OBSTETRIC AND GYNAECOLOGY

CASES AND COMMENTARIES

HEAD COLLEGE LIBRARY
MUHIMBILI UNIVERSITY
COLLEGE OF HEALTH SCIENCES

DR. M.L.W. MTAWALI

MD (DAR) 1992

OBSTETRIC AND GYNAECOLOGY

CASES AND COMMENTARIES

DR. M.L.W. MTAWALI

MD (DAR) 1992

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

THIS IS TO CERTIFY THAT ALL THE CASES PRESENTED IN THIS BOOK WERE MANAGED BY DR. M.L.W. MTAWALI UNDER MY DIRECT OR DELEGATED SUPERVISION

PROF. E.N.J. URASSA

HEAD,

DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF MEDICINE (OBGY) OF THE UNIVERSITY OF DAR ES SALAAM (1999).

DEDICATED TO MY HUSBAND MICHAEL AND CHILDREN CHEDIEL AND JESSIE

DECLARATION

I DECLARE SOLEMNLY THAT THIS WORK HAS NOT BEEN SUBMITTED FOR A DEGREE IN ANY OTHER UNIVERSITY

DR. MIRIAM LUCY MTAWALI

ACKNOWLEDGEMENT

I wish to extend my sincere heartfelt thanks to all the people who by one way or another means have enabled this work to be a success. Special thanks should go to the members of the academic staff of the Department of Obstetrics and Gynaecology for their tireless constructive criticism, helpful comments and advice.

Prof. M. Kaisi and Dr. N. Ndossi deserve a special note of thanks as my supervisor and adviser respectively, however the author is responsible for the contents of the work. Prof. E. Urassa and Dr. E. Ngwalle deserve thanks for providing and guiding me with surgical skills. Additional thanks should go to Candida and Dr. G. Lwihula for their statistical and analytical work, and Mrs H. Matimbwa for the secretarial work.

COPYRIGHT

"No part of this dissertation may be reproduced, stored in any retrieval system or transmitted in any form by means: electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the author or the Muhimbili University College of Health Sciences on the behalf".

DR.M.L.W. MTAWALI

INTRODUCTION:

This dissertation has three parts. The first two parts are made up of Ten gynaecologic and Ten obstetric cases and Commentaries. In each case a thorough history, physical examination and investigations are presented. At the end of each case one salient feature of the case is chosen and commented upon.

A Long Commentary comprises the third and last part of dissertaion. A prospective descriptive study on women with puerperal psychosis was done at Muhimbili Medical Centre between March and December 1998. The aim was to determine the sociodemographic characteristics, obstetric events, disease pattern and clinical findings among women with puerperal psychosis.

The study showed that majority of the subjects were young primigravidas aged less than 20 years who were married. Most of them were housewives and had attained primary level of education. Among those who were married only a small proportion got satisfied with the support: The same applied to those who received parents or relatives support. Majority of the women had delivered healthy babies by spontaneous vertex delivery with birth weight ranging between 3.1 and 4 kgs. Labour took between 12 and 24 hours in most of the cases. Affective symptoms and signs carried the highest proportion and majority presented with anaemia.

Recommendations are made that there is a need to proceed for further research in order to determine the associated factors.

RUPTURED ECTOPIC PREGNANCY: MANAGEMENT IN A GRAND MULTIPAROUS WOMEN

Registration Number	:	933957
Name	:	Mrs. M.M
Age	:	36 years old
Residence	:	Mabibo
Date of Admission	:	24/8/1998
Date of Discharge:	:	30/8/1998

SUMMARY:

Mrs M.M. a 36 years old para 7 with six living children was admitted in the gynaecological ward with a history and physical findings consistent with a ruptured ectopic gestation at 7 weeks gestation. During laparatomy a ruptured right Ampullary pregnancy was found and a right salpingectomy was done. As she had completed her family a left tubal ligation was done by Pomeroy's technique. Her postoperative recovery was uneventful. Her case is being presented with a commentary on the management of ruptured ectopic pregnancies in multiparous patients.

HISTORY OF PRESENT ILLNESS:

Mrs M.M was admitted in our gynaecological ward with a 10 weeks history of amenorrhea followed by sudden onset of abdominal pain and scanty vaginal bleeding. The symptoms had persisted for four days prior to admission.

She had experienced pregnancy symptoms characterized by Nausea, vomiting and breast tenderness from the fifth week of Amenorrhea. The abdominal pain was at first dull in nature but then became stabbing and localized on the suprapubic region. It was worse during urination and defecation. There was no shoulder tip pain. She felt very weak and dizzy with palpitation but could walk with support. She experienced one episode of fainting attack while at home.

She also noted dark watery bloody discharge from the vagina which had been there on and off two days prior to admission. She did not complain of any fever or vomiting.

Past Obstetric and Gynaecological History:

Mrs. M.M attained menarche at 15 years of age. Her menses had been regular with a cycle of 30 days and 3 days duration. It was not accompanied by abdominal pain. She had 6 full term vaginal deliveries. All the children were alive. The last born is 6 years old. During the last delivery at Sumbawanga she had started leaking liquor per vagina two days before onset of labour. She was kept in the ward until when she went into spontaneous labour she delivered a 3.2kg baby who was very weak and was unable to breast-feed. The baby received treatment and improved a week later.

She developed high grade fever, abdominal pain and passage of offensive vaginal discharge immediately after delivery she also received medications intravenous and tablets form. They were both discharged in fair condition since then she has been experiencing occasional episodes of abdominal pain.

She has not noted any offensive vaginal discharge or urinary symptoms. For the past five years she has failed to conceive despite adequate exposure to sexual intercourse. She has been using local herbs but without improvement. However at admission she had amenorrhea of 10 weeks.

Past Medical and Surgical History:

She had never undergone any abdominal or pelvic surgery in the past. She denied past history of tuberculosis.

Family and Social History:

She was married to a petty businessman. She had completed her primary school education. She neither drank alcohol nor smoked cigarette. She is a housewife.

There was no history of previous exposure to active case of tuberculosis

General Examination

The patient was ill looking, in pain, severely pale, conscious and oriented to place, time and person. She was not cyanosed but was sweating with cold and clammy extremities.

Cardiovascular System:

Pulse rate was 120 beats per minute regular with low volume. Blood pressure was 90/60mm of mercury, in recumbent position. On Auscultation there was obvious tachycardia. The heart sounds were heard normally with no added sound.

Respiratory System:

Respiratory rate was 26/minute. Chest movement was symmetrical with a tympanic percussion note.

The breath sounds were vesicular with no added sounds.

The breasts were normal with no palpable lump or tenderness.

Abdominal Examination:

It was distended to suprapubic region and moved slightly with respiration there were no marks or visible veins.

There was guarding and rebound tenderness on the hypogastrium Shifting dullness was elicited without fluid thrill.

The liver, kidneys and spleen were not palpably enlarged. It was not possible to feel any mass because of guarding.

Pelvic Examination:

The vulva was normal in appearance. Speculum examination the cervix was bluish with no obvious lesions.

Scanty Brownish Blood was coming through the external cervical os. The vaginal mucosa looked healthy.

Digitally Exam:

The cervical excitation test was positive. The uterus and both adnexae could not be felt due to tenderness. The pouch of Douglas was fluctuant and tender.

Diagnosis:

1. Ruptured Ectopic pregnancy
2. Hypovolemic shock secondary to internal haemorrhage

MANAGEMENT

Preparations for Emergency Laparatomy

Investigations and results

Preparation for Emergency Laparatomy:

The diagnosis and the need for urgent laparatomy was discussed to the patient and a written consent both for anaesthesia and surgery was obtained. She was also counselled for permanent surgical contraception due to her advanced age and high parity. Blood was taken for grouping and cross matching and three units of blood group B rhesus positive were requested.

A large bore cannula (gauge 16) was inserted in one of the antecubital veins and intravenous normal saline was given while other preparation for laparatomy were being finalized.

The skin of her abdomen pubic hair was shaved

The Nurses and Anaesthetist in Theatre were informed.

Operation: Laparatomy – right salpingectomy and left tubal ligation.

Indication: Ruptured ectopic pregnancy and completed family.

ANAESTHESIA:

Induction: Atropine 1mg was given followed by thiopentone 350mg both were given intravenously. Short term muscle relaxation was achieved by 100mg of

suxamethonium. A cuffed endotracheal tube number 7.5 was intubated.

MAINTANANCE OF ANAESTHESIA:

This was achieved by Halothane 1% and oxygen 6 litres per minute. Long term muscle relaxation was achieved by pancuronium bromide 4 mg. And injection Pethidine 100mg was given to provide intraoperative analgesia.

The patient was catheterized as follows:- The nurse scrubbed her hands for 5 minutes with soap and water, after which sterile gloves were worn on both hands. The left and right labia were cleansed with swabs soaked in savlon solution 1:20 with the left hand which next was used to separate the labia and expose the urethra meatus which was cleansed next from up downwards by a swab in the right hand. A sterile urethral catheter was gently introduced until urine was seen running out. After completion of drainage the catheter was left in situ and was inserted in an empty ~~glove~~ bladder for further drainage.

The abdomen was cleaned with iodine and spirit then drapped with sterile linen. It was opened through a subumbillcal midline incision in the following manner. A scalpel was used to make a longitudinal midline incision through the skin and the subcutaneous fat from below the umbilicus down to just above the pubis symphysis. Another scalpel was used to make a stab in the midline of the fascia and a pair of Mayo's scissors was inserted below the fascia and then opened up. The fascia was then cut with the scissors in the entire length.

The rectus abdominis muscles were retracted laterally to the left and using two straight long artery forceps the peritoneum was picked up and a stab was made with a scalpel. One finger was inserted into the peritoneal cavity and peritoneum was cut upwards and downwards wider direct vision.

Finding: there was Haemoperitoneum of about 1200 ml of fresh blood and auto transfusion was not done as there were no ACD bottles. There was a ruptured right Ampullary pregnancy and the uterus was of about six weeks size. The left fallopian tube and both ovaries were grossly normal looking.

What was done: The uterus was then lifted upwards and forward and a right salpingectomy was done as follows:

The right fallopian tube was clumped at the proximal part of the isthmus using two strong curved kocher's clamps and haemorrhage was arrested. Using a scalpel the tissues between the two clamps were divided with a scalpel. Another pair of Kocher's clamps was placed at the distal edge of the mesosalpinx and the tube was separated from the mesosalpinx it was isolated and excised. Chromic catgut Number 1 was used to close the mesosalpinx and the two ends were tied together.

Left tubal Ligation was done by a modified Pomeroy's technique as described.

The Fallopian tube was identified and it's mid portion was grasped by a straight Artery forceps at an avascular area of the mesosalpinx. A curved

Artery forceps was applied below the artery forceps holding the proximal and distal segments of the tube. Chromic catgut number one on a needle was used to ligate the tube twice below the curved forceps and the tube above the forceps was excised with a scalpel and the presence of a lumen on the severed portion confirmed it to be the tube. The artery forceps was removed and the area was found not to be bleeding. The remaining hemoperitoneum was sucked and the abdomen was closed in the following steps:

The peritoneum was closed by a continuous number 2/0 chromic catgut suture.

The rectus sheath was closed by an interrupted suture using vicryl number one. The skin was closed by a mattress suture using silk number zero. The wound was cleansed with iodine and spirit and later dressed with three sterile gauzes. Blood loss was estimated to be 1500mls. Intraoperatively she received 500mls of blood.

Reversal of Anaesthesia:

This was achieved by Atropine 1 mg and Neostigmine 2.5mg and extubation was done. Oxygen was given by mask. She recovered fully from anaesthesia and she was sent to the ward with the following post operative orders:

1. Monitoring pulse. blood pressure half hourly for 8 hours then 4 hourly - 16 hourly
2. Intravenous Dextrose - saline 3 litres in 24 hours

Injection Pethidine 100mg intramuscularly 8 hourly for 24 hours.

In put and output fluid balance chart for 24 hours.

Progress in the Ward:

She made a smooth postoperative recovery and six hours post operative she was found to be awake with a stable cardiovascular system. The urethral catheter was draining clear urine.

24 hours post operative her blood pressure was 110/70mmHg and the abdomen was soft with no shifting dullness. Her input was 4000mls against the output of 1700mls.

She started oral sips and ambulation. Three days later her haemoglobin was 8.4gldl and she was started on oral haematenics 6 days post operatively the skin stitches were removed and wound was dry. She was discharged on oral Haematenics to be seen a after six weeks at the outpatient clinic.

Follow up after six weeks:

Six week later she was seen at the outpatient clinic and she had no complaint. The scar had healed by primary intention being a gradmultiparous woman of 36 years, it was important for her to utilize this golden opportunity by doing a pap smear test as a means to detect early development of cervical neoplasia. This was done and was followed by pelvic examination which revealed a normal finding.

She returned 3 weeks later for her pap smear results which revealed normal cervical histology. She was discharged from the clinic.

COMMENTARY:

An ectopic pregnancy occurs when a fertilized ovum becomes implanted in any site other than the endometrial lining of the uterine cavity. It is estimated that 98% occur in the Fallopian tubes while up to 2% occur either in the abdominal cavity, between leaves of broad ligament, ovaries, rudimentary uterine Horn or cervix.

It is a very hazardous and life threatening complication of pregnancy. Generally the incidence has been rising significantly worldwide in the past 25 years.[1,2,3] In U.S.A. it has been rising sixfold averaging 2%. This is due to high prevalence rate of risk factors in the general population such as pelvic inflammatory diseases, use of intrauterine contraceptive devices, previous history of ectopic pregnancy, pelvic surgery or induced abortion with use of ovulatory induction drugs and the introduction of invitro fertilization together with Gamete intra Fallopian transfer Technique. In Jamaica it has been estimated to be 1 in 28 births while in South Africa 11 per 1000.[2] At Muhimbili Medical Centre Kajura found it to be 1.4%.

In Africa tubal pathologies due to pelvic inflammatory disease is the most important factor which is influenced by occurrence of gonococcal and tuberculosis endosalpingitis. Pelvic inflammatory disease is very common in developing

countries due to poor socioeconomic circumstances, poor hygiene and promiscuity. Puerperal sepsis is an important aetiological factor in caucasians as ectopic pregnancy tend to occur in multiparous women than Nulliparous women. Mrs. M.M gave a past history suggestive of pueperal sepsis during her last delivery which was preceeded by prelabour rupture of Amniotic membranes. Perhaps this could have led to the chronic pelvic inflammatory disease hence development of ectopic pregnancy.

Currently management of ectopic pregnancy entails numerous choices by the physician; whether to attempt it (expectant versus surgical or medical treatment), choice of route (laparascopy, laparatomy, sonographic or transcervical), choice of operation (conservative versus radical); and choice of surgical approach (standard technique versus microsurgery).

The ideal management in an individual case depends on a number of variables, the principal ones being the location and size of the ectopic pregnancy and whether the tube has ruptured. Other deciding factors include the anatomical status of the pelvis and particularly the health of the unaffected tube, the availability of microsurgical techniques and the wishes of the patient. Whatever the chosen form of treatment, diagnostic laparascopy is central to the management strategy; it allows the diagnosis to be confirmed, the state of pelvis to be determined and opens the possibility of laparascopic technique. However it is contraindicated in presence of shock, intraabdominal bleeding as in Mrs. M.M. the other contraindication is extensive intra abdominal Adhesions. It is

advantageous since it reduces the operating time, hospital stay and cost. It also makes the patient able to return early to her usual activities and improved cosmetic results.

Expectant management can be applied in ectopic pregnancies diagnosed at a very early stage since some resolve spontaneously while others end up in a spontaneous complete abortion which is often Asymptomatic. The tubal diameter should be less than 2 cms and Human chorionic gonadotrophin levels less than 1000 iu/L.

Medical treatment may be applied all in expectant treatment, either by systemic methotrexate, Actinomycin D, citrovorum rescue (Leucovorin) or by local injection of drugs such as Potassium chloride, methotrexate, Adrenaline, hypertonic glucose, mifeprostone or prostaglandin E2 or F2$\propto$ into the gestational sac either laparascopically, transvaginally or by transcervical tubal cannulation[1] . The patient needs to be followed up till when βHCG level are undetectable.

Surgery remains the treatment of choice for most patients with ectopic pregnancy. Traditionally the treatment of ectopic pregnancy was removing the affected fallopian tube but currently the approach is either conservative surgery is that it preserves future Fertility eg. Linear salpingostomy where by it is called salpingotomy if the tube is left open to heal by secondary intention.

Fimbrial evacuation can be performed if pregnancy is already aborting through the tube or lies at the fimbrial portion of the tube.

Mid resection with or without end to end anastomosis is necessary when the tube has ruptured or bleeding control is inadequate.

Mrs. M.M was a 36 year para 7 she had already agreed on permanent surgical contraception because she had already completed family. Counselling was done before the operation and she was explained the possibility of having a recurrent ectopic pregnancy, of course one can argue about the attitude of counselling someone who in a critical condition with pain as Mrs. M.M but the benefit of avoiding another ectopic pregnancy outweighed the clinical status of the patient.

Total salpingectomy was done since she had a ruptured ectopic pregnancy with massive intraperitoneal bleeding. The procedure helped to control bleeding quickly and hence prevented other problems like cardiopulmonary crises.

REFERENCES:

1. Stabile I. Ectopic pregnancy diagnosis and management 1996 : 111-126.
2. Amoko D.H; Buga G.A; Clinical presentation of ectopic pregnancy in transkei – South Africa Med. J Dec. 1995 (72) : 12
3. Makinde O.O; Ogunniyi S.O; Ectopic pregnancy in a defined Nigeria population: Int. J. Gynacol. Obstet. 1990 (33) : 239-241
4. Kajura A.L.A; Obstetric and Gynaecology cases and commentaries Dissertation UDSM 1998 : 246
5. Rock J.A; Damario M.A; Te Linde's operative gynaecology 8th edition (24) : 511-520.

VAGINAL LACERATION FOLLOWING SEXUAL ASSAULT: MANAGEMENT OF ALLEGED RAPE

Name:	Miss M.B.
Age:	11 years old
Registration Number:	920609
Address:	Ubungo
Date of Admission:	25.2.98
Date of Discharge:	27.2.98

SUMMARY:

Miss M.B. was brought by her mother as a case of alleged rape with vaginal bleeding. She was found to have a fresh posterior vaginal wall laceration which was bleeding during examination.

Resuscitation to restore circulating blood volume and repair of the vaginal laceration was done the same day. Recovery was uneventful and she was discharged the following day in good condition. The management of alleged rape is discussed.

HISTORY OF PRESENT ILLNESS:

The patient was brought to hospital by her mother because of vaginal bleeding following forced sexual intercourse which was done by her step father about four hours prior to admission.

The victim was an eleven year-old girl who had been staying with her mother, stepfather and two younger brothers.

Details of the history given by the patient were that on the day of the incident, her mother had gone to a funeral in one of their neighbours home.

She had remained at home with her stepfather while the two younger brothers were playing outside the house. The father summoned her into his bedroom and locked the door. She was grabbed, threatened and was forced to have sexual intercourse against her will. She resisted and tried to shout but her mouth was gagged by the assailant's hand. He tore her underpants and forcefully introduced his penis into the vagina which caused her severe pain. Soon after the assault she noticed that she was bleeding per vaginum. The bleeding was moderate and only stained her underpants. She did not feel any dizziness nor did she lose consciousness. The step father threatened her not to tell anybody and he left the abdomen immediately after the assault.

Miss M.B. dressed herself and decided to rest in her bedroom. As she was still experiencing pain in the abdomen. She could not walk properly. An hour later her mother returned from the funeral and found her daughter lying in bed. Miss M.B narrated the whole story to her mother. By then she had not changed clothes, taken bath or douch. The mother decided to take her to the nearby dispensary where she was referred to Muhimbili Medical Centre. She decided not to report the matter to the Police for fearing of embarrassment

on her husband. At the dispensary no medication was given nor any form of investigations taken.

On further questioning the patient denied having anything introduced into her. She also said she had never attempted sexual intercourse with anybody else before this assault; and that until then she had not reached menarche.

Past Medical History:

She had never been attended for any major illness.

Family and Social History:

She was a standard three pupil staying with her mother, stepfather and two younger brothers. Her biological father died in a car accident when she was a toddler.

There was no family history of Diabetes Mellitus or Hypertension.

Physical Examination:

She was a well nourished young girl in a depressed mood. Her gown was stained at the back with blood but it was not torn. She looked mentally normal and intelligent. There was no pallor, scratch marks, external bruises or lacerations.

Chest: The breast had started growing Breath sounds were vesicular with no added sounds.

Cardiovascular system:

Jugular venous pressure was not elevated.

Pulse was of normal volume; pulse rate was 76 beats per minute, regular blood pressure was 100/60 mm of mercury.

The heart sounds were heard normally with no added sounds.

Abdomen:

It was scaphoid, moving with respiration

The were no areas of tenderness.

Liver, spleen and both kidneys were not palpably enlarged.

There was no loin pain, and no fluid thrill or shifting dullness.

Perineal and vaginal examination:

The vulva was stained with blood but there was no semen.

She had scanty pubic hair.

On careful inspection no foreign hair was found.

The perineum and both labia looked normal. Slight bleeding and bruising was seen around the fresh hymenal tags and at the fourchette. The hymen was perforated at 3, 6 and 9 o'clock. The introitus could admit a finger therefore an unlubricated speculum was introduced gently into the vagina. The following were the findings.

i) A fresh actively bleeding longitudinal laceration which was about four centimetres long in the left posterolateral wall of the vagina.

ii) The cervix looked healthy, nulliparous, had no tear or laceration and was not bleeding.

iii) Material from the posterior vaginal pool and endocervical canal were taken, using a sterile syringe (1ml) and sterile swabs. It was then put into an empty sterile bottle for wet mount and sperm examination while the swab was sent for gramstaining together with culture and sensitivity.

Rectal examination:

The anal sphincter tone was intact. The rectal mucosa was normal.

DIAGNOSIS:

Vaginal laceration following rape.

MANAGEMENT:

i) Temporary temponade on the bleeding points was achieved by packing the vagina with asterile gauze roll.

ii) An intravenous infusion of 500mls normal saline was given to restore blood volume.

iii) Blood was typed and crossmatched 500mls of blood group A Rhesus positive was made available in case the need arose.

The following investigation were done:-

1. Haemoglobin was 10g/dl.
2. Specimens from the posterior vaginal pool and endocervical canal had already been taken during vaginal examination.

3. Blood samples for HIV and Syphilitic sreening tests were taken as a baseline after explaining to the mother the importance of doing them. An informed consent for anaesthesia and operation was obtained from her mother as the patient was below 18 years of age.

Anaesthesia:

She was induced with Atropine 0.5mg and thiopentone 250mg intravenously and maintained on oxygen face mask plus Halothane 2%.

The procedure: Repair of Posterolateral vaginal wall laceration:

The patient was put in lithotomy postion. The vulva and perineum was cleaned with savlon 1:20 and draped with sterile linen. Aseptic catheterization was done as described in obstetric case No.1. 200mls of clear urine was obtained. The vaginal gauze was removed and the vagina cleaned, the previous findings were confirmed during examination under anaesthesia. The anterior vaginal wall was retracted gently so as to expose the posterior vaginal wall. The wound was actively bleeding with fairly straight and fresh margins. Repair was undertaken with an assistant placing her two fingers in the vagina in a 'v" shape, to aid traction. The apex of the wound was identified and stitched using round bodied needle with catgut number 0 starting beyond the Apex of the laceration. The repair was done with continuous mattress suture in single layer. Complete haemostasis was achieved.

Rectal Examination: Revealed no abnormality.

Anaesthesia was stopped and the patient was observed for 30 minutes. She regained spontaneous respiration and was sent to the ward through the recovery room. The immediate postoperative period was uneventful.

Post Operative Care:

1. Monitoring

   Hourly Blood pressure remained around 110/80mm of mercury over a period of 12 hours.

   : Pulse rate was 76/minute, and pulse volume was normal.

   : Temperature 36.8ª.C.

   : Urine output 800 mls for first 12 hours the urine was clear and the catheter was removed.

2. Haemoglobin 9.6g/dl

She progressed well and was discharged the following day. She was told to attend our gyaecological out patient clinic the following week for follow up.

Follow up a week later:

Patient was doing well.

Her Results were out:

Wet mount showed spermatozoa some of which were motile.

. Vaginal swab for gram stains and culture did not grow any organisms

. Blood test for syphillis (VDRL) was non reactive

. ELISA Test for HIV was negative

Further follow-up

Vaginal examination done a month later revealed a healed vaginal wall, and nothing abnormal was detected. She was requested to report back after 3 months for a second HIV test, which was again negative.

COMMENTARY:

Rape is defined as the carnal knowledge of a person forcibly and against her will. The National Centre on Child Abuse and neglect (NACCAN) defines sexual abuse as "contact or Interaction between a child and an adult, when the child is being used for the sexual stimulation of that adult or another person. Sexual abuse may be committed by a person under the age of 18 years, when that person is either significantly older than the victim or when the abuser is in a position of power or control over that child[1]. Hence vaginal penetration is not a prerequisite. Abuse can represent any type of behaviour such as disrobing, genital exposure, photographing, oral genital contact, instrumentation with foreign objects or vaginal or rectal intercourse.

Incest is the term applied to a special subclass of sexual abuse that includes any sexual behaviour inappropriate to a normal preexisting family relationship e.g. stepfather as what had happened to Miss M.B.

There has been an increasing public concern and outcry regarding the escalating wave of sexual abuse of young girls. It has been estimated that there

COLLEGE LIBRARY
MUHIMBILI UNIVERSITY
COLLEGE OF HEALTH SIENCIES

are more than 200,000 abuse cases per year[1,2]. However the problem is being under reported world wide because many rape victims feel humiliated, degraded, shameful or self blame and would not like friends and relatives to know about it. Others do not report because of threats from their assailants. Miss.M.B. was sexually abused by the stepfather who had threatened her not to tell anybody. Despite the threat she informed her mother who in turn did not want to disclose the information to anybody even the police for fearing of embarrassing her husband. There is however a national effort by certain organisations, to educate the public on the importance of reporting these incidents to the Police, and the initial response appears promising.

No age is immune to the abuse (i.e from infancy to early adulthood) but reports indicate that the average age is 8 to 11 years at the time of first incident. It is now believed that younger children are at higher risk because of their physical vulnerability, trusting attitude and moral ignorance regarding right and wrong behaviour.

In most cases the victim and the assailants are known to each other as in Miss M.B.

Sexual abuse has a substantial impact on the physical, psychological and social health of the victim. Complications may arise such as tear of perineum, vaginal wall, vaginal vessels, bladder or rectum resulting in profuse bleeding[3]. Young virgins like Miss M.B. are more prone to multiple superficial laceration at 6 o'clock position (at the fourchette) because it is

thought that this is the site of fixation of the perineal body and consequently the tissues are at greatest stress when forceful stretching occur as in forceful coitus. Mrs. M. B. sustained multiple hymenal lacerations including 6 o'clock. She also sustained a laceration in the posterolateral vaginal wall. Other complications include sexually transmissible diseases such as syphillis, gonorrhea, chlamydia and HIV infection[4]. Pregnancy is another risk but fortunately Miss M.B. had not attained menarche otherwise she would have needed an emergency form of contraception. However this is not 100% guarantee since 11 years falls under peri menarcheal age.

Management of rape include a thorough history taking, assessment for physical injuries, collection of evidence for forensic evaluation, investigations to rule out sexually transmissible diseases, pregnancy prophylaxis and treatment of psychological sequelae. The victims also require appropriate care, follow up, information regarding their legal rights.

History taking in abuse cases is a true art and is the most important part of any evaluation with careful documentation of all details in patient's own words. Privacy and ample time are prerequisites.

The best history is obtained without presence of the parents. The doctor should enquire about pain, bleeding, ejaculation and the use of force or instrumentation. Physical examination include affect, general hygiene, evidence of extragenital as well as genital trauma, bruising, hair loss, bite marks, laceration or documentation using diagram's or sensitively taken

photographs is essential. Trauma may be limited to vulva and perineum, there may be oedema, erythema, excoriation, petechial or urethral inflammation. Mrs M.B. did not manifest with such trauma.

Great controversies exist over hymenal diameter and its relevance in sexual abuse cases[5]. Absolute diameter varies with the type of hymen (circumferential or fimbriated) stronger emphasis is now placed on findings or disturbance of the normal clear lacy hymenal vasculature or loss of the velamentous delicate border especially posteriorly from 9 to 3 o'clock.

Some clinicians have used colposcopy in trying to search for the wounds. Vaginal fluid specimens for spermatozoa should always be taken for microscopy whenever feasible wet mounts should be done. The presence of motile sperms or non motile sperms in or near the vaginal orifice of the victim is definite evidence of sexual contact as it was seen in Miss M.B. Motile sperm may be present in the vagina up to 12 hours. and in the endocervical canal up to 5 days. The presence of motile sperms represent recent coitus. Non motile sperms may be present in the vagina for 3 - 5 days and in the endocervical canal for up to 17 days after coitus. Non motile sperm remain intact on fabrics up to 12 months[1].

Sexually transmissible diseases should be excluded. Endocervical swabs should be taken for gram staining and culture and sensitivity. blood tests for syphillis and HIV test as a baseline screening. This was done after counselling.

Attention should be directed not only toward diagnosing and treating sexual abuse but also towards prevention and eradication. The community should offer some form of protection for young girls even boys though it is quite difficult. Girls should be encouraged to walk in-groups and should also avoid walking in the dark. They should also not be left alone at home or with any opposite sex. Again this is difficult as seen in Miss M.B. who was left with her stepfather. Contribution to the efforts of law enforcement agencies and judiciary to prevent and eradicate sexual assault is the collection of accurate information that can be used as a reliable evidence.

Recently in Tanzania it was announced in the parliament that whoever is convicted of practising sexual abuse will be sentenced to life. This is a great effort towards eradication of sexual abuse.

REFERENCES:

1. Slupik R. Sciarra Vol (21) Sexual Abuse 1 - 5.

2. Muram D. Child Sexual Abuse : Obstet & Gyaecol. Clinics of North America 1992 : 19 :193-202.

3. Slaughter L, Brown C, Crowley S. Pattern of Genital Injury in female Sexual Assault Victims; Am J. Obstet. Gynaecol 1997 : 176:609-616.

4. LemaV.M. Sexual Abuse of Minors : Emerging Medical and Social Problem in Malawi : East Afr. Med. J. 1997 Nov. 743.

5. Berensen A; Normal Newborn hymen proceedings of the North American Society for Paediatric and Adolescent Gynaecology, Costa Mesa Jan. 1990.

INCOMPLETE ABORTION: MANUAL VACUUM ASPIRATION AND INSERTION OF INTRAUTERINE CONTRACEPTIVE DEVICE (IUD)

Name	:	Mrs M.M
Registration	:	944738
Age	:	26 years
Date of Admission	:	28.12.98
Date of Discharge	:	29.12.98

SUMMARY

Mrs M.M. was admitted at Muhimbili Gynaecological ward with Lower Abdominal pain and profuse vaginal bleeding for one day following amenorrhea of ten weeks duration. A vaginal examination revealed on open cervical os with products of conception protruding from it. The uterus corresponded to 8 weeks in size. The products of conception were removed digitally to reduce the bleeding then evacuation of the uterus was done using manual vacuum aspiration in the side room. She was counselled with the husband for post abortal contraception and she opted for intrauterine contraceptive device (IUD). A copper T 380A IUD was inserted and she was discharged in good health.

The case is presented with a discussion on the post abortal contraception.

HISTORY OF PRESENT ILLNESS

Mrs M.M. was ten weeks pregnant. She was admitted in the Gynaecological ward complaining of heavy vaginal bleeding which had started on the day of admission with lower abdominal pain. She also gave a history of fever which occurred three days prior to admission. It was accompanied by chills and general body malaise. She neither vomited nor had urinary problems. In the peripheral hospital she was diagnosed to have clinical malaria so oral chloroquine was prescribed to her. She denied to have experienced dizziness or fainting episodes. The pregnancy was unplanned but she denied any attempt to terminate the pregnancy.

Menstrual and Gynaecologic History

She attained menarche at 14 years and the cycles were regular occurying after 28-30 days with moderate loss in about 3 days. Her last normal menstrual period was 14.9.98 so the gestational age was about 10 weeks. She had no abnormal vaginal discharge or chronic lower abdominal pain. She gave no history of previous genital ulcers or swellings. Since she had lactational amenorrhea, she considered this condition to be 100% protective against conception.

She had never used any form of contraceptive methods up to the time she conceived the index pregnancy.

Previous Obstetrics History

She was a para 1 had a child of 1 year. Her delivery was uneventful.

Past Medical History

She had never been admitted before except during the previous delivery.

Family and Social History

She was a housewife married to a secondary school teacher. She had no family history of hypertension or diabetes mellitus. She neither smoked cigarette nor drank alcohol.

Physical Examination

Mrs. M.M looked sick, afebrile with temperature of 36.7°C, not pale, dyspnoeic or cyanosed. Both extremities were stained with blood. She was warm and was not in shock.

Cardiovascular system

Her pulse rate was 94 beats per minute regular with normal volume. Blood pressure was 110/70 mm of mercury. Both heart sounds were heard normally with no added sounds.

Chest

Respiratory rate was 18/minute and the chest was symmetrically expanding with respiration. The lung fields were clear.

Her breasts were engorged with hyperpigmented areola montgormery tubercles were present. There was no palpable mass.

The Abdomen

Her abdomen moved normally with respiration and with no distension. There was mild suprapubic tenderness on deep palpation but there was no rebound tenderness or guarding. Liver, spleen and both kidneys were not palpably enlarged. The uterus was not palpable and shifting dullness was Negative.

Pelvic Examination

The vulva was normal but blood stained.

Speculum inspection revealed blood clots in the vagina and blood was seen trickling from the cervical os with some products of conception protruding from the os. The cervix had no laceration. It was soft and dilated 1.5cm. Some products of conception were removed manually from the cervical canal. The uterus was about 8 weeks size and it was anteverted and anteflexed. Both adnexae and pouch of Douglas were not tender and free of masses.

DIAGNOSIS

(1) Incomplete abortion

(2) clinical malaria

MANAGEMENT

Results of investigations

(1) Haemoglobin 10.2g/dl

(2) Blood slide showed 2 malaria parasites/200 WBC's

(3) Blood group O Rhesus positive

Treatment

She completed the third course of chloroquine tablets 300mg. The patient was prepared for manual vacuum aspiration. Pre procedural counselling for MVA was done and at the same time she was counselled with the husband for post abortal contraception. She opted for an intrauterine contraceptive device because it was a non permanent method which was free from hormonal contents.

Manual Vacuum Aspiration(MVA)

Manual vacuum aspiration was done in the gynaecological procedure side room. The patient was placed in a dorsal position with both hips flexed and abducted. Vulvovaginal toilet was done with savlon 1:20 and then draping with sterile linens was done. She was catheterized as in Gyn. case 1. A sterile bivalve speculum was introduced into the vagina and the cervix was exposed. The products of conception protruding through the cervical os were removed with an ovum forceps.

She was cautioned about the possibility of some pain sensation as the anterior lip was about to be grasped with a tenaculum. Karman's plastic cannula number 10 was introduced into the uterine cavity up to the fundus observing the no touch technique. Bivalve syringe was used to create the vacuum and the syringe was connected to the cannula and the vacuum was released. The syringe and the cannula were moved up and down in gentle movements and these movements were combined with rotatory movements and

approximately 30mls of products and conception were sucked out. Evacuation was regarded as complete when there was appearance of.

Air bubbles in the syringe, gritty sensation and sound cannula against the uterine wall, and when the uterine wall gripped the cannula tight with a feeling of pain by the patient with no further flow of products.

Conversation on general issues was kept going between patient, nurse and doctor hence no analgesia was required.

The evacuated products were inspected and no vesicles were seen. They were submitted for Histopathologic examination.

The total duration of procedure was 10 minutes. Postevacuation pulse rate was 92 beats/minute, blood pressure 110/70. No undue bleeding was noted from the cervix.

Insertion of intrauterine contraceptive device:

A copper T 380A IUD was loaded into the inserted barrel under sterile conditions. While stabilizing the cervix with tenaculum the inserter barrel was introduced into the uterine fundus through the cervical canal. The intrauterine device was inserted into the uterine cavity by retracting the outer barrel over the plunger (the withdrawal technique). The strings were trimmed to leave about 4 cms of strings in the vagina.

The patient was sent back to the ward for rest and pulse, blood pressure, temperature and respiratory rate were observed half hourly and reported stable.

Her condition remained stable and she was discharged the next day after being instructed on how to check for the strings. She was advised to attend Gynaecological outpatient clinic 6 weeks later for follow up.

Follow up after six weeks

She had no complaint. Her abdomen was soft and there was no palpable mass. On speculum examination the IUCD strings were in situ. The cervix, uterus and both adnexae were normal. Histopathology report HP.No. 4258/98 revealed decidua with normal chorionic villi and no hydropic changes were reported. She was given another date for follow up regarding her IUCD.

COMMENTARY

Incomplete abortion needing evacuation is one of the leading causes of gynaecological ward admissions in our centre.

About 10% of all clinical pregnancies spontaneously abort[1]. It is difficult to tell the exact cause of abortion in Mrs. M.M. but a history of high grade fever three days prior to admission perhaps could have exaccerbated the onset of abortion. Ideally chromosomal, genetic and hormonal studies were supposed to have been done for the purpose of obtaining the actual cause unfortunately it was not possible in our centre due to lack of facilities.

Abortion related complications are a cause of morbidity and mortality hence affecting the reproductive health and performance of many women. Acute complications include Haemorrhage as it was seen in Mrs. M.M. if

severe is compounded with shock. Others include sepsis and Acute Renal Failure. Late complications include chronic pelvic inflammatory diseases and tubal blockage causing infertility.

Post abortion care programme has been introduced worldwide under safe motherhood initiative programme as means to reduce maternal mortality and morbidity[2]. It is implemented in National Training centres and Teaching Hospitals but efforts are now made to decentralize the service so that all levels of health care system provide such services.

Post abortion care strategy is a combined approach that emphasizes both treatment of the current emergency and prevention of future unintended pregnancies especially among women highly likely to resort to unsafe abortion

The introduction of manual vacuum aspiration technology is a significant step towards improving post abortion care. It's effectiveness for uterine evacuation is well documented. Studies in United States. Kenya, Egypt, Nigeria, Tanzania and Zimbabwe have found (MVA) to be effective as compared to sharp curretage in treatment of early incomplete abortion interms of effectiveness, pre evacuation time, duration of procedure, hospital stay, cost of drugs, anaesthesia, complications such as excess bleeding, perforation of uterus, cervical injury and sepsis[3,4]. All these factors have been found to be reduced significantly when MVA is used as opposed to sharp curretage. It also increases womens access to post abortal care and facilitates links between

emergency post abortal care and family planning services as it happened in Mrs M.M.

Post abortal family planning is not only legal worlwide but also an effective service for reducing illegal unsafe and repeat abortion in all countries. Despite wide use many women who are treated for complications of either unsafe or spontaneuos abortion do not use contraceptive methods. Infact in most of the subsaharan countries, the contraceptive prevalence rate ranged between 10 and 15% in mid 1990's, in Tanzania the prevalence of modern contraceptive use in 1996 was 13%[5] so this shows that still many women do not use the modern contraceptive methods. Emergency post abortion care may therefore be one of a few contacts with formal health system and an opportunity for them to receive family planning and other reproductive health services.

These women need family planning counselling during their post abortion emergency care. In most instances counselling is not done for example a recent survey in Kenya found that 91% of providers reported that women did not receive family planning information. In two major Egyptian hospitals fewer than 3% of the women treated for postabortal complications were counselled about family planning[2]. During counselling women should know that a woman's fertility generally returns within two weeks after first trimester abortion. They should also make informed voluntary and well considered decisions. Mrs. M.M. opted for intrauterine contraceptive device

since she needed a reversible method which did not contain any steroids. This was possible since she did not present with any complications such as sepsis, severe anemia, shock or pelvic organ injuries. Infact she had a wider range of choice eg. Condom, oral contraceptive pills, injectables, norplant and spermicide.

Natural family planning could not be possible since before the problem she had Lactational Amenorrhea. The husband had disagreed to use condom right from the beginning and that is why she hoped for lactational amenorrhea to be 100%protective unfortunately she conceived.

There are a number of obstacles impeding provision of post abortion family planning services. These include providers lack of understanding of and attention to women's needs perspectives and motivation, administrative separation of emergency abortion treatment services and Family Planning services, misiformation among providers about appropriate contraceptive methods for use after abortion and lack of some of the contraceptive methods at that particular time eg norplant.

So Post Abortion contraception should therefore be implemented extensively in order to avoid unwanted pregnancies and at the same time allow women and their Families to have time for their daily plans. This can only be achieved if the providers receive regular proper training on Family Planning matters and at the same time if there's adequate availability of family planning methods in any centre which handles emergency abortion treatment.

REFERENCE

1. Wentz A.C., Novaks Textbook of Gynaecology with 11th Edition: 12: 314.

2. Population Reports: Care for post abortion complication (Vol.25): Sept. 1997:2-13

3. Blumenthal D.D, Rensburg R.E
Management of incomplete abortion with MVA: Time and cost Analysis Presented at Annual Meeting of Association of Reproductive Health Professionals 1993.

4. Magotti R.F., Obstetrics and Gynaecology cases and Commentaries 1993 UDSM: 188-206

5. Calverton M.D; Bureau of Statistics and Marco International (TDHS) 1996: 29 : 45-6.

IMPERFORATE HYMEN WITH HAEMATOCOLPOS: EXCISION AND DRAINAGE

Name:	Miss H.A.
Age:	15 years
Registration Number:	935764
Address:	Temeke
Date of Admission:	22.9.1998
Date of Operation:	23.9.1998
Date of Discharge:	28.9.1998

SUMMARY:

Miss H.A. was a 15 year old girl who had not seen her menarche. She was admitted in the gynaecological ward on 22.9.1998 having been referred from a peripheral hospital due to failure to menstruate, monthly cyclic abdominal pain with progressive lower abdominal swelling.

Physical examination revealed a pelvic mass corresponding to 18 gravid uterus with a bulging hymenal membrane closing the introitus and a bulging vaginal mass felt rectally.

A diagnosis of Imperforate Hymen with Haematocolpos was made. A cruciate incision and excision of the Hymen was made. Old menstrum was

drained. the post operative period and subsequent follow up visit were uneventful.

The case is presented with a discussion on management of Imperforate Hymen.

HISTORY OF PRESENT ILLNESS:

Miss H.A. a 15 year old premenarche girl was referred in our gynaecological ward from a peripheral hospital on 22.9.1998 due to failure to menstruate. She had also noted lower abdominal pain which occurred at a fixed regular cyclic pattern occurring once every month for the past one year. It had been of insidious onset but progressive and intermittent. The pain was colicky in nature and non radiating. The severity of pain had increased over the preceding 6 months, it lasted for 2-3 days only to subside spontaneously at the end of 4th day. It was accompanied by malaise, fullness and painful breasts. After the peak of pains she experienced dizziness, headache and occasionally nausea. She had not been vomiting.

She also noted a gradual but a progressive lower abdominal swelling about four months after the onset of abdominal pain which was not associated with any painful micturition, frequency, retention or passage of blood stained urine. She gave no history of fever, cough, loss of weight, pregnancy symptoms or swelling of the lower limbs. Her bowel habits were normal and regular.

Gynaecology History:

She had never menstruated and had no coital experience in life. She had noticed breasts growth at the age of 10 years which were fully developed by the age of 14 years. Pubic and Axillary hair begun growing shortly after wards with an interval of about 6 months apart.

She denied to have used any form of contraceptive methods.

Past Medical and Surgical History:

She had been well since childhood she had never been irradiated or undergone any pelvic surgery. There was no past history suggestive of schistosomiasis infestation.

Family and Social History:

She was a third born in a family of 6, 3 girls and 3 boys. She had completed primary education two years prior to admission and was living with her parents.

Both her mother and elder sisters had their menarche at about 13 years followed by regular menses.

Nobody in their family or neighbourhood had chronic illness suggestive of pulmonary tuberculosis and there was no family history of diabetes mellitus or heart disease.

PHYSICAL EXAMINATION:

General examination

She was a young girl in good nutritional status but appeared to be uncomfortable, her height was medium 154cms. She had a feminine soft voice, figure and well oestrogenized skin.

The axillary and pubic hair had a normal feminine distribution. She was afebrile not pale, jaundiced or dyspneic had no balding or webbing of the neck. The thyroid gland was normal, there was no lymphadenopathy or pedal edema.

Cardiovascular System:

The pulse rate was 72 beats per minute

- regular of normal volume
- Blood pressure was 110/70 mmHg.
- The first and second heart sounds were normally heard with no murmurs.

Chest:

The breast were fully developed with normal areola. There were no montgomery tubercles. The nipples were not wide apart and there was no secretions on expression of both breasts. Lumps were not felt. The breath sounds were vesicular bilaterally.

Musculoskeletal and Central Nervous System:

They were essentially normal.

Abdominal Examination:

There were no surgical scars. The hypogastrium was symmetrically distended. The abdomen was moving with respiration. The Pubic hair was present with normal feminine hair line distribution. Liver, spleen and both kidneys were not palpably enlarged. Renal angles were free of masses and tenderness.

There was a mass arising from the pelvis of about 18 weeks of gestation. It was smooth, firm, immobile and slightly tender. The percussion note over it was dull. No fetal parts were palpable.

There were no signs of free fluid in the peritoneal cavity. Bowel sounds were normal. Hernial sites were intact and normal.

Vaginal Examination:

There was no vaginal discharge or bleeding. The vulva was well developed and looked normal except for dark blue bulging shiny membrane which was completely obliterating the vaginal introitus. It was fluctuant. The clitoris, urethra and labia appeared normal.

Rectal Examination:

The anal sphincter and the rectal mucosa were felt normally. A Huge Bulging vaginal mass was palpated whereby the examining fingers could not get above it. There was minimal tenderness elicited.

DIAGNOSIS:

In view of the history and clinical findings a diagnosis of Imperforate Hymen with haematocolpos was made.

MANAGEMENT:

1. Investigation
2. Definitive treatment - excision of hymen membrane and drainage of the old mestrum.

Laboratory investigations:

1. Haemaglobin 10dl/gl
2. urinalysis - No glucose, protein, leucocytes, casts or epithelial cells.

Mid stream urine - culture and sensitivity revealed no bacterial growth.

3. Serum creatinine 60 mmol/l

   Serum urea 4mmol/L
4. Pelvic ultrasonography. A globular cystic mass lying behind the bladder with a normal uterus above the mass. No adnexal mass noted. Both kidneys and ureter normal. The findings are consistent with hematocolpos.

MANAGEMENT:

Excision of the hymen and drainage under general anaesthesia.

Preoperative Preparation

- Both the patient and mother were explained the actual problem and the management plan.

- The mother consented for surgery and anaesthesia for her daughter.
- The perineum was shaved.

Anaesthesia:

She was induced by Atropine 0.5mg and Thiopentone 250mg intravenously and maintained on oxygen face mask plus halothane 2%.

Procedure:

The patient was kept in Lithotomy position with legs supported by stirrups. Vulval and perineal toilet was done using savlon 1:20 and she was drapped with sterile towels.

The Hymen was identified and using a scalpel, a cruciate incision was made. Chocolate coloured non fowl smelling fluid simulating altered blood of about 400mls was drained. There was no necessity of applying abdominal pressure since the fluid drained easily. A diamond shaped Hymenal flap was excised to enhance further drainage of the fluid. The four redundant portions of the membrane were snipped away with scissors. Haemostatic sutures were not applied since there was no significant bleeding. Digital vaginal examination was deliberately not done for fearing of introducing infection. A sterile pad was applied on the vulva. The abdominal mass disappeared after drainage.

Post-Operative Care and Progress:

- The pulse rate, blood pressure and temperature were monitoring hourly for 24 hours - they were normal.
- Capsules Ampicillin 250mg 6 hourly and metronidazole 200mg thrice daily for 5 days were given.
- She was nursed in fowlers position to facilitate further drainage.
- Vulva and perineal hygiene was overemphasized especially after bowel movement and voiding urine.

She faired well. The old menstrum was very scanty by the fourth day post operative, she was discharged home on 5th day in good condition and was asked to attend the outpatient gynaecological review 6 weeks later. The mother was instructed to take note of the onset of menses, duration and any accompanied complication.

Follow up:

Six weeks later, she was doing fine with no complains. she had menstruated normally for a 3 days duration and the flow was normal.

Pelvic examination revealed a patent hymenal opening and no abnormal discharge. On speculum the vagina epithelium was pink and healthy, the cervix was normal, firm and closed. The uterus was anteverted and of normal size. The Adnexae were free of masses or tenderness.

The patient and the mother were explained concerning the progress and were discharged from the clinic.

COMMENTARY:

The hymen is probably a mixture of tissues derived from remains of the sinus tubercle and vaginal plate. It represents the junction of the sinovaginal bulb with the urogenital sinus and is composed of endoderm form of the urogenital sinus epithelium. It is normally perforated during embryonic life to establish a connection between the lumen of the vaginal canal and the vestibule.[1,2]

An imperforate hymen occurs when the hymen forms a sold membrane without an aperture and it is assumed that it's presence represents a persistent portion of the urogenital membrane which occurs when the mesoderm of primitive streak abnormally invades the urogenital portion of cloacal membrane.[3]

It is a relatively rare condition most often being recognized clinically at time of puberty when retention of menstrual flow occur is in the vagina (haematocolpos) uterus (haematometra) fallopian tubes (haematosalpinx) and occasionally in the peritoneum (haemoperitoneum).

Hallmark of management of imperforate hymen is excision of the hymen allowing free drainage of the old menstrum. Redundant portion of the membrane may be snipped away since the edges tend to coalesce and so

obstruct the membrane and reform the hymen again.[4] This was done in Miss H.A. The thick membrane may need a triangular section removed and haemostatic sutures may be applied using a dekyed absorbable suture. There was no need of applying such sutures in Miss H.A. Care should be taken to avoid excision of the hymenal tissues too close to the vaginal mucosa at the introitus to avoid scarring, stenosis and later development of dyspareunia. Digital examination, vaginal packs, douches or insertion of drainage tubes should be avoided for fearing of introducing infection. Abdominal pressure to enhance drainage may foster backflow leading to peritonitis and endometritis. Unnecessary intrauterine instrumentation should be avoided because if haematocolpos has already developed, there is a risk of perforating the thin overstretched uterine wall.

Asepsis is highly recommended since the vaginal epithelium of patients with imperforate hymen lacks normal Flora especially Doderlein acid Fast Bacillus with it's protective acid millieu in the vagina. The old menstrum is also a good culture medium for growth of Bacteria hence these patients are more prone to infection. This why she was covered with antibiotics. In this case Asepsis was observed both intra and postoperatively the procedure was done under Aseptic environment, either digital examination nor vaginal packs were introduced.

Digital examination may be done some weeks later to ensure that no

pelvic mass remains. This was done 6 weeks later in Miss H.A. and was found to be free of pelvic mass.

Friedman and colleagues have recommended carbondeoxide laser as an alternative method of treatment of imperforate hymen.[5] The hymen is excised by carbondioxide laser under local anaesthesia. No bleeding or wound infection occurred and healing was prompt and satisfactory with no complications like scarring formation, and introital dyspareunia hence concluded that Co_2 laser caused minimal thermal reaction to adjacent tissue hence could be used as an alternative method in treatment of imperforate hymen unfortunately it was not available in our centre so the only option was surgical excision. However during the follow up Miss H.A. progressed well with no evidence of excessive scar formation. The aspect of dyspareunia could not be ruled out since Miss H.A. had no coital experience.

Subsequent fertility of patients who are successfully treated for haematocolpos is normally not impaired. However the ultimate interference with fertility may be greater in patients with haematosalpinx complicated by endometritis or tubal blockade due to aseptic inflammation of the tubes hence continued follow up of such patients to determine their future reproductive capacity may therefore be necessary.

REFERENCE:

1. Tindal VR. Jeffcoate's principles of Gynaecology 1997:148/149

2. Rock J.A., Horowitz IR, Telinde's operative Gynaecology (36):911/9113.

3. Muran D. Copeland's Textbook of Gynaecology (5):125/136.

4. Whitfield CR, Dewhurst Textbook of Obstetric and Gynaecology for Postgraduate 4th Edition:11.

5. Friedman M, Gal D, Peretz BA. Management of Imperforate Hymen with Co_2 laser. ACOG Vol. 74 (Aug) 1989:270-272.

OVARIAN DERMOID CYST: LAPARATOMY AND OOPHORECTOMY

NAME:	Miss S.H.
Age:	23 years old
Parity:	Nulliparous
Residence:	Magomeni
Registration number:	905533
Date of Admission:	10.5.1998
Date of Operation:	20.5.1998
Date of discharge:	26.5.1998

SUMMARY:

Miss S.H. a 23 years old girl nulliparous was referred to our gynaecologic clinic with complaints of a gradually increasing lower abdominal swelling over a period of six months associated with lower abdominal discomfort for three months without menstrual disturbance. Clinical examination revealed a firm freely mobile lower abdominal mass of about 20 x 20 centimeters in diameter. On pelvic examination the mass appeared to arise from the right adnexae. A provisional diagnosis of an ovarian tumour was made. Laparatomy revealed a right ovarian tumour with an intact capsule and absence of Ascites. Right oophorectomy was done and cut section of the

tumour revealed features of Dermoid cyst which was confirmed after histopathological examination. She had an uneventful post operative period.

The case is presented with a discussion on the clinical course and diagnosis of ovarian Dermoid cyst.

HISTORY OF PRESENT ILLNESS:

Miss S.H. was referred to our gynaecological outpatient clinic complaining of lower abdominal swelling which she had first noted about six months earlier. It was increasing in size slowly as days went on. It was then accompanied by abdominal discomfort which was not related to food intake. She gave no history of loss of Appetite nor was there any change on her bowel habits. In particular she denied history of melena, rectal bleeding and weight loss.

Her menstrual cycles had remained regular with normal menstrual period. She did not complain of prolonged cough, chest pain or difficulty in breathing there was no history of fever, painful micturition, frequency or fainting attack. She denied to have noted any change of voice in particular deepening, or abnormally excessive hair growth.

There was no heat intolerance. She had not sought any medical advice during this time as the pain was relieved by oral analgesics.

Obstetrics and Gynaecological History:

She attained menarche at the age of 13 years, had regular menstruation lasting for 3 days in cycles of 28/30 days. She had no dysmenorrhea, vaginal

discharge or dyspareunia. She had not used any oral contraceptive method.

Past Medical Illness:

There was no history of any major illness in the past.

Social and Family History:

She was the third born in a family of four. Both parents are alive and well. She is single had completed her primary school education. She was staying with her sister. There was no family history of Diabetes mellitus, hypertension or tuberculosis contact.

Physical Examination:

She looked healthy, afebrile not pale dyspneic, or jaundiced. There was no oedema. the thyroid gland was of normal size, the resting pulse was 76 Beats per minute regular with normal volume. Blood pressure was 120/70 mmHg. There was no generalized lymphadenopathy and in particular supraclavicular nodes were not palpable.

Chest:

Both Breasts were normal in size and shape and had no palpable lump. The chest moved symmetrically. Air entry was normal in both lungs. The breath sounds were vesicular.

Cardiovascular System:

The Apex Beat was palpable at the fifth intercoastal space along the mid clavicular line. The Heart sound were heard normally with no added sounds or murmur.

Abdominal Examination:

The abdomen revealed an obvious fullness in the hypogastrium.

- It moved with respiration
- There were no distended veins or any surgical scars noted
- The umbilicus was normal in consistency, had no palpable nodule.
- On light palpation there was a smooth freely mobile cystic and non tender mass about 20 x 20 centimeters arising from the pelvis.
- Liver, spleen and both kidneys were not palpably enlarged. Both Renal Angles were free of tenderness.
- There was no fluid thrill or shifting dullness elicited on the abdomen.

VAGINAL EXAMINATION: as explained in Gynaecological case one. The vulva and vagina were found to be normal.

Speculum Examination:

Revealed a healthy cervix, nulliparous with physiological vaginal discharge. The vaginal mucosa was also healthy.

On Bimanual examination the cervix was firm and closed. The uterus was anterverted, normal in size and mobile. There was a cystic mass in the right adnexae. It measured about 20 x 20 centimeters and was separate from

the uterus but moved with the uterus on movement. It was non tender and mobile. The left adnexae and fornices were normal.

Rectal Examination:

The rectal mucosa was normal. Uterus was palpable and found to be of normal size. The pouch of douglas was free of mass or tenderness.

Provisional Diagnosis:

Benign ovarian tumour probably cystic in nature.

The patient was counselled concerning the nature of her problem she was asked to undergo several laboratory investigations before laparotomy.

INVESTIGATIONS:

1. Haemaglobin 11g/dl

   White Blood Cells: Total count 5600/mm3

   Neutrophils 63%

   Lymphocytes 25%

   Eosinophils 1%

   Basophils 1%

   ESR 10mm/hr westergren

2. Urinalysis - No leucocytes casts, epithelial cells

   Mid stream urine culture and sensitivity

   - No Bacterial growth

3. Stool - microscopy- Normal

4. Serum creatinine 80 mmol/L

   Serum urea 6mmol/L

5. Abdomen:

   Pelvic ultrasound showed a solid to cystic tumour of 20 x 20 cms of right ovary. The left ovary and uterus were normal. Liver, both kidneys were normal. The para Aortic nodes were not enlarged.

6. Plain abdominal X/ray- showed no calcification.

7. Chest X ray was normal. There was no effusion or opacification.

8. Intravenous urography could not be done due to lack of urograffin.

Ppreoperative preparation:

1. A signed informed consent was obtained for both anaesthesia and surgery.
2. Blood was taken for grouping and cross/matching. 1000mls of compatible blood group O Rhesus positive was available.
3. The abdomen was cleansed with soap the then shaved in the ward.

ANAESTHESIA:

Induction:

Atropine 1 mg

Thiopentone 275mg

Suxamethonium 100mg intravenously

Intubation with 7.5mm cuffed endotreacheal tube.

Maintenance: 1% Halothane

Oxygen at 6 litres/minute.

Operation:

The abdomen was cleaned with weak iodine solution and spirit. It was opened by lower abdominal median incision. A self retaining retractor was placed in the abdomen and the intestines were packed away with gauze packs.

Found: A right ovarian tumour measuring about 20 x 20 centimeters with variegated consistency. The capsule was intact. There was no Adhesions or Ascites.

- The parietal and visceral peritoneum had normal architecture.
- The left ovary, uterus and both tubes looked normal.
- The Pouch of Douglas had no seedlings. The omentum, bowels, liver spleen and both leaves of diaphragm were found to be normal.

The para aortic lymph nodes were not palpably enlarged.

Done:

The Right ovary was excised from the tube by placing three pairs of clamps on the mesosalpinx and incision made between the clamps, freeing the ovarian tumour. After removing the ovary, several interrupted chromic catgut No.1 sutures were placed in the mesosalpinx under the tube and tied. haemostasis was achieved.

The left ovary was closely inspected and it appeared normal.

The gauze packs and self retaining retractors were removed. The peritoneal cavity was mopped dry. Intruments and gauze counts were pronounced correct. The abdomen was closed in layers vicryl No.1 to rectus sheath and silk number 0 to skin.

On cut surface of the tumour mass, Greenish yellow material with Fatty tissue, hair was seen. The specimen was sent for Histopathology examination. The estimated Blood loss was 150mls.

She recovered well from anaesthesia and after a brief observation in the recovery room she was transferred to the Gynaecological ward.

Post Operative Orders:

1. Blood pressure, pulse rate, respiratory rate half hourly for 4 hours then 4 hourly for 24 hours. BP was 110/74 Pulse rate 90/minute regular, good volume. Respiratory rate 18/minutes.
2. Intravenous dextrose saline 3 litres/24 hours.
3. Pethidine 100mg intramuscularly 8 hourly - 24 hours for pain relief.
4. Input and output chart to monitor the Fluid Balance.

Post Operative Progress:

Six hours postoperatively the patient's condition was satisfactory. She was awake, not pale, afebrile temperature 37°C, Blood Pressure was 120/80 mm of mercury, Pulse rate 92 beats per minute regular with normal volume.

The abdomen was not distended, urine output was 500mls clear against input of 1000mls. 24 hours after the operation intravenous infusion was stopped the catheter was removed and the patient was allowed oral sips and ambulation was encouraged.

During the subsequent days in hospital the recovery was uneventful. On fourth day the wound was found to be clean with no evidence of sepsis. Haemoglobin on the fifth day was 9.8g/dl. She was put on oral haematenics. Wound stitches were removed on 6th day and she was discharged home and advised to come for follow up after 6 weeks.

Follow up After 6 Weeks:

She had no complaint. Her general condition was good. She had just completed her menses. The vital signs were normal. Her abdominal wound had healed completely by primary intention. Examination revealed no pelvic abnormalities. Her haemoglobin was 10.6g/dL Histopathology results (HP 5135/98) confirmed the diagnosis of a Benign cystic Teratoma. She was reassured and was asked to come again 6 months later for follow up.

COMMENTARY:

Mature teratoma account for approximately 25% of all ovarian neoplasms and 95% of all ovarian teratomas.[1] Although mature teratoma is the most common ovarian neoplasm in childhood, more than 50% occur during reproductive years as seen in Miss S.H. and only 10-20% occur in post

menopausal women. Mature teratomas which are predominantly of ectodermal components are commonly referred to as Dermoid cysts or tumours. The Dermoid were named originally because of their predominant composition of skin and skin like structures.[2] They have been found to involve both ovaries in 12-20% and 1% of women Dermoid cysts will transform into malignancy.[1]

Mature cystic teratoma are usually asymptomatic but may present with acute symptoms secondary to torsion or spontaneous rupture.[2] This is usually common during puerperium and childhood. Pain could also be due to traction, distension or inflammation. Mrs S.H. gave a history of abdominal swelling and mild discomfort. She decided to seek medical advice 6 months following the onset of the problem. This shows how mild the symptoms occurred. She did not complain of menstrual problem nor any pressure symptoms like heaviness sensation of pelvis. This was anticipated since only 15% of patients with primary ovarian neoplasia present with menstrual aberration.[3]

Dermoid cysts represent the greatest challenge to both gynaecologic and oncologic diagnostician, therapist and investigator. In this case the clinical diagnosis was suggested by history of progressive lower abdominal swelling and vague abdominal discomfort with a finding of a cystic pelvic mass of a significant size 20 x 20 centimeters necessitating laparotomy. This were further confirmed by a pelvic ultrasonography. Which has been considered capable of differentiating cysts and teratomas from those associated with other adnexae masses showing a characteristic density appearance. The sensitivity

and specificity of ultrasound in distinguishing non ovarian from ovarian masses and benign versus malignant ovarian cysts are unacceptably low to be used as a diagnostic tool especially in the presence of ambiguous pelvic findings. However it is still an important tool when pelvic examination is of suboptimal quality and is also able to detect the presence of masses or cysts whose size is below the sensitivity of clinical examination i.e. 2-5cms.

Transvaginal ultrasound offers a better detailed examination of the internal pelvic organs than transabdominal ultrasound unfortunately it is not available in our centre.[4]

Colour flow doppler studies that evaluate the vascular pattern of adnexal masses show promise as a means to improve the sensitivity and specificity of radiographic prediction of Benign and malignant lesions. In malignant lesions the angiogenesis results in vascular abnormalities and increase Blood flow compared with the vascular architecture and patterns of Blood flow in non malignant lesions.[4]

Plain abdominal X-ray usually show calcification in about half of patients with Dermoid cysts they also show tooth formation, Fat Halo sign but this was not the case in this patient.

Computerized Tomography scanning provide information about the retroperitoneal structures in addition to pelvic organs. It is a more accurate and sensitive way to differentiate benign from malignant lesion though the specificity is comparable. Miss S.H. did not undergo this type of scanning

since despite its presence in our centre, routine use has not been advocated in initial studies and it is also expensive.

Magnetic resource imaging is relatively a new technique which involves the use of radio frequency waves in varying magnetic fields. It is one of the most expensive and least available radiographic studies. However it may be of particular benefit in evaluation of pregnant patients because it avoids radiation exposure to the fetus.

The surgical management of ovarian Dermoid cyst is influenced by Age of the patient, size and persistence of enlargement, whether one or both ovaries are involved, adherence of adnexal structures, hormone production, other pelvic abnormalities, presence of Ascites and desire for future reproduction.[5]

Since Miss S.H. was young, nulliparous, not yet married with a persistent unilateral cyst of 20 x 20 cms which had no Ascites or Adhesions, the procedure of choice which was done oophorectomy. Precautions was also taken not to puncture the cyst otherwise chemical peritonitis would have developed with secondary infection and eventually Dense Adhesion or Granuloma.

In some centres laser laparascopic cystectomy has become popular whereby the ovarian cysts is reseated laparascopically.[5]

So Dermoid cysts are among the commonest benign tumours of the ovary. Therefore as gynaecologists appropriate treatment must be our goal.

REFERENCE:

1. Jonas H.W, Westz A.C., Burnett L.S. Novaks Texbook of Gynaecology 11th Edition 833_36.

2. Yasuioka T, Tenaka T. Journal of obstetrics and gynaecology April 1998 24(2):73-90.

3. Vick V, Baker: Current obstetric and gynaecologic Diagnosis and Treatment 8th Edition 960-61.

4. Scully R.E. Sciarra. Gynaecology and Obstetrics vol 4 (31):Pg 18.

5. Rosen D.M, Lam A.M, Carlton M.A. The safety of laparascopic treatment of ovarian Dermoid Cysts. Australian Journal of Obstetric and Gynaecology Feb. 1998 38(1):77-9.

PRIMARY INFERTILITY OF UNEXPLAINED AETIOLOGY: SUCCESSFUL PREGNANCY FOLLOWING SUPER OVULATION

Name:	Mrs R.M.
Age:	30 years
Registration Number:	916930
Address:	Ilala
Date of Admission:	19.5.98
Date of Discharge:	21.5.98

SUMMARY:

Mrs R.M., 30 years old nulliparous presented at our outpatient gynaecologic clinic with history of primary involuntary infertility for 3 years despite adequate exposure of unprotected coitus. Evaluation of infertility on both partners did not reveal any possible aetiology.

Clomiphene citrate was administered for superovulation and successful intrauterine pregnancy was achieved by the third month. To the time of write up Mrs R.M. was 21 weeks pregnant and attending antenatal clinic regularly.

HISTORY OF PRESENT ILLNESS:

Mrs R.M. a nulliparous. married since three years presented to our gynaecologic outpatient clinic with history of involuntary failure to conceive

for three years despite adequate unprotected sexual exposure. Menarche was at 14 years of age. She had regular cycles with periods lasting 3 - 4 days occurring every 28 - 30 days. She had no dysmenorrhea. Mid cycle pain was experienced regularly and there were no episodes of amenorrhoea or history of abortion in the past. She denied history of chronic lower abdominal pain and abnormal vaginal discharge. She had adequate sexual exposure of up to three to four times per week, orgasm was always achieved. She had no dyspaurenia and had never practiced post coital douching. Bleeding? Knowledge on appropriate coital timing was adequate.

She denied to have experienced any headache, visual disturbance, galactorrhea or excessive weight gain. There was no history of Tuberculosis contact. She was seeking medical advice for the first time.

The husband:

He came a week later. He was a 34-year-old man a degree holder working with Tanzania Revenue Authority; had no complaint besides the infertility problem. He denied ever having genital sores or urethral discharge, Trauma to Testis, inguinoscrotal swelling or any surgical operation. He could not recall history of mumps in early childhood neither could he tell whether his mother had received any drugs while he was in her womb. He admitted having a child out of wedlock who was two years old then. He had no coital or potency problems. He gave no history of prolong use of any drug, neurological problems, or exposure to radiotherapy or excessive heat.

He was taking moderate amounts of alcohol on special occasions but did not smoke cigarettes.

There was no history suggestive of Diabetes or Hypertension in his family and he could not recall any Tuberculosis contact.

Past medical history:

Both had never been admitted

Family and Social History:

Mrs. S.M. had completed secondary school and was a secretary in a private company. Her elder and younger sisters were all parous. She neither took alcohol nor smoked and there was no history of Diabetes or Hypertension in her family. She denied to have suffered from any stress.

Physical Examination:

Mrs R.M. was a healthy lady with well-developed female secondary sexual characteristics. Her skin was well oestrogenized with normal feminine hair distribution. There was no hirsutism or Acne. Her thyroid gland was not enlarged. She weighed 61kgs and was 159cms tall. She was pink, not jaundiced, had no neck webbing or lymphadenopathy.

Central nervous and Musculoskeletal System:

They were essentially normal

Breasts: These were well-developed and non-lactating. The distance between the nipples was within the normal range.

Respiratory System: Normal vesicular breath sounds were heard bilaterally.

Cardiovascular System:

Pulse rate was 80 beats per minute, regular, and of normal volume and character. Blood pressure was 100/70 mm of mercury. Heart sounds were normal with no murmur.

Abdomen:

It was scaphoid, and moved with respiration. There were no scars. Liver, spleen and both kidneys were not palpably enlarged. The renal angles were non tender. There were no pelvic masses palpable.

Pelvic Examination:

The vulva was normal with no abnormal discharge from the introitus. On speculum examination: The cervix looked healthy, nulliparous with on NO lesion or abnormal discharge. The vagina was normal, the mucosa healthy and pink.

Digital examination: The cervical excitation test was negative. Uterus was normal size, anterverted mobile and anteflexed. Both adnexae were free of masses and tenderness.

Rectal Examination: Anal sphincter tone was normal. The rectal mucosa was freely mobile and on bimanual palpation. No nodes were palpable.

Examination of the husband:

He was a musculine healthy looking man with a deep voice. His

weight was 76 kgs and height was 166cms with well developed secondary male sexual characteristics. He was pink, not jaundiced with no gynaecomastia or lymphadenopahy. The thyroid gland was not palpable.

Systemic examination: Was essentially normal. Blood pressure was 120/80 mm of mercury. He had no surgical scar.

Examination of Genitalia:

The phallus was normal sized and well developed. There was neither epispadias nor hypospadias. He was circumcised. Both testes were in the scrotum, they were firm, tender on pressure, non nodular 2.8 x 4 cms in size. There was no inguinoscrotal mass or varicocele noted.

PLAN OF MANAGEMENT:

Infertility work up was instituted to establish the following:

i) Ovulation

ii) Tubal patency

iii) Rule out male factor.

Investigations on Mrs R. M.:

i) Haemoglobin 11g/dl

ii) White cell count total 6000/ml

Differential

Neutrophils 65%

Basophils 3%

Monocytes 5%

Eosinophils 5%

Lymphocytes 25%

iii) ESR 3 mm in the first hour

iv) Blood group AB Rhesus Positive

v) VDRL - Negative

vi) Serum creatinine: 60Umol/Litre

vii) Fasting Blood glucose : 3.5 mmol/litre

viii) Midstream urine: Albumin was negative

Pus cells < 5/h.p.f.

Culture: No pathogens isolated

ix) Serum FSH taken during Follicular Phase 10miu/mL (Normal 3 - 20 miu/mL)

x) Serum LH taken during mid phase 70 miu/mL (Normal 22 - 155 miu/mL).

xi) Serum prolactin 10mg/ml (Normal 1.9 - 26 mg/ml)

xii) Serum progesterone 12nmol/L

xiii) Serum T3 1mg/ml (Normal 0.8 - 2)

T4 5mg/L (4.5 - 12)

TSH 4 uiu/mL (0.47 - 5 uiu/mL)

xiv) Endocervical Swab: No pathogens isolated

xv) Skull X-ray - Normal Pituitary Fossa

xvi) Premenstrual D & C: Revealed Normal Secretory Phase endometrium.

xvii) Pelvic ultrasonography Normal uterus, ovaries urinary bladder, pouch of Douglas Free of Fluid

xviii) Hysterosalpingography: Normal uterus with patent Fallopian Tubes.

xix) Basal Body Temperature:

Mrs R.M. was instructed to take oral temperature and chart on a special chart provided using one clinical thermometer every morning immediately upon awakening before any activity. Should she feel feverish on any day then she were to note this on the chart. Days when intercourse took place were also noted on the chart so as to see whether coital frequency and timing was a problem

The Basal Body Temperature chart showed a Biphasic Phenomena with luteal phase of 13 - 14 days indicating ovulation.

Investigations on the Husband

Haemoglobin 14g/dl

ii) White cell count - Total 7000/cc

Differential Neutrophils 68%

Lymphocytes 22%

Eosinophils 4%

Basophils 4%

Monocytes 2%

iii) ESR: 5 mm in first hour

iv) Urinalysis: No pus cells leucocytes or epithelial cells

v) Seminalysis:

Macroscopic : 2 mls of Normal Looking Seminal Fluid

Viscosity: Increased

Motility: More than 50% Active and Motile

Count: 59 million sperms per ml.

Smear: Normal mature sperms and about 10% abnormal sperms.

Conclusion: Sperm count and other parameters within the Normal Range.

Mrs R.M. was planned for Laparascopy inorder to evaluate the state of the pelvis, tubes, ovaries and decide on possible chances of surgery, she was admitted one day prior to the procedure. Her haemoglobin was 11 g/dl and one unit of Group AB Blood was crossmatched. Consent for the procedure and anaesthesia was obtained.

CLOSED LAPARASCOPY AND DYE INSUFFLATION

Details of the procedure:

Anaesthesia was induced by Atropine 0.75mg, thiopentone 250mg,

Suxamethonium 80 mg intravenously and was maintained by Halothane 5% and oxygen 6 litres/minute.

a) **Insertion of uterine insufflation cannula:**

The patient was placed on Lithotomy position under support. The vulva was cleaned and catheterization was done as in Gynaecological Case 1. 200mls of clear urine was drained. A sims speculum was introduced exposing the cervix which was retracted by two tenaculum forceps. The uterine insufflation cannula was introduced and was locked in position making it water tight. A 20 mls syringe of 0.5% methylene blue was connected to the cannula. The patient was then kept in supine posture and in slight Trendelenberg's position.

b) **Introduction of pneumoperitoneum:**

The abdominal wall was cleaned and draped. A small superficial periumbilical incision was made and verres needle was introduced into peritoneal cavity. About 3 litres of carbon dioxide gas were introduced into the peritoneal cavity.

c) **Introduction of laparascope:**

The trochar and cannula was then introduced into the peritoneal cavity. It was introduced in a vertical fashion up to the muscle fascia, then was passed at an angle of 45° in the direction of the pelvis. The laparascope was then introduced into the peritoneal cavity under transillumination guidance a,

trochar and cannula was introduced in the right iliac fossa and a probe was inserted.

Findings:

A clean pelvis with no adhesions. The uterus was normal both in size and shape. The ovaries, the Broad Ligament and both fallopian tubes were healthy. Both tubes on chromopertubation were patent.

Conclusion: Normal pelvis at laparascopy and dye insufflation.

The carbon dioxide gas was released from the peritoneal cavity and the periumbilical and stab incisions were repaired by plain silk number O sutures vital signs remained stable. She recovered well from anaesthesia and was taken back to the ward. She did well and was discharged in 8 hours and was told to come after 6 days for removal of sutures.

DEFINITIVE DIAGNOSIS: Primary unexplained infertility.

TREATMENT:

The couple was explained that the work up did not reveal any aetiology for the infertility. Superovulation with clomiphene citrate was considered and suggested since they were in real need of a child. They both agreed and were given instructions on the regime, Basal Body Temperature charting and coital timing. The Basal Body Temperature charting was for detection of probable ovulation and luteal phase problems.

Mrs. R.M. was cautioned about the side effects of clomiphene citrate such as hot flushes, nausea, headache, and abdominal discomfort. She was

told to report back immediately whenever problems arose. She was started on clomiphene citrate 50mg once daily for 5 days from the fifth day of the cycle. Basal Body Temperature showed a biphasic phenomena with luteal phase of 13 - 14 days. The second month she continued with the drug and in the third month Mrs. R.M. missed her period and started experiencing symptoms suggestive of pregnancy such as breast fullness, nausea, and palpitation. After two weeks the pregnancy was confirmed by urinary pregnancy test and pelvic ultrasonography. To the time of write up Mrs. R.M. was 21 weeks pregnant, attending our high risk antenatal clinic.

COMMENTARY:

Infertility is defined in general as the inability of a couple to conceive after one year of sexual intercourse without contraception. Studies have found it to affect 10% of the couples.

Various factors contribute to infertility. These include anovulation, abnormalities of the sperm and or semen, pelvic factors such as those causing tubal obstruction and problems of cervical mucus and sperm interaction. Occasionally there may be more than two factors affecting an infertile couple.

It has been estimated that 10 - 15% of couples have unexplained cause for their infertility or to be more precise are hypofertile as it was the case of Mrs. R.M. and her husband. The diagnosis of unexplained infertility was reached after having excluded all other possible causes of infertility.

The diagnosis of unexplained infertility should be made only after a systematic, complete, thorough, infertility study. When no obvious reason for infertility has been discovered then one has to answer the following questions before confirming the diagnosis.

- Was the infertility evaluation complete in terms of modern standards?
- Were the results of studies and observations appropriately interpreted?
- Has a factor that was considered within normal limits and compatible with fertility at the onset of the work up changed during the course of the evaluation?
- How accessible for evaluation are processes necessary for conception that occur within the reproductive system?

According to templeton[1]. The following criteria may suffice

- a history of two or more years of involuntary infertility
- regular confirmed ovulation.
- A normal hysterosalpingogram or laparascopy report.

Although our infertility work up was not wholly exhaustive but at least from the history, physical findings and investigations and templeton's criteria it suffices to say that Mrs. R.A and the husband had unexplained infertility. One may wonder how unexplained infertility occurs, some couples may have

undetectable defects in reproductive capacity while in others conception is delayed by chance alone. There may be limitations of many steps to conventional diagnostic assessments. No clinical tests can evaluate capacitation or the ability of sperm to negotiate the uterotubal junction. Thus in males no combination of available tests can provide a complete profile of sperm fertilizing ability as it is in the female, complete assessment of the pre-requisites for pregnancy is limited. Tubal patency testing does not assess the characteristics of bi-directional tubal mortality that could be essential for fertilization and embryo transport. Even with salpingoscopy the functional and secretion of the tubal epithelium cannot be assertained accurately. The vascular, Biochemical and Immunological preparation of the endometrium for successful implantation of the developing embryo cannot be revealed by conventional testing. Probably some of these factors could have been in this couple. But we cannot tell since it was not possible to investigate.

Management of unexplained infertility has been a controversial subject. In the past many authors opted for a more conservative approach of withholding any treatment because it was argued that in the absence of a known cause of infertility there could be no rationale for therapy.

Jafe documented that there was little to gain by administration of clomiphene citrate to infertile women with normal ovulating cycles like Mrs. R.M[2]. However Collins in his randomized control trials found that there was a growing body of evidence suggesting that there is a rationale for

therapy[3]. Different authors have now found that clomiphene citrate if used for 4- 6 times is effective as compared to untreated couples. Suri has recommended that before it's use determinations of Androgen, oestrogen and progesterone receptors in the endometrial tissues should be done in order to predict the clinical response of infertility to endocrine therapy[4]. Mrs R.M was given clomiphene citrate. This is an anti oestrogen and a weak oestrogen. It acts by competing with endogenous estradiol for oestrogen binding site in the hypothalamus and displaces oestrogen for the binding site. It therefore blocks the static negative feedback of oestrogen. The dose is usually 50mg daily taken between third and fifth day following spontaneous or induced menstrual period.

Ovulation should be documented in every cycle of treatment. Mrs. R.M. used Basal Body Temperature charting. This is considered to be easy and convenient. It also provides information about timing of ovulation so that frequency of coitus may be increased during this period.

Other medical drugs which can be used to cause super ovulation include Gonadotrophins releasing hormones (human menopausal Gonadotrophins and human chorionic gonadotrophins) however the treatment costs have limited it's wide use. Invitro fertilization and embryo transfer may also have a place in unexplained infertility. Arcaine et al demonstrated that super ovulation plus intrauterine insemination[6] was effective in treating unexplained infertility. So unexplained infertility could be due to delay in conception among normal

couples but in most cases is due to undetectable error in fertilization. Superovulation with clomiphene citrate as evidenced by well designed studies has been considered superior to no treatment.

REFERENCES:

1. Templetone A.A,

   The incidence, characteristics and prognosis of patients whose infertility is unexplained. Fertility and sterility 1982:37:175.

2. Jaffe R.B. Commentary on the Effects of a Clomiphene citrate upon ovulation and endocrinology when administered to patients with unexplained infertility. Obstetr. and Gynaecol Survey 1992 : Vol. 47 : 2 : 129.

3. Collins J.S, Crosignani PG; Unexplained Infertility: A Review of diagnosis, prognosis treatment efficacy and management. Internat. J. Gynaecol and obstetrics 1992: 39 : 267 - 275.

4. Suri N.K. Clomiphene citrate therapy and unexplained subfertility. East Afr. Med. J. 1996 Nov. (73) II : 724 - 26.

5. Arcaini L, Bianchi S, Baglioni A. Superovulation and intrauterine insemination versus superovulation alone in Treatment of unexplained infertility. J. Reprod. Medicine 1996 Aug. 41 (8) : 614 - 8.

6. Khan J.A. Sunde A. Koskenies A. Fallopian Tube Sperm perfusion versus Intrauterine Insemination in Treatment of unexplained infertility. Human Reprod. 1993 (8): 890 - 4.

UTERINE LEIOMYOMA WITH MENORRHAGIA

TOTAL ABDOMINAL HYSTERECTOMY

Name	:	Mrs. A.S.
Registration Number	:	906702
Age	:	43 years
Residence	:	Kimara
Parity	:	Para 5 + 0
Date of Admission	:	10.11.97
Date of Operation	:	12.11.97
Date of Discharge	:	19.11.97

SUMMARY

Mrs A.S. a 43 years para 5 women presented to the Muhimbili outpatient gynaecological clinic complaining of an abdominal swelling with heavy menses for about one year. Physical examination revealed a firm pelvic mass with a size corresponding to an eighteen weeks gravid uterus. A provisional diagnosis of uterine fibroid was confirmed by pelvic ultrasonography. Endometrial malignancy was ruled out by endometrial aspiration biopsy.

In view of the size of the uterus, parity of the patient and progressive menorrhagia. Total abdominal hysterectomy was done after she had been counselled. Her postoperative recovery was uneventful. The cases

is presented with a short commentary on various modalities of treatment of uterine fibroid.

HISTORY OF PRESENT ILLNESS:

Mrs A.S was seen at the gynaecological outpatient clinic complaining of heavy menses accompanied with clots for one year duration. The flow was heavy, more so on the third day of her period necessitating frequent changing of pads. Prior to onset of this problem she used to have regular periods with normal flow however the menstrual cycle had remained the normal 30 days. Concomitantly the periods were accompanied by dull moderate crampy lower abdominal pain radiating to the back and thighs. She admitted to have noticed a gradual increase in abdominal girth during the same period without marked increase in body weight. She denied history of intermenstrual or postcoital bleeding. There was no abnormal vaginal discharge. She did not experience dysuria, frequency or urgency. Bowel motions were normal. History of fever, leg swelling, palpitation and dizziness was not present. She had been on oral haematenics which was prescribed in the peripheral dispensary.

Past menstrual and gynaecological history:

Menarche was at the age of 14 years and the cycles were usually of 28 - 30 days with a flow of 3-5 days duration. She had not had any problems besides the heavy flow. There had been no history of dyspaurenia and she had never used any contraceptive methods.

Past obstetric history:

She was para 5 + 0 all alive and well her last born was 17 years. She did not experience any ante, intra and postpartum complications.

Past medical history:

She had never suffered from any major illness in the past. She denied history of bleeding tendency or use of drugs like anticoagulants.

Family and social history:

She was a widow, her husband had died of heart attack in 1992. She was doing petty business. There was no family history of diabetes, cardiac disorders or renal diseases. She neither drank alcohol nor smoked cigarettes.

PHYSICAL EXAMINATION:

Mrs. A.S. was healthy and well nourished, afebrile Temperature 36.7°C, not pale, dyspnoeic or Jaundiced. Her thyroid gland was not enlarged. There was no pedal oedema or peripheral lymphadenopathy.

Cardiovascular System:

Jugular venous pressure was not raised. Her pulse rate was 80 beats per minute, regular and of normal volume.

Blood pressure was 120/70 mm of mercury. There was no parasternal heave or thrill. The apex beat was located in the fifth left intercoastal space along the midclavicular line. Both heart sounds were normal with no added sounds.

Chest:

The respiratory rate was 20/minute with normal vesicular breath sounds. The breasts were normal with no lumps or galactorrhea.

Abdomen:

The abdominal wall moved with respiration and there was a suprapubic distension up to the level of the umbilicus. It was non tender and there was an abdominal mass equivalent to an eighteen weeks gravid uterus which was arising from the pelvis. The mass was firm in consistency and had nodular surface. It was mobile in transverse plane. Liver, spleen were not palpably enlarged and the renal angles were non tender, bowel sounds were normal. Fluid thrill was not elicited.

Pelvic examination:

The vulva, perineum and vagina were healthy. There was no abnormal discharge seen. On speculum examination, the vagina and cervix appeared normal. Digital and manual examination revealed a firm cervix with a closed external os. The uterus was enlarged and nodular equivalent to 18 weeks gestation. There was no adnexal mass or tenderness. The gloves were stained with normal vaginal discharge.

Rectal examination:

Anal opening and sphincter tone were normal. The rectal mucosa was smooth. The same mass was felt through the anterior rectal wall. There was no tumour infiltration through the rectal wall.

Provisional Diagnosis:

Uterine fibroids with menorrhagia.

INVESTIGATIONS

Haemoglobin 11gldl

Peripheral blood Film

White blood cells - Total 5000/mm3

Neutrophils 65%

Lymphocytes 32%

Monocytes 1%

Eosinophils 2%

Red blood cells morphology - Normal

Platelet count 200,000/mm3

Blood group B Rhesus O positive

Urinalysis – No sugar or protein

Bacteriological culture – No organisms grown.

Endocervical swab for microscopy and culture revealed no organisms.

Papanicolaus smear (cervical cytology) – showed benign epithelial squames with no signs of malignancy seen.

Stool – No ova.

Serum creatinine 80 mmol/L

Abdominal pelvic ultrasound scan: it showed a Bulky uterus with

inhomogenous echoes with calcification. The features were consistent with uterine fibroids.

Chest x-ray – normal lung fields, normal heart size.

Intravenous urography revealed a normal urinary system

Endometrial biopsy by Aspiration Technique was done as follows in the manual vacuum aspiration side room.

Procedure: (Endometrial Aspiration Biopsy)

The procedure was thoroughly explained to the patient. She was asked to void urine. Under no analgesia in dorsal position, vulvo vaginal toilet was done and she was draped. A repeat pelvic examination was done and the previous findings were reconfirmed. A sterile cuscos speculum was introduced exposing the cervix. The cervical anterior lip was grasped with tenaculum forceps and retracted anteriorly. Karman's flexible cannulae size 4 was introduced into the uterine cavity with relative ease. Vacuum was created in the monovalve syringe and connected to the cannulae.

The cannulae was gently moved up and down combined with rotatory movements and approximately 5mls of endometrial tissue was obtained and was sent for Histopathological reporting. Using Karman's cannulae the uterus was sounded to 8.5cms. The uterine cavity was not smooth more so on the posterior wall.

Results of histology: HP No. 1307/97

Revealed normal secretory phase endometrium with no features suggestive of endometritis or malignancy.

FINAL DIAGNOSIS: Uterine fibroids with menorrhagia

Surgical Management:

Operation: Total abdominal hysterectomy was planned on account of the following:

Abnormal uterine bleeding which was heavy and likely to manifest with Anaemia in future.

She was 43 years and had already completed family.

It was explained to the patient especially the fact that she would not be able to menstruate or conceive after the operation. She understood and agreed.

She was admitted in the gynaecological ward a day prior to the operation. Her haemoglobin was 11g/dl and 2 units of blood group B Rhesus D positive were crossmatched. She consented for both operation and Anaesthesia. The patient was later shaved. Soap enema was given the night before the operation and was instructed not to take anything orally after her evening meal.

Premedication, induction and maintenance:

Was done as in Gynaecological case no.1. Catheterization was also

done as in gynaecological case 1. 200mls of clear urine was obtained and the catheter was left in situ. The patient was kept in a slight Trendelenberg's position and the abdomen and perineum were cleansed with povodine and spirit followed by draping with sterile linen.

The procedure:

The abdominal wall was opened in layers through subumbilical midline incision as described in Gyn. Case no. 1.

Findings: An enlarged uterus with multiple subserosa and intramural fibroids. The ovaries looked normal and there were no adhesions.

A self retaining retractor was inserted and two tagged laparatomy packs were used to keep intestines away from the operating site.

The round ligament of the right side was grasped with two curved kocher's clamps near the uterine cornu, cut with mayor's scissors and ligated with catgut number 2. The anterior leaf of the broad ligament was opened and incised to a point of reflection of the bladder peritoneum on the uterus. The same was done on the left side.

The right utero-ovarian ligament was triply clamped with kocher's clamps and the ligament was incised between the clamp nearest the uterus and the middle clamp. The ligament was doubly tied with chromic catgut number 2. The same procedure was done on the left side.

The midline reflection of the bladder peritoneum was freed by extending the incision in the anterior leaf of the lower uterine segment where

the two incisions met in the midline. The bladder was freed from the anterior uterine wall using a fine dissecting scissors. The posterior leaf of the broad ligament was incised on either side parallel with the lateral sides of the uterus down to the origin of the uterosacral ligaments.

Using the index finger both ureters were further retracted downwards as they course beneath the uterine arteries. Both uterine vessels were triply clamped with kocher's clamps and the middle clamp. The vessels were doubly ligated with chromic catgut number 2.

Straight kocher's clamps was placed between the uterine vessels and the side of the uterus. The tissue between the clamp and the upper part of the cervix (which is made up of the upper most part of the cardinal ligament) was cut with the scalpel and haemostasis was achieved with chromic catgut number 2. The procedure was repeated on the other side. Each uterosacral ligament was clamped with curved kocher's clamps, incised and then ligated with vicryl number 0. Dissection was continued to develop a plane between the cervix and the vagina anteriorly and the anterior rectal wall posteriorly.

The bladder base was dissected away from the anterior vaginal wall and the pubo vesico-cervial fascia was completely dissected away from the cervix. Straight kocher's clamps were used to dissect the rectovaginal space posteriorly and incise the cut edges of the pubovesico-cervical fascia anteriorly.

The anterior and posterior walls of the vagina were clamped together at each lateral vaginal angle using two curved kocher's clamps and hysterectomy was accomplished later, the clamps were replaced with transfixation number zero vicryl sutures. The free margins of the vagina was reefed with a continuos locking sutures of vicryl no 2/0 and the vaginal vault was closed with interrupted chromic catgut number 2.

Posterior culdoplasty was done inorder to prevent vaginal vault prolapse. This was achieved by passing vicryl number 0 suture through the uterosacral ligament on one side then in and out of the posterior vaginal fornix and through the opposite uterosacral ligament and then tied together. Additional suspension of the vault was accomplished with a vicryl number 0 suture from the anterior vaginal wall laterally through the free margins of the cardinal ligament to the anterior bladder peritoneum and then through the round ligament and the anterior leaf of broad ligament. Posteriorly the suture incorporated the uterosacral ligament and finally to the posterior edge of the vaginal wall laterally. The same suture was applied in the other side and then the two sutures were tied together.

Reperitonization of the remaining peritoneum was done and the abdomen was closed as described in Gyn. Case no. 1. The estimated blood loss was 500 mls.

Reversal of anaesthesia was done as in Gyn case number 1. The patient was then sent back to the gynaecological ward with the following post operative orders:

i) Monitor vital signs be pulse, Blood Pressure, Temperature, Respiratory rate ½ hourly for 8 hours then 2 hourly for 12 hours.

ii) Inj. Pethidine 100mg 8 hourly – for 24 hours.

iii) Intravenous Dextrose saline 1000mls 8 hourly for 24 hours

iv) Injection Ampicillin 500mg intravenously 6 hourly for 24 hours then continue with capsules Ampicillin 500mg 6 hourly for five days.

v) Monitor input and output chart for 24 hours.

Progress:

She faired well. Her pulse was 86/minute regular with normal volume and blood pressure 110/70 mm of mercury. 6 hours postoperatively, she was fully awake with stable vital signs.

She was reviewed again 24 hours later: Her vital signs remained stable the Abdomen was soft with no shifting dullness. Both renal angles were not tender. Urine output was 1800mls against the intake which was 3500mls. Urethral catheter was removed on the 6th day post operative the sutures were removed the wound was found to be dry. She was discharged home the following day fully continent of urine. She was requested to attend the **Gynaecological outpatient clinic 6 weeks later.**

Follow up at the Gynaecological clinic 6 weeks later Mrs A.S had no complaint. She was fully continent of urine and her subumbilical midline scar had healed well by primary intention. Pelvic examination revealed no abnormality.

COMMENTARY:

Leiomyomas of the uterus (fibroids) are a familiar problem to gynaecologists because they are the most common uterine tumours and occur in 20-25% of women past the age of 35. Fibroids may be single or multiple and may be of varying size. Mrs A.S. had multiple subserosal and intramural fibroids.

Each fibroid originates from Elastin fibres in uterine blood vessels, most probably from one cell. The factors responsible for the initial neoplastic transformation are not known but at least two hormones (oestrogen, and growth hormone) are thought to influence the rate of growth(1).

Majority of women with fibroids are asymptomatic but when symptomatic, the clinical presentation will depend on size, location and number of tumours. Most women frequently present symptoms of menorrhagia as it was seen in Mrs. A. S other symptoms include dysmenorrhea, pelvic pain, micturition problems and constipation.

The mechanism of excess menstrual bleeding in uterine fibroids has been explained to be due to an enlarged endometrial cavity which has been caused by large fibroids. Other theories, eg - Pelvic congestion- Endometrial

hypertrophy due to oestrogen- Spiral artery mechanical failure. This creates a larger surface area for menstrual shedding. With intramural fibroids there is impedance of venous return from the endometrium. This may provoke heavier flow. In submucous myomas, mechanical alterations of the endometrium with distortion, dilatation and elongation of endometrial glands at the margins of the myoma may contribute to menorrhagia.

Management of uterine fibroids does not necessarily need surgical intervention since majority of women with myomas require no treatment and can be observed by means of periodic pelvic examination every 6 or 12 months to detect evidence of tumour growth.

Gonadotropin releasing hormones agonists (GnRH) have been widely used in the treatment of uterine fibroids[(2)] They have been found to cause uterine fibroids shrinkage to about 50% with increase in uterine Artery pulsatility index. Their maximum effect is usually noted after three months of therapy, but their high cost and side effects (including vasomotor symptoms and reversible bone loss) make use for more than three to six months problematic. Unfortunately after GnRH agonists are discontinued, fibroid tumour rapidly regain their baseline size. These agents should therefore be reserved for treating large submucous tumours before hysteroscopic surgery, awaiting the onset of menopause in perimenopausal women (since fibroids usually regress after menopause) or reducing symptoms in women awaiting surgery.

Interferons have also been found to be effective since they are potent inhibitors of basic fibroblast growth factor stimulated cell proliferation in human uterine cells[3].

Myomectomy has been considered in patients with symptomatic fibroids who desire children or whom the cause of infertility has been confirmed to be due to myoma.

Hysterectomy has been commonly performed worldwide. The absolute indications in patients with uterine fibroid include large fibroid which causes pelvic pain, pelvic pressure, bladder urgency, rectal pressure or ureteral obstruction. The second indication is progressive menorrhagia which causes anaemia and a fibroid which rapidly increases in size[1,4].

Usually there is no standard size for absolute indication but 12 weeks gestation has commonly been taken as a cut off point between surgery and consecutive approach.

Mrs. A.S. presented with progressive menorrhagia and was found to have a large fibroid of about 18 weeks gravid uterus. Since she had already completed family, then hysterectomy was the appropriate treatment for her.

The place of prophylactic oophorectomy in premenopausal women with benign uterine diseases has been extensively discussed previously. Many authors have now agreed to leave the ovaries alone since majority of the ovaries removed were proved to be histologically normal.

Laparascopic hysterectomy has been commonly done in the developed world infact celio- assisted vaginal surgery has shown a remarkable progress over the past few years since mechanical retractors have been used to lift the abdominal wall as an alternative to pneumoperitoneum(5) Therefore surgeons are now able to operate freely either using transvaginal or laparascopic approach.

Other alternatives to hysterectomy include endoscopic removal or destruction of myoma, laser endometrial ablation and uteroarterial embolization[2].

Uterine fibroids can therefore be a major health burden for women. An individualized approach to this common condition can control symptoms while minimizing the need for surgery.

REFERENCE:

1. Faure N, Lenay A, Maheux R

Clinical Applications of GnRH Agonists: 24: 468-74

Copeland's Textbook of Gynaecology 1993

2. Scialli A.R

Alternatives to Hysterectomy for Benign condition. Int. J. Fertil. Women's Med. 1998 43(4): 186-91

3. Lee B.S. Stewart E.A

Am. J. Reprod. Immunol. 1998 40(1): 19-25

4. Kaunitz A.M. Primary care of uterine Fibroids. An update. Journal Watch Women's Health 1997 (2) : 87-8

5. Chapman R. New therapeutic technique for treatment of uterine leiomyoma using laser induced interstitial thermography. Laser Surg. Med. 1998 22(3): 171-8

CARCINOMA OF THE CERVIX IN A HIV SEROPOSITIVE WOMAN: ANY ASSOCIATION? PALLIATIVE RADIOTHERAPY.

Name:	Mrs A.N
Registration Number:	921752
Age:	34 years
Parity:	6 + 0
Address:	Mbeya
Date of Admission	19.5.1998

SUMMARY:

Mrs. A.N. a 34 years para 6 lady was referred from Mbeya Regional Hospital because of clinical findings which were suspicious of carcinoma of cervix stage IIIb. She had presented with a history of postcoital bleeding which had started nine months prior to her referral.

Examination on admission revealed a fungating cervical mass which easily bled to touch, involving the whole vaginal mucosa and infiltrating the parametria with fixicity to the pelvic wall.

Biopsy taken from the cervix showed on histology a moderately differentiated squamous cell carcinoma. She was also found to be HIV seropositive (ELISA). Since the disease was advanced, she was referred to the

Radiotherapy unit whereby she underwent palliative Teletherapy with a marked reduction of tumour mass and vaginal bleeding. The case is presented with a short commentary on the possibilities of interaction of HIV infection with other cofactors in the development of cervical cancer and the importance of early diagnosis of the disease.

HISTORY OF PRESENT ILLNESS:

Mrs A.N. was referred from Mbeya Regional Hospital as a patient with clinical diagnosis of carcinoma of cervix. She complained of post coital vaginal bleeding which had started about 9 months prior to her admission. The bleeding was initially scanty in amount but it worsened with time especially on douching and straining during defecation. There was no passage of clots. She also developed abnormal vaginal discharge about four months later which had an offensive smell and was non- itchy.

She denied having any accompanying frequency, painful micturition or passage of blood stained urine. She had lost weight significantly and had generalized body weakness with prolonged history fever. She denied ever having genital ulcers. History of chronic cough, fever, palpitation, dizziness and easy fatigability was not present. Bowel habits were normal except but the patient experienced pain while defecating.

Menstrual and Gynaecological Histology:

Menarche was at 14 years. Prior to the start of the current problem her menstrual cycles were regular and occurred after 28-30 days with a

moderate blood loss and periods lasting four days. She had no symptoms such as dysmenorrhea or dyspaurenia before the illness. She gave no history of contraceptive use and had never undergone any pelvic surgery.

Obstetric History:

She was para 6 with no abortions. She had 4 living children. The last two children died at 1½ years due to fever and cough. All the deliveries were normal without any complications.

Past Medical History:

She had never suffered from any major illness necessitating admission. She denied having had schistosomiasis or tuberculosis at any time in the past. She gave no history of bleeding tendencies such as excessive bleeding from the gums nor was there any history of use of drugs like anticoagulants.

Family and Social History:

She was a widow. Her husband died in 1995 due to pulmonary tuberculosis with meningitis.

She got married at 15 years, that is one year after menarche. She admitted to have had sexual exposure even before marriage with multiple partners. She could not tell the sexual history of her late husband, but he had four extramarital children with different women.

Mrs. A.N. was a petty business woman. There was no history of tuberculosis in her family.

Physical Examination:

She was wasted, afebrile with a temperature of 36.7°C. She was not pale or jaundiced, but had a florid oral thrush.

There was inguinal lymphadenopathy bilaterally measuring 3 x 3 cm. The nodes were firm and mobile. She had no oedema of the lower limbs.

Chest

Breasts were normal with no palpable lumps. The chest expansion was symmetrical, air entry was normal and there were no added sounds.

Cardiovascular System:

Pulse rate was 94 beats per minute. The pulse was of normal volume. Her blood pressure was 120/70 mm of mercury and Jugular venous pressure was not raised. The first and second heart sounds were heard normally with no added sounds.

The Abdomen:

The abdomen was not distended and moved with respiration. There were no areas of tenderness. Spleen, liver and both kidneys were not palpably enlarged. Both renal angles were not tender and free of mass.

Pelvic Examination:

The vulva appeared normal and it was soaked with brownish foul smelling discharge. A gentle digital examination revealed a vagina with an infiltrating tumour down to the lower third of the vagina. Speculum inspection

showed that the whole of the cervix was eroded with a fungating mass arising from the whole circumference of portio vaginalis. No part of the normal cervix could be visualized. The growth bled easily on contact and gave an offensive odor. It had rough surfaces and irregular margins. The consistency was hard and the growth extended to the lower third of the vagina.

Rectal Examination:

The anal sphincter tone was normal, rectal mucosa was freely mobile. On bimanual examination, both parametria were found to be infiltrated with the tumour with fixicity to the left side of the pelvic wall.

Clinical Diagnoses:

Carcinoma of cervix stage IIIb

with immunodeficency state

PLAN OF MANAGEMENT:

PRETEST COUNSELLING FOR HIV SCREENING:

HIV screening was positive (ELISA checked twice)

She was HIV positive using both Behring Enzygnost (competitive) and well cozyme (recombinant) methods.

RESULTS OF INVESTIGATIONS:

Haemoglobin 10gldl

Blood smear - Normochromic Normocytic

White Blood cell count reduced.(3000/cc)

Neutrophils 70%

Lymphocytes 25%

Eosinophils 2%

Monocytes 3%

Platelet counts 200, 000/cc

Serum creatinine 60mmol/L

Mid stream urine:

microscopy showed few pus cells.

Bacteriological culture showed no growth of organisms.

Blood group B Rhesus D Positive

Abdominal and Pelvic Ultrasound: Revealed a bulky cervix of about 35 x 45 mm with a normal sized uterus. Both adnexae were free of masses with normal ovaries.

The right kidney was normal but the left one was slightly enlarged. There were no para aortic nodes seen and ascites was absent.

Chest x-ray film showed no pathology

Intravenous urography:

Both kidneys showed normal secretion with mild left hydroureter and hydronephrosis.

Examination under Anaesthesia:

Intravenous thiopentone 275 mg was given for induction of Anaesthesia. Halothane 1% and oxygen 6 litres/minute were used for maintenance of anaesthesia.

The patient was placed in lithotomy position. The vulva and perineum were cleaned with savlon 1:20 and then draped with sterile linen. The urinary bladder was catheterized as in gynaecologic Case 1. 200mls of clear urine were obtained. Digital examination confirmed the previous findings. A sim's speculum was introduced and the previous findings were also confirmed. A wedge biopsy was taken histology.

Rectal examination showed parametrial involvement to both sides and fixation to the left side of the pelvic wall. Sigmoidoscopy and cystoscopy were not done.

Anaesthesia was reversed as in gynaecologic Case 1. And the patient was then taken back to the Gynaecological ward after recovering from Anaesthesia.

Histopathological Report of the Biopsy: HP No. 1847/98

The section showed malignant tumour cells composed of islands and strands of polygonal cells with increase in nuclear cytoplasmic ratio and dense chromatic pattern. There was also increased mitotic activity and stromal infiltration. Intercellular bridges were also noted. Conclusion: cervical moderately differentiated squamous cell carcinoma.

Final Diagnosis: (1) Carcinoma of cervix stage IIIb (FIGO)

(2) Acquired immunodeficency syndrome

TREATMENT:

Treatment of Candidiasis:

Nystatin oral suspension 400,000 IU three times a day for two weeks were prescribed.

Her haemoglobin rose to 11.5g/dl.

Palliative Radiotherapy:

Mrs A.N was first given oral haematenics daily for two weeks in form of ferrous sulphate 200 mg thrice daily and folic acid 5 mg daily. She then received 36 Gy by external Beam using Cobalt 60, at daily dosage of 2 Gy for 5 days, followed by a two days rest. The tumour mass shrank considerably as compared to the original size. With this palliative teletherapy vaginal bleeding stopped.

It was difficult to introduce the tandems in order to perform intracavitary radiotherapy because of advanced disease and resultant fibrosis due to teletherapy.

COUNSELLING ON TERMINAL CARE:

Relatives and the patient were counselled concerning the problem she had that it was an advanced stage and after radiotherapy, emphasis was put on liberal use of analgesia for pain, balanced diet and prompt diagnosis and Treatment of any intercurrent infections. A letter was written back to Mbeya regional hospital informing them that she could continue with care at their

centre. She was sent back to continue with care at home and nearest hospital.

COMMENTARY:

The human immunodeficiency virus was isolated in the early 1980's by Professor Luc Montagnier and colleagues from pasteur institute in Paris and Dr. Robert Gallo and Colleagues from laboratory of the institute of health in USA. It is seen that the number of HIV infected women is increasing reaching about 40% of all HIV infected people world wide[1,2].

HIV infection has been found to worsen progression of several gynaecological conditions including cervical intraepithelial neoplasms, invasive cervical cancers, pelvic inflammatory diseases, syphilis and vaginal candidiasis hence making the standard treatment difficult especially when there is high degree of immunosuppression[3].

Carcinoma of the cervix has been related to some sexual behaviour of the patients. The predisposing factors being early sexual intercourse and multiple sexual partners. This can predispose to infection with human papilloma virus (~~HIV~~ HPV) serotypes 16 and 18 (16, 18, 45, 56) which are known to increase the risk of developing carcinoma of cervix. Mrs. A.N. admitted to have practiced early sexual intercourse with multiple sexual partners even before marriage which was at 15 years. She therefore belonged to the high-risk group.

A primary means by which HIV infection may influence the pathogenesis of HPV associated cervical pathology is by molecular interaction between HIV and HPV genes. Some authors have postulated that there is an

up regulation of HPV E6 and E7 genes with expression of HIV proteins.(4). HIV infection can also influence the pathogenesis of cervical HPV infection indirectly through immunosuppression. This is why patients who are HIV seropositive present in more advanced disease and have poorer prognosis than the general population[5] as it was the case of Mrs. A.N. She presented late with an advanced cervical cancer with AIDS manifestation. The symptoms had started 9 months earlier where by she was prescribed several Antibiotics at the peripheral clinics. If a proper examination was done at that particular moment and then referred to our tertiary centre then probably she would have presented at an earlier stage.

Early detection of those women with cervical neoplasia through proper history and examination is important so as to initiate treatment at an earlier stage is important.

That is why the centres for disease control in Atlanta 1993 has recommended that pap smear be obtained for HIV infected women at least annually because of the increased risk for cervical disease in women who care HIV infected. It has also included HIV testing in all relatively young women with invasive cervical cancer. The question of early detection of carcinoma of cervix in our country is very difficult practically and this is partly due to the cost and unavailability of facilities for pap smears together with lack of skills among health care providers and cytotechnicians.

Patients presenting with advanced cervical malignancy and AIDS manifestation like Mrs. A.N. should be properly taken care of. They should not be neglected and should be given analgesics for pain, antibiotics for infection together with balanced diet. There should be good linkage between the patient, her family and the hospital in order to achieve a high quality of standard terminal care.

REFERENCES:

1. Schoub BD: AIDS and HIV in perspective: a guide to understanding the virus and it's consequences Cambridge University Press 1st ed. 1994; pg 1-17

2. Maiman M: Cervical neoplasia in women with HIV infection. Oncology 1994 : 8 : 83-89.

3. Korn AP: Landers DV: Gynaecologic diseases in women infected with human immunodeficiency virus type I. J. Acquire Immune Defic Syndr Hum. Retrovirol 1995; 9 : 361-370.

4. Boccalon M, Tirelli U, Sopracordevole F; Intraepithelial and invasive cervical neoplasia during HIV infection Eur J. Cancer 1996 : 32 : 212-217.

5. Zanetta G, Mareo A, Colombo A; HIV infection and invasive cervical carcinoma: the need for closer screening programmes in seropositive patients AIDS 1995 :9:909-912.

UTEROVAGINAL FISTULA FOLLOWING ABDOMINAL HYSTERECTOMY: MANAGED BY URETERIC RE-IMPLANTATION

Name:	Mrs. F.A Para 2 + 0
Age:	43 years
Registration Number:	934710
Residence:	Kibaha
Date of Admission:	3/9/98
Date of Discharge:	24/9/98

SUMMARY:

Mrs F.A. was referred to Muhimbili Medical Centre from Tumbi Hospital in Coast Region due to urinary incontinence following total abdominal hysterectomy. The incontinence was not total as she still had some urge to micturate. Serum creatinine was normal and intravenous urography showed normal kidneys with left hydroureter. During examination under anaesthesia a diagnosis of left ureterovaginal fistula was strongly suspected which was later confirmed at laparatomy.

She underwent left ureteroneocystostomy and her postoperative recovery was uneventful. She was discharged fully continent of urine three

weeks later. An intravenous urography done six weeks later showed a normal position and function of both kidneys, ureters and bladder. The case is presented with a discussion on ureteric injury as a complication of pelvic surgery.

HISTORY OF PRESENT ILLNESS:

Mrs. M.F. underwent total abdominal hysterectomy at Tumbi Hospital, Kibaha in the Coast Region in September 1998 due to uterine fibroid with menorrhagia. Two weeks later she noticed wetting her pants and continuous dribbling even shortly after voiding. She was getting the usual urge to void and passed usual quantities of urine 5 - 6 times a day. The passage of urine involuntarily was not altered by straining or posture. There was no history of weight loss, fever, dysuria, abdominal or loin pains. She was recatheterized for 14 days with no improvement. She gave no history of headache, chronic cough or blurring of vision.

Gynaecological history:

Menstrual cycles had been regular lasting 3 - 5 days in every 30 days except for the period of 1 year prior to the operation when she noted heavy menses. There was no history of contact bleeding, or abnormal vaginal discharge. She had never used any form of contraceptive. She had not undergone any other gynaecological operation before the previous hysterectomy.

Past obstetrical history:

She was para 3 + 0; all her three pregnancies went to term and she had normal uncomplicated labours and puerperia. All the children were alive and healthy. She delivered in hospital in all the three pregnancies.

Past medical history:

There was no history of neurologic disease, diabetes, and chronic cough in the past. She denied to have had trauma to the spine.

Social and family history:

She was a housewife, married to a peasant. There was no history suggestive of exposure to active TB. There was no family history of hypertension or diabetes mellitus. She neither smoke nor take alcohol.

Physical examination:

Her general condition was good. She was conscious, afebrile and not pale. There was no pedal oedema or lymphadenopathy.

Central nervous system:

The patient was depressed about her condition. Testing of motor and sensory system revealed no neurological disturbances.

Chest: Respiratory rate was 16/minute

Breath sounds were vesicular with no added sounds

Both Breasts were normal with no palpable masses.

Cardiovascular system:

The pulse was regular and of normal volume, with a pulse rate of 76 beats per minute. Blood pressure was 140/80mm of mercury. Both first and second heart sounds were normally heard and there were no murmurs.

The abdomen:

The abdomen was scaphoid and had a well-healed subumbilical midline surgical scar. There was no area of tenderness or palpable mass. The liver and spleen were not palpably enlarged. Both renal angles were not tender and free of masses.

Pelvic examination:

There was an ammoniacal smell with mild excoriation of the perineal skin. There was no stress incontinence noted on straining with a full bladder.

Speculum examination revealed a normal looking vaginal epithelium and a pool of urine was seen in the vagina. No obvious fistula could be located, but urine appeared to be leaking through a scarred recess at the left corner of the vault.

Rectal Examination:

The anal sphincter tone was normal and the rectal mucosa was normal.

DIAGNOSIS: A provisional diagnosis of post hysterectomy ureteric damage leading to a ureterovaginal fistula was made.

Differential diagnosis: Vault vesico-vaginal Fistula

INVESTIGATIONS DONE ON ADMISSION:

A: Urine Tests:

Urinalysis revealed no sugar or protein with a Normal Sediment

Culture:- No bacterial growth.

B: Blood Tests:

Haemoglobin 11g/dl

RBC - Normocytic normochromic

WBC - Total 5.8 x $10^{9/L}$

Differential Neutrophils 62%

Lymphocytes 32%

Monocytes 4%

Eosionophils 2%

Serum creatinine 60 umol/L

Serum urea 6 mmol/L

Liver Function Tests:

ALAT 40iu/L

ASAT 30iu/L

ALP 100iu/L

C: **Chest x-ray** : Normal Film

D: **Intravenous urography:**

Plain Film - Normal

Post contrast Films: These showed adequate renal function on both sides and both kidneys were normal in size, position and shape. There was no hydronephrosis. The right ureter was in normal position and draining well into the bladder. The left ureter was dilated and it's lower end was not clearly seen but ended blindly and the dye was seen spilling faintly into tissues around. The bladder outline was normal and emptied satisfactorily after micturition.

Examination under Anaesthesia:

The patient was placed in lithotomy position draped with sterile towels after cleansing of the perineum with savlon: 1:20. The bladder was catheterized as in gynecologic case no. 1. Speculum examination revealed a capacious and healthy looking vagina with urine leaking continuously. The vault looked healthy but on it's left corner there was a fibrotic area and urine was seen trickling from this lesion. No fistula was identified by a probe. The vagina was packed with gauze and the bladder filled with a dilute solution of methylene blue about 300 cc. On removal the gauze was formed to be wet, but there was no dye staining seen.

Final diagnosis: Left ureterovaginal fistula causing left hydroureter.

Repair of the Fistula:

The patient was worked up for re-implantation of the left ureter. The urine was cultured again and was found to be sterile. Haemoglobin was

11.6g/dl 3 units of blood group O Rhesus D positive were cross matched for operation.

Preparation for the repair of the fistula:

The patient was informed on the Final Diagnosis and the possible surgical method of repair of the fistula. She was then prepared for surgery after she consented for both operation and anaesthesia.

Description of the procedure:

Procedure: Left ureteroneocystostomy

Indication: Post hysterectomy left ureterovaginal fistula

Under general anaesthesia as described in gynaecologic case Number 1. The usual aseptic techniques were done and the abdomen was opened through the previous subumbilical midline incision scar as described in gynaecologic case number 1.

Findings:

Clean pelvic cavity with no uterus and only the left adnexae was found. The urinary bladder looked normal.

What was done:

The left ureter was exposed by an incision made in the posterior abdominal wall peritoneum. The terminal portion of the left ureter was identified. It was dilated. Both kidneys were palpated and were found to be of normal size. The distal end of the left ureter was carefully dissected from the site of trauma excising all the fibrotic tissues around the ureter. Dissection

of the ureter from the ureterovesical junction was done moving upwards so as to mobilize it from it's bed in order to get sufficient distance to permit implantation into the bladder without tension. After adequate mobilization, it was clamped with a strong artery forceps on it's distal portion at the suspected injured site. The proximal segment was held by tissue forceps. The ureter was then divided and the distal stump was sutured with vicryl number zero.

The urinary bladder was opened through a longitudinal incision and through a stabwound in the posterior side of the base of the urinary bladder, the proximal free end of the mobilized ureter was reimplanted into the bladder and reimplantation was accomplished using interrupted vicryl number 3/0. The absence of uterus enabled easy mobilization of ureter and reimplantation. It was not possible to do submucosal tunnel technique due to dilatation of ureter. The outer border between the urinary bladder and the ureter was also approximated with interrupted vicryl no.3/0. The posterior abdominal wall peritoneum was repaired with catgut number 3/0.

A ureteric catheter number 8 was then inserted into the ureter and later the urinary bladder was repaired in two layers using vicryl number 3/0. The ureteric catheter was drained through the left Iliac Fossa.

The abdomen was closed in layers as described in gynaecologic case number 1. The wounds were dressed with three sterile gauzes.

The patient was reversed from anaesthesia as in gynaecologic case 1 and was sent to the ward with the following postoperative orders:-

i) Half hourly monitoring of pulse, blood pressure, temperature and respiration for 8 hours then 2 hourly for 16 hours.

ii) Intravenous dextrose saline 1000 mls 8 hourly for 48 hours.

iii) Injection Ampicillin 500mg intravenously 6 hourly for 24 hours then capsules Ampicillin 500mg 6 hourly for five days.

iv) Injection Gentamicin 80mg intramuscularly 12 hourly for five days.

v) Injection Pethidine 100mg intramuscularly 8 hourly for 24 hours.

vi) To continue with both ureteric and urethral catheters for 10 and 14 days respectively.

Post Operative Progress:

The patient did well without pyrexia or ileus. Her vital signs remained stable and her bed continued to be dry throughout. The output was adequate. By the end of 24 hours. She had normal bowel sounds and had passed flatus.

On the fourth postoperative day, urine samples from both ureteric and urethral catheters were taken separately for culture and sensitivity. Both grew no organisms. On seventh postoperative day, the skin sutures were removed, the wound had healed by primary intention.

The ureteric and urethral catheters were removed on 10th and 14th days respectively. There was no renal angle tenderness. She was started on urinary bladder training and she remained fully continent of urine till the 18th

day postoperatively when she was discharged home and was told to attend the outpatient clinic six weeks later.

COMMENTARY:

Surgical injury to the ureter in pelvic surgery, though uncommon, its risks to medical and legal implications are serious.

The incidence of ureteral injuries associated with major gynaecological surgical procedures is 0.5 - 2.5%[1], out of which one half to three quarters are latrogenic in origin. Since some ureteric injuries are never recognized, the incidence might be underestimated. In a ten years review in one country hospital, Goodno JA Jr. found that gynaecological surgical procedure resulted in 0.4% incidence of ureteral injuries and repair of these injuries was successful in most of the cases[2]. In developing countries like Tanzania there is a shortage of trained gynaecologists hence quite a number of pelvic surgery is done by the general doctors in poorly equipped units. This increases the risk to ureteric injury.

Conditions which most commonly predispose to ureteric injuries include previous pelvic surgery, pelvic tumours, cervical leiomyoma, endometriosis and pelvic inflammatory diseases. This is due to close proximity of ureters to the female reproductive organs throughout it's course. In total abdominal hysterectomy, the most risky part occurs during removal of the cervix. In this patient the injury occurred almost in this area as it was demonstrated by the operative findings. Normally ureteral injury occurs

primarily at three places[3]. These are:-

- The distal ureter just lateral to the vagina.
- The pelvic brim, where the ovarian vessels are in close proximity to the ureter and
- At the angle of the vagina as it was the case in Mrs. M.F.

Management of ureteral injuries is categorized under two groups i.e. injuries recognized intraoperatively and those recognized postoperatively.

For injuries recognized intraoperatively, repair is done immediately or the source of trauma is removed immediately incase of clamping or suturing or the ureter.

Mrs. F.A presented with urine incontinence two weeks postoperatively. She was diagnosed to have ureterovaginal fistula causing Left Hydroureter after examination under anaesthesia and intravenous urography. Ureteroneocystostomy was done by direct implantantion of ureter in the bladder. This procedure though widely used in the past, has now less often been done by gynaecologic surgeons because of the associated risk of vesicoureteral reflux. Instead submucosal tunnel technique is the one preferred since it restores the Intramural Anatomy of the ureter and hence avoids vesicoureteral reflux[4,5]. It was not possible to do submucosal tunnel in this patient since she had a dilated left ureter.

The abdominal route is most preferred for repair of ureteric injuries. However Mackendrodt discovered the vaginal repair of uretero vaginal fistulas

in a technique called entropionizing[4]. He found it to be very useful in simple injuries to the terminal ureter.

Uretero-ureteral anastomosis can also be done either at the time of injury or at time of subsequent delayed repair but it is usually performed for ureteral injuries that occur near or above the pelvic brim.

Other procedures include transuretero - ureterostomy (i.e anastomosis of the upper ureter in one side to the intact ureter in the opposite side). This can be done if for some reason the ureter cannot be implanted into the bladder, however one needs to be careful as this might interfere the normal functioning of the contralateral urinary tract.

Renal Autotransplantation into the pelvis offers the potential and excellent results in the hands of an experienced renal transplant surgeon. it should be considered in patients who have no possibility of repair of the injured ureter with poor function of the contralateral kidney.

Indigenous techniques have been devised for substituting a segment of ileum for a ureter that has been damaged too extensively to be repaired or implanted into the bladder.

Turner Warwick has proposed repair of difficult ureteral injuries to be wrapped with a vascularized omental pedicle since healing of the ureter is fundamentally dependent on the condition of the surrounding tissues[4].

There is still controversy regarding the management of a ureteral injury when it is noted in the immediate postoperative period, commonly the surgical

repair of ureteric injuries were delayed for an interval up to three months. However many authors including Flyn, Witters, Beland and associates[4] have suggested that ureteral injuries sustained during a clean operation and recognized in the early postoperative period can be repaired as soon as the diagnosis is made with results equal to those of delayed repair. Contraindications to immediate repair includes sepsis and patients considered as poor surgical candidates. In addition the successful passage of ureteral catheter or stent eliminates the need for immediate surgery. Unfortunately with most iatrogenic ureteral injuries stent placement is not feasible with possible exception of ureterovaginal fistula. Laparascopic repair of ureteral injuries during operative laparascopy has been reported.

Therefore prevention of ureteric injuries can only be achieved if one learns the anatomy and physiology of the ureter, makes every effort to recognize ureteral injury by careful pelvic dissection and checking for signs of ureteral injury as early as possible.

REFERENCES:

1. ACUG Technical Bulletin : Genitourinary Fistula 1985: 88 : 1 - 5

2. Goodno J.A Jr, Powers T.W; Harris V.D. Ureteral injury in Gynaecological Surgery a ten years review in a Country Hospital. Am. J. Obstetr. Gynaecol. 1995: 172 : 1817 - 1822.

3. Hatch K. Urinary Tract Injury and Fistula Copeland Textbook of Gynaecology 1993 : 39 : 755 - 765.

4. Thompson J.D : Operative Injuries to the ureters Prevention, Recognition and Management. Te Lindes Operative Gynaecology 1996 (40) : 1150 - 1173.

5. Meirow D, Moriel E.Z. Zulberman M. Evaluation and Treatment of Iatrogenic ureter Injuries during Obstetric/Gynaecologic operations for non malignant conditions. J. American College of Surgeons 1995 : 178 : 144 - 8.

UTEROVAGINAL PROLAPSE: VAGINAL HYSTERECTOMY AND ANTERIOR COLPORRHAPHY:

Name:	Mrs. M.C.
Age:	56 years
Registration Number:	911508
Address:	Mburahati
Date of Admission:	17.5.1998
Date of Operation:	20.5.1998
Date of Discharge:	27.5.1998

SUMMARY:

Mrs M.C. 56 years, para 7 + 0, postmenopausal woman, presented at our Gynaecological outpatient clinic with a history of a mass protruding per vaginum associated with a sense of bearing down for one year . The mass was easily reducible by fingers but kept coming down on straining or standing. She had no stress incontinence of urine. Bowel habits were normal. Physical examination revealed a second degree uterovaginal prolapse with a cystocele. There was no rectocele. She underwent vaginal hysterectomy and anterior colporrhaphy. Her recovery was uneventful. A case is presented and commentary made on aetiology of genital prolapse and salient features in anterior colporrhaphy and vaginal hysterectomy for genital prolapse.

HISTORY OF PRESENT ILLNESS:

Mrs M.C. 56 years old, para 7 + 0, 3 years postmenopausal presented at our gynaecological outpatient clinic with a history of a mass protruding per vagina for one year. It was associated with a feeling of a sense of bearing down. The problem began with a dragging sensation of something "Falling out" which was associated with mild lower abdominal pain and backache. The pain was intermittent radiating to the thigh. The mass became more obvious as time went by. She could easily reduce the mass with her fingers especially when lying down, but it kept coming down when she stood up or strained. She had no sense of incomplete bladder emptying, dysuria, increased frequency of micturition or loin pains. There was also no jutting of urine on coughing or smearing or laughing. She was voiding urine easily, without having to apply some manipulative measures. History of chronic cough, asthma, night sweats, weight loss and constipation were absent. She had not noticed any abdominal swelling.

Gynaecological History:

She could not recall the exact year of her menarche but said that she had been having regular periods of 3 days in every 30 days, till when she reached her menopause. She had never used any form of contraceptive method. She had not undergone any gynaecological operations or Hormonal Replacement Therapy.

Obstetric history:

She had 7 vaginal home deliveries. The labour were essentially not prolonged and no episiotomy or tears were encountered, post delivery she never saw a fleshy red mass protruding vaginally. All children were alive and the last born was 14 years old.

Past medical history:

There were no other remarkable illness.

Family and social history:

She was a widower. Her husband had died of heart attack. She had not been to school. Her elder sister had a similar problem, and this made the patient think she had been bewitched. There was no family history of Diabetes Mellitus or Hypertension. She neither took alcohol nor smoked cigarettes.

Physical Examination:

An elderly, healthy looking lady, of slender physique. She was afebrile, pink, not jaundiced, and had no lymphadenopathy or oedema.

Respiratory system:

The respiratory rate was 18/minute.

The breath sounds were vesicular bilaterally with no rhonchi or wheezes.

Breasts: were pendulous but had no lumps or nipple retraction.

Cardiovascular System:

The pulse rate was 80 beats per minute, regular and of normal volume and character. Blood pressure was 140/80mm of mercury. The first and second heart sounds were normally heard with no murmurs.

The abdomen:

It was scaphoid, had no scars and moved well with respiration. The liver and spleen were not palpably enlarged and there was no ascites. The renal angles were non tender with no palpable mass.

No pelvic mass was palpated and the hernial orifices were free.

Central nervous system: No abnormality was detected.

Vaginal examination:

The vagina and perineum were examined in dorsal position. The external genitalia was atrophic, the urethra and vestibule were normal though the vaginal outlet was grossly relaxed with the cervix and part of the uterine body protruding at the introitus. There was no ulceration. On straining, further descent beyond the introitus could be demonstrated. Stress incontinence could not be demonstrated on coughing.

The patient was then placed in the left lateral position and a sims speculum was gently introduced. The anterior vaginal wall was exposed by retracting the posterior vaginal wall. A cystocele was demonstrated which

descended more on straining. There was no rectocoele demonstrated on exposing the posterior vaginal wall by retracting the anterior vaginal wall. Finally bimanual pelvic examination in dorsal position after the patient had micturated revealed a mobile small uterus. The fundus remained above the vagina introitus and there were no adnexal mass palpable.

Examination per rectum

The anal sphincter was normal. The rectal mucosa was normal and free of mass, and did not appear to come down the vagina.

Diagnosis:

1. Second degree Utero vaginal prolapse
2. Cystocele

MANAGEMENT:

Mrs M.C. was counselled concerning her problem and she was explained the planned mode of management, to which she agreed. Vaginal hysterectomy and anterior colporrhaphy was planned. Before surgery some laboratory investigations were done:

Investigations: done at the outpatient clinic

i) Haemoglobin 11g/dl

ii) WBC Count: Total 4800/ml with normal differential distribution

iii) Platelets: 300,000/ml

iv) ESR: 10 mm in the first hour

v) Serum creatinine 63 mmol/L

vi) Mid stream urine: No pus cells, casts, or epithelial cells.
Culture and sensitivity: No pathogens isolated.

vii) Blood group B Rhesus positive

viii) Chest X-ray: Normal lung fields and Heart shadow

ix) Intravenous urogram: Normal kidneys, ureters and bladder.

x) Cervical Pap Smear: normal

Surgical treatment:

1. Vaginal Hysterectomy
2. Anterior Colporrhaphy
3. Strengthening of pelvic floor

The patient consented for both surgery and anaesthesia. She was admitted 2 days prior to surgery. She was kept on fluid diet, sitz bath twice daily and enema was given the night before surgery. She was starved from 22.00 hours on the night before surgery. Two units of blood group B Rhesus positive were cross-matched, pelvic hair and perineum was shaved on the morning of operation.

Anaesthesia:

The general anaesthesia was given as in gynaecological case No.1.

Procedure:

The patient was put in lithotomy position. The perineum, surrounding skin and vagina were painted with 1% iodine in 70% Alcohol and sterile drapings were applied. Aseptic catheterization of the bladder was done as in

gyn case 1. using a metal catheter and about 100mls of clear urine was drained. Pelvic examination under anaesthesia confirmed the previous findings.

Sims speculum was inserted in the vagina. The cervix was held by the volsellum forceps and pulled downwards. 10mls of Normal Saline was injected under the vaginal mucosa on the anterior and Lateral Aspect of the cervix but avoiding injection directly into the bladder. This was done to ease separation of the planes of dissection. The cervix was "circumcised" circumferentially about 1 cm from the external os. Then a vertical midline incision was made on the anterior vaginal wall extending from the urethral fold above the original incision. The flaps of the vaginal skin were dissected away from the bladder using Mc indor scissors and the gauze on a finger inorder to achieve adequate exposure, using a metal urethral catheter it was introduced through the urethral meatus hence the base of the bladder identified. An incision was then made by a knife below the base of the bladder through the vesico-cervical ligament to the cervix. A plane of dissection was identified and a blunt dissection was used to strip the bladder off the cervix upwards until the uterovesical peritoneum was exposed. The cervix was then pulled upwards and through the posterior aspect of the original circumferential incision a blunt dissection was made thus separating the posterior vaginal skin from the cervix. The dissection was continued upward until peritoneum of pouch of Douglas was identified. The anterior and posterior peritoneal pouches were then opened

each through the transverse incision and a stay sutures were applied as markers. The paracervical tissue on each side were clamped and divided between Kocher's forceps and transfixed with chromic catgut number 1. The sutures were cut long and held by Artery Forceps.

The uterine vessels were then doubly clamped and divided between Kocher's forceps and transfixed with chromic catgut No.1. These were cut short.

The index and middle finger of the Right hand were inserted through the anterior peritoneal opening and the uterus was hooked at the fundus and delivered through the opening. The broad ligament including the round ligaments, the ovarian ligament and Fallopian Tubes were clamped together. divided between Kocher's forceps and transfixed with chromic catgut number 1 on each side. The tubes were cut long and their ends held by small Artery forceps. The ovaries appeared normal and were left in situ.

Closure of the peritoneum:

Using the peritoneal stay sutures as markers, the peritoneum was closed transversely using chromic catgut number O approximating the Anterior edge of the uterovesical peritoneum and the peritoneum from the pouch of Douglas. The cut edges of the appendages were kept extraperitoneal. The sutures holding the pedicle of the broad ligaments. uterosacral and cardinal ligaments were then tied together separately to strengthen the pelvic floor extraperitoneally.

Anterior colporrhaphy:

The bladder was suspended by a mattress of chromic catgut No. O sutures placed through the Pubovesical Fasciae and tied. At the uretero vesical junction, the paraurethral fascia was drawn carefully from its most lateral margin to add additional support to the posterior urethra. Redundant vagina skin was excised and the walls approximated by interrupted catgut No. 2. Haemostasis was achieved. A two way Foley's catheter was inserted into the bladder and ballooned and sterile gauze roll inserted to pack the vagina. The total blood loss was estimated to be 400mls the operation took one hour:

Reversal of anaesthesia:

This was done as in gynaecological case No.1.

Post Operative Care:

1. Vital signs monitoring
   - Pulse rate was monitored hourly for 24 hours and it remained stable.
   - Blood Pressure was monitored 4 hourly for 24 hours and it remained stable.
   - Temperature was charted 4 hourly the patient remained afebrile.
   - Respiratory Rate remained stable
2. Intravenous Dextrose Saline 1.5 Litres in the first 12 hours then to continue with oral fluid and full diet.

3. Pethidine 100mg intramuscularly 8 hourly for 24 hours for analgesia.
4. Ampicillin 500mg was given 6 hourly for 5 days orally
5. Vagina pack was removed 12 hours after the operation. No vaginal bleeding was observed.
6. Indwelling catheter was left in situ for 48 hours. The patient remained well throughout the post operative period. Her vital signs were stable. She neither had signs of pelvic sepsis or hematoma nor stress incontinence after removal of catheter. Her haemoglobin was checked 3 days post operative it was 10g/dl on 7th day postoperatively she was discharged home and was told to come at our gynaecological clinic 6 weeks later. She was also advised to abstain from sexual intercourse for 3 months.

Follow-up: She was seen 6 weeks later. She had no complain she was able to urinate well the abdomen was found to be soft.

COMMENTARY:

Pelvic floor relaxation with sub sequent uterovaginal prolapse is a gynaecological condition whose incidence is fairly low in developing countries like Tanzania and Kenya[1]. In Muhimbili Medical Centre it accounted for 0.7% of all gynaecological operations in 1998. However in the developed world it is one of the most common conditions treated by gynaecologists.

Pelvic relaxation refers to various anatomical abnormalities involving the vaginal canal and it's surrounding structures associated with loss of fascial, muscular and ligamentous support. These include the urogenital diaphragm, pubourethral, cardinal, uterosacral ligaments, the levetor ani muscles and the endopelvic fascia. This general term of pelvic floor relaxation comprises of urethrocele, uterine prolapse, vaginal vault prolapse (in absence of uterus), enterocele, rectocele and relaxed vaginal outlet uterine prolapse cannot occur without vagina prolapse since it is the vagina which supports the uterus below.

The uterus component of the uterovaginal prolapse is measured in relation to the degree of prolapse of the cervix below the level of ischial spine the normal station of the cervix in the pelvis[2]. A first degree of uterovaginal prolapse refer to the descent of the cervix below the ischial spine as far as, but not beyond the introitus. A second degree prolapse refers to the descent of the cervix (but not the entire uterus) beyond the introitus as it was in the case of Mrs. M.C. A third degree is when the entire uterus lies beyond the introitus. It is also called procidentia. All these refer to maximal descent of the cervix with straining or traction on the cervix with a tenaculum when the patient is not anaesthetized[2].

It was believed in the past that the cause of weakness of the pelvic floor was vaginal childbirth especially multiple deliveries[3] associated with laceration of the Birth canal and the Ageing process due to oestrogen deficiency causing continued loss of fascial strength and support. However it is now thought that

probably pelvic floor weakness may primarily be of congenital causes. Mrs M.C. had no associated risk factors like those, which chronically raise the intraabdominal pressure. The mentioned factors aggravated by menopausal fascial and muscular atrophy plus strenous farming activity could have precipitated the genital prolapse.

Management of uterovaginal prolapse ranges from conservative measures to very invasive surgical measures. The type of management depends on the Age of the patient, desirability to children and menstruation, symptoms and general health of the patient. Conservative measures are only of temporary relief and mainly involve the use of pessaries and kegel exercises. The perineal exercise can be of great value in tightening the support of the vagina and uterus by improving the tone of levetor ani muscle in symptomatic young women. Ring or Smith Hodge pessaries may be used in developmental weakness, and factors such as childbearing. Ageing and conditions causing increased intra abdominal pressure (like eg. prolonged Heavy Load Lifting, chronic cough, ascites and pelvic mass) are only secondary i.e precipitating or activating factors. The part played by an inherent defect in supporting tissues is evidenced by the fact that prolapse in both nulliparous and multiparous has a strong familial incidence and this also explains why prolapse often follows easy rather than difficult labour.

Mrs. M.C. was a multiparous patient who had reached menopause three years previously. She delivered all her 7 children at home the labour

were of short duration and had no signs of trauma. Her sister also suffered from the same problem of genital prolapse therefore the predisposing factors to genital prolapse were present in her case. The importance of genetical predisposition is seen.

Such factors may be associated with congenitally lax pelvic support despite the fact that she had no evidence of hernias or hemorrhoids elsewhere.

In this case surgery (vaginal hysterectomy plus anterior colporrhaphy) was the chosen mode of treatment since she was postmenopausal and the desire for children was out of question. The removal of uterus and cervix also protected the patient from the risk of malignancies in these sites. Although papsmear results showed no sign of malignancy, Ideally endometrial curretage was also supposed to be done before surgery because suspicious results would indicate removal of uterus through the abdominal route. It should be remembered that the uterus is not the cause of uterovaginal prolapse and removal of the uterus does not solve the problem. Infact the most important part of this operation is support for the vaginal walls, vagina vault and vaginal outlet. Thus in this case the pedicle containing the ligaments were tied together in the midline and made taut. This created a new support for the vaginal vault.

The treatment for the cystocele is by anterior colporrhaphy[5] a procedure designed to plicate the pubocervical fascia under the bladder and urethra as it was done in this case. It is important to tighten the periurethral

fascia under and around the urethra and to elevate the proximal urethra so that it is higher than the bladder base, by this way genuine stress incontinence (GSI) can be prevented or treated[5]. Fortunately Mrs M.C. did not present with GSI. While repairing it is important not to narrow the vagina too much as this may cause dyspaurenia.

REFERENCES:

1. Ojwang S.B.O. Genital Prolapse as a problem in Rural Community. East. Afr. Med.J Jan 1995 : 1.
2. Beck R.P. Abnormalities of Support in Female Genital Tract: Genital Prolapse; Copeland's Textbook of Gynaecology (1993) 710 - 733.
3. Lukman Y: Uterovaginal Prolapse: A Rural Disability of the Young. East Afr. Med. J 1995:2
4. Thompson J.D: Malposition of the uterus. Te'linde's Operative Gynaecology 7th Ed. 1992 : 819.
5. Peter R: A 25 years experience with 519 Anterior Colporrhaphy Procedures. Journal of the American College of Obstetrician and Gynaecologists 1991 Dec. (78) 6.

PLACENTA PRAEVIA GRADE IV:

DIAGNOSTIC TECHNIQUES

Name:	Miss M.Z.
Gravidity:	Primigravida
Age:	17 years
Residence:	Magomeni
Delivery number:	9359
Date of admission:	28.7.1998
Date of operation:	21.7.1998
Date of discharge:	27.7.1998

SUMMARY:

Miss M.Z. 17 years old, primigravida was admitted into the high risk labour ward from Magomeni dispensary due to painless unprovoked vaginal bleeding at 32 weeks of gestation.

The bleeding had started about an hour prior to admission. Fetal movements were felt normally. On admission she had no active bleeding. She was then kept in the labour ward for observation and after 10 hours she was transferred to the antenatal ward with a provisional diagnosis of placenta previa. The diagnosis of placenta previa type IV was confirmed by ultrasonography at 32 and 36 weeks respectively. She was planned for

expectant management up to 38 weeks of gestation where she was to undergo elective caesarian section unfortunately she had a second episode of severely heavy vaginal bleeding which subjected her to emergency caesarean section. She delivered a 2.4kg healthy male baby. The recovery was uneventful she was discharged on 6th postoperative both she and the baby in good condition. The case is presented with short commentary on the different diagnostic techniques.

HISTORY OF THE PRESENT ILLNESS:

Miss. M.Z. was referred from Magomeni Dispensary on 28.6.1998 due to painless, unprovoked vaginal bleeding that had been noticed about an hour prior to admission. Her last menstrual period started on 15.11.1997 her expected date of delivery was on 22.8.1998 therefore her gestational age on admission was 32 weeks. She was about to have her lunch when she noted blood trickling down to her legs.. It was not mixed with mucus. She denied history of coitus or trauma preceding the bleeding.

She was feeling dizzy and weak but denied history of fainting attack. She did not complain of abdominal pain, and fetal movements were present. She denied history of fever or abnormal vaginal discharge or contact bleeding.

There was no history of labour pains, passage of blood stained urine, or constipation. She also denied history of bleeding tendencies like bleeding from gum on brushing her teeth.

This was her first episode of vaginal bleeding in this pregnancy. She had booked at Magomeni dispensary antenatal clinic on 9.3.1998 at gestational age of 20 weeks. The booking blood pressure was not checked nor the haemoglobin level. The fundus was estimated 20 weeks, which corresponded with gestational age. She made 3 more visits before being referred to the high risk labour ward. Her haemoglobin level was found to be 80% and blood pressure 120/80mm of mercury.

The fundus corresponded to gestational age in all the subsequent visits. She received oral haematenics and weekly chloroquine prophylaxis.

Gynaecological History:

She attained her mernache at 13 years. Her menstrual cycle was of 28 days; regular with periods lasting 3 to 5 days and menstrual flow was normal. She had no history of intermenstrual bleeding. She denied any previous history of endometrial curettage.

Past Medical History:

She had no history of major illness in the past.

Family and social history:

She was a petty business woman. Single stays with her elder sister. She completed primary school. There was no family history of twins. She admitted to be drinking alcohol occasionally but denied cigarette smoking.

Physical Examination on Admission:

She had a fair nutritional status, she was a febrile not pale, no pedal or ankle oedema. The peripheral lymph nodes were not palpably enlarged.

Cardiovascular system:

The pulse rate was 82/minute regular and of normal volume. Blood pressure was 110/70 mm of mercury (sitting). The first and second heart sounds were heard and were normal. There were no added sounds and no murmurs.

Chest:

Breasts were normal. They had no palpable mass or nipple discharge. The breath sounds were vesicular and the lung fields were clear.

Abdomen:

Abdominal examination was done gently

The abdomen was symmetrically distended and moved synchronously with respiration. There were no scar or therapeutic markings.

The abdomen was soft with no areas of tenderness.

The liver, spleen and kidneys were not palpably enlarged.

The fundal height was estimated to be 32 weeks and corresponded well with the gestational age.

The lie was longitudinal.

The presenting part was caphalic and high.

No uterine contractions were felt

The fetal heart rate was 140/per minute and regular.

Perineal inspection:

The sanitary pad was soiled with blood. The vulva and perineum were stained with blood.

No active bleeding was noted from the introitus.

No external haemorrhoids were noted

There was no bleeding from the vulva.

Diagnosis:

With the above history and findings a provisional diagnosis of antepartum hemorrhage due to placenta praevia was made.

Vaginal and cervical causes of antepartum hemorrhage were the other possibilities.

MANAGEMENT:

1. **In the labour ward**
    1. Urgent blood grouping and crossmatching was requested. Four units of blood were requested. The patient was blood group 0 Rh(D) positive.
    2. Intravenous drip of normal saline 1000 mls was started.
    3. Blood pressure, pulse rate, respiratory rate and fetal heart rate were monitored half hourly.

4. Sanitary pads were inspected frequently for evidence of vaginal bleeding.
5. The patient was advised on strict bed rest.
6. The patient was advised not to drink or eat anything for fear that should she continue to bleed, an emergency examination under anaesthesia and possibly caesarean section would be necessary.

In the antenatal ward:

The patient was transferred to the antenatal ward 10 hours after admission. The decision was made so after observing that the patient had not bled at all the 10 hours she had been in the labour ward, and that the vital signs had been stable. The aim was conservative management in view of the gestation age of pregnancy.

1. Strict bed rest was to continue until delivery or placenta praevia had been ruled out.
2. She was told to report any vaginal bleeding.
3. Haemoglobin was checked and was found to be 12g/dl
4. She was told to mobilize her relatives to donate blood so that it was always available in the blood bank incase she developed heavy bleeding.
5. A pelvic ultrasonography done at 32 and 36 weeks respectively confirmed complete placent praevia grade (IV).

6. Emergency delivery was to be done incase of another episode of heavy vaginal bleeding.

The patient experienced a second episode of heavy vaginal bleeding during her third weeks stay in the high risk Antenatal ward. By then the gestational age was 36 weeks. She was rushed for emergency caesarean section.

Preoperative preparation:

1. The patient was rushed to the labour ward
2. 2000mls of blood group O Rh (D) positive were made available at the blood bank.
3. The patient signed a consent for anaesthesia and surgery.
4. An intravenous line with a canula number 16 was set with normal saline running fast.
5. The patient's abdomen and perineum was shaved.

Procedure in Theatre:

1. The patient was catheterized as follows:-

   The nurse scrubbed her hands for five minutes with soap and water, after which sterile gloves were worn on both hands. While the patient is the dorsal position a sterile swab soaked in savlon solution 1:20 was picked up by the right gloved hand and was passed over to the left hand which swabbed the right side of the labia from up downwards. The left

labia was also swabbed in the same way using the same left hand but with a new swab. The left hand was then used to separate the labia and expose the urethral meatus which was cleansed from up downwards by a swab in the right hand. A sterile urethral catheter was gently introduced until urine was seen running out. About 100mls of clear urine was removed. The catheter was then connected to the right glove which had been previously worn by the nurse.

2. The surgeon scrubbed and dressed in sterile gown and put on sterile gloves.
3. The patient's abdomen was cleansed with weak iodine twice and finally with 70% ethyl alcohol.
4. She was drapped with sterile linen and the site of operation was exposed.
5. Anaesthesia: General anesthesia,
   a) Atropine 1mg and pethedine 100mg were given intravenously as premedication.
   b) Intubation was done using a cuffed endotracheal tube size number 7.
   c) Anaesthesia was maintained by oxygen 6l/min and halothane 0.25%

Operation: Lower segment caesarean section:

PROCEDURE:

Through subumbilical midline incision the abdomen was opened in layers. The lower segment of the uterus was exposed using Doyen's retractor.

- Each side of the uterus was packed with tagged abdominal packs soaked in warm water.
- The loose uterovesical fold of peritoneum was picked up with a pair of non toothed dissecting forceps and incised transversely.
- The lower peritoneal flaps were pushed downwards using swab on a stick hence mobilizing the bladder downwards and away from the site of incision of the uterus. It was held in this position by the Doyen's retractor.
- A cresent shaped incision was made on the lower segment and extended laterally with index fingers.
- The fetal head was delivered gently. A 2.5kg male baby was delivered with apgar score of 8 at one minute and 10 at 5 minutes. No external congenital malformation was seen.

The cord was quickly and doubly clamped and cut in between clamps. Ergometrine 0.5mg was given intravenously. Placenta praevia type four was confirmed using controlled cord traction. The placenta and membranes were delivered easily. No abnormality of placenta or cord were noted. Sinuses were seen on the placental bed but the bleeding had been minimal.

Green -Armytage clamps were applied on the uterine margins inorder to control bleeding from the wound.

The uterine wound was repaired in two layers. The inner layer being repaired by continuous locking suture of chromic catgut No. 1 starting just beyond the lateral margin of the wound by a figure of eight knot. The second layer was done by a non locking continous suture made in such a way that it completely buried the first layer.

The uterovesical peritoneum was repaired with chromic catgut number 0 in a continuous suture.

The ovaries and tubes were inspected and were found to be healthy.

- The packs on either side of the uterus were removed.
- The abdomen was mopped dry and swab and instruments were counted and announced to be correct.
- The abdomen was closed in layers but leaving the peritoneum unsutured with vicryl no. 2 to rectus sheath and silk no. 0 to skin.
- Vulva and vaginal toilet was done. Blood loss was estimated to be 600mls.

Reversal of Anaesthesia:

Reversal of anaesthesia was done using 2.5mg neostigmine and 1mg atropine.

- Suction of secretions and extubation were done.
- The patient recovered from anaesthesia and was sent back to the ward in good condition with a blood pressure of 110/70 mmHg and pulse rate of 100 beats per minuted.

Postoperative Orders:

1. Close monitoring of pulse, temperature, blood pressure and respiratory rate were done half hourly for 4 hours then hourly for the first 24 hours.
   - 6 hours post operatively the pulse rate was 98/beats per minute and regular.
   - The blood pressure was 110/70 mm of mercury. The respiratory rate was 18/minute. She remained afebrile.
2. Intravenous dextrose saline 3 litres were given over a period of 24 hours.
3. Injection pethedine 100mg intramuscularly were given 8 hourly for the first 24 hours to relieve pain.
4. Urine output of 1200mls was collected and was considered adequate for 24 hours.
5. There was no active vaginal bleeding observed.

Progress in the ward:

Intravenous fluids were discontinued after the first 24 hours. The urethral catheter was also removed after the first 24 hours. The patient had

started passing flatus and the bowel sounds were audible. She was instructed to start oral sips and was encouraged to ambulate. The haemoglobin was checked and was found to be 11g/dl on third post operative day.

The breasts were secreting milk and the child was breast feeding well. The child was given polio and BCG vaccine. The uterus had contracted well the lochia was normal and non foul smelling. The patient was discharged on 6th postoperative day after the stitches were removed and the wound remained clean. She was discharged with Iron and Folic Acid tablets. She was advised to attend postnatal clinic at this centre after 6 weeks.

Postnatal visit:

She returned 6 weeks post delivery at the postnatal clinic. Her blood pressure was 110/70 mm of mercury, weight 55kg, haemoglobin 12.1g/dl. The abdominal wound had healed completely by primary intention. The uterus was not palpable abdominally. She had no abnormal vaginal discharge.

Counselling was done concerning the use of proper safe and effective method of family planning. She was started on progesterone only contaceptive pills and she was told to come for follow up and also wherever she felt any problems such as excessive bleeding. She was also advised on the vaccination programme of the underfives available at any maternal and child health clinic.

COMMENTARY:

Placenta praevia is defined as implantation of the placenta partially or wholly in the lower segment of the uterus[1].

It is one of the most serious obstetric haemorrhagic condition occurying in pregnancy which may lead to complications associated with maternal and perinatal mortality and morbidity. It's seriousness had made any antepartum haemorrhage to be considered as placenta praevia until proven otherwise.

At term about 0.5-1% of all pregnancies have placenta praevia of some degree and this is respossible for 15-20% of all causes of antepartum haemorrhage[2].

The aetiology of placenta praevia remains controversal. However there are major theories focusing on endometrial or myometrial damage and defective genetic or placentation mechanisms. The risk of endometrial damage in relationship to an increasing rate of placenta praevia has been demonstrated. Previous caesarean section, therapeutic and spontaneous abortions, dilatation and curretage, advanced age, parity, multiple pregnancy, smoking, cocaine use and chronic endometritis have been shown to increase the risk for placenta praevia[3,4]. However placenta praevia' also occurs in patients who have had no insult and hence the mentioned theories cannot explain all cases of placenta praevia. This shows that the remaining theory of defective genetic or placentation mechanisms has a role to play somehow.

Mrs M.Z. (now a para 1) had no previous history of uterine insult. Her newborn showed no evidence of any congenital anomalies. It is difficult to ascertain the aetiology of placenta praevia in this case since she had none of the risk factors mentioned before.

The commonest symptom of placenta praevia is painless unprovoked vaginal bleeding which usually does not appear until around 29 to 30 weeks of gestation. This correlates with the stage of gestation during which the lower segment begins to elongate accounting for degree of separation often times the bleeding occurs without warning. The intial bleeding is rarely heavy but studies have shown that subsequent episodes of bleeding to be heavier and fatal.

The diagnosis of placenta praevia can seldom be established firmly by clinical examination unless examination under anaesthesia is done whereby a finger is passed through the cervix and the placenta is palpated[1]. Such examiantion is never permissible unless the woman is in the operating room with all preparations for immediate caesarean section are made. With the advent of ultrasonography in experienced hands, the placental location can be demonstrated relative to the internal cervical os. Using this transabdominal sonography with a full maternal urinary bladder the accuracy of diagnosis of placenta praevia is 98%[4]. Diagnosis errors are due to overdistension of the urinary bladder, resulting in apposition of anterior and posterior walls of lower uterine segment, myometrial contractions, fibroids, blood clots, and late placental migration.

Transvaginal sonography has also been found to be useful where the diagnosis is difficult for technical reasons particularly with posterior placenta giving a greater diagnostic accurary compared with the traditional abdominal

approach. However this route is considered dangerous as it may provoke bleeding.

Before the advent of ultrasonography patients with antepartum haemorrhage were often investigated using invasive radiological methods such as soft tissue placentography, and arteriography[1]. These have been unpopular because of their invassiveness and minimal accuracy. Other known methods to localize placenta are by radioactive isotope localization. Radiosodium used in a dosage of 50 microcunes injected intravenously and with the help of Geiger Muller counter revealed large collection of blood which would normally be found in placental site, liver and heart. Technetium 99 has been used more recently it's advantage is that it is rapidly excreted in bladder urine but gives a false positive result due to production of high count at the lower pole of the uterus.

Infrared thermography is done by using the old idea of localizing maternal pools to signify the placental site(5). Other sophisticated methods for diagnosing placenta praevia include magnetic resonance imaging(5).

This is more accurate compared to sonography but it is very expensive and not available in most of the centres like ours.

It is clearly seen that the different diagnostic methods mentioned need specialized skills, some are sophisticated expensive and not available in many centres including ours. So it is important to take a thorough history and do accurate physical examination so that one is able to make a proper diagnosis of

placenta praevia where the facilities are not available in order to avoid catastrophies.

REFERENCE:

1. Cunningham FG, Mac Donald PC, Grant NF. Williams obstetrics: Obstetric hemorrhage 19th ED 1993:819-851.

2. Beischer NA, Mackay EV: Obstetric and the newborn. An illustrated textbook 2nd ED 1988:157-168.

3. Parozaine F, Dindell M, Lahosa M: Risk factors for placenta praevia. Placenta 1994;15:321-326.

4. Ananth CV, Smulian J.C. The association of placenta praevia with history of caesarean delivery and abortion. American Jour. Obstet, Gynaecol. 1997 Nov:1071-8.

5. Shaw KJ: Management of common problem in obstetric and Gynaecology 3rd ED. 1994:33:201-205.

ECLAMPSIA: CONTROL OF FITS, AUGMENTATION OF LABOUR AND VAGINAL DELIVERY

Name:	Mrs. S. R.
Age:	19 years
Registration number:	136/98
Gravidity:	Primigravida
Address:	Kimara
Date of Admission:	25.10.1998
Date of Discharge:	01.11.1998
Delivery Number:	12986

SUMMARY:

Mrs. S.R. a 19 years primigravida at 39 weeks of gestation was admitted to the Muhimbili Obstetric Intensive care unit with a history of fits and loss of consciousness at home preceded by severe headache and blurred vision.

Physical examination revealed a Blood pressure of 150/90 mm of mercury and proteinuria 3+ (300mg/dl). A diagnosis of Eclampsia was made. Induction of labour led to a successful vaginal delivery of a 3200 grammes male baby with apgar score of 6 and 8 at one and five minutes

respectively. Uneventful puerperium with resolution of features of pre-eclampsia followed delivery. The case is presented with discussion on management of Eclampsia.

HISTORY OF PRESENT ILLNESS:

Mrs. S.R. was admitted to our maternity intensive care unit on 25th October 1998 at 11.15am having been referred from a peripheral dispensary because of generalized convulsions which were observed by her relatives while at home about 3 hours prior to admission. The convulsions were preceded by episodes of headache and visual disturbance a few hours before, for which she took paracetamol tablets.

Her elder sister who accompanied her denied a history of urine or faecal incontinence in the patient prior to onset of convulsions. There was no fever either. She was taken to a peripheral dispensary where she was given an injection which made her sleep and was then transferred to Muhimbili.

The Present Pregnancy:

Her last normal menstrual period had started on 26.01.1998 and her calculated date of delivery was on 02.11.1998. Therefore her gestational age was 39 weeks. She had booked late at a peripheral clinic at 34 weeks of gestation. Her booking blood pressure was 110/70 mm of mercury and weight was 54 kgs. Fundal Height was 34 weeks and corresponded to gestationed age. She made four subsequent visits. Her blood pressure remained normal. Haemoglobin and urine for Albumin were never checked. Serological

screening for syphilis (VDRL) was negative. The average weekly weight gain was about 0.5 kgs. She had no oedema during her subsequent visits.

Chloroquine and Folic acid tablets were given. It was not indicated whether Tetanus Toxoid had been given at the clinic.

GYNAECOLOGICAL HISTORY:

Her elder sister reported that she attained menarche at 14 years of age. The menstrual period were regular. She had never been on any form of contraception before.

Past Medical History:

There was no history of elevated blood pressure, convulsions or loss of consciousness. She also denied of past history of Diabetes mellitus, Renal disease or Head injury.

Family and Social History:

She was a second born in a family of 6 children. None of the sisters had a history of eclampsia or preeclampsia. There was no family history of epilepsy, hypertension or twin pregnancy. She was married and was a fulltime housewife. Had completed her primary school education. Her husband was a carpenter. Both did not take alcohol nor smoke cigarette.

Physical Examination:

She was semiconscious; could respond to painful stimuli but not commands, restless, afebrile temperature of 36.7c, moderately pale, nor cyanosed. Blood pressure was 150/90 mm of mercury, pulse rate 92 beats per

minute regular with normal volume. Oedema was absent. She had frothy saliva in her mouth which was sucked out.

Central Nervous System

The pupils were equally dilated and reacted to light. Corneal reflexes were present. Neck was soft and Kerning's sign was negative. There was mild hypotonia in both upper and lower extremities. She had exaggerated deep tendon reflexes. Neither clonus nor lateralizing sign was noted.

Fundoscopy revealed normal optic fundi with normal blood vessels.

Cardiorespiratory system:

Jugular venous pressure was not raised first second heart sounds were normal with no murmur. Chest expansion was symmetrical bilaterally. Percussion note was tympanic and the breath sounds were vesicular bilaterally with no basal crepitation.

Abdomen:

It had no surgical scars. There was no area of tenderness. Liver, spleen and both kidneys were not palpably enlarged. The size of the uterus corresponded to 36 weeks of gestation or more. The lie was longitudinal with cephalic presentation.

The level of presenting part was 4/5 above the brim. The fetal size was estimated to be 3kgs. Some mild contractions were noted during palpation. Fetal Heart rate was 140 beats per minute, regular.

Vaginal Examination:

This was done as a sterile procedure whereby the examiner put on a pair of sterile gloves after scrubbing with soap and water. The patient had already been sedated. Two nurses supported the flexed and parted thighs and legs on either side of the bed while the patient was being examined.

The vulva was cleaned with salvon 1:20. On examination the cervix was found to be soft, fully effaced and 1.5 centimeters dilated. The amniotic membranes were intact. Using Kochers Forceps, amniotomy was done and a clear liquor came out with no cord prolapse. The sacral promontory was not reached and the sacral curve was normal. Ischial spines were not prominent and the intertuberous diameter was 4 Knuckles. The pelvis was therefore considered adequate for the fetus.

DIAGNOSIS: Intrapartum Eclampsia.

Differential Diagnosis:

1. Cerebral malaria
2. Epilepsy
3. Meningitis
4. Hypoglycaemia

Cerebral malaria was unlikely in the absence of fever. This was further ruled out by a negative blood slide. It was also less likely to be associated with proteinuria and hypertension. Her sister denied the patient being epileptic

nor was there any family history of epilepsy; more, usually the blood pressure is normal in epilepsy.

Meningitis was unlikely because of absence of high grade fever, neck stiffness and a positive Kernig's sign. Hypoglyccaemia was ruled out by a random blood glucose of 4 mmol/litre.

MANAGEMENT:

I: **Immediate control of convulsions:**

(a) Intravenous Diazepam 20 mg was given on admission to control convulsions then 10 mg 6 hourly to keep the patient sedated for 24 hours.

(b) Intravenous hydralazine 10mg was to be given if Diastolic pressure rose above 110mmHg.

II: **Supportive treatment:**

(i) An airway tube was inserted in the mouth to keep the airway open and prevent tongue biting.

(ii) the oropharynx was sucked by secretions when necessary. So a suction machine was made available.

(iii) A Foleys catheter was inserted aseptically into the bladder as described in obstetric case number 1. 100mls of clear urine was obtained. It was then connected to the urinary bag after being ballooned so as to get accurate charting of urine output and determination of protein content.

(iv) An intravenous drip of Ringer's lactate solution 500mls eight hourly was started and a total of 1500 mls was infused in 24 hours.

(v) She was put in semiprone position to ensure drainage of bronchial secretions. The position was changed every 2 hours to avoid bed sores.

(vi) No oral feeds were allowed until the patient was conscious enough.

(vii) Oxygen was readily available at the bed side.

III: **Termination of pregnancy** by medical and surgical induction:-

(a) Amniotomy had already been done during pelvic examination.

(b) Syntocion drip 5 iu in Ringer's lactate 500mls was run at 10, 20, 30, 40, 50, 60 drops per minute half hourly then increasing the rate after every 15 minutes.

(c) Injection pethidine 50mg intramuscularly was given for analgesia and injection promethazine 50mg for sedation.

(d) Injection Ampicillin 500mg was to be given 6 hourly as prophylaxis to chest infection.

(e) The second stage was planned to be assisted by vacuum extraction.

INVESTIGATIONS:

(a) Urine for protein

- Albuminuria +++
- No glucose or Acetone
- Sediment normal
- No casts or epithelial cells.

(b) Blood slide - no malaria parasites seen.

(c) Haemoglobin 9.8gldl

White Blood cell count 8000/cc3

Platelets 200,000/ml

Red blood cell morphology - normal

(d) Random Blood glucose - 4 mmol/litre

(e) Serum creatinine 90 umol/litre

Blood urea 4 mmol

(f) Serum uric acid 0.76 mmol/litre

(g) Serum sodium 130 mmol/L

Potassium 5 mmol/L

(h) Blood group B Rhesus positive

Observations and progress in the ward:-

- Chart for convulsions were made.
- Blood pressure, pulse rate, respiratory rate and urine output were monitored half hourly.
- Maternal temperature was monitored after every 2 hours.
- Urine was tested for protein and Acetone after every 4 hours.

The level of consciousness was monitored, pupils were checked for equality and reaction to light.

- The frequency and duration of fits, though not anticipated were to be monitored.
- The progress of labour was monitored and the findings were entered on a partogram attached.
- The vacuum extraction tray and delivery tray were kept ready.

At 12 mid-day

. No more fits were observed apart from that which occurred on admission.

. Blood pressure was 140/80 mmof mercury, pulse rate was 88 per minute regular with normal volume. Respiratory rate was 22 breaths per minute.

All the vital signs had been progressing well.

At 3.00pm:

She was reassed and was found to have strong uterine contractions of about 3 contractions per 10 minutes each lasting between 20 to 40 seconds.

: No fits were reported. She was still sedated

: Blood pressure was 140/80 mm of mercury; Pulse rate 86 per minute regular with normal volume.

: Respiratory Rate 16 per minute and the

: Lung fields were clear.

: Urinary output was 500mls for the period of 4 hours.

: Fetal Heart Rate was 140/minute Regular.

: The cervix was 7 centimeters dilated with clear liquor. There was no cord prolapse. The presenting part was 3/5. There was no caput nor moulding.

Labour progressed well:

At 5.00pm that is 6 hours after admission the patient entered into second stage of labour. She was then delivered by assisted vacuum delivery as follows.

Low Cavity Vacuum Extraction:

The patient was put in lithotomy position with the help of nurses. Perineum was cleaned with savlon 1:20 and draped with sterile linen. The bladder was found to be empty. Sterile vaginal examination was done. The cervix was fully dilated the presenting part was at station +1. There was no moulding or caput formation. A Malmström's vacuum extractor was used after having been checked and found to be in good condition. A number 5 cap was chosen and applied onto the occiput. This was guided by the right index and middle fingers to make sure that no vaginal mucosa is caught between the cap and presenting part.

An assistant with the hand pump made a few strokes to elevate the pressure gauge to 0.2 kg/cm2 this was increased by 0.2kg/cm2 every 2

minutes to the desired pressure of 0.8kg/cm2.

Traction of the vacuum was applied synchronously with uterine contraction at the end of which traction was stopped. At this juncture a left medio-lateral episiotomy was made on after infiltration with 10cc of 1% lignocaine so as to facilitate delivery.

Details of the procedure:

As the presenting part was distending the perineum the middle and index fingers of the left hand were placed between fetal head and the distending perineum at the fourchette. Using one blade of Mayo Scissors a mediolateral incision starting at 5'oclock position of fourchette was made. The incision was deepened to involve the perineal muscles but not to injure the rectum. The process occurred very gently and smoothly. So the head was easily delivered after two contractions. The baby's face was mopped and mucus was extracted from the airway after release of the negative pressure of vacuum pump. Cord was doubly clamped and was divided. Apgar score of the baby at one minute was 7 and 9 at 5 minutes.

It was a Male baby weighing 3200grammes. The second stage of labour had lasted for 15 minutes. On inspection the baby had no obvious malformation. Signs of placenta separation were awaited. The placenta and membranes were then delivered by controlled cord traction while the baby was taken care by the assistant. Ergometrine was not given purposely, instead the Oxytocin drip that had been running continued to run for 1 hour to ensure a

firm uterine contractions. The uterus contracted well and there was no undue vaginal bleeding. The blood pressure was checked and was found to be 100/70 mm of mercury pulse rate was 90 beats/minute regular.

Repair of episiotomy

The patient was taken to high bed where she was put in lithotomy position. The perineum was cleansed with savlon 1:20 and sterile drappings were applied. The episiotomy wound was repaired starting at the apex of the incision in the posterior vaginal wall. A series of interrupted chromic catgut sutures number 0 were placed up to the mucocutaneous junction at the introitus. The wound was repaired in 2 layers. Haemostasis was achieved, the estimated blood loss was 250mls.

Follow Up:

Her blood pressure had come down to 120/80 mm of mercury, within 48 hours of delivery.

The sedation was tailed off and antihypertensive drugs were not given. No more fits were observed she regained her consciousness and became oriented to time, place and person. She was then transferred to the postnatal ward on the second day.

The baby received BCG and Polio vaccines. Her haemoglobin was checked to be 9gl/dl, BP 110/70mm of mercury. Counselling was done concerning he problem she had of Eclampsia. She was also educated about the importance of early booking, early reporting to hospital whenever she

experienced any abnormal symptoms and was discharged home then was to return 2 weeks later for check up.

Post Natal Follow up: 2 weeks later

Her blood pressure was found to be normal 110/70 mm of mercury. She had no imminent signs of eclampsia nor proteinuria. Her baby was in good health. She was told to return 4 weeks later where by she was found to be doing well and was now educated on Family Planning and opted for intrauterine contraceptive device which was inserted.

COMMENTARY:

Eclampsia is a life threatening emergency that continues to be a major cause of serious maternal morbidity and is still one of the leading cause of maternal mortality world wide.[1] It also contributes to high perinatal morbidity and mortality if occurring during the antepartum period. Studies have shown that 75% of cases occur before delivery as in Mrs S.R. while the rest occur after delivery usually within the first 24 hours.[2]

In U.S.A. the maternal mortality rate caused by Eclampsia has been estimated to be about 1.6 maternal deaths per 100,000 live births[3] while in Netherlands 1.7 maternal deaths per 100,000 live births.[4] In Muhimbili Medical Centre Eclampsia was the second cause of maternal mortality contributing to 22.2% of all the maternal deaths between January and August 1998.

Over the past 60 years there has been a dramatic drop on the incidence and associated morbidity of Eclampsia in the developed world as compared to the developing countries like Tanzania. This could probably be due to very few Antenatal services in peripheral and remote areas, poor quality of care, inadequate facilities for detection of high risk patients such as Albustix Sticks, Blood pressure machine, scarcity of trained personnel, lack of patients awareness concerning the problem and poor referral system due to lack of transport, and poor infrastructure. In fact the incidence of Eclampsia in a community reflects the quality of Antenatal care in that community.

The Eclampsia fits are usually preceded by severe headache, visual disturbance with Epigastric pain, Mrs. S.R presented with severe headache a few hours before the onset of seizures. Perhaps had she been educated before, she would have sought medical advice. This would have helped somehow although studies show that 20% of Eclamptic fits occur without warning signs.[2]

Management of Eclampsia needs an organized plan so as to avoid Fatal Complications like cerebrovascular accidents, Acute pulmonary oedema, Renal failure and Abruptio Placenta. The optimum management is maintenance of an oral airway, avoidance of maternal injury, treatment and prevention of further convulsions, correction of hypoxia and acidosis, control of Blood

pressure in a safe range then initiation of delivery irrespective of the gestational age.[5]

Mrs S.R on arrival was immediately started on injection diazepam 20mg (intravenously) to control fits and keep the patient sedated so as to avoid any exposure to stimuli such as light, sound and pain which would have provokes further development of fits. This explains why in the past all Eclamptic patients were kept in the dark room. Diazepam is usually given as an intravenous bolus over 2-5 minutes in dose of 10-20mg which may then be repeated after 6 hours or introduced in an infusion drip to ensure adequate sedation. If used for a prolonged period of time, may result into a Floppy Baby Syndrome characterized by Neonatal Hypotonia, hypothermia, Apnea and Low Apgar Score. Thanks God Mrs. S.R laboured for a few hours and despite being given injection diazepam, she delivered a 3.2kg baby with Apgar Score 6 and 8 at one and five minutes respectively. The baby was found to be active. So diazepam has still been considered a good Anticonvulsant for initial treatment of Eclampsia on short term basis.

Several other anticonvulsants include magnesium sulphate, phenytoin, phenobarbitone, lytic cocktail, chlormethiazole Edisylate, and Thiopentone.

Magnesium sulphate has been commonly used in the developed world to prevent and control Eclamptic fits without producing generalized central nervous system depression in either the mother or fetus infant. In most

institutions it is initially administered in a 4-6gm intravenous bolus over 20 minutes followed by a continuous infusion ranging 1-3g/hour aiming for serum levels of 4-8 mmol/dl.[3] It's clearance is primarily by the kidney thus Renal function and urine output must be evaluated. It's toxicity is evidenced by muscular paralysis resulting in respiratory arrest - so the earliest sign of toxicity is the loss of deep tendon reflexes. During treatment calcium gluconate which is the Antidote should readily be available. Unfortunately Mrs. S.R was treated with diazepam because magnesium sulphate was not available at the centre. Perhaps it is high time Magnesium sulphate should be promoted in the centre like in other parts of the world. However despite many Eclamptic patients, we need to take great precautions as far as monitoring of urine output, respiratory rate and reflexes are concerned. Phenobarbitone is available at our centre but is probably not superior to Diazepam since it is a long acting and not best in acute situations.

Incase of uncontrollable fits, thiopentone and muscle relaxants may be used and intermittent positive pressure ventilation carried out.

Blood pressure is usually controlled by hydralazine given intravenously 5mg as bolus and the same dose to be repeated at 30 minutes intervals until the diastolic Blood pressure ranges at 90-100 mmHg fortunately Mrs S.R did not need any of the antihypertensive drugs since her Blood pressure fell between 140/90 and 150/90 mmHg. Fluid therapy is usually through Ringer's Lactate solution at a rate of 60-125 mls/hr as larger amounts may Lead to pulmonary

and cerebral oedema. Potent diuretics are usually avoided lest they compromise placental perfusion because of further intravascular fluid volume depletion[5]. Intravenous or intramuscular pethidine, usually with promethazine is given in at a lower dose say 50mg, 50mg each in order to relieve the labour pains which may provoke further fits.

The development of Eclampsia at any gestational age requires delivery once the diagnosis is confirmed and other possible causes have been excluded. Vaginal route of delivery is highly preferred since caesarean section has got its own risk such as anaesthesia, operative trauma especially Blood loss in a patient with already contracted volume. Caesarean delivery is therefore usually done in presence of other obstetrical indications, and when induction of labor has failed. Mrs. S.R had an adequate pelvis and was found to be in latent phase of labour. So induction of labour was done by Amniotomy and oxytocin infusion labour progressed fast and the second stage was assisted by a vacuum extraction.

Ergometrine was avoided since it is a potent vasoconstrictor which could have worsened the hypertension, instead, the oxytocin drip continued to run to ensure adequate uterine contraction hence prevent primary postpartum hemorrhage. Vital signs such as blood pressure were continued to be monitored closely.

Therefore proper management of Eclampsia is mandatory so as to reduce both maternal, perinatal morbidity and mortality.

MINISTRY OF HEALTH – TANZANIA

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

Husband's name: Haidari Kassim

Hypersensitivity, special observation: None

Risk factors: 1. Eclamptic 3.

Record of Labour

Hospital reg number:

Surname (in capitals): Rashidi

Other names: Somoye

Postal/residential address: Kimara

Date of birth: 1980 Sex: F

Religion: Moslem

Clinic/ward: 35

General information about the stay

Admission, date: 25 | 10 | 98 time: 11.15am

Admitted by, name (in capitals): Dr M. Mtenvali

Delivery No.: 12986

Reason for admission: Eclamptic fits

Onset of labour, date: time:

Rupture of membranes, date: I time:

Admitted from: ☐ home ☑ hosp transfer ☐ anten ward

Summary of antenatal problems: Late Booking at 34 weeks. Blood Pressure 110/70 mm Hg. Has been Normotensive throughout the visits. Urine for Albumin not checked. No Pedal edema.

Obstetric history

LMP, date	EDD, date	Gravida	Para	Living children
26 | 1 | 98	2 | 11 | 98	1		

Past pregnancy complications: –

Past labour complications: –

Examination

General condition: Semiconscious

Height: 160 cm Temperature: 36.7 °C

Blood pressure	Urine, protein	acetone	Oedema	Height of fundus
130/90 mm Hg	+++		Nil	36

Size of fetus	Presentation/lie	Fetal heart rate	Liquor
medium	L/C	138 per minute	I

Initial vaginal examination

Examined, date: 19 | 10 | 98 time: 12.20 am

Examined by doctor, name (in capitals): Dr M. Mtenvali

Cervix, state	dilatation	Position	Level
Soft Anterior (fully effaced)	1.5 cm	–	4/5

Moulding	Caput	Membranes/liquor
–	–	Arm clear M. Cord

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

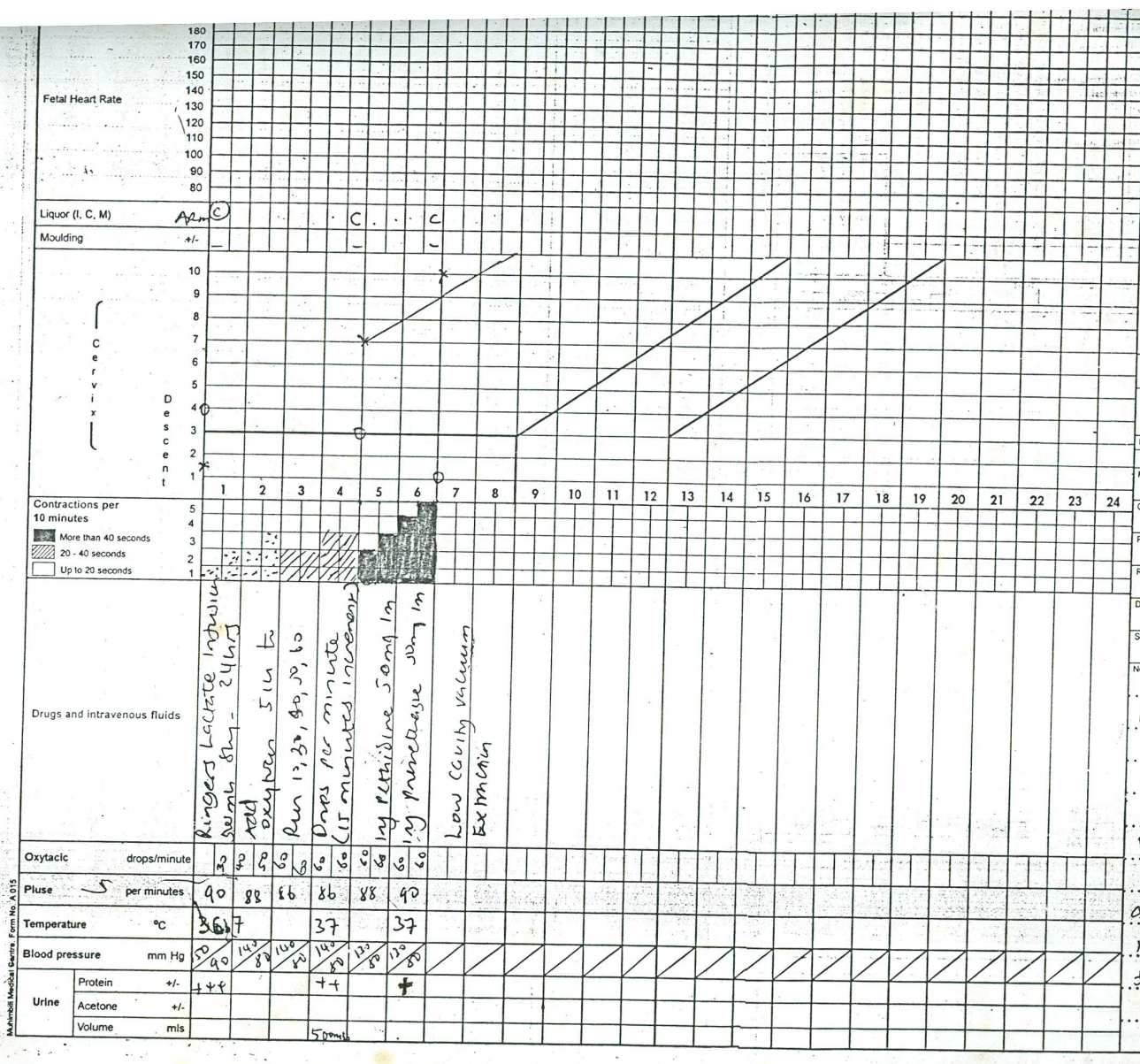
Resident's or registrar's opinion and management

See notes overleaf

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.
25.10.98 11.15am	Primigravida at 39 weeks of gestation with Intrapartum Eclampsia
	NB: She has already been given Diazepam Injection 20mg intravenously.
	Plan:
1.	Nurse in Lateral tilt Position
2.	Suction of secretions from the Nasal and oral Cavity
3.	Injection Hydrallazine 5mg intravenously on half hourly basis when Diastolic BP rises above or equal to 110 mm of mercury.
4.	Ringers Lactate infusion 500ml IV 8 hourly – 24hours.
5.	Injection Pethidine 50mg I/Muscular Injection Promethazine 50mg Stat. Repeat after 8hrs.
6.	Augment Labor:- with oxytocin 5IU in 500mls Ringers Lactate to run 10, 20, 30, 40, 50, 60 DRPS per minute (15 minutes increment)
7.	Indwelling urethral catheter – Output Chart.
8.	Maternal Fetal Vital Signs to be monitored half hourly. Watch for any Fits.
9.	Review again after 4 hours.
	Dr M. Mtenvali



Date of birth | Time of birth

Method of delivery plus reason for operation
Low cavity vacuum Extraction due to Eclampsia

Birth weight 3200 grams | Sex M

Apgar score at 1 minute 6 | Apgar score at 5 minutes 8

Condition at birth and resuscitation
Good. Suction done

Summary of labour

Duration
First stage 6 hours | Second stage 15 minutes | Third stage 5 minutes

Placenta and membranes
Complete ☐ incomplete | weight 500 grams

Measured blood loss 250 mls | Post delivery blood pressure 130/80 mm Hg

Oxytocic, name and dosage
Oxytocin 5iu ☐ IM ☐ IV

Perineum
Episiotomy

Repaired by, name
Dr Mtenga

Delivered by, name and signature
Dr Mtenga / Vaileth

Supervised by, name
—

Notes and special remarks
Baby sent to the Neonatal ward. Mother drowsy, observed in the Eclampsia room. Vital signs, Abdomen and other signs and symptoms of impending Eclampsia fits were checked!

REFERENCE:

1. Moodley J, Daya P. Eclampsia: a continuing problem for developing countries. Int. J. Gynaecol-obstet 1994:44-14.
2. William C, Mabie M, Sibai B. Current obstetric and gynaecologic diagnosis and treatment (8th Ed). 19:388-391.
3. Shaw K.J. Management of common problems in obstetric and gynaecology (3rdEd) 28:174-175.
4. Van Beek E, Peeters L.H. Obstetric and gynaecological survey 1998:53:223
5. Breen M. Eclampsia - What is the best treatment? Postgraduate Doctor 1995:18:41-48.

0.15mil/min 0.15mil/kg/min X 60 X 30 0.15mil/kg/min X 30 min

60 X 30 / 2 = 15mil kg/30min

PRIMIGRAVIDA WITH ANAEMIA DUE TO MALARIAL INFECTION: TREATMENT AND CHEMOPROPHYLAXIS

NAME	:	Mrs. M.F.
Registration Number	:	006/97
Parity and age	:	Primigravida, 20 years
Residence	:	Mbagala
Date of First ANC Visit	:	20.4.1997
Date of Delivery	:	20.7.1998
Delivery Number	:	9361

SUMMARY:

Mrs. M.F. a 20 year old primigravida at 26 weeks gestation was referred from Temeke Antenatal clinic due to low haemoglobin of 6.4 g/dl with no symptoms or signs of heart failure. She was then admitted in the antenatal ward. Blood slide demonstrated plasmodium falciparum and peripheral blood film showed iron deficiency anaemia. Malaria was treated with chloroquine tablets and oral haematenics were given for correction of Anaemia.

Her haemoglobin rose progressively and at term it was 10.8 g/dl. The case is presented with a discussion on predisposition of primigravida to malaria and the mechanisms of anaemia due to malaria during pregnancy.

HISTORY OF PRESENT ILLNESS:

Mrs. M.F was a 20 years old primigravida. Her last normal menstrual period started on 20.10.1997 therefore her expected date of confinement was 27.7.1998. She booked at Temeke Antenatal clinic while 26 weeks pregnant. Her booking blood pressure was 100/70 mm of mercury weight 54kgs and haemoglobin 62%. Quickening had already started 2 months prior to booking. A week later she developed fever and was admitted at Temeke hospital whereby she was given three chloroquine injections as treatment for clinical malaria. She got a relief and was discharged home. However she was feeling dizzy and weak.

Three weeks later she went for a second antenatal visit and was still feeling dizzy and weak. She also experienced palpitation. Her haemoglobin was found to be 56% she was therefore referred to Muhimbili Antenatal clinic. She was able to lie flat without a pillow and did not wake up at night because of breathlessness. She did not experience any Nausea, loss of Appetite or excessive vomiting during early pregnancy.

She denied to have had any episode of abnormal vaginal bleeding before or during this pregnancy.

There was no history of cough, vomiting blood, passing black tarry stool or bloody diarrhea.

Symptoms such as loin pain, passage of blood stained urine and yellow colouration of eyes were not present.

She did not experience any bleeding from any of the Natural Orificies such as Nasal Bleeding and there was no history of Bony and Joint pains or swelling.

Past Gynaecologic and Menstrual History:

She attained menarche at 13 years and her cycles had been regular occurying after every 28-30 days lasting 3-5days. The flow was moderate with no clots she could change pads which were soaked with menstrual blood about three times a day. There was no inter- menstrual bleeding. She had never used any form of contraceptives and had no history of having suffered from any gynaecologic disease in the past.

Past Medical and Surgical History:

She had never been admitted in the past and denied to have suffered from any chronic major illness like renal disease, hypertension or Diabetes mellitus.

She gave no history of drug allergy or prolong use of drugs.

There was no history of repeated blood transfusion.

Dietary History:

She ate normal family diet which comprised mainly of maize-meal, rice, beans and green vegetables which were usually cooked for about 30 minutes. Meaty products were taken very occasionally sometimes once a week. The whole family ate 2 meals per day with breakfast which comprised of black tea with two slices of bread or buns.

Family and social history

She was a Zaramo by tribe and hailed from Rufiji. She had completed primary education. She was a housewife, married to a watchman in one of the city shops. The husband earned 15000/= Tanzanian shillings per month. That was the only income he had. According to her it did not sustain their monthly requirements.

who got her pregnant?

Their family was made up of three people ie. her husband, herself and a sister in law. She neither smoked cigarette nor drank alcohol. No family member had episodes of yellow colouration of eyes, swelling or painful joints or repeated blood transfusion. There was no family history of Diabetes mellitus, Hypertension, bleeding disorders, Twinning, or Tuberculosis contact.

Physical Examination:

She was a young lady with good nutritional status. She was afebrile, moderately pale with a tinge of jaundice. She was not dyspnoeic or cyanosed and had no angular stomatitis, pedal oedema or peripheral lymphadenopathy. Her tongue had normal papillae. Clubbing and koilonychia of fingers were absent. She weighed 55 kilogrammes.

Chest:

The breasts were healthy and the nipples normal

Chest expansion was symmetrical bilaterally

Percussion note was tympanic and

Breath sounds were vesicular bilaterally with no basal crepitations.

Cardiovascular System:

Jugular venous pressure was not raised. Her pulse rate was 86 beats/minute and it was regular with normal volume. Blood pressure was 110/80 mm of mercury. She had normal first and second heart sounds with a soft systolic murmur at the Apex which was not radiating to the axilla.

THE ABDOMEN:

The abdomen was uniformly distended and it moved with respiration. It was soft and nontender. The liver spleen and both kidneys were not palpably enlarged. Renal angles were free of masses and tenderness. The fundal height was 26 weeks gestation and corresponded with dates.

Diagnosis:

: Severe Anaemia at 26 weeks gestation not in heart failure

: Clinical malaria

MANAGEMENT:

Resultat of investigations

: Haemoglobin 6.4 g/dl

: Blood slide demonstrated 60 asexual falciparum parasites per 200 WBC

Red Blood cell count $2.1x10^6/mm^3$ (normal 3.7-5.3)

: Red blood cell morphology

MCV = 68 femtolitres

MCHC = 34ug/dl

MCH = 28 picogrammes

A thin blood film stained with Giemsa revealed red cells which were hypochromic and microcytic.

: Haematocrit 22%

: White blood cell count : Total 7000/mm3

Differential count - Neutrophils 67%

Lymphocytes 30%

Eosinophils 3%

: Platelet count 200,000/mm3

: ESR 17mm in first hour by westegren

: Sickling test Negative

: Reticulocyte count < 1%.

: Stool demonstrated No ova or cysts

Urine : sugar - Negative

urobilinogen - Negative

Protein - Negative

Pus cells, casts, epitheloid cells - Negative

No schistosoma ova

Culture: No bacterial growth.

VDRL - Negative

Serum Bilirubin 0.9 mg/dl

Liver function Test

ALAT 20IU/L

ASAT 15iu/L

ALP 40iu/L

Bone Marrow Aspiration Biopsy Results:

White Blood cells seg 58% lymph 36% stab 2%

Eosinoph 3% monocytes 1%

ESR 17 mm/1st hour

Erythropoiesis was increased and granulopoiesis and megakaryocytes were normal.

Conclusion: Iron deficiency Anaemia

Serum transferrin and Ferritin levels were not done due to lack of reagents.

Final Diagnoses:

Iron deficiency Anaemia not in Heart Failure

Falciparum malaria

2. Treatment and prophylaxis against malaria and correction and prophylaxis against anaemia.

Malaria:

For treatment of malaria chloroquine tablets 600mg on the first and second day and 300mg on the third day were given. For chemoprophylaxis chloroquine tablets 300mg were given weekly till delivery.

Anaemia:

Oral ferrous sulphate 200mg twice daily and Folic Acid 5mg once daily were given till delivery.

The follow up antenatal visits:

Blood slide for malarial parasites was repeated one week after treatment and it was Negative. It remained Negative at 32 weeks, and 36 weeks.

She was seen at the Antenatal clinic after every two weeks up to 36 weeks and then weekly till delivery.

Her haemoglobin increased progressively.

7.4g/dl at 28 weeks

8.8g/dl at 32 weeks

10.2g/dl at 36 weeks

10.6g/dl at 38 weeks

Her weight increased progressively and at 38 weeks she weighed 60kgs

She remained normotensive throughout her visits.

DELIVERY

At 39 weeks she went into spontaneous labour and delivered a 2.8 kg male baby with Apgar score of 9 in first minute and 10 in the fifth minute. The delivery was monitored by a partograph. Blood loss was estimated to be 150mls.

The newborn had no abnormality and was sucking well. Her post delivery haemoglobin was 10 g/dl. Both the newborn and the mother were discharged in good health.

The mother was instructed to continue with weekly chloroquine, throughout her puerperium, and throughout her lactation period.

1. She was requested to return for follow up 6 weeks later

2. Follow up 6 weeks:

She had no complaint. Her Haemoglobin was checked it was 12.1g/dl physical examination revealed her to be a healthy, pink soft abdomen with normal pelvic examination. She was educated about the different family planning methods and she opted for progesterone only pills which were provided to her.

COMMENTARY

Anaemia in pregnancy remains a serious health problem in most parts of the world. It is known to worsen other complications of pregnancy, delivery and puerperium. During the past 30 years various published reports have shown no significant decrease in the prevalence and severity in the tropics compared to industrialized countries.[1] Most patients frequently present with severe form of anaemia which contributes significantly to maternal mortality and reproductive health morbidity. At Muhimbili Medical Centre, anaemia was the leading cause of maternal mortality contributing 29.2%.[2]

In holoendemic areas, malaria has been found to be the principal cause of anaemia in pregnancy which commonly develops between 10 and 28 weeks of gestation.[3] Pregnant women have been found to have increased risk to plasmodium falciparum malaria than non pregnant women and the peak prevalence of infection usually occur in the early second trimester then to be followed by a fall in prevalence with advancing gestational age. Mrs. M.F was admitted because of anaemia with malaria in pregnancy at 26 weeks of gestation.

Mrs. M.F. had Iron deficiency anaemia. Studies conducted in Dar es Salaam showed Iron deficiency anaemia to be the commonest cause of severe anaemia of pregnancy[4]. The aetiological factors being a combination of dietary insufficiency as it was seen in Mrs. M.F. increased body demands and blood loss due to Hookworm Infestation.

Primigravida like Mrs. M.F have been found to be most susceptible to malaria infection than multigravida. During pregnancy the cell mediated immunity becomes more suppressed compared to humoral immunity probably due to increased cortisol levels. There seem to be a tendency to switch from cell mediated immunity to humoral immunity in subsequent pregnancies as evidenced by higher susceptibility observed in primigravidae[5].

Some women especially primigravida develop a hyperactive malaria splenomegaly which usually shows improvement after prolonged malarial prophylaxis. The actual cause of splenomegaly is unknown but probably it indicates host differences in immune response to malaria for primigravidas.

It has also been documented that women express low reactivity to ring infected Erythrocyte surface Antigens (RESA) which may partially explain higher susceptibility of primigravida as compared to multigravidae.

The primary mechanism of anaemia due to malaria are varied but usually results in Hemolytic Anaemia as evidence by low levels of Haptoglobins. The Iron pigment after haemolysis cannot be utilized for erythropoiesis hence worsening the anaemia. During malaria infection tumor necrosis factor is released by the monocytes after T cell mediated release of interleukin 3, interferon a granulocytes macrophage colony stimulating factor. Tumor necrosis factor is known to lead to dyserythropoiesis and hence hemolysis. It is also known to modulate endothelial hemostasis and upregulate expression of adhesion molecules. [6]

Cytoadherence and endothelial damage are believed to be important processes in the pathogenesis of cerebral malaria. Increasing hemolysis leads to increase demand for folic acid which may lead to megaloblastic anaemia. That is why folic acid and iron were given.

The search for an effective vaccine against plasmodium falciparum malaria is still going on but the problem faced is due to the biological ability of malarial parasites to evade the body's mechanisms for immunosurveillance through antigenic polymorphism.[7] Therefore chemoprophylaxis and chemotherapy are the only readily available means. Prophylaxis improved the haemoglobin and birthweight of the newborn as it was seen in Mrs M.F. Chloroquine is the drug of choice for chemoprophylaxis. Oral chloroquine tablets are preferred to parenteral chloroquine since it's absorption has been found to be rapid and the doze adequate unlike parenteral chloroquine which takes time in order to attain the equivalent dosage. Proguanil 200 mg daily alone or in combination with chloroquine is also highly effective. Amodiaquine, maloprim (Pyrimethamine and Dapsone) and Fansidar (Pyrimethamine and sulphadoxine) have not been advocated due to their side effects of neutropenia, agranulocytosis and risk to the fetus respectively. However Fansidar has been preferred to Quinine in treatment of chloroquine resistant malaria it may be reserved for severe case of malaria during pregnancy.

REFERENCES:

1. Reviews: Br. J. Obstet. Gynaecol. 1998 : 105 : 385-390
2. MMC Maternity Established Data Base Jan-Dec. 1998
3. Brabin B.J. Malaria in pregnancy. It's importance and control. Postgraduate Doctor – Africa 1989 : 11:57-59
4. Lema R.A., Ngonyani M. Anaemia - A national health problem in Tanzania. A paper presented at Regional workshop on anaemia. Lusaka, Zambia TFNC report No. 972.
5. Mtabingwa T.K. Malaria in Pregnancy: Epidemiology, Pathophysiology and Control options: Acta Tropical 1994: 57: 239-254.
6. Clark I.A, Chamdhri G, Cowden W.B. Roles of Tumour Necrosis factor in the illness and pathology of malaria. Trans. R. Soc. Trop Med. Hyg. 1989 : 83:436-440
7. Anonymous. Towards a malarial vaccine editorial the Lancet 1992: 339: 586-587.

CERVICAL INCOMPETENCE: MAC DONALDS SUTURE AND SUCCESSFUL VAGINAL DELIVERY

Name	:	Mrs S.M
Registration	:	E/789/96
Age	:	28 years
Date of Admission	:	13.08.1996
Date of Discharge	:	21.01.97

SUMMARY

Mrs S.M. 28 years old gravida 5 para 0+4 booked for antenatal care at 12 weeks of gestation with a previous history of an induced abortion in midtrimester, followed by second trimester pregnancy wastage. Pelvic examination revealed a short open cervix. Obstetric ultrasound scan showed a normal pregnancy at 13 weeks and other investigations were normal. A diagnosis of incompetent cervical os was made. McDonald suture was applied and the course of pregnancy was uneventful. She delivered a 2.9kg healthy female baby at 38 weeks of gestation. The case is presented with a discussion on the surgical management of cervical incompetence.

HISTORY:

Mrs S.M. booked for antenatal care at our high risk antenatal clinic

because she had previously had three consecutive second trimester abortions. Her last normal menstrual period was on 31.4.1996 and the expected date of confinement was on 8.2.1997. Thereafter her gestational age was 12 weeks. At booking her blood pressure was 110/70mm of mercury, weight was 59kg haemoglobin 11g/dl. she had no other complaint.

Past Obstetric History

The first two pregnancies in 1992 were unwanted, and were electively terminated at 8 weeks gestation age by dilation and curretage. She did not experience any complications like abdominal pain offensive vaginal discharge or excessive vaginal bleeding.

Her third pregnancy was in 1994. This ended into a spontaneous abortion at 6 months of gestation. The abortion was preceded by a brief period of mild abodminal pain and pelvic heaviness, rupture of membranes, and then abortion of a live male fetus which died after a few minutes. No abnormalities were noted on the fetus. The placenta was removed complete and the patient had no complications. The patient denied having a fever or urinary symptoms prior to the abortion. She was discharged home the following day.

The last two abortions preceding the index pregnancy occured in 1995 at around 5 months of gestation each. They both presented very much like the third abortion. Both were complete with no observable external congenital anomalies. Post mortem examinations on the abortuses were not done.

She sought medical attention when at a peripheral clinic and interval screening for syphillis and diabetes mellitus which were negative.

Past Medical History

She had no history of excessive thirst, appetite or urination. She denied to have had genital ulcers, abnormal vaginal discharge or generalized body rash.

She gave no history of prolonged use of any drug.

Past menstrual and gynaecological history

She had her menarche at 14 years of age. Her cycles were regular occuring every 28-30 days with a moderate blood loss for about 3 days duration. She had never used any form of family planning method. Besides the two dilatation & currettages done for termination of the first two pregnancies the patient had not undergone any form of surgery on her cervix.

Family and social history

She was a housewife married to a petty businessman. She neither drank alcohol nor smoked cigarettes. There was no history of similar problem in her two sisters. She had no knowledge of whether her mother had received any medication during pregnancy.

Physical examination

She was healthy looking, afebrile not pale, not dyspneic or jaundiced. The peripheral lymph nodes were not palpably enlarged.

The cardiovascular system

Her pulse rate was 74 beats per minute, regular with normal volume. Blood pressure was 110/70mm of mercury. Jugular venous pressure was not raised. The heart sounds were normally heard with no murmurs.

The Respiratory system

Her respiratory rate was 18/minute with symmetrical chest expansion. The breath sounds were heard normally on both sides.

The Abdomen

It was soft with a fundal height of 14 weeks. Liver and spleen were not palpably enlarged. The renal angles were free of masses and tenderness.

Pelvic examination

The vulva was normal. Speculum examination revealed a 0.5cm long parous cervix with no lesion. The membranes were not bulging and there was no abnormal discharge from the cervical os.

Provisional diagnosis

In view of her past obstetric history the diagnosis of recurrent abortions possibly due to incompetent cervical os was made. She was counselled for cervical cerclage placement. She agree to the suggested mode of treatment.

Management

She was admitted in the antenatal ward for investigations and placement of cervical cerclage.

Investigations

- Haemoglobin 11g/dl
- VDRL negative
- Blood group B Rhesus Positive
- Fasting Blood glucose 4mmol/litre
- Serum creatinine 80umol/L
- Mid stream urine for culture - no bacterial growth.

Obstetrical Ultrasound scan:

It showed a gravid uterus with a live singleton fetus with a cranial-rump length (CRL) corresponding to gestational age of 13 weeks. No gross fetal abnormalities were detected. There were no fibroids or any adnexal mass. The cervix was short and had a funnel shape.

Pre operative preparation

- The perineum was shaved and cleaned with soap solution in the ward.
- A signed informed consent was obtained for anaesthesia and surgery.

Anaesthesia.

Induction was done using

- atropine 1mg intravenously
- thiopentone 200mg

- oxygen 6litre/minute

Maintenance was by face mark

- Oxygen 6 litre/minute
- Halothane 0.8%

Cervical cerclage procedure (Mcdonald)

The patient was put in lithotomy position. The perineum and the vagina was cleaned with salvon 1:20 draped with sterile linen. The bladder was emptied by a metal catheter, 100mls of clear urine was drained. A Sims speculum was inserted into the vagina to retract the posterior vagina enabling visualization of the cervix.

There was no scarring or bulging of the membrane and no obvious discharge. The anterior and posterior lips of the cervix were held with mild traction using two non serrated sponge holding forceps. The Mcdonald stitch (Proline No.2) was applied round the cervix as a pulse string suture using round-bodied needle at the level of the vesical cervical peritoneal reflection. The stitch was first inserted at 12 O'clock to emerge at 10 O'clock. similar bites were made 8,4 and 2 O'clock. A knot was secured at 12 O'clock and tightened gently to a point where cervical secretion could pass easily. At the end of the procedure there was no significant bleeding nor was there any liquor draining. Reversal of anaesthesia was achieved by oral pharyngeal suction and oxygen by mask till she was awake and was transferred to the recovery room then to the ward with the following post operative orders:-

To start oral feeds as soon as she is fully awake

Tablets paracetamol 2gm 8 hourly - 24 hours

Observation for

- abnormal vaginal discharge or bleeding
- abdominal pain - irritability of the uterus

Progress in the ward

She recovered well and after 6 hours she was fully awake. She had neither abdominal pain nor abnormal vaginal discharge or bleeding. She was discharged after three days to be followed at the antenatal clinic after every two weeks. She was advised to avoid sexual intercourse for 1-2 weeks and strenous work.

Follow up at the Antenatal Clinic

She was seen at the antenatal clinic two weeks later. She had not experienced any abdominal pain or abnormal vaginal discharge. Her blood pressure was 110/70mm of mercury and Hb 12g/dl. Fundal height corresponded with the gestational age. Speculum examination showed the suture to be in situ and the cervix was not effacing. She continued to be followed up at two weeks interval with the speculum examination till when she was 36 weeks then she was seen on weekly basis. She remained normotensive with a good haemoglobin level. The fundus has been growing well corresponding with dates.

Progress in the labour ward

The McDonald suture was removed. Pelvic examination showed the cervix to be 4cms dilated with intact membranes. Artifical rupture of memrbranes was done and clear liquor was drained with no cord prolapse. The head was engaged and the level of the presenting part was at station 0. The pelvis was adequate for the baby. Close monitoring of labour using the partogram was done and after 6 hours she delivered a 2.9 male baby with Apgar Score 8-10 at one and five minutes respectively the baby had no gross abnormality. The placenta was delivered by controlled cord traction and it was complete weighing 450gms. The estimated blood loss was 250mls. The mother and the baby were allowed ro rest in the labour ward for 2 hours then they were transferred to the post natal ward. The newborn was sucking well. They were discharged home both in good condition the following day after BCG bath and oral polio vaccine.

COMMENTARY

Cervical incompetence is the inability of the cervix to maintain an intrauterine pregnancy until term. The incidence is difficult to establish because there are no generally agreed criteria for diagnosis.

The primary disorder is disruption of the sphincteric mechanism of the internal os secondary to either abnormalities in the muscular isthmus or a disruption of the cervical Fibrous tissue[1].

The aetiology of cervical incompetence can be divided into three categories, traumatic, hormonal and congenital factors. Mrs. S.M. presented with typical features of cervical incompetence characterised by recurrent acute painless second trimester pregnancy loss. Since she admitted to have electivelly terminated first trimester pregnancies twice, this strongly suggest that it was the cause for cervical incompetence. Cervical iatrogenic trauma is the most common cause for cervical incompetence[2]. It is frequently caused by first trimester termination of pregnancy as seen in Mrs S.M. especially if mechanical cervical dilatation is done forcibly without prior use of softening agents such as prostaglandins or laminaria tents. It may also be caused by cervical lacerations that occur during labor or delivery secondary to malpresentation, precipitate labour through an incompletely dilated cervix. Conization of cervic, cryosurgery may also cause cervical incompetence. Hormonal factors are postulated to affect the cervicoisthmic junction such as high levels of relaxin or low levels of progesterone. The congenital aetiology may be caused by in utero exposure of diethylstill bestrol.

Cervical incompetence can be managed surgically or by non surgical means[3,4]. In the absence of visual anatomic defect, either treatment remains controversial because there is no objective scientific evidence to prove it's efficacy.

The various techniques of cervical cerclage include the lash procedure which is usually a preconceptual procedure. This is rarely done as it causes

permanent scarring of cervix. During pregnancy there are two types of operative procedure used; The shirodkar procedure which originally utilizedstrips of Fascia Lata which were tunneled submucosally above the vesico-vaginal Fascia of the cervix at the level of the internal os, and then tied. The fascia lata has been replaced subsequently by a variety of suture material from silk to steel wires and most recently by mersilene bands[2,3,4].

The McDonald cerclage procedure is currently the most commonly used Transvaginal method[2,3,4] as done in Mrs. S.M. With the availability of improved suture materials such as Mersilene bands, the modified Mcdonald procedure has a clear and distinct advantage. Compared with shirodkar procedure, it is simpler, Faster and less traumatic. The suture material used in Mrs. S.M. was proline Number 2 it was inserted in the submucosa of the cervix at the level of internal cervical os. Some surgeons prefer not to empty the bladder or if necessary to fill it with saline so that it displaces the uterine corpus and minimize the chance of penetrating the amniotic Sac. It also allows a more caudal placement of the suture closer to the internal cervical os. In a modification of the McDonald procedure it is recommended that tying of the knot should be done posteriorly since anterior placement of the knot has been reported to result in severe abrasions and sometimes ulcerations of the anterior vaginal wall including the urethra. Mrs. S.M. was catheterized and the knot was tied gently anteriorly. Thanks God she did not present with the complications mentioned. The author opted for that site because she thought

the posterior knot might cause difficulty during it's removal as it might be burried deeply. The suture should be tied snugly to the surface of the cervix and excessive strangulation of the cervix could result in cervical lacerations, tissue necrosis and irritability. This was not the case in Mrs. S.M.
It is advisable not to insert a finger or dilator in the endocervical os after the procedure as is sometimes recommended. This may disrupt or dislodge the cervical mucus plug hence introduce infection or cause rupture of the amniotic sac. It was not done in Mrs. S.M. for the same reasons.

Transabdominal cervicoisthmic cerclage should be reserved for rare cases in which the procedure technically cannot be carried out transvaginally as in patients who have extremely short or amputated cervix, multiple cervical lacerations or defects and patients who have had repeated unsuccessive transvaginal approach([2,3,4).

Alternatives to surgical cerclage include synthetic gestagens which were used in the past because they were thought to have a quiscent effect on the uterus. These are no long utilized and are contraindicated in early pregnancy. Smithhodge pessaries have also been used. They usually shift the axis of intrauterine pressure from the cervix to the lower uterine segment preventing cervical dilatation. another therapeutic approach is prolonged bed rest, but the preferred is surgical cerclage.

None of these treatments, surgical or non surgical has withstood scientific scrutiny and has been proved to be unequivocably effective.

However careful selection of patients for each has been individually beneficial and this approach will probably persist.

REFERENCES

1. Daya S. Copeland: textbook of gynaecology 1993 Edition (9):215-217.

2. Grimes D.A. TeLinde's operative Gynaecology 8th edition (23)481-483

3. Joffe G.M, De Vale g.M,Izquierdo L.S, Diagnosis of cervical change in pregnancy by means of Transvaginal ultrasonography Am J of Obstet.gynaecol.1992:(166):896-900.

4. Kirwan J: Cervical incompetence: The shifting scene. British J. Hospital Medicine 1996 Vol.56:503-504

PROLAPSE OF UMBILICAL CORD: EMERGENCY CAESAREAN SECTION

Name:	Mrs. E.J.
Age:	24 years old
Residence:	Tandika
Gravidity:	Primigravida
Registration Number:	121/98
Date of admission:	17.10.1998
Date of operation:	17.10.1998
Delivery number:	12719
Date of discharge:	23.10.1998

SUMMARY

Mrs E.J. a 24 year old Primigravida at 38 weeks of gestation was referred from a peripheral hospital with a diagnosis of prolapsed umbilical cord following spontaneous rupture of membranes 2 hours prior to admission. Examination revealed a live fetus at a descent level of 5/5 with a pulsating prolapsed cord in the vagina.

The cervix was 4 centimeters dilated. A Male baby weighing 3.2 kg with apgar score of 8 at one and 10 at 5 minutes was delivered by emergency

caesarean section. The postoperative period was uneventful and the mother and the baby were discharged home in good condition on the 6th day post-operatively. Aetiology and management of cord prolapse is discussed.

HISTORY OF PRESENT ILLNESS:

Mrs E.J. was a primigravida at 38 weeks of gestation. Her last normal menstrual period was on 19.1.1998. She had been referred to the labour ward at Muhimbili from Temeke hospital on 17.10.1998 at 10.00 am because of umbilical cord prolapse which was discovered during a routine vaginal examination following spontaneous rupture of membranes about 2 hours earlier. She had also noted mild abdominal pain which started as soon as she arrived at the peripheral hospital. The pain had been mild at first but started increasing in intensity and became frequent as time went on. There was no accompanying fever, headache or urinary symptoms. She denied to have had any abnormal vaginal discharge prior to the current problem.

Initial assessment at the peripheral hospital was done at 9.00am. She was found to be afebrile, the fetus lying in longitudinal lie with cephalic presentation. The fetal head was free at the brim and vaginal examination revealed a 3 centimeters dilated cervix with a prolapsed umbilical cord which was pulsating. The presenting part was not well applied to the cervix. She was then referred to our labour ward for emergency caesarean section since they could not perform it in their centre because of lack of suture materials. She was transferred in knee chest position.

Antenatal History:

She had booked for Antenatal care at a peripheral hospital on 22.5.1998 at about 18 weeks gestation. Her booking blood pressure was 110/70 mmHg, haemoglobin 80% weight 55kgs. Had no oedema. Serological screening for syphilis (VDRL) was negative and she was blood group B Rhesus D Positive. She had made regular visits and was given prophylaxis of oral haematenics in form of fersolate and folic acid together with weekly chloroquine tablets. She remained normotensive throughout and her haemoglobin was 82% which was checked a week prior to admission. The lie was always stable.

Gynaecological History:

She attained menarche at 14 years of age. Her cycles were regular every 28-30 days and she menstruated for 3-5 days. The menstrual flow was normal. She had no dysmenorrhea and had never used any means of contraception.

Past Obstetric History:

She was nulliparous.

Past Medical History:

She had no history of major illness in the past.

Social and Family History:

She was a housewife while her husband was a carpenter. She had completed her primary school education. There was no history suggestive of

hypertension, diabetes mellitus or twin pregnancy in the family. Both neither smoke nor drink alcohol.

Physical Examination

With the patient in knee chest position, her general condition was good. She was not pale, was afebrile not jaundiced, or dyspneic. She had no oedema. Her radial pulse rate was 84 beats per minute regular with good volume. Blood pressure was 120/80mmHg.

Cardiovascular System:

The heart sounds were normally heard with no murmurs.

Chest: Both lung fields were clear with no added sounds. The breaths had no palpable mass.

Abdominal Examination:

Her abdomen was distended uniformly. The Fundal height was equivalent to 36 weeks pregnant uterus.

Fetal lie was longitudinal with cephalic presentation

The level of the presenting part was 5/5. Three moderate contractions were palpable every 10 minutes each lasting between 20 and 40 seconds.

The fetal heart rate was 130 per minute regular.

The fetal size was estimated to be 3000grams

Liver, spleen and both kidneys were not palpably enlarged

Both renal angles were non tender.

Pelvic Examination:

Preparation for pelvic examination. The hands were scrubbed with soap and water. Sterile gloves were then put on. The vulva looked normal and clear liquor was seen to escape through the vagina in small amount.

The left hand swabbed both labia majora Anteroposteriourly using different sterile swabs soaked in 1:20 savlon Solution for each side. The left thumb and index finger then parted the labia minora to expose the vestibule.

The right hand holding the a third sterile swab cleaned the vestibule starting on the urethral meatus to the introitus. The right index and middle finger were then introduced into the introitus and then into the vagina. A loop of cord was palpated in the vagina and was felt to pulsate between the examining fingers during and between contractions. The cervix was fully effaced and 4 centimeters dilated. The vertex was at station - 2 in the left occipital transverse position. There was no moulding or caput. The sacral promontory was not reached at 13cms. The sacral curve was normal the ischial spines were not prominent. The pubic arch was normal and the intertuberous distance could allow 4 knuckles. The Bony pelvis was considered adequate.

Diagnosis

Cord prolapse and live fetus in first stage of labor.

PLAN OF MANAGEMENT:

a) In the labour ward.

(i) Emergency caesarean section planned and the patient was told about the plan

(ii) She consented for anaesthesia and surgery.

(iii) Blood grouping and crossmatching was taken. She was blood group B Rhesus D positive and one unit was available.

(iv) Obstetric theatre staff were informed of the emergency.

(v) Shaving of the abdomen was done and the patient was placed in knee elbow position.

(vi) All preparation for surgery were ready within one hour of admission. She was then transferred to theatre in knee elbow position. This position was maintained even when the surgeon scrubbed for operation.

b) In theatre

(i) The fetal heart sounds were checked for the last time just before cleaning the abdomen, it was 138 beats per minute regular.

(ii) Catheterization was done and 150mls of urine was obtained.

(iii) Anaesthesia: This was given as described in obstetric case No. 1.

(iv) Operation: Lower segment caesarian section at 11.00am 17.10.1998.

Procedure:

Abdominal preparation was done as described in obstetric case No. 1 the abdomen was opened through a subumbilical midline incision. The lower segment of the uterus was exposed using Doyen's retractor. Each side of the uterus was packed with tagged abdominal packs soaked in warm saline. The loose uterovesical fold of peritoneum was picked up with a pair of non toothed dissecting forces and incised transversely. The lower peritoneal flaps so formed was pushed down using swab on a stick so as to mobilize the bladder down ward and away from the site of incision of the uterus and it was held in position by the Doyen's retractor. A crescent shaped (Fishmouth) incision was made on the lower segment and extended laterally with index fingers. The membranes were ruptured and clear liquor was sucked out. The right hand fingers were insinuated below the fetal head in the uterine incision and a male baby was delivered gently. Ergometrine 0.5mg was given immediately after delivery. The cord was quickly and doubly clumped and cut in between clamps and handed to the nurse midwife. The placenta was delivered easily using controlled cord traction method, it was complete and not low lying. A series of green Armytage clamps were applied on the wound margins of the uterus in order to control bleeding.

The inner uterine wound was repaired in two layers. The inner layer was repaired by a continuous locking suture of chromic catgut number 1 starting from just beyond the lateral margin of wound by a figure of eight

knot. The second layer was done by a no locking continuous suture made in such a way that it completely buried the first layer. The uterovesical peritoneum was repaired which chromic catgut no 00 in a continuous suture. The ovaries and tubes were inspected and they were normal and healthy. The packs on either side of the uterus were removed. The abdomen was mopped dry and after the swabs and instruments were pronounced correct the abdomen was closed in layers with chromic catgut 2/0 to the peritoneum, vicryl number 2 to the rectus sheath and silk number 0 to skin as in obstetric case number 1. The vulva and vagina toilet was done. The blood loss was estimated to be 500mls.

The Baby:

The baby was a male weighing 3 kgs with apgar score of 8 and 10 at 5 and 10 minutes respectively. There was no obvious congenital malformation noted.

Reversal of Anaesthesia:

Was done as in obstetric case No. 1. The patient recovered from anaesthesia and was sent back to the ward in good condition with blood pressure of 100/70 mmHg and pulse rate of 90 beat per minutes after half hour postoperatively.

Post-Operative Orders:

1. Blood pressure, pulse rate, respiratory rate temperature were done half hourly for 4 hours and then 4 hourly for the first 24

hours. 6 hours postoperatively the pulse rate was 90 beats per minute and regular. The blood pressure was 110/70mmHg. She remained afebrile, the respiratory rate was 16/minute.

2. Intravenous dextrose saline: 3 litres was given over a period of 24 hours.
3. Pethidine 100mg intramuscularly was given 8 hourly for 24 hours to relieve pain.
4. Urine output of 1500mls was collected in 24 hours, it was adequate.
5. Ampicillin 500g intravenously 6 hourly was given for the first 24 hours.
6. There was no undue vaginal bleeding observed and the uterus remained well contracted.

Progress in the Ward:

After the first 24 hours, the intravenous fluids were discontinued. The patient was passing flatus. Bowel sounds were audible. She was allowed oral sips and started ambulating.

On 3rd day postoperatively her haemoglobin was checked and was found to be 9 gl/dl.

The breast were secreting milk and the child was breast feeding well. The lochia was normal and non foul smelling. On 6th day postoperatively she was discharged after stitchs were removed. The wound was found to be clean.

She was given Iron and Folic Acid tablets and advised to attend postnatal clinic at this centre 6 weeks later.

Postnatal Visit:

6 weeks post operative, she was well her blood pressure was 120/80mmHg. Haemoglobin was 10gl/dl. The abdominal wound had healed by primary intention and the uterus had involuted well. She had no abnormal vaginal discharge. The child was healthy and was breast feeding well. Counselling on family planning was done and so she opted for progesterone only pills. She was advised to come for follow up 3 months later.

COMMENTARY:

Umbilical cord prolapse is defined as descent of the umbilical cord into the lower uterine segment, where it may lie adjacent to the presenting part (occult cord prolapse) or below the presenting part (overt cord prolapse)[1] Overt cord prolapse is associated with rupture of the Amniotic membranes and displacement of the umbilical cord into the vagina often through the introitus. In occult prolapse, the umbilical cord cannot be palpated during a pelvic examination.

The incidence of overt cord prolapse varies worldwide mostly between 1:200 to 1:400 deliveries.[1] Obufeni found it to be 1:240 deliveries[2] found it. The incidence of occult prolapse is unknown because it can be detected only by fetal heart rate changes characterized by umbilical cord compression.

Any obstetric condition which predisposes to poor application of the presenting part to maternal pelvic inlet and therefore cervix may cause the umbilical cord to prolapse. Such conditions include malpresentation (eg. Breech, Transverse Lie, Face, Brow, compound presentation), malposition such as occiput posterior position of the head, prematurity especially before 34 weeks of gestation, high parity, multiple pregnancy, pelvic tumours, low lying placenta, hydramnios, prelabour rupture of membranes, obstetric manouvres such forewater amniotomy and abnormalities of the cord such as long cord or low lying placental insertion.[1,2,3,4] It has been suggested by some authors that alteration in normal turgor and rigidity of the umbilical cord as a result of fetal hypotension in utero like in abruptio placenta may cause cord prolapse. Mrs. E.J. was a primigravida at term who had ruptured membranes spontaneously two hours before the onset of labour. On admission she was found to have mild contractions with high level of presenting part. So probably these two factors predisposed to development of an overt cord prolapse. After delivery the length of the cord was found to be within the normal range i.e. 50cms. Therefore abnormality of the cord as a predisposing factor was ruled out.

Umbilical cord prolapse is a true obstetric emergency which needs active and precise management since it is associated with significant rate of perinatal morbidity and mortality because of intermittent compression between the presenting part and pelvic inlet, cervix and vaginal canal hence

compromise fetal circulation and depending on the duration and intensity of the compression may lead to fetal hypoxia, brain damage and ultimately death.

Therefore immediate delivery by the quickest possible method is important. Extra delay of only thirty minutes in cephalic presentation more than doubles the perinatal mortality.[4,5] Mrs E.J. took about 2 hours from time the diagnosis was made at peripheral hospital to time of delivery by caesarean section. It was important to make sure that delivery took place at least within an hour. However several factors could have contributed to the delay such as lack of transport to the high risk hospital, poor staffing, and limited theatre facilities.

On arrival to the high risk hospital, an immediate pelvic examination should be done in order to determine the cervical effacement and dilatation, station of the presenting part and strength and frequency of pulsations within the cord vessels. This was done in Mrs. E.J.

In overt cord prolapse, exposure of umbilical cord to air causes irritation while cooling of the cord with poor handling result into further vasospasms of the vessels. Some authors have recommended the cord to be replaced in warm moist vagina in order to prevent vasospasm some have suggested rapid instillation of about 600mls of sterile 'saline' into the bladder via foleys catheter.[14] This could be used in patients who need to travel a long distance to the tertiary hospital for definitive treatment.

For a viable fetus with normal cardiac activity if in first stage of

labour, she should be placed in knee chest or knee elbow position as in Mrs. E.J. so that the examiner applies a continuous upward pressure against the presenting part in order to lift and maintain the fetus away from the prolapsed cord until preparations for caesarean section are complete. Oxygen should be given to the mother until when the anesthesiologist is prepared to administer a rapid inhalational anaesthesia for delivery. Abdominal delivery should be done as quickly as possible as in obstetric case 1. It is advisable to have a neonatologist standby for resuscitation of the baby. Mrs. E.J. was already referred in knee chest position, physical examination revealed her to be in first stage of labour with a live fetus and a pulsating cord prolapse. She was therefore rushed for caesarean section after counselling. The operation took 45 minutes. Thanks God a live baby of 3 kgs with apgar score 10 at 5 minutes was born. The Neonatologist could not be found immediately in that emergency situation. Luckily the baby did not manifest with any sign distress or asphyxia. The length of the cord was estimated to be within the normal limit of 50cms and the insertion to the fetal surface of the placenta was normal. So the possibility of abnormality of the cord as a predisposing factor to cord prolapse was excluded.

In case of overt cord prolapse who is found to be in second stage of labour, vaginal delivery has been preferred either by instrumental delivery such as vacuum extraction. Forceps or breech extraction, provided the pelvis is adequate for that particular baby. Vaginal delivery has also been indicated

in case of immature fetus or a dead fetus whereby confirmatory tests have been done such as electronic cardiotocogram and ultrasonography.

For occult cord prolapse, if cord compression pattern is seen i.e. variable deceleration of fetal heart rate during labour, an immediate pelvic examination should be done in order to exclude an overt cord prolapse. If an occult cord prolapse is suspected then the patient should be placed in Sim's or Trendelenburg position in attempt to alleviate the compression. If the fetal heart rate returns to normal then labour may be allowed to continue provided no further fetal insult occur and oxygen should be administered to the mother. And the fetal heart rate should be continuously monitored electronically if signs of cord compression persists, then caesarean section should be done.

So as obstetricians we need to reduce the risk of occurrence of cord prolapse by either identifying the high risk patients eg. those with malpresentation and subject them to ultrasonographic examination at the onset of labour. And since most of the prolapse occur during labour, as the cervix dilates these patients should be continuously monitored to detect abnormalities of fetal heart rate.

Amniotomy should be avoided in high risk pregnancies, should amniotomy be required in an unengaged presenting part, careful needling of the membranes and slow release of amnioticfluid may be applied until the presenting part settles against the cervix.

REFERENCES

1. Barclay M.L. Umbilical cord prolapse and Associated cord accidents. Sciarra, Gynaecology and obstetrics 1994 Vol 2:78.

2. Dare F.O., Owolabi A.T., Facubaa O.B. Umbilical cord prolapse: A clinical study of 60 cases seen at O. Awolowo University. East Afr. Medical Journal May 1998:308.

3. Critchlow C.W, Leet T.L., Beneditti T.J. Risk factors and infant outcome associated with umbilical cord prolapse: 1994 Feb. 170(2):613-8.

4. Ritchie J.W. Malposition of the occiput and malpresentation Dewhurst's Textbook of obstetrics and gynaeocology for postgraduate. 1995 5th Edition:364.

5. Murphy D.J.. Mackenzie T.L. The mortality and morbidity associated with umbilical cord prolapse. British Journal of obstetrics and gynaecology Oct. 1995 102 (10):826-830.

RHESUS NEGATIVE PREGNANT WOMAN - DELIVERY - PLUS IMMUNOPROPHYLAXIS

Name:	Mrs. A.J.
Registration Number:	007/98
Age:	28 years
Parity:	Gravida 3 para 1 + 1
Residence:	Sinza
Date of Discharge:	25.7.1998
Delivery Number:	9393

SUMMARY:

Mrs. A.J. a 28 years Gravida 3 para 1 + 1 lady booked at the Muhimbili High risk Antenatal Clinic on account of Rhesus Negativity. She had been diagnosed to be of blood group O Rhesus negative three years back. Her husband was group O Rhesus positive. In 1994 she spontaneously aborted at 8 weeks of gestation whereby evacuation was done. She delivered vaginally a 3.5 kg. Group O Rh(+) baby. No anti D immunoglobulin was given. The baby did well.

In the index pregnancy she did not develop antibodies throughout the antenatal period. She delivered a full term baby weighing 3.6 kgs who was

Blood group O Rhesus (+). The direct combs test was negative. She was then given 300 microgrammes of anti D immunoglobulin within 24 hours after delivery. They both did well. The case is presented with a commentary made on reasons for low incidence of isoimmunization in Black Africans.

Index Pregnancy:

Mrs A.J. booked at the high risk antenatal clinic at Muhimbili Medical Centre when she was 28 weeks pregnant on account of being Rhesus Negative. She was gravida 3 para 1+1 and her last normal menstrual period was on 14/10/1997.

Her booking blood pressure was 110/70 mm of mercury, Haemoglobin 12 g/dl and urine for Albumin was negative. Blood group O Rhesus D Negative was reconfirmed and serological screening for syphilis (VDRL) was negative. She had no other complaint.

Past Obstetrical History:

In 1995 she had been diagnosed to be blood group O Rhesus D Negative when she was pregnant. Her husband was group O Rhesus D positive. She denied to have undergone any procedure like amniocentesis or external cephalic version during that pregnancy.

She delivered at Mtwara Regional Hospital a full- term baby weighing 3.5 kgs who was group O Rhesus Positive. The placenta and membranes were expelled immediately after birth without any difficulty. She could not remember the results of investigations taken from the baby. However no anti

"D" immunoglobulin was given to her post delivery, as it was not available. The baby did well and did not develop neonatal jaundice.

A few months prior to conception of that pregnancy she had aborted spontaneously at about 8 weeks gestation following a febrile illness so evacuation was done in the same hospital. No anti D immunoglobulin was given following that abortion.

Past Gynaecological History:

She had menarche at 16 years of age. The menstrual cycles were regular of about 28 days. She had never been on contraception before.

Past Medical History:

She had been in good health throughout all her life. She denied history of blood transfusion before.

Family and Social History:

She was a housewife married to a storekeeper at Tanzania Harbours Authority. She was not of mixed ethnic origin. Her husband was also of Black African Stock. There was no consanguinity.

PHYSICAL EXAMINATION:

She was in good nutritional status and was not jaundiced or pale. There was neither oedema nor lymphadenopathy. Her pulse rate was 74 beats per minute and blood pressure was 110/70 mm of mercury.

The lungs and heart sounds were normal.

Abdominal Examination:

The abdomen was distended moving with respiration. The fundus corresponded to the calculated gestational age of 28 weeks. The liver spleen and kidneys were not palpably enlarged.

Follow up at the Antenatal Clinic:

1. Haemoglobin remained in the range of 13.6 - 12 g/dl
2. Her husbands blood group was determined again and was found to be group '0' Rhesus positive as reported by the patient at the initial visit.
3. Maternal indirect Coomb's test was done at 30 and 36 weeks gestation and on both occasions the results were negative.
4. Blood slide for malaria parasite was negative
5. Ultrasonographic follow up at 29 weeks and 36 weeks showed a normal growing fetus with absence of oedema e.g scalp, ascites, pericardial or pleural effusion.
6. Her Blood pressure remained in the normal range.

Delivery:

She developed spontaneous labour at 40 weeks gestation. Labour was closely monitored by using the partogram. She delivered a 3.6 male baby of apgar score 9 and 10 at 1 and 5 minutes respectively. The baby was not pale or jaundiced. He had no congenital malformation noted. The liver and spleen

were normal. Blood was obtained from the cord for determination of the baby's blood group, Rhesus factor, haemoglobin and direct Coomb's test. (seen result below). The baby was then sent to the neonatal unit for observation. Blood was also drawn from the mother for indirect coomb's test and Kleihauer - Betke test. She was counselled on the need of immunoprophylaxis incase the baby was Rh(+).

Investigation Results of the Baby:

The baby was blood group O Rhesus (D) positive. It's haemoglobin was 17g/dl. Direct Coomb's test was negative. The Kleihauer - Betke test was not done due to technical problems. A repeat indirect Coomb's test was negative. The mother was given 300 micrograms anti D immunoglobin intramuscularly within 24 hours after delivery.

Progress of the Baby:

The baby was feeding well, it did not develop jaundice or anaemia. They were both discharged on fourth day in good condition. The mother was again counseled on her problem and the need for good antenatal care and Immunoprophylaxis in the subsequent pregnancies.

COMMENTARY:

Originally the Rh concept was defined by the antiserum and two Blood group factors namely Rh positive and Rh Negative. The Rh factors however have become increasingly complex and more than 400 other Red Blood Cell Antigens have been identified. Although some of them are Immunologically

and genetically important, fortunately many are so rare as to be of little clinical significance. The CDE or Rhesus blood group system is of considerable clinical importance because the majority of individuals who lack it's major antigenic determinant D or Rh become immunized after a single exposure to erythrocyte Antigen by producing antibody which depending on the degree of antigenicity may pass through placenta and cause destruction of fetal red blood cells causing anemia, and Hemolytic Disease of the Newborn or erythroblastosis fetalis[1]. The mother could be sensitized if enough erythrocytes from the fetus enter her circulation (Fetal maternal Haemorrhage) or incase she receives incompatible blood transfusion. The risk of immunization is dose dependent being 3% with less than 0.1mls of fetal blood and as higher as 65% with 50 - 250mls of positive cells. However quite small amount of Rh positive blood as little as 0.3mls in some instances will produce Rh immunization in Rh Negative volunteers[2,3].

Several nomenclature systems are currently used. However the CDE grouping system has been considered best especially to describe the non D antigens and their respective Antibodies anti C, anti c, anti E and anti e. The CDE antigens are inherited independently of other blood group antigens such as 0, A or B, and are located in the short arm of chromosome 1.

The Rh antigen Cc Ee are considerably less immunogenic than D. Of this group the antigen responsible for severe hemolytic disease of the newborn is D[3].

Rhesus negativity is predominantly a Caucasian trait. The Basques show a highest incidence 34%, while in Finland it is 10 - 12%, Chinese and Japanese have incidence of 1% among African Americans there is lesser incidence of D Negativity individuals 7 - 8% than among white Americans 13% and in blacks it ranges between 4 - 8%[3]. African Tanzanians show very low Rh negativity compared to Western European and Basques. In all populations studied in Tanzania, Rh Negativity was between 3 - 4%[4]. Rh negativity was definitely confined to the Basques many years back but currently the incidence in other caucasians and non-caucasians is related to intermingling of Basques gene and other caucasian groups and now intermingling of caucasian gene and other races[3].

The relatively very low incidence of hydrops fetalis in Tanzania probably reflects the low prevalence of Rh Negativity.

Mrs. A.J. was not immunized despite of having had 3 previous pregnancies with a Rhesus positive husband of which two were proved to be compatible Rh(+). The first pregnancy ended in a spontaneous abortion at 8 weeks gestation following a febrile illness. It is known that spontaneous abortion increases the risk to maternal immunization by 2 - 3%[3]. There are several possibilities as to why Mrs. A.J. was not immunized. Firstly it depends on her inborn ability to respond to the Rh antigenic stimulus especially in case of low degree of antigenicity. Approximately two thirds of Rh negative women being responsive. Secondly, probably there was low

volume of fetal blood which entered the maternal circulation, the other reason could be no responders regardless of amount of fetal maternal haemorrhage as mentioned earlier. There has been reported significant protection against immunization when there is also ABO incompatibility between fetal red blood cells and the mother this reduces the incidence of Rh immunization to about one tenth of that when they are ABO compatible. However this was not the case in Mrs A.J. since all belonged to blood group O including the child.

There are some variation in strength of the Rh antigenic stimulus depending on the Rh genotype of fetal blood cells R'r(CDe/cde) genotype is relatively strong.

The possibility of the aborted fetus being Rh(-) and husband heterogenous for D (ie Dd) and hence reducing the chance of immunization cannot be excluded. The detection of Dd father could not be determined directly because there was no anti d. antibody.

The currently recommended move towards prevention of Rh isoimmunization is to give 300umg of Rh immunoglobulin within 72 hours after delivery. Some authors have been administering to pregnant women at 28 weeks of gestation hence reducing the Rh immunization rate to 0.2%[5] . It has also been documented that Rh immune globulin can still be given on 14th or 28th days if it was not given within 72 hours of delivery. Routine administration has also been recommended after abortions (as it happened in the first pregnancy of Mrs A.J), ectopic pregnancy, amniocentesis, chorionic

villus sampling, percutaneous umbilical cord blood sampling, external cephalic version, manual removal of placenta and fetal surgery. The problem faced is the cost of the drug and sometimes unavailability as it was the case of Mrs A.J.

REFERENCES:

1. Stangenberg M. Selbing A. Westregren M., Rhesus Isoimmunization. New prospective in maternal Fetal Medicine review: Obstetrical and Gynecological Survey 1991 Vol. 46: 4.
2. Mkocha, C.: True Isoimmunization; A rarity among black African Women? Case report, dissertation for M.MED UDSM. Obst/Gyn 1995.
3. Norman B, Seeds J.W. Rhesus Immunization in Pregnancy. A review; Obstetrical and Gynaecological Survey 1993 (48) : 12.
4. Nhonoli A. Kiango J.S.; The distribution of Blood group frequencies in Mainland Tanzanians Africans: East Afr. Med. J. 1974 51:3
5. Hellen L. How Martlew N, Preventing Rhesus D hemolytic disease of the newborn by giving anti D Immunoglobulin; Are the guidelines being adequately followed? Br. J. Obst. Gynaecol. 1997 (104) 34 - 41.
6. Commentaries: Anti D Immunoglobulin in Rh D Prophylaxis: Br. J. Obstetr Gynaecol. 1998 (105) 129 - 134.

INTRAUTERINE FETAL DEATH: CERVICAL RIPENING BY INTRACERVICAL PG F2α, SUCCESSFUL INDUCTION

Name:	Mrs. R.A	34 Years
Registration Number:	175198	
Residence:	Temeke	
Date of Admission:	4.10.98	
Date of Delivery:	5.11.98	
Delivery Number:	13406	
Date of Discharge:	12.11.98	

SUMMARY:

Mrs R.A. a gravida 4 Para 1 + 2 lady was referred to Muhimbili Antenatal ward from Temeke Hospital on account of one week loss of fetal movements at 32 weeks gestation. Abdominal ultrasound scan confirmed intrauterine fetal death. VDRL and TPHA tests were positive and coagulation Profiles remained normal.

Four weeks after the diagnosis of fetal death she remained undelivered. Intracervical prostaglandin F2$\propto$ was used to ripen the cervix and she had a successful induction of labour. The case is presented with a short commentary on the various methods of ripening the cervix before induction of labour.

HISTORY OF PRESENT ILLNESS:

Mrs R.A. a fourth gravida with one previous delivery and two abortions was referred to Muhimbili Antenatal ward on 6/10/98 from Temeke Hospital on account of loss of fetal movements at 32 weeks since one week prior to admission. Her last normal menstrual period was on the 28/2/98 therefore her calculated date of confinement was 4/12/98. The loss of fetal movements occured insidiously, as it started with progressive decrease of fetal movements ending in total loss of fetal movements. She had no history of preceding febrile illness and denied to have experienced any abdominal pain, abnormal vaginal discharge or vaginal bleeding. History of headache, blurring of vision, frequency of micturition, urgency or dysuria were not present.

She gave no history of trauma to the abdomen, yellow colouration of the eyes or bleeding tendencies like bleeding from the gums.

HISTORY OF PRESENT PREGNANCY:

She had booked at a gestational age of 20 weeks. Her booking blood pressure was 110/70 mm of mercury, body weight was 62kgs. Haemoglobin was 72%, urine; Blood group/Rhesus factor, and VDRL were not checked. Quickening had not been reported. She made a total of four visits in the peripheral antenatal clinic. The fundal height was shown to be correspondingly increasing with the gestational age. The weight gain had been 3Kgs for the past 12 weeks.

During the last visit she reported to have not heard the fetal movements for a period of one week. She was then referred to Muhimbili Antenatal Ward.

Past obstetric history:

Her first pregnancy was in 1992. This ended up with a normal vaginal delivery. The baby weighed 3.1 kgs. She had no ante, intra or postpartum complications. In 1994 she aborted spontaneously at 4 months gestation and the second abortion took place in 1996. This was at six months gestation. Both abortions were not preceded by any febrile illness, urinary symptoms or drainage of liquor. Post mortem examinations in both incidences were not done to the abortuses. She had not been investigated concerning her problem of recurrent abortions.

Past Medical History:

She had not suffered from any major illness besides the two abortions. She gave no history suggestive of Diabetes mellitus, hypertension or tuberculosis.

Family history:

She was a housewife married to a petty businessman. All pregnancies were with him.

There was no family history of Diabetes mellitus or Hypertension or tuberculosis contact.

No one in the family had similar problems. She neither smoked cigarettes nor drank alcohol.

Physical Examination:

She was healthy looking but depressed, afebrile Temp 36.7°C, not pale, dyspnoeic or jaundiced. Shehad no petechial haemorrhages and there was no angular stomatitis. Peripheral lymph nodes were not palpably enlarged. Her weight was 66kgs while her height was 162 cms.

Breasts: Both nipples were secreting milk on expression and there were no palpable breast masses or tenderness.

The Respiratory System:

The respiratory rate was 18 per minute and there was bilateral symmetrical chest expansion. Breath sounds were vesicular bilaterally with no added sounds.

Cardiovascular System:

Her pulse rate was 76 beats/minute. It was regular and of normal volume, and her blood pressure was 110/70mm of mercury. The heart sounds were normal and there were no murmurs.

The Abdomen:

The abdomen was soft, distended and her fundal height corresponded to 28 weeks gestation.

Liver and spleen were not palpably enlarged and the renal angles were non tender. The fetal heart sounds were not heard.

Pelvic Examination:

The vulva looked normal. There were no genital ulcers. Speculum examination revealed a healthy vagina mucosa and the cervix appeared normal. On digital examination the cervix was anterior, about 1 cm long, firm in consistency and closed.

Provisional Diagnosis: Intrauterine Fetal Death.

The patient was explained about the possible diagnosis and was requested to undergo some investigations which were to confirm the diagnosis and if possible to look for the cause and severity of the condition.

Result of Investigations done in the antenatal ward

- Serology for syphillis VDRL was Positive 1/4 and TPHA was also positive.
- Fasting blood glucose 4mmol/l.
- Serum creatinine was 88 mmol/l
- Blood group was B Rhesus positive
- The husband was blood group B Rhesus positive
- Haemoglobin was 11gd/l

  White Blood cells total 5000/mm^3

  Differential Neutrophils 68%

  Lymphocytes 30%

  Monocytes 1%
- Platelet count 130,000/mm^3

- Coagulation profile - bleeding time 3' 3" (ivy)
  - prothrombin time 13" 78% Control 11.5 100%
  - Partial thromboplastin time 37"-Control 35"
  - Serum Fibrinogen 0.80umol/l
- Urinalysis - No pus cells, leucocytes, red cells, glucose, or albumin
- Specific IGM antibodies against Toxoplasmosis cytomegalovirus and Rubella virus - negative
- Abdominal Ultrasound:
  - Absent fetal heart activity
  - Spalding's sign positive
  - No Retroplacental clot

FINAL DIAGNOSIS: Intrauterine fetal death probably secondary to syphillis with no coagulopathy.

Progress in the Ward:

The patient was again explained about the diagnosis and was educated on the need to treat her and her husband as well. She was also counselled on the possible complications of prolonged intrauterine fetal death. She received procaine penicillin fortified 2.4 mu for 2 weeks and the treatment was prescribed to the husband. Two weeks later she remained undelivered. Coagulation indices were rechecked and were found to be within normal limits.

She was then asked to buy intracervical prostaglandin tablets. Two units of fresh blood and two units of fresh frozen plasma were requested in case coagulopathy should be detected after delivery of the dead fetus.

Cervical ripening and induction of labour

A night before attempt of induction of labour at 8.00pm, 2 pellates of intracervical $PGF_2 \propto$ were inserted intracervically as follows:-

The patient was told to urinate then was placed in Lithotomy position while in the sideroom. The vulva and perineum were cleaned with antiseptic as in obstetric case no.1, a sterile speculum was inserted gently. The findings were the same as in previously. $PGF_2 \propto$ was inserted intracervically using an introducer which was then released out. The amniotic membranes remained intact.

The patient was allowed to go for rest and was cautioned that she might start experiencing labour pains.

Six hours later she was reviewed and had not complained of any abdominal pain, another 2 pellates were then inserted as described.

Induction of labour and delivery.

The following morning, she was sent to the labour ward. By then she had started experiencing mild lower abdominal pain.

Induction of labour was started using 5 Iu of oxytocin in 1000mls of Dextrose saline at a rate of 10 drops/minute increasing to 20, 30,40,50 and 60

drops per minute, increment being done at ¼ hourly intervals.

Injection Pethidine 100mg was given Intramuscularly for intrapartum Analgesia. Bed side clotting time was checked and found to be 5 minutes. The pulse blood pressure, temperature and uterine contractions were monitored hourly. Eight hours from the start of induction of labour, she had a bearing down sensation and the membranes ruptured spontaneously. Liquor was straw coloured. She expelled a 1.8kgs female macerated abortus which had no observable external congenital anomalies. The placenta was expelled complete without any difficulty. It weighed 350grammes and did not show any obvious external pathology. The patient refused her fetus and placenta to undergo any postmortem examination because of her traditional beliefs. The estimated blood loss was 200mls.

Post natal period

She was observed in the labour ward for 2 hours before being transfered to the post natal ward. Pulse, blood pressure and temperature remained normal. The uterus was well contracted and there was no significant vaginal bleeding.

Haemoglobin was checked the following day and was found to be 10g/dl. she was discharged home and was told to report to postnatal clinic 6 weeks later.

Follow up after 6 weeks

She was found to be in good general condition. Haemoglobin was

11g/dl. The abdomen was soft and the uterus had involuted well.

She was asked to return after 6 months for follow up regarding her VDRL status.

COMMENTARY:

Intrauterine fetal death is a devastating condition in a pregnant woman usually causing psychological stress and anxiety of carrying a dead fetus in utero.

The pattern of fetal death has changed dramatically during the past 3 decades. It is estimated that more than 80% of the fetuses who die today in utero do so before the onset of labour[1].

Maternal syphillis is among the long list of the causes of Intrauterine Fetal death. A recent population based study in Malawi showed that it contributed to 26% of stillbirth[2].

Mrs M.R. presented with symptoms and signs of Intrauterine fetal death. One can never be absolutely sure that the cause of death was due to syphillis since postmortem examination, chromosomal studies, cultures from oropharynx the fetuses and insertion of umbilical cord to the placenta were not done. However since all other investigations taken including the specific IGM antibodies against Toxoplasmosis, Rubella and Cytomegalovirus were negative, most probably the cause of death was maternal syphillis. The other supporting evidence is the rising gestational age at which fetal loss occured.

About 75% women with Intrauterine Fetal death are expected to go into spontanenous labour within 2 weeks of the fetal death. This is the basis of expectant management in intrauterine fetal death. However if more than three weeks pass without developing spontaneous labour, one is justified to start worrying about coagulopathy due to persistent consumption of clotting factors resulting from the release of thromboplastins by the dead fetus. However this rarely develops before 5 weeks. In some instances a woman may force the doctor to induce her earlier than 3 weeks for fear of carrying the dead fetus in utero. Therefore the advent of more effective methods of labour induction has enhanced the desirability of early delivery. However counselling and reassurance is the most important aspect during the course of management. Mrs.R.A had stayed with intrauterine fetal death for a period of four weeks before going into spontaneous labour. Intracervical prostaglandins F2α were inserted to ripen the cervix and then labour was induced successfully with intravenous oxytocin in dextrose.

Cervical ripening prior to induction of labour significantly facilitates the labour onset and progress in most of the occassions. An unripe cervix during induction of labour definitely increases a high chance of failed induction, so this is a very important step towards successful induction.

There are several known methods used for riprening the cervix. Prostaglandins have commonly been used for many years in both cervical

ripening and uterine stimulation in the induction of labour. Intra cervical prostaglandins F2α pellates have been found to be very successful and efficient in cervical ripening (3). Several studies have found it to be have lesser side effects.

Prostaglandin E2 has also been found to be equally effective though some studies have associated it with increased risk of uterine rupture due to hyperstimulation. There are various routes used. These include oral, intravenous, extra-amniotic, and intra amniotic. However the commonest routes used are cervical and intra vaginal, as the other routes have been associated with more adverse effects such as nausea, vomiting, diarrhoea and uterine hyperstimulation.

A combination of extra-amniotic prostaglandin with intravenous oxytocin has been found to be an effective means of induction of labour where there is intrauterine fetal death[2] as it happened in Mrs. R.A. Gemeprost. a synthetic prostaglandin E, analogue has also been found to be very useful in induction of labour with second trimester intrauterine fetal death[5].

Other methods for cervical ripening and ultimately induction of labour include use of extra amniotic isotonic saline with intra amniotic injection of hypertonic saline. However the latter method has not been recommended for intrauterine Fetal death since most of the time the volume of the amniotic fluid is often reduced making the potentially highly toxic salt solution difficult to

inject into the sac, coagulation defects may also be induced or enhanced by this method.

Hygroscopic dilators such as laminaria tents have also been used in some centres. These are made up of dessicated stem of cold water sea weeds. (Laminaria digitata). When placed into the endocervix they tend to absorb water, hence the cervix softens.

Relaxin, a polypeptide Hormone which is released by the corpus luteum, decidua and chorion has also been found to be useful the same applies to the synthetic Lamicel.

Use of balooned catheter has also been found to be useful in ripening the cervix especially in developing countries where most people cannot afford buying prostaglandins.

mifepristone

RU 486, a steroid compound which antagonizes progesterone actions at the receptor level has also shown successful results in some centres. The tolerance had been found to be good and cabrol recommended it to be used as a Pharmacologic alternative to Prostaglandins[6].

Breast stimulation and use of oestradiol hormone have been reported to help cervical ripening and induction of labour.

Amniotomy is among the methods for cervical ripening and induction of labour; however it could not be done on Mrs. R.A for fear of infection especially with gas forming organisms like clostridum welchi species.

REFERENCES:

1. Kerse MJNC, Kanhai H.H. Induction of labour after Fetal death in chalmers I (eds) Effective care in pregnancy and childbirth 1990: 1118-1128.

2. Mc Dermott, Steketee R. syphillis associated Perinatal and Infant mortality in rural Malawi: Bull world health organ 1993: 71(6):773-780.

3. Salamalekis E. Intra/extramniotic Administration of Prostaglandin F2∝ in Fetal death, missed and Therapeutic abortion, Aretein Hospital Greece. Clin exp obstet Gynaecol. 1990:17(1):17-21.

4. Kahoe S, myllote MJ. Extraamniotic Prostaglandins supplemented with intravenous oxytocin in induction of labour following fetal death in utero. Jr J.Med. Sc.1990 159:278-9.

5. Byrne P, Onyekwuluje T. Gemeprost in the management of second trimester intrauterine fetal death. Ire. Med 1994(87):54-5.

6. Cabrol D, Dubois C, Cronge H.
Induction of Labour with Mifepristone (Ru 486) In intrauterine Fetal death, Badelosque Univ.Hosp. Paris. Am. J. Obstet gynaecol.1990 163(2):540-2.

THIRD DEGREE PERINEAL TEAR IN A PATIENT WITH CIRCUMCISED VULVA: PRIMARY REPAIR UNDER GENERAL ANAESTHESIA

Name	:	Mrs. M.M
Registration Number	:	387/98
Age	:	22 years
Parity	:	Para 1
Date of Admission	:	21.3.98
Date of Operation	:	21.3.98
Date of Discharge	:	26.3.98

SUMMARY:

Mrs. M.M. was a para 1 lady having been referred from Temeke hospital with a diagnosis of perineal tear following a prolonged labour. She had delivered vaginally an hour prior to admission a 3.9kg female baby whose apgar score was reported to be 6 and 8 in one and five minutes respectively.

On admission she was found to have sustained a third degree perineal tear. She also had an intact hypertrophic circumcission scar. The bleeding was minimal. Primary repair in theatre under general anaesthesia was done and the patient recovered well and was discharged home five days later continent for both flatus and faeces. The case is presented with a short commentary on consequences of female genital mutilation on child birth.

HISTORY OF PRESENT ILLNESS PRECEDING ANTENATAL CARE AND DELIVERY.

Mrs. M.M had booked for antenatal care at Mbagala clinic while she was 20 weeks pregnant. Her booking blood pressure was 120/70 mm of mercury. Haemoglobin 10g/dl. She had no pedal oedema. She made a total of 8 visits. Her fundal height corresponded well with gestational age.

Labour pains started on 20/3/98 at 6.00pm while at home. She was then taken to Temeke hospital for delivery. On arrival at around 7.00pm she was assessed and was found to be in active labour with the cervix being 4 centimetres dilated. Artificial rupture of membranes was done and clear liquor was obtained. 5 hours later she was reassessed and was found to be 6 centimetres dilated. There was neither caput nor moulding recorded. The position was not determined but pelvis was reported to be adequate. Thereafter she was not assessed until the following morning at around 11.00 am. By then she had not delivered despite having strong uterine contractions. At this juncture she was thought to have poor progress of labour. So she was referred to Muhimbili Medical Centre for further management. As she was about to be transferred she started having a sense of bearing down. She was examined and was found to be in second stage of labour. She finally delivered a 3.9kgs baby after struggling for about an hour. It was reported that the nurses assisted her by applying fundal pressure! Strangely through episiotomy was not done. The reported apgar score of the baby was 6 to 8 at

one and five minutes respectively. The placenta and membranes were delivered complete without any difficulty. On perineal inspection she was found to have a large perineal tear. Bleeding was minimal. She was therefore referred to Muhimbili Medical Centre for perineal repair.

Past Gynaecological History:

Her menarche was at the age of 14 years. She had regular menstrual cycles occurring every 28 days and periods lasting 4 days. She denied having used any form of contraceptive methods.

Family and Social History:

She was a housewife, married to a petty businessman. She did not smoke or drink alcohol. She denied history of tuberculosis contact.

Physical Examination:

Her general condition was good; she was afebrile, not pale and not dyspnoeic.

Cardio Respiratory System:

Pulse rate was 90/minute regular with good volume and her blood pressure was 120/80 mm of mercury. Both heart sounds were normal with no murmurs.

Chest movement was symmetrical bilaterally both lung fields had vesicular breath sounds with no added sound.

Abdominal Examination:

The lower abdomen was distended to just below the umbilicus. There

were no areas of tenderness and the uterus was well contracted equivalent to 18 weeks. Liver and spleen were not palpably enlarged. Renal angles were free of masses or tenderness.

Pelvic Examination:

On inspection: There was a circumcision scar involving the clitoris both labia majora and minora. It was hypertrophic, covering the urethral orifice and part of the vagina.

Speculum examination: revealed no cervical tear. There was no active bleeding.

Digital examination revealed a well contracted uterus of about 18 weeks size.

There was a perineal tear around the posterior fourchette which extended to the anal sphincter. The whole anal sphincter was torn apart and the rectal mucosa was torn to about a length of 3cms.

Diagnosis:

Third degree perineal tear.

Management:

1. Intravenous drip of Normal saline 1000mls was administered.
2. Blood for grouping and crossmatching was taken and one unit of blood was requested.
3. An informed consent was obtained from the patient and she was prepared for a primary repair in theatre under General Anaesthesia.

Procedure in Theatre:

Anaesthesia was induced with 250mg intravenous sodium thiopentone. This was maintained with a mixture of oxygen 6litres/min and Halothane 5% using a face mask.

The patient was placed in Lithotomy position. The vagina, perineum and rectum were cleaned using savlon antiseptic 1:20. She was draped using sterile towels and then catheterization was done as in obstetric case number 1.

A soft sterile gauze roll was gently passed into the rectum to avoid faecal contamination of the operation field.

The vaginal walls and cervix were thoroughly inspected after speculum insertion, to see if there were any other tears missed during the initial examination. None were detected other than the tear noticed before. Then the rectum was inspected and it was found to have torn up to about 3cms. The tear involved the anal sphincter.

Repair:

Repair of the rectal wall started from the apex downwards as a continuous suture using fine chromic catgut No.3/0 on an atraumatic needle while inverting the edges and care being taken not to perforate into the bowel lumen. The stitch was reversed and brought back to the apex and tied.

The torn ends of the anal sphincter were grasped using Allis tissue forceps the left one having been retracted. These were approximated using 3 figure of eight sutures_number O chromic catgut.

The apex of the vaginal tear was then identified and the vagina was sutured with continuous catgut number O. Then the perineal muscles, the bulbocarvenosus and superficial transversus perineal muscles, were approximated using interrupted sutures of chromic catgut No.0 ad finally the perineal skin was closed using interrupted chromic catgut number 2/0. The gauze which was inserted with the rectum was removed. The vagina could admit 2 fingers easily and the anus could accommodate the little finger. A prick with needle in the perineal area after anaesthetic reversal showed a contracting sphincter.

Reversal of anaesthesia was done as in obstetric case 1. The patient was then sent to the ward with the following post operative care:

1. Pethidine 100mg intramuscularly 8 hourly as necessary for 24 hours to relieve pain.
2. Chloramphenical 500mg 6 hourly orally for 5 days
3. Flagyl tablets 400mg 8 hourly orally for 5 days.
4. Liquid paraffin 15mls 8 hourly for 7 days as a stool softener.
5. Low residue diet for a week
6. Sitz baths were given daily for 3 days.

Post Operative Progress and Follow up:

She remained well. She did not develop fevers. Pulse rate was 80/minute and regular. Blood pressure was 110/80mm of mercury. Her haemoglobin checked on the third day was 9.6g/dl. The perineum healed by

primary intention. She had no pain during defecation and she was continent for both flatus and faeces. On the 5th post operative day, she was discharged and was told to return for postnatal check up 6 weeks later.

She was seen 6 weeks later at the postnatal clinic. Her general condition was good. Haemoglobin was 10.4g/dl and blood pressure was 120/80 mm of mercury. Her uterus had completely involuted and the perineal wound healed well. She remained continent for both flatus and faeces. The anal sphincteric tone was normal. She was discharged from the follow up clinic and was counselled for the need to deliver in all her future pregnancies in hospital preferably where there are operative facilities. She was also advised to continue with care of her child including the immunization services.

COMMENTARY:

Female genital mutilation existed as early as the fifth century BC according to Herodotus and was practiced among the phoenicians, Hittites and Ethiopians[1]. Between 85 and 114 million girls and young women worldwide have been subjected to various forms of female genital mutilation according to WHO estimates[2]. The reason behind the practice has been considered to prevent or cure for sexual deviations such as nymphomania, masturbation and for disorders thought to be caused by masturbation such as hysteria.

Female genital mutilation is practiced in more than 20 countries in Africa, from the Atlantic Ocean to the Red Sea and in countries around the Indian Ocean. It has also been commonly practiced among the Arabs and

Indians. Female circumcision became an issue for European and American physicians during the 1980's as a result of the immigration of African families and the influx of young couples and students from countries where circumcision is prevalent.

Toubia classified sexual mutilation into three broad categories[3].

Type I also called "Sunna" (Tradition in Arabic) and is accompanied by partial or total excision of the prepuce or hood of the clitoris, and sometimes excision of the tip of the clitoris.

When clitoridectomy is accompanied by partial or total excision of the labia minora, the operation is termed excision (type II).

Modified Infibulation (type III) involves clitoridectomy and an incision of the Labia Minora and the upper two thirds of the Labia majora, leaving a posterior opening.

Total infibulation (type IV) involves the same operation as type III but with wider excision of the Labia majora to create raw surfaces that are then stitched together to cover the urethra and the vagina as it was the case of Mrs. M.M.

Introcision, a rare form of ritualistic female genital mutilation, involves the incision and inward folding of the vaginal introitus.

There are many known medical complications of female genital mutilation. However obstetrical complications carry a special weight among the list of complications. These include severe haemorrhage due to perineal

laceration, bladder injuries, laceration of the urethra and rectum, fetal brain damage or fetal loss because of obstructed labour. Moreover female genital mutilation is one of the causes responsible for the increased maternal mortality in countries in which this tradition is practiced. In Bara district, Sudan maternal mortality rate was 407 per 100,000 live birth and female genital mutilation was identified as one of major contributor. Mrs. M.M. sustained a third degree perineal tear. It seems she had a prolonged second stage due to scar tissue dystocia which was overcome after application of fundal pressure. It's a pity episiotomy was not done at that particular moment especially seeing that the baby weighed 3.9kgs for a primigravida with a circumcised vulva. One cannot tell whether there was shortage of nurses or was it ignorance or lack of knowledge of the attending nurse that episiotomy was mandatory during that stage. No wonder Mrs. M.M. developed a spontaneous third degree perineal tear. Other obstetricians have preferred anterior episiotomy or deinfibulation in order to prevent vesico-vaginal or rectovaginal fistulas as well as laceration of the scar tissue with subsequent maternal haemorrhage. Release of the outlet from the scar tissue has also been advocated whereby the upper part of the vestibule is incised during the second stage of labour before episiotomy. The incision is made by introducing a finger through the introital aperture directed to the pubis. The flap of tissue anterior to the pubis is cut in the midline, over the finger with scissors until the urethral meatus is

visualized. Episiotomy is also performed if the operator thinks it is necessary for the completion of fetal expulsion.

Concerning the first stage of labour although it was reported to be prolonged it is difficult to tell exactly what factors contributed to the delay since. No features of obstructed labour were documented. One assessment showed that there was no caput succedaneum or moulding. In fact several studies have shown that during the first stage of labour, performance of circumcised women do not differ much from that of uncircumcised except for the second stage of labour whereby it significantly longer and there is increase in rate of haemorrhage among the circumcised. The outcome of labour for the infants also showed a significant difference. Severe asphyxia and lower apgar scores are more frequent among infants whose mothers were circumcised. The type of circumcision which significantly affects the outcome of labor is infibulation i.e. removal of clitoris, Labia minora and both majora as it was the case of Mrs. M.M. For Tanzanians this type is a rare one because most tribes perform type I. Infibulation is highly practiced among Somalians and Ethiopians.

Efforts to end the custom of female genital mutilation were begun in Kenya in 1906 by the church of Scotland. The World Health Organization in collaboration with the International Federal of Gynaecology and Obstetrics (FIGO) together with the Royal College of Obstetrics and Gynaecology in

United Kingdom have also voted to end the practice of female circumcision around the world. By using television and radio exposure and programs in schools in recent years, local health care officers and educators have been working to educate and change the attitudes of the public in countries where female circumcision is practiced since the social, political and cultural situation in every country and region where female genital mutilation is performed is different and unique. Worldwide eradication of female circumcision requires more detailed planning, resources and sustained commitments for governments and international organizations.

REFERENCES:

1. Taba A.H. Female circumcision in Traditional practices affecting the health of women and children. WHO/EMRO Technical publications : No.2 1979 : 43-52.

2. Anonymous, World Health Forum 1993 : 11; 416.

3. Toubia N. Female circumcision as a Public health Issue. N. Engl. J. Med 1994: 331 : 712 - 16

4. Dirie M.A., Lindmark G. The Risk of Medical Complications after Female circumcision. East Afr. Med. J: 1992 69:479-482.

5. Campbell M. Abusham Z. Sudan; Situational analysis of maternal health in Bara District North Kodofan. World Health Stat. Q. 1995 : 48 : 60 - 66.

RUPTURE OF THE GRAVID UTERUS:

SUBTOTAL HYSTERECTOMY.

Name	:	Mrs. F.I.
Age	:	27 years
Residence	:	Temeke
Date of Admission	:	7/5/1998
Date of Discharge	:	17/5/1998
Registration number	:	006/97

SUMMARY:

Mrs F.I a gravida 3 para 2 woman was referred from Temeke hospital with a diagnosis of obstructed labour. On examination she was found to be pale with a pulse rate of 110 beats/minute and blood pressure of 90/50 mm of mercury. The whole abdomen was tender and fetal parts were easily palpated. Fetal heart beats were absent. The cervix was 8 cm dilated and the head was at the level 4/5, with gross caput and moderate moulding. A diagnosis of ruptured uterus was made. Laparatomy revealed an extensively ruptured uterus with a dead fetus weighing 4 kgs. Subtotal hysterectomy was done. The post operative recovery was smooth. The case is presented with a discussion on management of Ruptured uterus.

HISTORY OF PRESENT ILLNESS:

Mrs. F.I. was admitted at Temeke hospital in labour and was there for eight hours. Intrapartum records showed that she had an initial vaginal examination five hours prior to the referral and was also found to have strong contractions. The fetus was in longitudinal lie with cephalic presentation; fetal heart rate was 138 beats/minute. During the pelvic examination the cervix was 5cms dilated and the presenting part was at the level of 4/5. The pelvis was thought to be adequate for the baby. Four hours later she was reviewed and the contractions were strong with fetal heart rate of 154 beats per minute. The cervix was 7 cm dilated and the level of the presenting part was still at 4/5. But now there was caput formation as well as moderate moulding. The doctor who attended her decided to refer her to our high risk labour ward with a diagnosis of obstructed labour.

The present pregnancy:

Mrs F.I. was a 27 years old Gravida 3 para 2 + 0 lady. Her last normal menstrual period had started on 23/7/1997. Her expected date of delivery was on 30/4/1998. So during admission her gestational age was 41 weeks.

She had booked at 28 weeks and made a total of eight visits to the antenatal clinic.

She was Normotensive through out the visits and her Haemoglobin ranged between 9-11g/dl. Urine for Albumin was never checked due to lack of albustix. The fundal height increase had been corresponding with the gestational age.

Obstetrics history:

She was gravida 3 para 2 without history of abortions. The first pregnancy was in 1994 which ended into a premature delivery while seven months pregnant. This followed an Episode of High grade fever. Birth weight of the child was 1.8 kgs he is alive and well. The second pregnancy was in 1996 whereby she had a fullterm spontaneous vaginal delivery of a male baby weighing 2.65kgs. there were no prenatal or postnatal complications. The child is alive and well.

Past gynaecological history:

Her menarche was at 14 years and she had regular cycles of 28-30 days with a moderate flow of 3-5 days. She had no dysmenorrhea and had never used any form of contraceptive methods. There was no history of previous gynacelogical operation.

Past medical and surgical history:

She had no history of having had a serious medical or surgical illness.

Family and social history:

She was a housewife and her husband was a carpenter. She neither

drank alcohol nor smoked cigarette. There was no history of Diabetes Mellitus or Hypertension in her family. They lived a few minutes walk to Temeke hospital.

Physical examination:

She was sick looking in pain, afebrile with temperature 36.7°C, pale, restless and had cold extremities. There was no peripheral oedema.

Cardiovascular system:

Jugular venous pressure was normal pulse rate was 110 beats per minute with a decreased volume and her blood pressure was 90/50 mm of mercury. The heart sounds were normal and there were no murmurs.

Respiratory System:

The respiratory rate was 22/minute. The chest expanded symmetrically with respiration.

The breath sounds were normal and there were no crepitations.

The abdomen:

The abdomen was distended more so in the flanks. There was tenderness all over the abdomen and the fundal height was equivalent to a gestations of 34 weeks with fetal parts easily palpable. The lie was longitudinal but it was not possible to ascertain the presenting part due to tenderness. There were no palpable contractions. Shifting dullness as well as Fluid Thrill were present. Fetal heart beats were not audible.

Pelvic examination:

She had scanty bleeding per vagina. The cervix was fully effaced and 8 cm dilated. The presenting part was cephalic and it was at the level of 3/5 with caput +++ and moulding grade ++. The pouch of Douglas was boggy and tender.

Diagnosis: Ruptured Gravid uterus due to obstructed labour with internal haemorrhage.

MANAGEMENT:

1. **Preoperative resuscitation and preparations**

   i) The diagnosis was communicated to the patient and she was prepared for emergency laparatomy.

   ii) Blood for grouping and cross-matching was taken and three units of Blood Group B Rhesus positive were obtained.

   iii) A gauge 16 cannula was inserted and through it a normal saline was given fast while other preoperative preparations were being finalized.

   iv) Intravenous metronidazole mg and Ampicillin 1gm were given as preoperative antibiotics cover.

   v) A Foley's urethral catheter was inserted and then ballooned, as in obs case no. 1. 150mls of clear urine were obtained.

vi) Bedside investigations:

- Haemoglobin 11 g/dl
- Urine – for protein – trace

  Sugar – Nil

vii) The lower abdomen was shaved and the patient was ready for laparatomy within 30 minutes of the diagnosis.

2. Definitive Surgical Treatment

Operation – subtotal Abdominal Hysterectomy

Indication: Ruptured gravid uterus.

Anaesthesia – As described in obstetric case number 1

THE PROCEDURE:

The abdomen was opened as described in obstetric case Number 1.

Findings: Haemoperitoneum and clots amounting 1800mls. A female dead Fetus was Found Floating Freely in the peritoneal cavity. There was an inverted 'T' shaped rupture of the uterus involving the lower segment and the body of the uterus anteriorly. The uterine vessels and the urinary bladder were spared. A decision of doing subtotal hysterectomy was done inview of the extensive uterine rupture and lacerations. This was found to be the quickest and safest procedure.

The newborn:

A fresh still born female baby weighing 4 kgs was evacuated. It had

no congenital malformations. The placenta was delivered. It was completely detached from the endometrial cavity.

Subtotal hysterectomy:

- The round ligament of the right side was grasped with two curved kocher's clamps near the uterine cornu, cut with mayo's scissor's and ligated with chromic catgut number one. The Anterior leaf of the broad ligament was opened and incised to a point of reflection of the bladder peritoneum on the uterus. The same procedure was done on the left side.
- The right utero-ovarian ligament was triply clamped with kocher's clamps and the ligament was incised between the clamp nearest the uterus and the middle clamp. The ligament was doubly tied with chromic catgut number two. The same procedure was done on the left side.
- The midline reflection of the bladder peritoneum was freed by extending the incision in the anterior leaf of Broad Ligament medially across the anterior leaf of the lower uterine segment where the two incisions met in the midline.

  The bladder was freed from the anterior uterine wall using a fine dissecting scissors. The posterior leaf of the broad ligament was incised on either side parallel with the lateral side of the uterus down to the origin of the uterosacral ligaments.

- Both uterine vessels were triply clamped with kocher's clamps and then severed with a scalpel between the upper most clamp and the middle clamp. The vessels were doubly ligated with chromic catgut number two.
- The corpus was later amputated as low as possible and the stump was closed with figure of eight vicryl number zero sutures. Reperitonization of the stump was done using catgut number 2/0 suture.
- The abdomen was closed as described in obstetric case number 1. Estimated blood loss was 2500mls and the patient received 1500mls of blood

Intraoperatively:

She was reversed from Anaesthesia as described in obstetric case number 1. She was then sent to the postnatal ward after recovering from anaesthesia.

Post Operative Orders:

- Monitoring of pulse, blood pressure temperature and respiratory rate
- ½ hourly
- Intravenous Dextrose saline 1000mls 8 hourly for 24 hours.
- Intravenous Metronidazole mg 8 hourly for 24 hour then tablets metronidazole 400mg 8 hourly for five days.
- Intravenous Ampicillin mg 8 hourly for 24 hours then capsules Ampicillin mg 8 hourly for five days.

- Injection Gentamicin 80mg 12 hourly for 5 days.
- Injection Morphine 10mg 8 hourly intramuscularly for 24 hours
- Input/output fluid balance chart for 24 hours.
- Indwelling urethral catheter for seven day

Progress in the ward:

She had a smooth post operative recovery and six hours postoperatively she was fully awake. She had stable cardio-respiratory systems and the urinary catheter was draining clear urine (about 300mls were in the bag). The abdomen was soft and there was no shifting dullness. 24 hours postoperatively she was started on oral sips and ambulation. Total output was 1700mls against an input of 3500mls. Her Haemoglobin on third postoperatively day was 9 g/dl. She was started on oral Haematenics and on the seventh day postoperatively the catheter and skin sutures were removed. The wound was found to be dry. She was counselled on what was done and what are the implications on her future fertility and ability to menstruate. She was given a date for postnatal review after six weeks.

Postnatal follow up:

Six weeks later she was seen at the postnatal clinic. Her haemoglobin was 10.8g/dl and the wound had healed by primary intention. Pelvic examination revealed no mass. She was discharged from the clinic.

COMMENTARY:

Rupture of the uterus of pregnant women is one of the most serious

obstetric complications. Inspite of the recent advances in modern obstetrical practice it remains a life threatening complication of pregnancy and labour especially in the developing world. It causes high maternal and fetal morbidity and mortality with reduction of future fertility[1].

Usually rupture of uterus is described as complete or incomplete depending on whether the laceration communicates directly with the peritoneal cavity or not. Fetal mortality has been found to be high in complete ruptures. This was supported by Bolder who found that all fetuses who survived were from incomplete ruptures and none from complete ruptures[2]. Mrs. F.I. had a complete rupture and as expected the fetus died intraabdominally.

The reported incidence of rupture of gravid uterus in developing countries has been found to be high ranging from 1-10 in 1000 hospital deliveries depending on the setting of the Health care facility[2]. At Muhimbili Medical Centre Ruptured uterus contributed 2.1% of the maternal mortality[3]. Factors which contribute to this high incidence include poverty, ignorance, illiteracy and traditional practices.

Prolonged obstructed labor, previous caesarean section, grand multiparity and injudicious use of oxytocin in grand multiparous women have been found to be the commonest aetiological factors for uterine rupture[4].

Mrs. F.I. had a prolonged obstructed labour evidenced by severe degree of caput and moulding. This was due to the relatively big size of the baby compared to maternal pelvis. Probably had this risk factor being

detected antenatally or even intrapartum then earlier measures would have been done like short trial of labour or even referring the patient immediately to the High risk hospital. It is seen that despite the use of partogram, earlier measures of referring the patient to high risk tertiary centre were not done. Other reported factors include malpresentation and malpositions such as transverse lie, compound presentation and persistent occipito posterior position respectively. Administration of prostaglandin E2 either vaginally or intracervical has also been associated with uterine rupture. Assisted vaginal delivery either by vacuum or forceps are other precipitating factors.

The optimal management is early diagnosis immediate preoperative resuscitation and operative treatment. The mother should be resuscitated with fluid and electrolyte replacement together with liberal blood transfusion[5]. However it is not always possible to complete resuscitation of the patient before beginning the operation as the rise of blood pressure increases the bleeding. During the operation resuscitation should be continued energetically aiming to restore the systolic blood pressure above 100mg. Mrs F.I. received 2500mls of normal saline before operation started and 1000mls of Ringers lactate intraoperatively 300mls of Dextran 70 and 1500mls of whole blood.

The choice of operative management should be according to the condition of the patient as well as the operative skill of the surgeon. Repair of the uterus and tubal ligation is the preferred method compared to hysterectomy since loss of the uterus (hence menstrual bleeding) psychologically tends to

affect most of the women. However in case of multiple vertical or oblique tears in which repair will take a longer time or in presence of severe infection, hysterectomy is usually advised[5]. Subtotal hysterectomy has been widely practiced so as to expedite the reversal of anaesthesia. But one has to be aware that there is always a possibility of stump malignancy together with difficulties in brachytherapy. Subtotal hysterectomy was done in Mrs. F.I. because of multiple vertical tears which were bleeding in presence of her critically ill condition which would not have allowed a total hysterectomy.

Generally speaking, the procedure undertaken must be individualized and should be dependent upon the type, location and extent of the rupture as well as patients condition. Since rupture of uterus is a life threatening obstetrics hazard it should always be kept in mind in the care of obstetric patients. With awareness, timely diagnosis, prompt surgical management and neonatal care, the maternal and perinatal mortality and morbidity can be kept very low.

REFERENCES:

1. Mulumba N. Rupture of uterus: a review of 32 cases in a general hospital in Zambia Br. Med. J. 1996; 312: 1204-1205

2. Balder M.D, Bretbach G.P, Bastert G: Uterine rupture an analysis of 81 cases in Conakry – Guinea: Int. J. Gynaecol- Obstet. 1990; 32: 223-227

3. MMC Maternity Established Data Base Jan-Dec. 1998

4. Sakka M.A, Hamsho A, Khan L: Rupture of pregnant uterus – A 21 year review at Women's hospital, Hamad Medical Corporation, Doha, Quarter. Int. J. Gynaecol-Obstet 1998 : 63:105-108

5. Rajab S.H, Mulumba N. A 4 year clinical analysis of ruptured uterus at Nyangabwe Referral hospital, Francistown, Botswana. Int J. Gynaecol. Obstet. 1998:63: 285-286.

ADVANCED ABDOMINAL PREGNANCY - LAPARATOMY

Name:	Mrs M.S.
Age:	31 years
Residence:	Mwananyamala
Date of Operation:	7/3/97
Date of Discharge:	21/03/97

SUMMARY:

Mrs. M.S. a 31 year old gravida 3 para 2, at 38 weeks of gestation was referred to Muhimbili Medical centre from Mwananyamala hospital on account of transverse lie with intrauterine fetal death which had been confirmed by ultrasonography.

On admission history revealed an initially normal pregnancy state which was later followed by occasional painful fetal movements culminating to cessation of fetal movements, a week prior to admission.

On examination she was found to be in good nutritional status, with pallor. Her fundal height corresponded to 34 weeks gestation. The fetal parts were easily palpable but the presenting part could not be clearly defined. The fetal heart tone could not be heard. A clearly, demarcated mass was palpated

at the right iliac fossa measuring about 15cm in diameter. Vaginal examination revealed a retracted closed uneffaced cervix which was pushed to the left. Both plain abdominal x-ray and abdominal ultrasound scan done at Muhimbili Medical Centre were highly suggestive of an extrauterine gestation which was confirmed at laparatomy. A female macerated still born baby weighing 3.1kgs was delivered and the placenta was left in situ. The patient had a fairly smooth postoperative recovery.

The case is presented with a short commentary on difficulties encountered when making a diagnosis of abdominal pregnancy.

HISTORY OF PRESENT ILLNESS

Mrs M.S. was referred to Muhimbili Medical Centre from Mwananyamala hospital on account of loss of fetal movements a week prior to the referral. There was no history of preceding abdominal trauma nor history of febrile ilness before the loss of fetal movements. She had been experiencing mild dull lower abdominal pain for quite some time. She could not tell the exact duration. This was worse whenever she experienced fetal movements. There was no accompanying abnormal vaginal discharge or bleeding. She once sought medical advice at Mwananyamala hospital when she was 6 months pregnant whereby she received analgesics and was told to rest at home. She got a temporary relief. She had also noted breast engorgement with whitish fluid secretion on expression a day prior to the index hospital admission.

The Present Pregnancy

Her last normal menstrual period had started on 08/06/96. At the time of admission she had amenorrhoea of 38 weeks and her calculated date of delivery was on 15/03/97. She booked at a gestation age of 18 weeks, but started feeling fetal movements at a gestation age of about 22 weeks. These movements were usually accompanied with abdominal pain at one particular spot.

She made a total of six visits to the antenatal clinic, and and all along everything appeared normal except for the lie which was unstable through all the visits. Fetal heart tones were heard normally throughout the visits till one week prior to the referral when they caesed.

Past Obstetrics History:

She was para 2 and the children were both alive and well. She delivered her first child in 1992 and her second child was delivered in 1994. Both were normal vaginal deliveries and had no ante, intra or post partum complications.

Past Menstrual and Gynaecological History:

She had her menarche at 14 years of age and had regular cycles of 28 days with a moderate menstrual flow of about 3 days duration. There was no accompanying dysmenorrhea. She had never used any form of modern contraceptive methods nor had she suffered from any abnormal vaginal discharge.

Family and Social History:

She was a housewife married to a primary school teacher since 1991.

Physical Examination:

She looked healthy not in pain and was neither pale nor jaundiced. There was no peripheral oedema nor Lymphadenopathy.

The Respiratory System.

Her respiratory rate was 20/minute and she had symmetrical chest expansion. The breasts were engorged and secreted milk on expression. Her breath sounds were vesicular and there were no added sounds bilaterally.

The Cardiovascualr System:

Her pulse rate was 76 beats/minute and it was regular with normal volume. Her blood pressure was 110/80mm of mercury and heart sounds were normal. There were no murmurs.

The Abdomen:

The abdomen was globullary distended and it corresponded to 34 weeks gestation. It was soft and and fetal parts could be easily palpated. To the right of the fetus there was another firm mass occupying the right iliac fossa. This mass was not tender, and had limited mobility. It measured about 15cms in diameter. The fetus was in oblique lie but it was not possible to ascertain the presenting part. There was no shifting dullness. Fetal heart tones were absent.

Pelvix Examination

The vulva looked normal. Speculum examination revelead a pulled up cervix which was deviated to the left. It was closed and there was no bleeding from the External cervical os. Bimanually the mass in the right iliac fossa corresponded to 18 weeks.

Provisional Diagnosis:

Extrauterine pregnancy with Intra-abdominal fetal demise.

Plan of Management

- Investigations
- Definite surgical treatment

Investigations

Haemoglobin 11g/dl

Platelet count 200,000/cc

White Blood cells total - 6000/cc

Differential - Neutrophils 68%

Eosinophils 1%

Basophils 1%

Lymphocytes 30%

VDRL - NEGATIVE

Blood group B Rhesus D Positive

Coagulation profile

- Bleeding time 3'45' (IVY)

- Prothrombin time 12.5" 80% -Control Plasma 12.5 100%
- Partial Thromboplastin Time 40.0"- Control Plasma 34.4"
- Serum Fibrinogen level 1.4 Umol/L

Plain Abdominal x-ray (AP and Lateral Films)

The fetus was in a characteristic swimming attitude" and gas in the maternal bowel could be seen overlying the fetus. Spalding's sign was positive.

Abdominal Ultrasound Scan

The uterine cavity was empty with evidence of decidual reaction. A singletone fetus in oblique lie was seen in another sac. There was oedema of the scalp and spalding's was positive. No cardiac activity was seen. The liquor was very scanty. These features were sonographically consistent with an extrauterine pregnancy with fetal demise.

Final Diagnosis

Advanced extrauterine pregnancy with intra abdominal fetal death.

PLAN OF MANAGEMENT

Laparatomy

Preparation for Laparatomy

1. The diagnosis was explained to the patient and the planned mode of treatment. She consented for both surgery and Anaesthesia.
2. The abdomen and perineum were shaved
3. 1000mls of compatible group B Rhesus positive blood was made available.

4. Bedside clotting time was determined and it was 5 minutes with a stable clot.

5. 1000mls of Dextrose saline was allowed to run slowly using cannula gauge 18.

Anaesthesia

This was administered in obstetric case no 1.

Operation and Findings

The abdomen was cleaned with spirit and Iodine solutions. Drapping with sterile linen was done. It was opened as described in obs case 1 but with cephalad extension.

Findings

A large gestational sac which adhered to the fundus of the displaced uterus. The sac had it's blood supply from the left infudibulo pelvic ligament and it consisted of large tortous vessels.

The uterus was displaced to the right. Both tubes and ovaries were burried in adhesions.

What was done

A longitudinal incision was made on the anterior wall of the sac and some scanty straw coloured liquor was sucked. A dead macerated Female baby weighing 3.1 kgs was delivered. The umbilical cord was doubly tied with vicryl suture number one and was then cut. The cord was cut as near to placenta as possible. No attempt was made to remove the placenta as it was

firmly attached to the fundus of the uterus and it had tortuous blood supply from the left ovarian vessels. The walls of the sac were trimmed as much as possible and the remaining sac was marsupialized with chromic catgut number one. Haemostasis was achieved. Swab and instruments counts were ascertained correct. The abdomen was then closed in layers as described in obstetric case 1. Anaesthesia was reversed as described in obstetric case number 1, and the patient was sent to the postnatal ward after recovery from the Anaesthesia.

The fetus was examined and showed no obvious external congenital malformations.

Post operative treatment orders

- Monitor pulse, temperature, blood pressure ½ hourly - 12 hours
- Intravenous dextrose saline 1000mls 8 hourly for 24 hours
- Intravenous metronidazole 500mg 8 hourly for 2 days then tablets metronidazole 40mg 8 hourly for 5 days.
- Intramuscular Gentamycin 80mg 12 hours for 5 days
- Input/ouput chart for 24 hours

Progress in the ward

Vital signs remained stable in the first 24 hours. Temperature was 37°C. There was no pallor or abdominal distension noted 24 hours later she ambulated and started on oral sips. The total output of urine was 1800 mls against an input of 3500mls.

Haemoglobin was checked on the third post operative day and was found to be 10.2 gldl. She was started on oral haematenics. On the seventh day the skin sutures were removed. The wound was dry and had healed well.

She remained in the ward for another seven days before being discharged. She was given a date to come again at the post natal clinic four weeks later. On discharge the abdominal mass was equivalent to an 18 week pregnant uterus.

Follow up at the post natal clinic.

She was seen 4 weeks later and had no complaint. There was no abdominal pain or distension. She was found to be pink, and afebrile. The wound had healed nicely by primary intention and the abdominal mass now corresponded to 14 weeks pregnant uterus. She was requested to report back 3 months later. She was seen on the appointed date (4½ months postoperation) and was found to have no palpable abdominal mass.

COMMENTARY

Abdominal pregnancy is one of the rarest and most serious types of extrauterine pregnancy. It's incidence has been reported to vary from 1:3500 to 1:10,000 deliveries, the pattern being mainly influenced by factors such as the frequency of ectopic pregnancy in a population, availability of care early in pregnancy and the use of assisted reproductive technique with the degree of suspicion exercised by those providing health care.

Abdominal pregnancies are classified as primary or secondary depending on the original site of implantation. Most are secondary as the results of early tubal abortion or rupture with secondary implantation of the pregnancy into the peritoneal cavity. Mrs. M.S. had a secondary abdominal pregnancy because for a primary abdominal pregnancy, the pregnancy must meet the three criteria by Studderford in 1942[2] which state that both tubes and ovaries must be in normal condition with no evidence of recent or remote injury, no evidence of uteroperitoneal fistula should be found and the pregnancy must be related exclusively to the peritoneal surface and be early enough in the gestation to eliminate the possibility that it is a secondary implantation following primary implantation in the tube.

Making a diagnosis of abdominal pregnancy is not always a straight forward thing. The typical presenting symptoms are recurrent attacks of diffuse abdominal discomfort, vaginal spotting, painful fetal movements, history compatible with tubal abortion in the first trimester with loss of fetal movements. The clinical signs include easy palpable fetal parts, abdominal tenderness, abnormal fetal lie with a uterus separately palpable and absence of Braxton Hicks[2]. Mrs M.S. presented with recurrent abdominal discomfort throughout the course of her pregnancy. She was once admitted because of the same problem whereby she was told to rest and take some analgesics. She also complained of painful fetal movements which later caesed about one week prior to admission. This shows how the diagnosis is always delayed or

sometimes not made because of lack of high index of suspicion by the doctor who attends the patient. Had abdominal pregnancy been thought of then probably Mrs. M.S. would have undergone a vaginal examination to ascertain the position of the cervix.

Confirmation of the diagnosis of abdominal pregnancy require demonstration of the fetus outside the uterine cavity. If the uterus can be palpated separately from the fetal parts, then the abdominal pregnancy can be confirmed either by hystero-salpingography or by the failure of oxytocin to stimulate the gestational mass.

Ultrasonography has been considered to be a useful, non invasive aid in supporting or confirming diagnosis of abdominal pregnancy[3]. However false positive diagnosis like intrauterine fetal deaths have been reported as it happened in Mrs.M.S at Mwananyamala. In Delke series of 5 patients with advanced abdominal pregnancy, ultrasonography was confirmatory in 3 cases and erred im 2[4]. Even with excellent equipment in well trained hands, a sonographic diagnosis of abdominal pregnancy is missed in 50% of cases[5].

Radiologic findings have been variable. X-ray with a probe or radiopaque material in the uterus is confirmatory but incase of an intrauterine fetus, it's not Justifiable. Radiologic findings of fetal small parts in the lateral position overlying the maternal spine has been found to be a farily reliable sign of an abdominal pregnancy.

A radiologic examination of the abdomen including the Antero-Posterior and the lateral views is also helpful in defining malposition of the fetus which is most often discovered to be in transverse position.

Magnetic resonance imaging (MRI) and computerized tomography (CT) scan have been considered specific and accurate in confirming the diagnosis of abdominal pregnancy following suspicion of sonographic examination[6]. However these method are expensive and needs skilled personel.

The management of abdominal pregnancy is usually surgical. Laparatomy is done and concerning the placenta, it's management has remained a controversial issue. Most clinicians believe that the best treatment is to clamp the cord, leave the placenta in situ and close the abdomen but allow retroperitoneal drainage if possible[2]. The placenta can be removed after complete cessation of function as demonstrated by quantitative HCG titres. Methotrexate used to begiven occassionally so as to hasten trophoblastic degeneration. However many authors no longer recommend such therapy because of the potential effects for Hemorrhage caused by the necrotic trophoblastic tissues and hence causing multiple abdominal fistulae. The placenta can only be removed if it is accessible and if it's removal can be accomplished without heavy blood loss.

Therefore despite the difficulties in diagnosing abdominal pregnancy, as doctors one should try as much as possible to have a higher index of suspicion

otherwise "castastrophic" events like haemorrhage resulting from separation of placenta will occur.

References

1. Stabile I, Ectopic pregnancy. Diagnosis and Management. Cambridge University Press 1996:84-85.
2. Rock J.A., Damario M.A. Ectopic Pregnancy Thompson JD, Rock J (Eds) Te Linde's operative gynaecology 1996: 522-523.
3. Shati H.R. Neal M.R., Ultrasonography evaluation of abdominal pregnancy. Critical Review in diagnostic Imaging 1994: 35:1-59.
4. Delke I, Verdiano P. Leon on: A review of current management and addition of 10 cases, obstetric and gynaecology 1982 60:2.
5. Costa C.D., Presley J, Bastert G; Advanced abdominal pregnancy, obstetric & gynaecology. Survey 1991:46:515.
6. Wagnar A, Burchardt A.J. Magnetic Resonance. Imaging in Advanced abdominal pregnancy: A case report of Fetal death: Acta Radiologic 1995 36(2):193-5.

PUERPERAL PSYCHOSIS AS SEEN AT MUHIMBILI MEDICAL CENTRE: SOCIO DEMOGRAPHIC CHARACTERISTICS, OBSTETRIC EVENTS, DISEASE PATTERN AND CLINICAL FINDINGS:

ABSTRACT:

A prospective descriptive study was done at Muhimbili Medical Centre between early March to late December 1998 to determine the sociodemographic characteristics, obstetric events, disease pattern and clinical findings among patients with puerperal psychosis. It involved 67 subjects as cases. Data was collected by the author using a structured questionnaire, physical and mental status evaluation with selected laboratory investigations. Data was entered in a precorded questionnaire and later analysed in a computer using Epi Info version 6.04b and statistical package for social science (SPSS).

Majority 76% of the subjects were young women aged less than 20 years who were married (44.8%) and primigravidas (95.8%). Most of them were housewives and had attained primary level of education. Among those who were married or at least living with a man on a continuing basis, 59% received support from their partners and only 27% of the women got satisfied with the support. 79% received support from either parents or relatives but only 15% of them got satisfied.

The mode of delivery in most cases was spontaneous vertex delivery with a birth weight of ranging between 3.1 and 4kgs. At the time of delivery the highest proportion of babies were reported to be healthy. The length of labour was mostly between 12 and 24 hours with 43% of the women experiencing difficult labour.

The commonest organic symptoms presented were headache, body weakness and abnormal vaginal discharge and most of the psychotic symptoms presented were of Affective in nature, the highest proportion being overtalkativeness, aggressiveness and refusal to feed the child. The onset of the symptoms had a peak incidence during the first week of childbirth.

Clinical evidence of severe anaemia was present in 19% of the women, moderate anemia 42%, Falciparum malaria infection 24.3% endocervical swab for culture positive to E.coli 16.1% and positive HIV test in 16%.

The findings in this study are consistent with those described in other studies regarding the sociodemographic characteristics with special reference to Age, marital status, parity and level of education, obstetric events and some clinical findings were also similar.

Recommendations are made that further studies need to be done in order to determine the associated factors so as to prevent or detect early and or at risk women.

INTRODUCTION AND REVIEW OF LITERATURE:

The original description of puerperal psychosis is ascribed to Hippocrates who postulated that in women, blood collected in the breasts causing symptoms of madness like confusion, delirium, hallucinations and insomnia[1].

Puerperal psychosis has been defined as personality disintegration and loss of contact with reality occurring usually within 6 weeks of childbirth[2]. Certain symptoms involve impairment of reality such as delusions, hallucinations and formal thought disorders. Nonetheless postpartum psychosis has not been accorded the status of being a distinct entity in the current psychiatric classification system. (DSM III - R - ICD9)[3]. This position is based on a number of studies that were unable to find any unique pattern of symptoms in postpartum as compared to nonpostpartum psychiatric disorders. The official US psychiatric diagnostic nomenclature together with other investigators view postpartum psychosis as a variant of major mood disorder with manic or atypical psychotic features in which a significant portion of sufferers will go on to develop bipolar mood disorders of recurrent unipolar depression[4]. However observations and reports by other authors suggest that puerperal psychosis deserves a place in the psychiatric nomenclature other than "atypical psychosis".

Psychiatrists also disagree on the time interval used after birth varying from 6 weeks to one year. Epidemiological studies done in U.S.A. and Great Britain using research diagnostic criteria for psychosis and depression have defined the post partum period as occurying from 2 weeks to one year following childbirth[4,5,6]. Swift defined the puerperium as the first 60 days following delivery[7].

However the standard definition of puerperium is a period of 6 weeks following childbirth in which a number of changes of reproduction occur anatomically, biochemically and physiologically such as menstrual, systemic and lactational changes[3].

The incidence of puerperal psychosis in the United States of America and Great Britain has been estimated to be about 1 to 2 per 1000 births[4,8,9,10]. The picture appears quite different in developing countries where not many studies concerning the problem have been carried out so far. The few available studies and clinical observations show that there is an increase in frequency of patients presenting with puerperal psychosis. Turkson in Accra found it to be about 6 per 1000 births[11].

The peak prevalence of psychotic symptoms has varied, but most authors have found it to occur during the first week.

Ifabumuyi and Madden in the University Teaching Hospital in Northern Nigeria found most of their patients presenting with psychosis within the first

week of delivery[10]. The same finding was reported by Ndossi in his unpublished study which was done at Muhimbili Medical Centre between 1997 and 1998. Interestingly the dramatic change in mental state of the Nigerian mothers started in the seventh day after delivery. This corresponded with the naming ceremony of their newborn baby, an elaborate festive occasion in Nigeria. The onset of psychotic behaviour on this day had been variously interpreted by the patients as influence of witchcraft, voodoo etc. Watson found the peak prevalence occurring six weeks after delivery[12]. Kendell and Terp revealed that in the first postpartum month, women were 22 times more likely to be admitted with psychosis than non-pregnant women of child bearing age[13, 14] while Benvenutti found it to be at 8 weeks[15] and Martin and Nott at 6 and 9 months respectively. Meltzer and Kumar revealed the symptoms to occur within 2 weeks of childbirth[18,19].

Studies have shown that the first few days after delivery are psychologically stressful to the mother. There is a host of conflicting feelings within the mother, her husband and relatives. The mother goes through an emotional Letdown that follows the excitement and fears particularly with regards to her mothering experience. There is also a discomfort during the early days of the puerperium, which may follow loss of sleep during labour and after delivery because of excessive crying of the child at night, or due to other problems like nursing a sick child. During this time many women have

been found to have symptoms of depression contributing to prevalence of 8 - 10% in women of childbearing age[20].

It is estimated that 20 - 40% of women are predisposed to experience emotional disturbance or cognitive dysfunction in early postpartum period. As mentioned there have been speculations about the actual pathophysiology behind the disorder, but up to now no aetiological factor has been found. The postulated causes include endocrine changes, socio-economic factors, obstetric events, organic factors and infections.

With regard to endocrine changes, there seems to be an alteration in the hypothalamic-pituitary gonadal axis causing affective symptoms similar to those which occur premenstrually and menopausally. Specifically in the immediate postpartum period (about 5 days following delivery) there is a dramatic drop in oestrogen and progesterone levels and a large increase in prolactin. This rapid change after delivery may create a withdrawal state especially of oestrogen thereby causing symptoms of psychosis. This correlates with the peak presentation of post partum psychosis. Some authors have supported this theory after seeing patients improving their psychotic symptoms following combined oral contraceptive use. This was supported by Wisner who found that administration of oestrogen on a psychotic patient improved the symptoms[2].

Although the data are not complete many but not all women who experience menstrual distress also experience postpartum distress. The elevated prolactin level by day 3 is associated with lactogenesis but decrease after the milk let down reflex. Other investigators have studied the effects of prolactin and have noted that a low premenstrual progesterone level associated with a high prolactin level may lead to irritability, hostility and anxiety and low level of oestrogen with high prolactin level may produce depressive symptoms.

Some authors have correlated postpartum mood disorders with alterations in thyroid function. However hormonal studies have not revealed the biological cause for postpartum disorders. Riley correlated hypercalcemia with development of psychosis and fall in calcium on levels with improvement of symptoms of puerperal psychosis[22].

There are several socio-economic predisposing factors which have been thought to influence development of puerperal psychosis in one way or another. They include lack of social support, low social economic status, poverty and legitimacy of the pregnancy. These may be of particular significance in developing countries like Tanzania where the World Bank has estimated the per capita income to be 100 US Dollar per year[23]. In 1993 it was estimated that 51.1% of Tanzanian"s belonged to a Soft Core Poverty group while 35.9% belonged to a Hard Core Poverty group[24]. This shows a

high proportion of people belonging to the low income group. Marital instability has also been reported by some authors to be a predisposing factor, and at least explains the increased incidence in the primipara, most of who have been married for less than a year.

Personality studies indicate that women who have obsessive compulsive traits are at risk of experiencing postpartum psychiatric disorders. Their coping mechanisms are rigid and inflexible. Kendell found that 20 - 30% of patients with bipolar affective disorders developed puerperal psychosis[13,25,26,27].

Obstetrical events other than parity have not proven to be significant in some studies[4]. Factors such as age of the mother, prematurity of infant, medical complications during pregnancy prolonged or complicated labour, caesarean delivery, fetal loss, perinatal death and gender of the baby have not proven useful in identifying these women at risk of puerperal psychosis. However some studies have found the factors to be influencial. In most of the research primigravidity and young age have definitely been found to influence the development of puerperal psychosis. Ifabumuyi found the highest percentage in primigravides who were between 15 and 24 years while Mackeinjoula Found the mean highest prevalence with the mean age of 28.8[10]. Ndossi found 76% of the cases being primigravidas who mostly ranged between 15 and 24 years of Age.

Organic factors have also been found to influence postpartum psychosis. Ndossi found 42% of the psychotric mothers had underlying

organic problems such as anemia and sepsis. Swift found these conditions in 37% of cases[7]. Therefore it is important to rule out any organic condition which could either influence or manifest as psychosis. These include anaemia, clinical malaria, thyphoid fever, any form of sepsis and HIV. It is pertinent to note that at Muhimbili Medical Centre anaemia has been found to be the leading cause of maternal mortality, contributing to 31.1%[28].

Meyer in Zurich found that anaemia was a common problem among patients presenting with post partum affective disorders[29] and after receiving Recombinant Human Erythropoietin there was improvement of the psychotic symptoms together with increase in Haemoglobin. He further suggested that Haemoglobin concentration should be considered in any patient presenting with postpartum affective disorder. Salaam also found that in patients who had affective disorders and did not respond to lorazepum 40% had Anaemia[30].

The hypoxic state of tissues in anaemia causes inadequate supply of oxygen to neuronal tissues hence impairing judgement, concentration and memory. This result in psychotic manifestation. It would have been interesting to know the rate of Anaemia in non pregant women with similar mental changes. However so far o studies have been done concerning the problem.

With regard to malaria, Nguyen in Vietnam found the incidence of psychosis among patients with malaria to be 1.2 per 1000, the problem being commonly associated with severe falciparum parasitemia[31]. Bajiya found

10.5% patients developing neurological sequelae following cerebral malaria, psychosis being high on the list. This was supported by Sowunmi in Ibadan who found patients with plasmodium falciparum malaria presenting with a spectrum of neuropsychatric complications including psychosis[32,33].

Typhoid fever has also been highly associated with psychosis. Alli in India found 84% of patients with Typhoid fever developing neuro psychiatric manifestation[34] including psychosis while Baiyewu in Ilorin found patients developing psychosis well before the appearance of fever[34,35]. He therefore recommended that there should be a high index of suspicion. Baiyewu's observation shows that the clinical pattern of typhoid fever is changing and in particular the incidence of neuropsychiatric manifestation which is on the increase. The apparent increase in frequency of neuropsychiatric complications of thyphoid fever could represent a change in the pathogenicity of salmonella typhi or the increasing recognition of a biochemical defect carried by a bacterial endotoxin and provoked by poor nutrition.

Concerning the HIV epidemic, not so many studies have been done but Susser found 3.8% of patients had HIV infection among young adults with psychotic disorders[36].

HIV infection may be having an indirect effect on the aetiology and clinical course of psychiatric disorders including puerperal psychosis. mediated through opportunistic infections which can affect the central nervous system.

However Doyle found no association between HIV infection and the onset of psychosis[37].

The varying postulated causes and onset of puerperal psychotic manifestatio could be influenced by individual's interpersonal ability to withstand the possible precipitating factors.

Puerperal psychosis demands a special attention like any other obstetrical problem since it is a true medical psychiatric emergency. Infact it is the gravest and most dramatic among all the post partum psychiatric disorders. Ndossi and colleagues found that it contributed notably i.e 2.1% to the mortality of psychiatric patients who were admitted at MMC during 1991-95[38] while Turkison found that 5.3% of psychiatric admissions were from obstetric and gynaecological wards[11].

Although majority of patients with puerperal psychosis are reported to be affective i.e manic or depressive, many authors have found various other symptoms such as restlessness irritability, incoherence, auditory Hallucinations and refusal to feed the child. Delirium is the hallmark of puerperal psychosis in the maternity ward. Delusions that the baby is unwell or dead are not infrequently elicited. The clinician should thus be aware that patients suffering from puerperal psychosis tend to present with confusional state, aggressiveness, suicidal ideas or hallucinations which may pose risks to the mother and people surrounding her since she may cause injury to them. Some

mothers may express hostile ideas towards the infant hence cause injury to or neglect child through practical incompetence or misguided delusions. Undoubtedly this disorder causes great morbidity to the patient psychologically, emotionally, and physically. Cases have been reported in Muhimbili Maternity ward whereby women have thrown themselves from the one of the upper floors to the ground, hence causing head injuries and death.

The psychotic pain is very distressing to the patient relatives doctors and all people surrounding her. Therefore health workers particularly those working in the maternity wards should be able to detect psychiatric emergencies at an early point in their evolution and to effect appropriate treatment. This is quite important as most of the time the task is left to psychiatrists who are not always readily available.

Statement of the problem:

Pregnancy and puerperal psychosis pose a disproportionate burden to Sub-Saharan females. Majority of people with psychological problems customarily remain at home with their families and are eventually treated by traditional healers. Cox in Uganda found that 70% of respondents believed that taking traditional medicine during pregnancy could prevent development of puerperal psychosis and that none from the group regarded western treatment as an effective way of treating puerperal psychosis[39].

Moreover getting a psychotic female to hospital is resource intensive and expensive for women who are generally from low economic status as

mentioned earlier. The other reason for these women to be left at home could be due to the social stigma. Therefore taking into consideration that many deliveries occur in other health centres or at home and that only few patients who develop puerperal psychosis are referred to Muhimbili for management, a worrying number of mothers with puerperal psychosis are not identified and hence are predisposed to greater maternal mortality.

Ndossi's unpublished study showed that there was a high frequency of organic diseases such as anaemia 51% malaria 26% and puerperal sepsis 29% among patients with puerperal psychosis. Anaemia and sepsis have been contributing notably to the maternal mortality at Muhimbili by 31.1% and 11.1% respectively. This shows that probably these organic factors have an influence somehow in the development of puerperal psychosis, however one can never make a conclusive statement since no controls were included in Ndossi"s study.

So far since 1972 (i.e 27 years ago when Swift conducted a study of puerperal psychosis among Tanzanians), no studies have been done to underline the magnitude of mental health problems among Tanzanian women besides the one done by Ndossi and collegues which is not yet published. The incidence of this disorder is yet unknown, since puerperal psychosis has been a forgotten area in obstetrics at Muhimbili Hospital, closer examination of this problem was long overdue.

Rationale and justification of the study:

Puerperal psychosis seems to be a forgotten area in obstetrics as it has been mentioned before. Since there are very few published research findings in developing countries on this subject, there was therefore a great need of investigating on the problem. The information obtained from this study will open the way for further research on factors associated with puerperal psychosis within Muhimbili as well as any other part of the word.

It's heavy morbidity to the mother, child and the surrounding society also underscored the justification to study.

BROAD OBJECTIVE:

To describe the sociodemographic characteristics, obstetric events, disease pattern and clinical findings in patients with puerperal psychosis at Muhimbili Medical Centre between March and December 1998.

Specific objectives:

1. To describe the socio-demographic characteristics of women presenting with puerperal psychosis interms of Age, parity, marital status, occupation, educational level, social support, previous episode and Family History of Psychosis.
2. To determine mode and outcome of deliveries, Birthweight and status of the child among women who presented with puerperal psychosis.

3. To determine the presenting symptoms and time interval between delivery and onset of puerperaL psychosis.

4. To investigate among patients with puerperal psychosis any underlying organic disease by using laboratory investigation of Haemoglobin, Blood slide for malarial parasites, Endocervical swab culture, Widal and HIV tests.

MATERIALS AND METHODS:

Study Type:

This was a Descriptive Hospital Based Study.

Study Place:

It was done at Muhimbili Medical Centre.

Muhimbili Medical Centre is the largest Consultant Hospital and the main University Teaching Hospital in Tanzania. It is situated in the capital city, Dar es Salaam which has a current population of 3 million people. The city has three District/Hospitals and several private Hospitals offering maternity services.

Majority of referral cases to Muhimbili come from the districts, private and Missionary Hospitals/Dispensaries within the city. Some are self referrals. However complicated cases from other hospitals in the country are also referred to Muhimbili because of better medical expertise.

The maternity ward has about 256 Hospital beds with 7 wards including the Neonatal ward. On average there are about 50 deliveries and 20

admissions of women with Antenatal and Postnatal problems per day.

Patients with puerperal psychosis are specifically kept in the last room of the ward (room 4). The room also keeps women who have any form of puerperal sepsis, and those who are nursing mothers.

Study Period:

The study took place between March and December 1998.

Study Population:

The study population included all patients who were admitted in the maternity and psychiatry wards who presented with overt features of psychosis within a period of 6 weeks following delivery whatever the outcome. This included even those who had delivered either at home or anywhere in periphery and had been referred to Muhimbili.

The period of 6 weeks had been selected by the author since this was standard defined period of puerperium where all features of the female reproductive organs return physiologically, anatomically and biochemically into their normal state.

However there are still some controversies concerning the actual period as it has been mentioned before.

Mothers who developed psychosis while pregnant were excluded from the study.

Data Collection:

Ethical clearance to carry out the study was obtained after the author

had presented her research proposal to the academic member of staff of Obstetric and Gynaecology in collaboration with Dr. Ndossi, N, Senior Consultant Psychiatrist from Psychiatry Department at Muhimbili Medical Centre.

Thorough explanation on the nature and importance of the study were explained to the patient's relatives, friends or any close relation before the patient was included in the study. Both Qualitative and Quantitative information was then obtained using a structured Questionnaire based on a World health Organization Model on Hospital based descriptive study on puerperal psychosis see Appendix I. It had both closed and open ended questions and consisted of 3 main parts. The first part was the interview part for collecting information such as the socio-demographic characteristics like Age, Parity, Marital Status, Educational Level, Obstetric events like mode and outcome of deliveries. The second part recorded the presenting organic and psychiatric symptoms with mental status evaluation while the last part recorded results of different laboratory tests.

The interview, physical and mental status examination were done by the author herself. Laboratory Investigations such as Hb, BS - MPS, Endocervical Swab Culture, Widal and ELISA Tests were all taken by the same author. The question of HIV screeing in a mentally disturbed patiet was cosidered. Ethically, HIV screening can be doe for Research purspose as long as the

investigator's main interest is on the number of patiets having the problem and not the ames of the patients.

All the findings were documented in the questionnaire. The working diagnosis of the patients and the management protocols were done ny the author in collaboration with the Consultant Psychiatrist in the Psychiatric Unit together with consultant obstetricians of the corresponding maternity ward at Muhimbili Medical Centre.

The patiets were the followed up ad whe they had regaied their ormal cosciousness the questionnaire was further completed.

Data Handling:

After data collection allquestionnaires were checked for completeness. The responses for all the questions were checked and any inconsistence noted and corrected. Responses for the open ended questions were listed and the main responses grouped into categories which were asigned codes. These codes were later applied to all open ended questions in the questionnaire. Data was then entered into the computer by using Data Entry Program EPI Info 6.04b May 1996 version and SPSS (Statistical Package for Social Science.

After data entry, frequencies of all variables were prepared and were used to identify inconsistencies. The final data, after Data verification and cleaning was saved and used in analysis. Simple frequency tables were made where the proportion and percentages were calculated.

OPERATIONAL DEFINITIONS:

Delusions: Abnormal belief arising from distorted judgement and is held with absolute conviction, and not shared by those of a common cultural or social background.

Hallucinations: A thought conviction of sensation where there is no external object.

Insomnia: Lack of Sleep

Delirium: An acute organic reaction consisting of alteration of consciousness and attention.

Social Support: Financial, moral and physical assistance from the husband, partner, parents or close relations.

Limitations of the Study:

The study did not reflect the true magnitude of puerperal morbidity in Dar es Salaam region since it was a Hospital Based Study.

Some of the psychotic patients were initially difficult to interview, examine and to obtain specimen like endocervical swab for culture and Gram Staining. Follow up was very time cosuming sice the author had to wait until full mental recovery of the patients. Sometimes the relatives were not available at time of interview so the author had to set an appointment.

Concerning the question of duration of labour. This is rather subjective since one may not be able to tell the exact duration especially taking into consideration that those who delivered at home did not use any partogram. The degree of satisfactio is also very subjective although it was asked after the patient had required fully mental insight.

RESULTS:

During the study period 13103 women delivered in the maternity unit at Muhimbili. A total of 67 patients were recruited in the study.

Table I: SOCIODEMOGRAPHIC CHARACTERISTICS AMONG WOMEN WITH PUERPERAL PSYCHOSIS:

CHARACTERISTICS	NO. OF CASES	PERCENTAGE (%)
1(a) Age Group (Years)		
15 - 19	51	76
20 - 24	8	11.5
25 - 29	7	10.4
30 - 34	1	2.1
Marital Status		
Single	20	30
Married	30	44.8
Divorced	5	7.2
Cohabiting	12	18
Parity		
1	64	95.8
2	2	2.8
>3	1	1.4
Educational Level		
None	15	21.9
Primary School	48	72.1
Secondary School	4	6
Occupation		
Unemployed	64	96
Employed	1	1
Petty Business	2	3
Husband/Partner's support		
Yes	40	59
No	27	41
*Satisfaction of Support		
Yes	11	27
No	29	73
*Support from parent/relatives		
Yes	53	79
No	14	21
**Satisfaction with support		
Yes	8	15
No	45	85
1(b): Previous episode of Psychosis		
Yes	2	2.9
No	65	97.1
Family History of Psychosis:		
Yes	1	2
No	66	98

* The percentage are out of those who had received husband or partner's support
**The percentage represents out of these who received parents/relatives support.

Table 1:

Shows the sociodemographic characteristics of women who presented with puerperal psychosis. The Age group of 15 - 19 years gave the highest percentage of cases contributing to 76%.

Women who were married contributed largely by 44.8%.

Women who were primipara scored the highest percentage of 95.8%.

Most of the cases had received the Primary Level of education contributing to 72.1%.

96% of the cases were unemployed.

59% of the cases received husband's support and among those who received the support only 27% admitted to have been satisfied with the support given while the rest i.e 73% reported that they had not been satisfied.

53% of cases had also received support from in either parents or relatives and only 15% of this group got satisfied.

Only 2% gave a history of previous episode of psychosis while only 1% gave a positive Family History.

Table II: **OBSTETRIC EVENTS AMONG WOMEN WITH PUERPERAL PSYCHOSIS:**

EVENTS	NO. OF CASES	PERCENTAGE %
Mode of Delivery:		
SVD	57	85
ABD	1	2
LCVE	3	4.1
LSCS	6	8.9
Birthweight (Kgs):		
<1.0	1	2
1.0 - 2.0	4	6
2.1 - 3.0	20	30
3.1 - 4.0	42	62
Health Status of Child (Delivery):		
Healthy	52	78
Sick	12	18
StillBirth	3	4
Condition of Sick Child at Birth*		
Birth Asphyxia	9	75
Prematurity	1	8
Congenital Anomalies	6	50
***Length of Labour (Hours)**		
< 12	12	18
12 - 24	28	42
> 24	27	40
Difficulties experienced in Labour		
Yes	29	43
No	38	57
Current Condition of Baby		
Healthy	41	61
Sick	15	22
Died	11	17

*The percentages do not add up to 100 because some babies had more than one diagnosis.

Table II:

Shows the different obstetric events in women who presented with puerperal psychosis 85% of the women had delivered by spontaneous vertex delivery (SVD).

Most of the Birthweight ranged between 3.1 and 4kilogrammes.

78% of the babies born were reported to be healthy

Among the babies who were born sick, they were diagnosed to have Birth Asphyxia Congenital Anomalies and were Premature.

The Length of Labour was estimated to be between 12 and 24 hours in 42% of the cases, more than 24 hours in 40% and less than 12 hours in 18% of the cases.

43% experienced difficulties during labour.

61% of the cases reported to have healthy babies at time of the interview while 22% had sick babies and 17% reported their babies to have died.

Table III: **THE DISEASE PATTERN AMONG WOMEN WITH PUERPERAL PSYCHOSIS IN TERMS OF SYMPTOMS AND TIME INTERVAL SINCE DELIVERY:**

Disease Pattern	No. of Cases	Percentage %
Organic Symptoms**		
Fever	11	16
Headache	29	43
Palpitation	15	22
Weakness	23	34
Cough	2	3
Chest tightness	7	10
Abnormal vaginal discharge	22	33
Psychiatric Symptoms**		
Aggressiveness	57	85
Overtalkativeness	59	88
Auditory Hallucination	22	33
Delusions	3	4
Suicidal Ideas	2	3
Refusal to eat	10	15
Refusal to Feed the Child	43	64
Depression	10	15
Mental Status Evaluation:		
Appearance:		
Unkept	66	98
Well kept	1	2
Mood		
Elated	57	85.3
Depressed	10	14.7
Speech		
Pressurized	59	88
Incoherent	44	66
Poverty	1	2
Normal	3	4.1
Perception		
Auditory Hallucination	22	33
Delusions	3	4
None	42	63
Insight		
Poor	66	98
Good	1	2
Judgement		
Poor	65	97.1
Good	2	2.9
Time Interval between delivery and onset of Symptoms (days)		
0 - 7	62	92
8 - 15	4	6
16 - 23	1	2

** The percentages do not add up to 100 because the respondents presented with more than one symptoms.

Table III:

Shows the disease pattern among women with puerperal psychosis in terms of the presenting organic and psychiatric symptoms, the mental status evaluation together with the time interval between delivery and onset of symptoms.

The commonest organic symptoms presented were headache, weakness, and abnormal vaginal discharge.

Concerning the psychiatric sysmptoms majority presented with overtalkativeness (88%) and Aggressiveness (85%) while 64% refused to breastfeed the child, 33% had auditory hallucination and 15% had refused to eat. Only 4% had delusions and 3% had suicidal ideas.

The mental status evaluation revealed that 98% of the cases were unkep.

The mood was elated in 85.3% and depressed in 14.7%

88% presented with pressurized speech, 66% with incoherent speech and 2% with poverty of speech. 4.1% had normal speech.

Concerning per ceptual disturbance Auditory Hallucination contributed to 33%, and Delusions 4%. 63% had no signs of perceptual disturbances.

Most of the cases had poor insight and judgement - i.e 98% and 97.1% respectively.

Onset of symptoms in the first week of childbirth contributed most i.e 92% compared to other periods.

Table IV: **DISTRIBUTION OF LABORATORY INVESTIGATION RESULTS OF WOMEN WITH PUERPERAL PSYCHOSIS:**

Laboratory Results	No. of Cases	Percentage%
Haemoglobin g/dl		
< 6	13	19
6 - 10	28	42
10 - 14	26	39
Blood Slide mps		
Positive	16	24.3
Negative	51	75.7
Endocervical Swab culture:		
Positive E.coli	11	16.1
Negative	56	83.9
Widal Test		
Positive	0	0
Negative	67	100
ELISA Test		
Positive	11	16
Negative	56	84

Table IV:

Shows the distribution pattern of Laboratory investigations results of women who presented with puerperal psychosis.

39% of the cases had haemoglobin of between 10 and 14g/dl while 42% has between 6 - 10 g/dl and 19% less than 6g/dl.

75.7% has negative Blood slides for malaria parasites while 24.3% had positive blood slides for malaria parasites.

Most of the cases had negative result of endocervical swab culture i.e. 83.9 while 16.1% grew E.coli organisms.

None of the cases tested positive for the Widal Test.

Concerning HIV test, 84% were negative while 16% tested positive.

DISCUSSION:

The study revealed 67 women who had presented to Muhimbili maternity ward with puerperal psychosis. most of them showed appreciable different physical and psychiatric morbidities.

The hospital based nature of the study and the fact that it was confined to one public hospital among the four in the city means that the data are not available for women presenting to private and other above sources. Furthermore those who developed psychotic symptoms while at home and did not seek formal care or had received traditional medication were not represented. Though women with psychosis were referred to Muhimbili, absence of data from the three hospitals might bias the results and for this reason it would not be appropriate to generalize the findings to represent the general population of Dar es Salaam.

The proportion of patients with puerperal psychosis in this study was 1% and that of Swift et al 0.09% which was 22 years ago in the same hospital whereby all patients with puerperal psychosis were admitted in the psychiatric ward since by then Muhimbili was a general hospital providing all usual services except for obstetric services which were provided in Ocean Road Hospital located one mile across Dar es Salaam City. one reason for the difference in incidences might be an increase in number of deliveries and patients with puerperal psychosis referred to Muhimbili. There could also be other precipitating factors which might have risen over the past few years. it

is clearly seen that the country's economy has declined over the past few years hence worsening the socioeconomic status of many people. This could also influence the incidence somehow since many authors have documented the disease to be indirectly associated with low socio-economic status. The other reason which could influence the incidence is probably increased frequency of obstetric complications which usually result from either poor quality of antenatal care due to lack of facilities, and technical skills or poor intrapartum care heading to problems like prolonged obstructed labour which may eventually end up into asphyxiated babies. Increase in prevalence of organic conditions such as anaemia, malaria and HIV infection during pregnancy and puerperium could also have a influence. Turkson in Accra found an incidence of 6 per 1000 birth[11] while different authors in US and Great Britain found 1 - 2 per 1000 births [4,8,9,10]. Increase in awareness and Health Seeking Behavior amog people over the 22 years could also have an influence despite all the economic problems.

Majority 76% of women with puerperal psychosis were aged between 15 and 19 years the same age group had highest proportion of 68% in Ndossi's study and 52% in Ifabumuyi's study[10]. The reason could be explained by the fact that in Tanzania there has been an increase in prevalence of teenage pregnancy to 26%.

Most 62.8% of the patients were either married or at least leaving with a man on a continuing basis and out of these 59% received support from their

partners but only 27% were satisfied with the support. Swift found 85%[7] of women were either married or cohabiting while ndossi found 59%. The degree of satisfaction can be very subjective as one may get relatively adequate support yet feel that it is not satisfactory. However it may be true that 73% of women who were either married or cohabiting did not get adequate support since as mentioned Tanzania has a large population belonging to the law income group. 51.1% belong to the soft core poverty group while 35.9% in the hard core poverty group[24]. The same reason applies to those who had received support from parents. Only 15% got satisfied.

Most 95.8% of the women in this study were primigravida whereas only 1.4% had parity of more than 3. ndossi similary found primigravidas scoring a highest proportion of 76% and Ifabumuyi[10] found 66% while Swift 25%. Young primigravida are most probably ill prepared psychologically to cope with motherhood together with stress of marriage system. Swift also reported on the significance of stress factors in the genesis of puerperal psychosis among Tanzaniana[7].

72.1% of the women had attained primary level of education. ndossi found 68% TDHS findings of 1996 showed that 45.5% of the female population had completed primary level of education. Low level of education goes hand in hand with how socio economic status though not always. Only 6% of these women had completed their secondary school education while 21.9% had not received any form of education.

Most 96% of the women were housewives while ndossi found 82% this curresponds with TDHS results which show that 60% of married female population are housewives.

Concerning previous episodes of psychiatric illness only 2.9% gave a positive history Ndossi found 4% while Swift 30%[7] whereby 5% had psychosis during pregancy and Ifabumuyi 28%[10]. In this study no one had psychosis during pregnancy the reason could be due to high proportion of the disorder among primigravidas. All had suffered from non puerperal psychiatric discorders. The observation that women with bipolar affective disorders are prone to developing puerperal psychosis has earlier been demonstrated[13].

The study also showed that most 85% of the puerperally psychotic women had delivered by spontaneuous vertex delivery and the duration of labour was found to be between 12 and 24 hours. In 42% of the patients while 40% took more than 24 hours . Most of the children were born with birth weight ranging between 3.1 and 4kgs. The same was found by Ndossi. This could also be explained by the fact that the mean birthweight in Tanzania is about 3.4 kgs. Among sick babies the diagnosis was either birth asphyxia, prematurity or congenital anomalies. Some of the babies had more than one diagnosis. Although some studies have failed to relate the association of development of psychosis with poor outcome of babies, Kendell managed to find an association[13].

Majority 57% of the women did not experience difficulty during labor. Looking at the group (43%) which experienced difficult labor the outcome of labor was either having a sick child or stillbirth, only 2% had healthy babaies again Kendell found an increased predisposition to development of puerperal psychosis in women who had difficult labour.

In analysing the organic and psychiatric symptoms, the study showed that majority of the patients had complained of headache, body weakness and abnormal vaginal discharge. A similar number of women expressed abnormal behaviour refusal to breast feed with auditory hallucination. This was in agreement with ndossi's findings. Swift found over 69% of patients manifesting either with visual or auditory hallucination of both, the other signs being paranoid delusional thinking with persecutory or grandiose ideas more than 80% of the patients in this study were unkept with elated mood and pressurized speech. Majority had poor insight and judgement. Swift[7] found 75% of women had gross abnormalities in motor activity with hyperactive being slightly more common than negativism and underactivity. 65% of the patients had abnormal mood and affect while 30% of the women showed disorientation and marked confusion at the time of their admission.

In the women reviewed in Ifabumuyi Madden[10] and Ndossi's study, the highest proportion of psychiatric symptoms occured within the first week postpartum (56% - 86% respectively). In the present study the figure was 92%. However Kendell[13] found the peak prevalence occuring within the first

month after delivery while Benvenutti found it at 8 weeks[15] and Martin[18] and Nott[19] at 6 and 9 months respectively. The difference could be due to the patients ability to respond towards the endocrinological changes and psychosocial stressful factors.

19% of the patients had severe anemia in this study while 42% had moderate anemia. Making a total of 61% this could reflects how significant anemia in pregnancy is in our setting. Ndossi found 51% of cases having anaemia of any degree. While Swift[7] also reported to have cases of anaemia. The finding of anaemia in any form of psychosis has been well demonstrated by several authors like Meyer[29] and Salaam[30]. 24.3% of the patient had positive blood slide test for Falciparum malaria. Nguyen in Vietnam found the incidence of psychosis among patients with malaria to be 1.2 per 1000 deliveries[31]. Ndossi also found 26% of women in his series having a positive blood slide for malaria parasite.

16.1% had positive endocervical swab which grew Escherichia coli species.

Looking on the women who complained of abnormal vaginal discharge (33%) the discrepancy could be due to false negative results, or physiologic lochia which was considered abnormal by the patient. Swift[7] also showed some patients having some form of sepsis while Ndossi found 29% of women having sepsis.

None of the women tested positive for widal test, unlike Allis[34] and Baiyewu[35] who found an association of typhoid fever with psychosis.

16% of the women in this study had a positive HIV test while 84% had a negative test. Susser[36] found 3.8% patients having a positive HIV test among psychotic patients. While Doyle[37] found no association between HIV infection the onset of psychosis. Taking into consideration that the current known prevalence rate of HIV in pregnancy in Dar es Salaam is about 13.7%[41], one may wonder whether the disease influence the occurence of psychosis.

Conclusion:

1. The highest proportion of puerperal psychotic women were teenage primigravidas, who were married and housewives
2. majority had attained primary level of education and had received support from their husband, and relatives though not satisfactory in most of the cases
3. A small proportion gave a previous episode and positive family history of psychosis.
4. Spontaneous vertex delivery with healthy babies weighing between 3.1 and 4 kgs carried the highest percentage
5. Among women who had prolonged labour mjority delivered babies who were sick.

6. Most of the symptoms occured during the first week of delivery and they were of affective in nature.

7. Anaemia carried a high percentage of 61% while malaria, puerperal sepsis and HIV infection a small proportion of 24.3%, 16.1% and 16% respectively.

RECOMMENDATION:

Puerperal psychosis seem to cause a significant mental and physical morbidity hence as obstetricians we should try to pay more attention on the problem by early identification of the problem and prompt treatment.

Since the study has provided preliminary findings on puerperal psychosis there is a need to proceed for further research in order to determine the associated factors.

REFERENCES:

1. Kumar R. Reproduction and Psychiatric Disorders in Women 1983 : 67 - 72
2. Brockington E. Mental Disorders during pregnancy and childbirth 1978; 1:67
3. Downey J.I, Whitaker A.H. Important psychiatric Problems during pregnancy and the postpartum period. Medicine of the Fetus and mother 1992. 78: 1299 - 1494
4. Inwood O.G. Postpartum psychotic disorders comprehensive Textbook of Psychiatry 1989 : 16 - 852- 858.
5. ICD 10 Classification of Mental and Behavioural disorders : World Health Organization Geneva 1991.
6. Cohen L.S. Postpartum psychiatric disorders Acta Psychiatrics Scandinavia 1995 ( ) 91:67 - 78.
7. Swift C.R. Psychosis During the Puerperium among Tanzania. East Afr. Med. J. 1972 (49) : 652 - 657.
8. Paffenbarger R.S. Epidemiological Aspects of mental Illness associated with childbearing motherhood and mental illness 1982.
9. Steven N. Epidemiology of Puerperal Psychosis of Maternal Fetal Medicine 1996 (1) : 36 - 8.
10. Ifabumuyi O.I., Akundele, M.O. Post partum mental illness in Northern Nigeria. Scientific paper 1980, 83 : 64-7.

11. Turkson S.N, Psychiatric Diagnosis among referred patients in Ghana. East Afr. Med. J. 1998 (75): 336 - 8.

12. Watson J.P, Ellioft S.A, Rugg A.I, Psychiatric Disorders in Pregnancy and First Post Natal Year Br. J. Psychiatry 14 : 453 - 462.

13. Kendell R.E. Charmers J.C. Epidemiology of Puerperal Psychosis. Br.J.psychiatry 1987 (150) : 662.

14. Terp I.M., Mortensen P.B. Postpartum Psychosis Clinical Diagnosis and Relative Risk of Admission after parturition. Br. J. Psych. 1998 (172) : 521 - 6.

15. Benvenutti P. Cabras P.L. Servi P. Puerperal psychosis. A clinical Case Study with followup. J. Affect Disord. 1992 Sept (1) : 25 - 30.

16. Martin S.M, Smith L, Grant A: Various Mental Disorders 1993; 6:12 - 15.

17. Nott P.M. Psychiatric Illness Following Childbirth in Southampton : A Case Register Study. Psychological Medicine 1982 : 12:557 - 61.

18. Meltzer E.s., Kumar R. Puerperal mental Illness Clinical Features and classification. Br. J. Psy. 1985 (147) : 647 - 54.

19. Kumar, R. Marks M. Clinical Survery of Psychotic mothers and Baby unit. J. Affect Disord. 1995 Jan (1) : 11 - 22.

20. Kuller JA. Katz V.L. McMahon MJ, Pharmacologic Treatment of Psychiatric diseases in pregnancy and Lactation. Fetal and Neonatal Effects: Obstet. Gynaecol 1996: 87 : 789-794.

21. Wisner K.L, Peindl K.s., Hanusa B., Effects of childbearing on Maternal History of panic disorder with comorbid mood disorder J. Affect Disorder 1996 (3) : 173 - 80.

22. Riley D.M. Wat D.C. Hypercakemia in Aetiology of Puerperal Psychosis. Biol Psych. 1985 (5) : 479 - 88.

23. Socio economic Growth and Poverty Alleviation in Tanzania May 14 - 20, 1997. World bank Document.

24. Mujinja P., Poverty and Health Socioeconomic and political determinants of Health: Scientific paper presented in TPHA Conference, Nov. 1997.

25. Cheethan R.W, Rzadkowolski A. Psychiatric Disorders of Puerperium in South African Women of Nguni origin : A Pilot Study S. Afr. Med. J. 1981 60 (213) : 502 - 6.

26. Schopt J. Bryois C. Nosology of Severe postpurtum psychiatric Disorders - Result in catchment investigations. Eur. Arch. Psych. Neurol. SCT 1984 : 241 (3) : 54 - 63.

27. Sijuwola O.A. Psychiatric disorders in Puerperium West Afr. J. Med. 1988 (3) : 193 - 7.

28. Muhimbili Maternity Ward Established Data Base: Jan - Dec. 1998.

29. Meyer J.W. Eichorn K.H. Does Recombinant Human Erythroporetin not only treat anaemia but reduces postpurtum Emotional Distress well? J. Perinat. Med. 1995 23 (1-2) : 99 - 109.

30. Salam S.A. Kilzeih N. Lorazepum Treatment of Psychogenic catatonia. Un update. J. Psychiatry 1998 Dec. 49:16-24.

31. Nguyen T.H., Day N.P.Waller B. Post Malaria Neurological Syndrome. Lancet 1996 348 (9032) : 917 -21.

32. Bajiya H.N., Kocher D.K. Incidence and outcome of neuorological sequelae in survivors of cerebral malaria. J. Assoc. Physicians India 1996 Oct. 44 (60) : 679-81.

33. Sowunmi A, Ohaeri J.U. Falede G.O. Plasmodium Falciparum Malaria presenting as psychosis (University Ibadan) Nigeria. Trop Geogr. Med 1995. 47 (5) : 218 - 9.

34. Alli G, Rashid S. Kamli M.A. Spectrum of Neuropsychiatric complications in 791 cases of Typhoid fever. Sprinagure, India. Trop. Med. Int. health 1997 Apr. (4) : 314-8.

35. Baiyewu O, Olubayo P.O. Typhoid Fever masque during as functional psychosis in Iloru Univ. Teaching Hosp. West Afr. J. Med 1991 Jul. Dec (3-4): 363-5.

36. Susser E. Colson P., Jandrof L. HIV infection among young adults with psychotic disorders. Am. J. Psychiatry 1997 Jan. 154 (6) : 864-6.

37. Doyle M.E. Labatte L.A. Incidences HIV among patient with new onset psychosis. Psychiatr. Serv. 1997 Feb 48 (2) : 237 - 8.

39. Ndossi N.K., Kisesa A.F., Causes of Death among mental patients at MMC Dar es Salaam East. Afr. Med. J. 1997 (2) : 82 - 84.

40. Tanzania Demographic Health Survey 1996 2.5:11-37.

41. HIV perinatal transmission for study HIV July 1996 (Unpublished) at Muhimbili, Department of Obstetric and Gynaecology since July 1996.