes containing the treatment allocations was used (32). The envelopes were opened in the operating room, shortly before the beginning of caesarean section. The allocated procedure was strictly respected.

Data collection.

A questionnaire with open and closed questions was provided to the surgeon. Each patient had her own questionnaire. (Refer Appendix i) Six postgraduate doctors were involved in the study. After each operation the surgeon had to fill a questionnaire. It had the surgeon's name, patients identity, indication and type of caesarean section.

Detail of the procedure and complications encountered. The time keeper was a runner-nurse. Operating time was recorded from the beginning of the incision to the last stitch, using a big watch placed in the theatre.

Blood loss was estimated at the end of each procedure by the surgeon and anaesthetist as explained by Morgan (31).

Postoperative care of patient at Muhimbili Medical Centre is usually under the Intern doctor. The Intern Doctors were blinded about the study.

Retrospective information was obtained by interviewing the patient and extraction of information from the patient case notes. This was done by the principal investigator.

Patient were allowed to get out of bed when they are able to. The information on out of bed time was recorded by a nurse incharge of the ward who was aware of the study.

The permission to discharge the patient was under the Intern doctor, before the patient was discharged, the general condition of the patient was inspected. The wound was inspected and the stitches removed. The lochia was examined. If the doctor is satisfied, the patient was discharged. If the child is still under treatment the mother continued to stay in the wards but it is indicated she is a Nursing mother.

Important Definitions

Wound healing.

Normal - means, the wound has closed, no discharge of pus or serosanguinous fluid. The margins are well apposed.

Complicated - means, there is wound dehiscence.

Infection: means the wound has visible pus discharge.

Others: means extensive induration, cellulitis, discharge serosanguinous fluid and margin not well apposed.

General condition

Normal postoperative improvement: patient had remained with normal vital signs, temperature, pressure and pulse, No chest infection, No signs of ileus or peritonitis, the uterus is involuting, the lochia is not offensive.

Complicated: Febrile morbidity, vaginal bleeding , chest infection, ileus, offensive lochia, thromboembolism phenomenon.

Limitations of the study

1. Operating Assistants didn't receive formal training on newer method. This had led to unnecessary confusions during operations which wasted time.
2. Muhimbili Medical Centre, Maternity and operating theatre staff were not excluded from the study. Biasness was possible especially on postoperative care.
3. Operated patient were sharing a room irregardless of the procedure, some of ones decision could be influenced by others, example on request for extra analgesia.
4. The data was obtained from difference sources in different time, hence liable to errors.

RESULTS:

Between 15th December, 1996 and 14th June, 1997 a total of 1193 caseraen sections were done. Using the protocol 340 women were recruited. 169 women were randomly allocated to Misgav Ladach study group and 171 to Munro Kerr traditional caesarean section group. Both groups were similar with respect to maternal age, parity, gravidity and indications for caesarean section (Table 1) and as shown in illustrative histogram 1,2,3 and 4. The operative techniques for each procedure was strictly followed. A total of 264 women were left out using the exclusion criteria.

Blood Loss

Intraoperative blood loss was estimated as explained by Morgan (31). The blood loss of 500mls and below was considered to be within the normal limits in both of the procedure. A loss of more than 500mls was considered excessive. 87% of women in Misgav Ladach group had blood loss of 500mls and below 13% in the same group had excessive blood loss. While in Munro Kerr's group. 87.7% had blood loss within the normal limits and 12.3% had excessive blood loss. (Chi-square = 0.04, p = 0.84) The different is not statistically significant (Table 2).

Operating Time

75% of women in Misgav Ladach group had their operation completed in less than 30 minutes compared to 8.8% in Munro Kerr's group. 25% of women in Misgav had

their operation complete in 30 minutes or above, compared to 91.2% in Munro Kerr. (Chi - square = 156.6 P = 0.0000)

The difference is statistically significant (Table 2).

Wound healing and sepsis.

In each group the women were further categorized according to the state of abdominal wound on the day of removing the stitches.

(i) Normal. properly healed no discharge, pus or gaping.

(ii) Complicated: wound dehiscence.

(iii) Infected, obvious pus is seen.

The sepsis rate was 13% in Misgav Ladach and 15% in Munro Kerr. (Table)

(Chi square = 0.89, p = 0.64)

The difference is not statistically significant.

Post operative out of Bed Time.

Patient were compulsory on bed for the initial 18 hours in both procedures. (the 18 hours were decided in the operating protocol). The information that they could come out of bed when they think they could manage. The out of bed time was noted by a nurse incharge of the ward. One patient in each group had managed to come out of bed at 18 hours postoperative. That was the earliest. Two patient in Munro Kerr groups had come out of bed after 96 hours. The mean out of bed time for Misgav Ladach was 24 (SD 2.0) hours. While in Munro Kerr was 48 (SD 1.0) hours. Out of bed was categorized in three groups:-

(i) Below and equal to 24 hours

(ii) Between 25 - 49 hours

(iii) 50 hours and above

The difference is statistically significant (Table 2).

Postoperative Hospital stay in Days

The discharge of the patient was decided by the intern doctor who was not informed about the study. The mean postoperative hospital stay for Misgav Ladach group was 5.5 days and Munro Kerr 7.2 days (SD 0.5, 0.6 respectively). The shortest hospital stay was 5 days which had occurred in Misgav Ladach group. The longest hospital stay

was 13 days which had occurred in Munro Kerr group. Women were categorised in 2 groups, (i) Those who had stayed in six days or less and (ii) those who stayed for more than six days. 68.6% in Misgav group had stayed for six or less days, compared to 46.1% in Munro Kerr's group. While 31.4% in Munro Kerr had stayed for more that 6 days, compared to 53.9%, (Chi - square 18.2, $P < 0.0001$)

The difference is statistically significant (Table 2).

Postoperative Analgesic Need

The initial single dose of analgesia (Pethidine) was given to every patient in the study. The dosage were modified according to individual's weight. Subsequent doses where than provided on patient request. The women were categorized in two groups. Those who requested a total dose equal or less than 400 mg and those who requested more than 400 mg. 87.2% of women in Misgav group requested equal or less than 400 mg as compared to 86.6% in Munro Kerr's group. While 12.8 percent requested more than 400mg in Misgav ladach compared to 13.4 percent in Munro Kerr.

(Chi-square = 0.046, p= 0.83)

The differences is not statistically significant (Table 3).

Antibiotic usage

According to the protocol each surgeon was free to decided out of clinical presentation whether the patient is to be given intraoperative antibiotics.

(Chi - square = 3.22 P=0.07)

The difference is not statistically significant (Table 3).

General condition (Postoperative)

Women were categorized in two groups. Normal and complicated group. (according to the definition given in the methodology). In Misgav Ladach group 14.2% of women had complicated postoperative condition and in Munro Kerr 17% had complicated postoperative condition. While 85.8% in Misgav Ladach had normal Munro Kerr.

(Chi- square 0.30 P = 0.55) The difference is not statistically significant.

The average number of sutures used per procedure was documented. In Misgav Ladach technique it was 3.67, while in Munro Kerr technique it was 7.5.

TABLE 1

Distribution of indication for Caesarean sections between Misgav Ladach and Munro Kerr's group

	Misgav Ladach	Munro Kerr
Fetal distress	62 (37%)	64 (38%)
Cephalopelvic disproportion	49 (29.4%)	54 (31.7%)
Cervical dystocia	15 (8.8%)	11 (5.8%)
Malposition/Malpresentation	28 (17.6%)	33 (18.8%)
Others	15 (8.8%)	9 (6.3%)

(Chi square 1.37, P = 0.50238)

TABLE 2

A comparision in blood loss, operationg time, hospital stay and out of bed time between the Misgav Ladach ana Munro Kerr group.

	Misgav Ladach	Munro Kerr	P Value
1. Intraoperative blood loss			
≤ 500 mls	147 (86.9%)	150(87.7%)	
> 500 mls	22 (13.1%)	21(12.3%)	P=0.84
2. Operating time			
≤ 30 minutes	127 (75%)	11(8.8%)	
> 30 minutes	42 (25%)	160(91.2%)	P=0.0000
3. Days of Hospital stay			
≤ 6 days	116(68.6%)	78(46.1%)	
> 6 days	53(31.4%)	92(53.9%)	P<0.0001
4. Out of bed			
≤ 24 hours	121(70.7%)	26(15.3%)	
25 - 48 hours	43(26.3%)	124(73.3%)	
49 + hours	5(3.7%)	21(11.4%)	P<0.0001

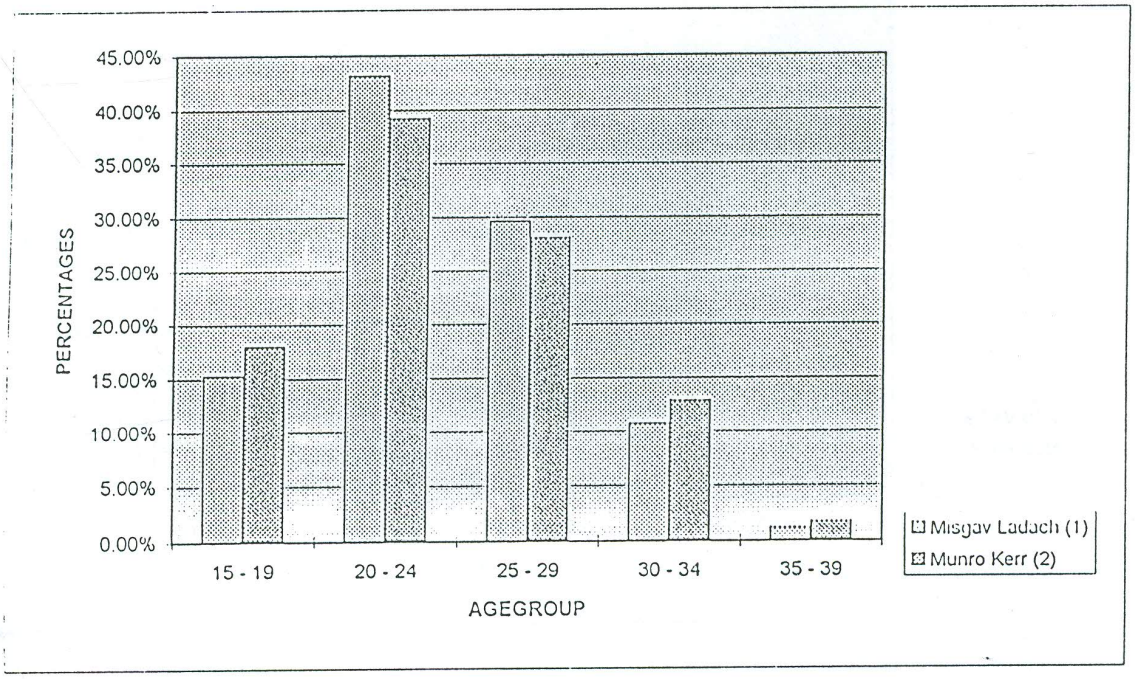
TABLE 3

Post operative Analgesia Need and Intraoperative use of Antibiotica in Misgav Ladach and Munro Kerr Groups

Characteristic	Misgav Ladach	Munro Kerr	P=Value
Post operative Analgesia (Pethidine)			
≤ 300mg	147(86.9%)	148(86.5%)	
> 300mg	22(13.01%)	23 (13.4%)	P=0.83
Antibiotics			
Administered	40 (24%)	28(16.3%)	
Not Administered	129.(76%)	143 (83.7%)	P=0.07

HISTOGRAM 1.

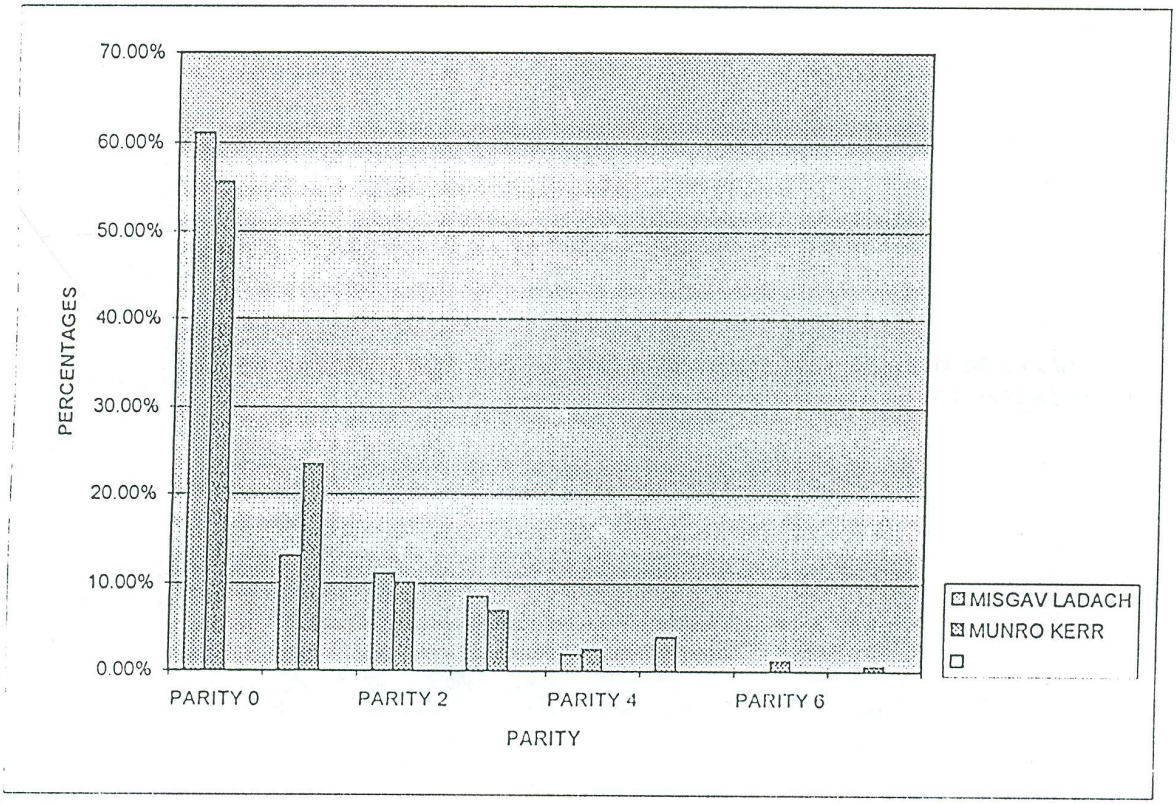
'DISTRIBUTION OF THE AGEGROUPS BY TWO METHODS MISGAV LADACH (1) AND MUNRO KERR (2)



Agegroup	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39
Misgav Ladach (1)	15.30%	43.20%	29.60%	10.70%	1.20%
Munro Kerr (2)	18%	39.20%	28.10%	12.90%	1.80%

HISTOGRAM 2

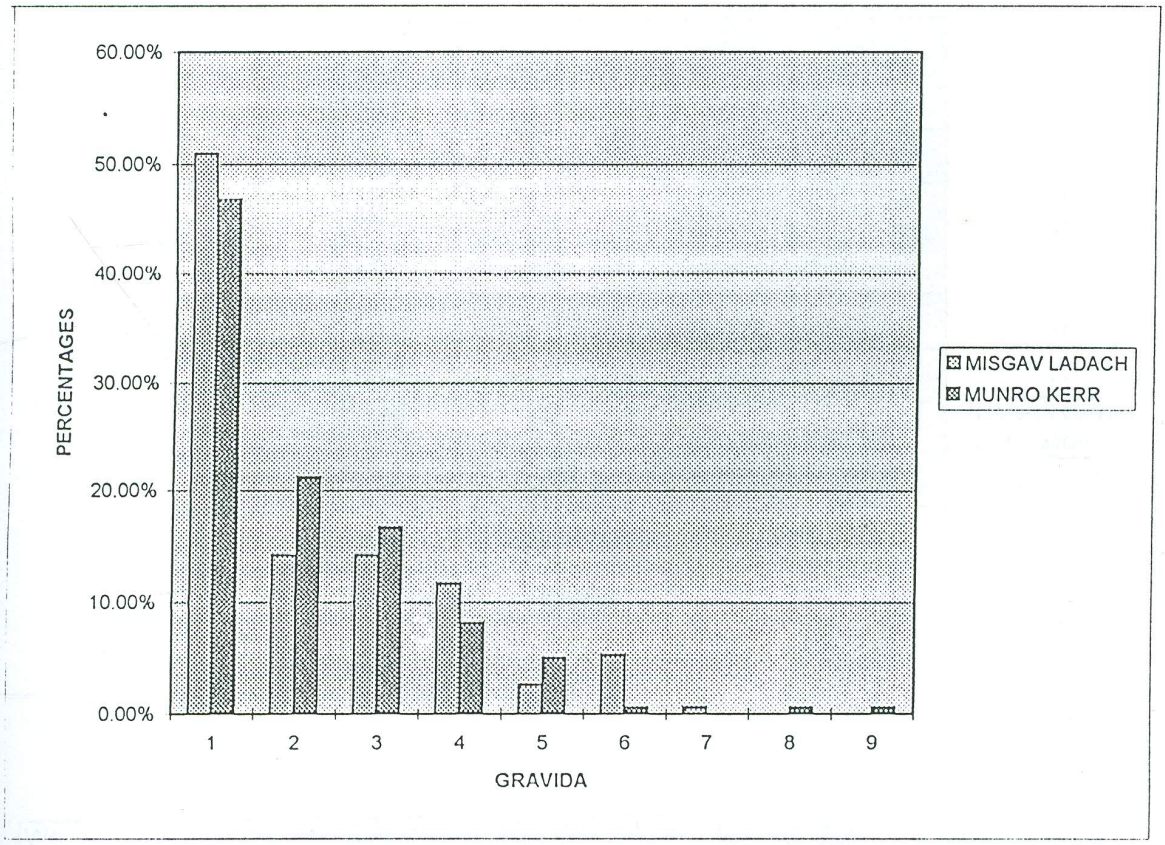
'DISTRIBUTION OF PARITY AMONG THE TWO GROUPS MISGAV LADACH (1) AND MUNRO KERR (2)



PARITY	PARITY 0	PARITY 1	PARITY 2	PARITY 3	PARITY 4	PARITY 5	PARITY 6	PARITY 7
MISGAV LADACH	61.10%	13.10%	11.10%	8.50%	1.90%	3.90%	0	0
MUNRO KERR	56%	23.40%	10.10%	6.90%	2.50%	0	1.20%	0.60%

HISTOGRAM 3.

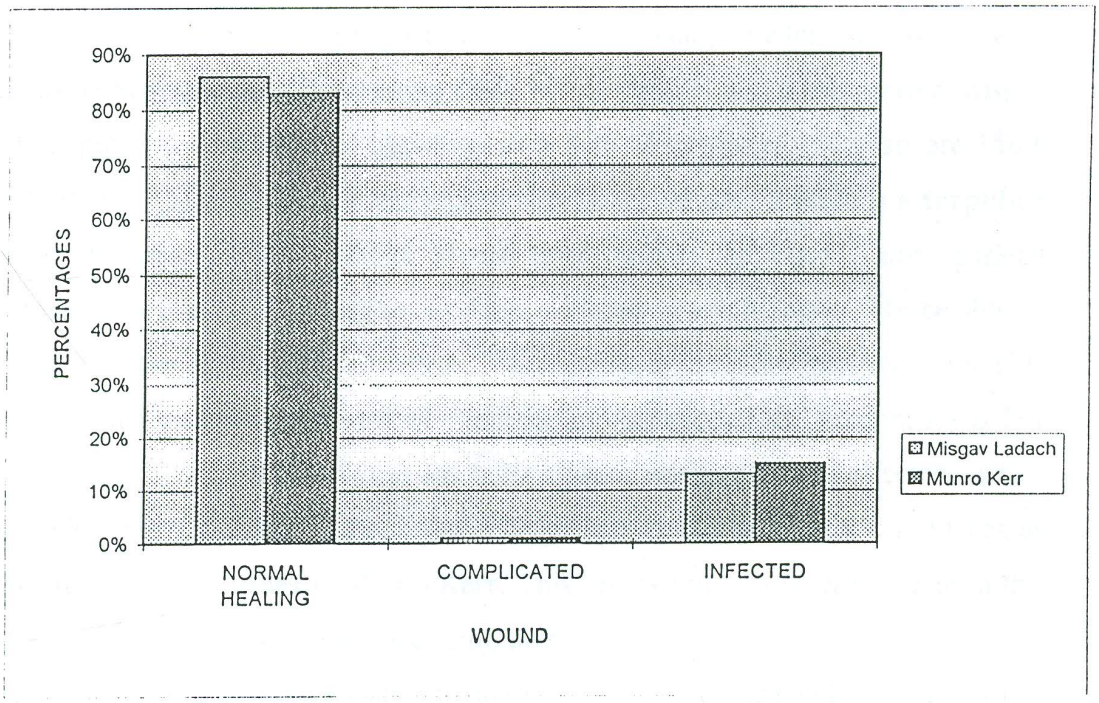
'DISTRUBUTION OF GRAVIDITY AMONG THE TWO GROUPS MISGAV LADACH (1) AND MUNRO KERR (2)



GRAVIDA	1	2	3	4	5	6	7	8	9
MISGAV LADACH	50.90%	14.30%	14.30%	11.70%	2.60%	5.20%	0.60%	0	0.00%
MUNRO KERR	47%	21.20%	16.80%	8.10%	5.00%	0.60%	0.00%	0.60%	1%

HISTOGRAM 4.

'DISTRIBUTION OF WOUND CONDITIONS BY TWO METHODS MISGAV LADACH (1) AND MUNRO KERR (2)



Wound	NORMAL HEALING	COMPLICATED	INFECTED
Misgav Ladach	86%	1%	13%
Munro Kerr	83%	1%	15%

DISCUSSION:

The aim of this study was to compare the two different methods of caesarean section, Munro Kerr and Misgav Ladach at Muhimbili Medical Centre. The comparison was aimed at demonstrating if there were advantages or disadvantages on selected aspects between the two procedures. The null hypothesis, among other statements, had stated there was no difference between Misgav Ladach procedure and Munro Kerr tradition caesarean section in operating time. In this study, it was demonstrated Misgav Ladach procedure had shorter operation time than Munro Kerr. (Chi-square 156.6 P=0.0000). The difference is statistically significant. Misgav Ladach is a simplified surgical technique (24). Unlike Munro Kerr, neither the visceral nor parietal peritoneum is closed. The uterine incision is closed in single layer. Hence shorter period in accomplishing the procedure. This finding is in accordance with Irion (24) who reported at least a different of 6 minute in operation if the peritoneum is left unsutured. Hauth et al (18) found one layer closure was as safe and effective as two layer closure. In Misgav Ladach the skin incision is closed with 3 - 4 stitches as compared to 7 - 8 stitches in Munro Kerr. This serves time. This was evident in this study. This process also serves operating time.

Intraoperative blood loss was also compared in this study, the null hypothesis had stated, there was no difference in intraoperative blood loss between Munro Kerr and Misgav Ladach caesarean section. It was demonstrated that the amount of intraoperative blood loss was not statistically difference between the two procedure, (Chi square = 0.04, P = 0.84)Table 2. Though, general anaesthesia was used and halothane was the main anesthetic agent, still 86.9% of women in Misgav Ladach and 87.7% of women in Munro Kerr group had blood loss within normal range.

There is no evidence that exteriorazation and massaging of the uterus in Misgav Ladach was helpful in reducing intraoperative bleeding in this study. This finding is against what Holmegen(29) and Stalk(6) had found in Sweden and Israel.The findings in this study had failed to reject the null hypothesis.

The healing of the wound was also compared, Normal, complicated (dehiscence) or

infected. There was no statistical difference in either of the category between Munro Kerr and Misgav Ladach. Group (Chi-square 0.81 P= 0.64). This study could not reject the hypothesis which state the rate of sepsis is same between the two methods. This finding is contrary to what is documented in Holmegen(29) study, on low rate in Misgav Ladach. However 98.2% in Misgav Ladach women, 97.67% in Munro Kerr were emergency caesarean section. Hickl(30) had documented that emergency caesarean sections as an entity is associated with high rate of postoperative wound sepsis. Although the rates were not signficantly different between the compared groups, they were both high.This could also support the argument that our patients present with obstructed labour, having had multiple vaginal examinations, long interval of ruptured membrane and features of chorioamnionitis. The abdominal wound is contaminated with infection from the uterus on delivery of the baby and placenta.

Wound dehiscence was 1% in each method this was low. This could be a result of a directive on the operating protocol. At least a margin of 10 mm from each edge of the incised fascia should be taken on suturing. This is said to be associated with low rate of wound dehiscence (27). This study could not approve or disapprove Stark's(6) finding on the rate of wound dehiscence to be less in transverse incision when compared to the vertical incision.

The post operative out of bed time was lower in Misgav Ladach group when compared to Munro Kerr (Chi-square = 106.5 P < 0.0001). This was statistically significant. This finding is in accordance with others. Irion (24) had attributed this with less foreign material (suture) and hence minimal inflammatory reaction. Stalk(6,7,8) had attributed it to less tissue cutting and minimal foreign material. The author supports Irion's views.

The postoperative analgesia (Pethidine) requirement was also compared in this study. The null hypothesis had stated in both procedures the amount of postoperative analgesia which is required is same. In this study, it is found there is no statistical difference in analgesia need between the two groups. (Chi square = 0.046, P=0.83). This was contrary to Stalk's finding(7,8) where analgesia need was found to minimal in Misgav Ladach. In this study Analgesia were given after initial dose, as needed. Number of

doses administered were documented.At Muhimbili postoperative patient usually stay in one room. It is the author's view that ordering and obtaining analgesia by one patient may have influenced others to do so.The null hypothesis on analgesia could not be rejeced in this study.

General condition of women in both groups was compared after categorizing them in normal and complicated (as defined in Methodology). In Misgav Ladach group 14% of women had a complicated postoperative condition and in Munro Kerr 17% had a complicated post operative condition. (Chi-square 0.30, P=0.58). The different is not statistically significant. Febrile morbidity as a single entity had contributed to nearly half of complicated postoperative condition. But further analysis on the cause of the condition was not done in this study. However patient were managed fully with investigation including slides for malaria parasites, urine for culture and sensitivity and blood culture on individual need.

The intraoperative use of antibiotic was also compared. 76% in Misgav Ladach didn't receive antibiotics compared to 84% in Munro Kerr while 24% in Misgav Ladach and 16% in Munro Kerr group had received intraoperative antibiotics. (Chi-square =3.22 p=0.77) the difference is not statistically significant.

Analysis on types and condition leading to provision of antibiotics was not done in this study. The length of post-operative hospital stay is an objective measure of short term maternal morbidity (24). Hauth(20) argued postoperative recovery is directly proportional to operating line and inversely proportional to amount of surgical material used.

His argument based on reaction of the body towards foreign material. The findings in this study were in accordance to him. The mean postoperative hospital stay for Misgav Ladach was 5.5 days and Munro Kerr 7.2 days. The patient in Misgav Ladach group had stayed for shorter period compared to Munro Kerr (Chi-square 18.2 $P < 0.0001$). The difference is statistically significant.

The rare complications of caesarean sections, peritonitis, iatrogenic urinary bladder injury, pulmonary thromboembolism and anaesthetic accidents did not occurred. Air embolism though documented by Handler and Bromade (17) to be associated with

exteriorization of uterus, luckly it didn't occur. It is the author's view that Handler and his colleague findings can not be disapproved in this study because of small study population.

Surgeon who participated in the study had a general view that the Misgav Ladach procedure is simple and easy to learn, the former was shown in 86.8% of questionnares directed to Misgav Ladach.

RECOMMENDATIONS:

1. Muhimbili Medical Centre, is loaded with "waiting" caesarean section due to limited space in theatre. The wards are also over-crowded and floor cases due to lack of beds are not uncommon. As Misgav Ladach caesarean section when compared to Munro Kerr procedure has shorter operating time and shorter postoperative hospital stay. (The difference is statistically significant). The author recommends this procedure as suitable to easy the mentioned problems.
2. Misgav Ladach technique is economical, apart from its shorter operative time it consumes less material, as it was demonstrated. Its adoption will benefit Muhimbili Medical Centre when considering the cost.
3. Surgeons and assistants should also be taught a new procedure together.
4. High rate of wound sepsis in these procedure should be investigated.

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