OBSTETRICS AND GYNAECOLOGY

CASES AND COMMENTARIES

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

1994

CHARLES N. E. MKOCHA; M.D.(Dar) 1986.

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DEDICATION

I dedicate this dissertation
to my mother Lillian.

Dr. Mkocha, C. N. E.

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A B S T R A C T

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

The first section consists of ten gynaecological conditions which are commonly encountered in day to day practice.

The second part comprises of ten obstetric conditions.

Short commentaries are written on one aspect of each condition in both first and second parts.

The last part is made up of a research done over a period of 3 months on the socio-demographic attributes among women undergoing surgical sterilization in three referral hospitals in Tanzania. The effect of sterilization on population control in Tanzania is discussed.

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G Y N A E C O L O G I C A L C A S E S

G.1 RARE PRESENTATION OF SCHISTOSOMIASIS IN GYNAECOLOGICAL PRACTICE

Registration number : 737073

Name : Mrs. V. J.

Parity : Para 3+0

Age : 32 years

Residence : Korogwe, Tanga

Date of admission : 3rd March 1993

Date of Discharge : 12th April 1993

SUMMARY:

Mrs V. J. was a 32 year old para 3+0. She had been referred from Tanga on account of spontaneous passage of flatus and stool per vaginum for about 6 months. She also had lower abdominal pains for the same duration. Examination revealed a well circumscribed rectovaginal fistula measuring 1.5 cm in diameter. Biopsy results from the fistula edges were consistent with schistosoma mansoni granuloma. She responded very well to a course of praziquantel and the fistula closed spontaneously thereafter.

History of present illness:

V. J. had been well until 6 months prior to referral.

She delivered a full term pregnancy a month before onset of both flatus and stool incontinence. This was the third uneventful vaginal delivery at term. Labour was conducted in the nearby district hospital and was not unduly prolonged. She was discharged home on the following day with a

3000 g healthy baby.

A month after delivery copious vaginal bleeding was noticed but later on its intensity decreased. There was accompanying lower abdominal pain which radiated to the back and to the anal region. Within a week of onset of these symptoms she noticed flatus and some stool coming though the vagina on straining. Soon after she had yet another episode of vaginal bleeding which like the previous one ceased spontaneously.

However the stool and flatus continued to egress spontaneously from the vagina. Now, no more stool were passed through the anus and it was very loose motions. Review at hospital lead to the suspicion that probably a third degree perineal tear which was inadvertently missed at the time of delivery was the cause. Examination by the attending physician confirmed the existence of a recto-vaginal fistula. The fistula was small measuring about 1.5 cm in diameter and the physician assured her of possible spontaneous closure! Four months later the fistula was persisting hence the referral to Muhimbili Medical Centre.

At Muhimbili Medical Centre she also complained of long standing colicky abdominal pain which radiated to the back and anus. Pain was relieved on defecation. The other findings were comparable to those from the referring hospital.

Review of other systems:

She passed urine normally and had no history of haematuria at present or in the past. Had not had any tuberculous contact, haemoptysis or weight loss. Denied to have had any ano-rectal operations in the past.

Obstetric and Gynaecological history:

Had attained menarche at 13 years and menstrual cycles were regular occurring after every 30 days. She had not suffered from genital growths or ulcers in the past. She was para 3 and all children were alive and well.

Past medical history:

V. J. was a known asthmatic from childhood and had been on prophylactic aminophylline for many years.

Family and social history:

She was a housewife married to a peasant at Korogwe - Tanga region.

General examination:

She was a young lady with good nutritional status. Did not look sick and was afebrile with a temperature of $37^{0}C$. She was neither pale nor jaundiced. Virchow's nodes and other lymph nodes were not palpable.

Cardiorespiratory system:

The pulse was 86 beats per minute, regular with good volume. The blood pressure was 120/90 mm Hg. Heart sounds were normal. Both lungs had good air entry and there were no added sounds.

Abdominal examination:

The abdomen was scaphoid and had no scars. Livèr and spleen were not palpably enlarged. The renal angles were free from tenderness or masses. No ascites was detected.

Pelvic examination:

The vulva was normal. Faeculent smelling materials were seen within the vagina. There was no accompanying bloody discharge. Digital examination

revealed a recto vaginal fistula of about 1.5 cm diameter in the midposterior wall of the vagina. The fistula edges felt smooth. There was no tenderness on examination. The uterus and adnexae were normal and the pouch of Douglas was free of masses. Gloved finger was stained with stools.

Rectal examination confirmed the presence of the fistula and the mucosa was smooth. Speculum examination revealed a healthy anterior vaginal wall and cervix. The recto-vaginal fistula was visualized, the edges were raw and red but did not bleed on contact.

Diagnosis:

Rectovaginal fistula

Cause? 1. Colorectal carcinoma

2. Granulomatous diseases.

Investigations and results:

1. Haemoglobin was 9.7 g/dl.
2. Midstream specimen of urine for microbial culture was sterile.
3. Stool microscopy for ova - was negative
4. White cell count

   Total white cell count was 4.5 x 10^9/L.

   Differential white cell count showed eosinophilia of 10%.
5. Erythrocytic sedimentation rate (ESR) was 12 mm in the first hour.
6. Chest X-ray - normal lung markings
7. Ultrasound examination of the liver was normal
8. VDRL for treponema infection was negative.

Proctoscopy and biopsy:

The fistula was visualized on the anterior rectal wall. It was 2.5 cm from the anal verge. Edges of the fistula were everted but smooth and red. Multiple snips were taken for histology.

Histology showed numerous schistosoma mansoni ova and lymphocyte infiltration. No evidence of malignancy was found.

Conclusion: Schistosoma mansoni granuloma.

Treatment:

Praziquantel 40 mg per kg body weight was prescribed and given as a single dose treatment for schistosomiasis. She was discharged home and followed up on outpatient basis.

She was planned for repair of the fistula at a later date when she was to re-admitted. This repair was to be undertaken after control of infestation.

Follow up at outpatient clinic:

The patient was seen at the clinic 4 weeks after discharge from hospital. She reported a significant reduction in amount of fecal discharge from the vagina and that now she passed some stool from the anus. However she continued to experience troublesome flatus incontinence. She was in good health. Rectal and vaginal examination revealed a spectacular reduction of the fistula size. It was then less than a centimetre in diameter. These findings were communicated to her and the plan for surgical repair was deferred.The patient was seen six weeks later. Examination showed total disappearance of the original site of fistula. She had no more fecal or flatus incontinence.

COMMENTARY:

It is very rare to encounter schistosomiasis infestation as a cause of gynaecological complaints in daily practice. Schistosoma fistula is even a rarer experience even in endemic regions. This is not so because schistosoma infestation are innocent in causation of gynaecological diseases but probably it is due to difficulties in establishing causal relationships.

It is documented that schistosomiasis infests the uterus, the ovaries and sometimes the fallopian tubes[2]. In the latter it causes tubal damage leading to infertility or tubal pregnancies. In the uterus and ovaries it is usually discovered when these structures are examined histologically for other pathologies, otherwise it remains quiescent.

Schistosomiasis in the gastro-intestinal tract (GIT) is common and has been incriminated in causation of liver fibrosis and portal hypertension, colon or rectal polyps and granuloma[1]. In the GIT it presents with vague abdominal symptoms mimicking peptic ulcers, pancreatitis or dysenteric conditions like Crohn's disease, amoebiasis, tuberculosis, intestinal polyposis and ulcerative colitis[1].

The patient had presented with non specific lower abdominal pains which radiated to the back and anus but there were no episodes of dysentery at any moment.

Schistosomiasis as a cause of recto-vaginal fistula (RVF) is a rare phenomenon. In V. J.'s case, there was confusion with her having had delivered in the recent past. Therefore a third degree tear sustained in labour was implicated, but when a RVF is traumatic, it is expected that

flatus and stool incontinence would commence almost immediately [3]. Even if she had sustained an ischaemic necrosis of the posterior vaginal wall due to obstruction the fistula would have appeared earlier.

The patient in question had not experienced difficult or prolonged labour in the last confinement.

It is also rare to encounter RVF as a solitary injury from obstructed labour. It is commonly accompanied by urinary tract and or neurological damages [2,6]. With these in mind it is not likely that V. J.'s fistula was as a result of obstructed labour.

However with schistosoma infestation, the pathological changes which occur in the rectal wall predisposes one to the development of RVF with minimal trauma, even if the trauma is normal labour [3].

There are other causes of RVF in adults which include granulomatous venereal diseases [2,4,5]. Venereal granulomas may ulcerate and or slough and cause fistulous communication but this patient had a negative history of genital growths or ulcers suggestive of syphilis or lymphogranuloma venereum. VDRL was also negative.

The positive histological diagnosis of Schistosoma mansoni granuloma from the histology is probably one of rare occurrences where this infestation caused spontaneous RVF in an adult. Also schistosoma changes of rectal wall which predisposes to fistula formation from minimal trauma widens the possibilities of the causes of trauma to include hard stools from constipation.

V. J. came from Korogwe, Tanga, one of Schistosoma endemic regions of Tanzania. Schistosomiasis, there will be one of the predisposing factors

to RVF formation in labour [3], but on the index case, the sequence of events took too long a time to cause symptoms.

What is important to learn is the difficulties which would have been encountered in attempted surgical repair without clearing the infestation. This infestation was quiescent and stool microscopy was negative for ova. Rectal biopsy not being one of the routine investigations taken before RVFs are repaired may be a predisposal to many failed attempts. Therefore the author suggests rectal snips to all patients with RVF regardless of operant circumstances preceding the fistula formation especially to those from Schistosoma endemic regions.

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G.2 SUBTOTAL HYSTERECTOMY FOR PERFORATED UTERUS: IS IT STILL IN VOGUE IN MODERN GYNAECOLOGICAL PRACTICE?

Registration number	:	758580
Name	:	Mrs. S. S.
Parity	:	Para 2+0
Residence	:	Ilala, Dar es Salaam
Date of admission	:	5.9.93
Date of discharge	:	17.9.93

SUMMARY:

Mr. S. S. was a 25 year old lady. She was referred to this hospital on account of post abortal sepsis. Findings at examination were of a toxic, shocked and dehydrated patient with a distended abdomen and evidence of free peritoneal fluid. Pelvic finding were highly suggestive of a pelvic abscess.

Resuscitation and stabilization of patient's vital signs was undertaken and massive doses of broad spectrum antibiotic started. She was operated upon and a perforated uterus was encountered where subtotal hysterectomy and peritoneal lavage were undertaken. S. S. was discharged two weeks later in good health.

Management of septic perforated uterus is presented and a commentary on the place of subtotal hysterectomy in modern gynaecological practice.

History of present illness:

S. S. had been well until a week before admission when she had a spontaneous abortion of a 10 week pregnancy at home. She was evacuated of the abortion at a peripheral hospital on the day she aborted and was

discharged home with some oral antibiotics.

At home abdominal pain persisted, later on to be followed by distension and fever. Vaginal bleeding also persisted and later became mixed with purulent offensive discharge.

In view of the above developments, she reported back to the same hospital from where she was referred to this centre.

Obstetric history:

She was a para 2 patient, all deliveries were full term and normal, both children were alive and well. Last confinement had been 2 years prior to the present admission.

Gynaecological history:

Menarche was at 11 years. Her cycles were 28 days and menstrual flow lasted 4 days. The flow was moderately heavy. She had never used any contraception on her entire life. Last normal menstrual period had started on the 15th of July 1993.

Past medical history:

Had history of repeated malarial attacks.

Family and social history:

She was married and lived with her family. She neither smoked cigarettes nor drank alcohol.

General examination:

She was very sick, afebrile temperature $37^{0}C$. Was dehydrated and tachypneic. Was oriented in person, place and time. Had warm extremities. She was not pale or jaundiced.

Cardiorespiratory system:

The pulse rate was 120 beats per minute with low volume. The blood pressure was 90/60 mm Hg. Respiratory rate was 26 per minute.

Both lungs had good air entry and had no added sounds.

Abdominal examination:

The abdomen was distended and had minimal movements with respiration. Had generalized tenderness with muscle guarding and hence deep palpation was not possible. There was a dull percussion note on the flanks and hypogastrium with an obvious shifting dullness. Bowel sounds were distantly audible.

Pelvic examination:

Foul smelling yellowish pus was seen at the vulva.

Speculum examination revealed a bulging anterior vaginal wall. The cervix was closed and displaced upwards and posteriorly. No laceration marks were seen on the cervix. Serosanguinous fluid was coming out of the external os and from it a swab for bacteriological examination and culture was obtained.

The anterior vaginal wall felt soft and fluctuant and the pouch of Douglas had a moderate bulge.

Diagnosis:

Septic abortion

Differential:

Uterine perforation with haemoperitoneum.

Management plan:

Explorative laparotomy and drainage of the peritoneum was contemplated.

1. The diagnosis and management plan were explained to the patient and an informed consent for anaesthesia and surgery was obtained.
2. Intravenous normal saline and Ringer's Lactate with a wide bore cannula was set up for resuscitation. Fluid repalcement resulted into stable vital signs and the patient was ready for surgery within 6 hours of admission.
3. An indwelling urethral catheter was used to monitor amount of urine passed, colour and therefore the adequacy of fluid intake.
4. Parenteral antibiotics were started as soon as an intravenous route was established. These included
   (i) Crystalline penicillin 5 mu intravenously 6 hourly for 72 hours.
   (ii) Metronidazole 500 mg intravenously 8 hourly for 5 days.
   (This combination of antibiotics was given while awaiting for results of culture and sensitivity from the pus swab).
5. Blood sample was collected for grouping and crossmatching and 1.5 litres of Blood group B Positive were obtained.

Investigations and results:

1. Haemoglobin was 10.0 g/dl.
2. Gram stain of endocervical smear showed a mixture of gram positive rods and cocci.
   Culture for aerobic organism was sterile.
   There were no facilities for anaerobic organisms cultures.
3. Blood urea was 3.5 mmol/L.

Serum electrolytes could not be done.

4. White cell count was 4.3 x 10^9 /L.

   Differential count - Neutrophilia 70%.

   Total white cell count 4.3 x 10^9/L

   Differential count - Neutrophilia 70%

   Platelet count was 200,000/mm^3

5. Pus swab obtained from the peritoneal cavity:

   Culture revealed Escherichia coli sensitive to gentamicin and augmentin.

6. Plain erect abdominal X-ray:

   There were no fluid levels in the bowels and no gas under the diaphragm.

7. Clotting and bleeding times were 5 and 3 minutes respectively.

8. Chest Xray was normal.

9. Prothrombin time and fibrinogen levels were not determined

10. Electrocardiogram was not done.

Mrs. S. S. was then reviewed for anaesthetic and operative suitability and was sent for surgery on the following day.

Laparotomy findings:

The abdomen was disinfected with savlon followed by weak iodine solutions before draping with sterile surgical linen.

The patient was anesthetised as per other gynecological operations. A midline sub-umbilical incision with a cephalad extension above the umbilicus on the left side was made to gain more exposure. The peritoneal cavity was partly filled with serosanguinous foul smelling fluid. The

visceral peritoneum was covered with fibrinous material which on removal, freely bleeding surfaces appeared. Loops of small intestine were distended and were floating on the fluid.

On careful inspection no bowel perforation was seen. The uterus was enlarged to about 12 week size and was wrapped by the omentum. The uterus was soft and boggy with dark brown colour.

A two centimetre perforation with irregular edges was seen on the anterior surface of the uterus after the omentum was gently released. Free pus came out of the perforation. Fluid which was in the general peritoneal cavity, also filled the pouch of Douglas. The ovaries and the fallopian tubes appeared healthy.

The uterus was very friable and could not hold stitches. The ligaments supporting it were the only viable tissues which could stand suturing. Total hysterectomy would have prolonged the operation time and hence a subtotal hysterectomy was performed preserving both ovaries. The peritoneal fluid was sucked out and lavage was done with sterile warm normal saline.

Blood loss amounted to about 500 ml intraoperatively. Corrugated rubber drains were inserted on either side of the cervical stump and the pouch of Douglas. The abdomen was closed in three layers with catgut, vicryl and silk for parietal peritoneum, rectus sheath and skin respectively.

Anaesthesia was reversed and she was transferred back to the ward after a short observation in the recovery room.

Post operative care:

1. The blood pressure, pulse rate and respiration were

monitored hourly and they remained stable from the time resuscitation was completed pre-operatively.

2. The same antibiotics started pre-operatively were continued for five days.
3. She produced only 300 ml of concentrated urine in the first 12 hours post operatively thence parenteral fluids infusions were adjusted accordingly.
4. One litre of fresh blood was transfused post-operatively. On the second day post operatively she developed abdominal distension and had not passed flatus. A nasogastric tube was inserted and 300 ml of greenish material was obtained. A flatus tube was passed and the distension waned slowly.

The corrugated rubber drains were removed on the third day post operatively when they were found not draining any more.

She continued to have fever until the fourth day when it gradually started settling and the temperature became normal on the sixth day.

From the fourth day she developed profuse diarrhoea but with marked improvement on her general condition. She became ambulant and oral intake was initiated.

On the ninth day she was discharged home in good health and advised to come back for review six weeks later.

Out patient follow up:

She was seen six weeks later as planned. She was in good health and pelvic examination was normal. It was explained to her what had been done intraoperatively and she was then discharged from the clinic.

COMMENTARY:

Septic abortion is one of the life threatening condition in gynaecological practice [1,3,4]. Management of septic abortion is complex and depends on the complications which accompany it. The patient may present with hypotension like S. S. which can not be pinpointed to a specific cause. Hypotension may be as a result of primary haemorrhage at abortion, septic shock and septicaemia. Inapparent blood loss may result from chronic sepsis.

Fluid and blood replacement are essential in order to re-establish an effective circulating volume. Ringer's lactate and normal saline are good volume expanders in emergency because Dextran-70 can not be used prior to cross-matching.

Crossmatching is invariably required in septic abortions even in the absence of apparent blood loss. Some would require abdominal surgery while others will have lost significant quantities of blood prior to the admission [4]. The latter can not be easily detected due too short a time for anaemia to appear.

Antibiotic therapy is vitally important part of management of such patients and usually requires initiation of treatment prior to a bacteriological diagnosis [1,2]. While genital tract infections associated with abortions may be caused by almost any organism, the most common ones are E. coli, anaerobic and aerobic streptococci, bacteroides, staphylococci and clostridia. The choice of antibiotics should be made after consideration of usual bacterial prevalence and sensitivities in the specific locality.

For seriously ill patient like S. S., antibiotic combinations are expected to cover as many possible bacteriological combinations as possible before one obtains a specific diagnosis from culture results[1,2,4].

Bacteriological culture from Mrs. S. S. yielded E. coli which was sensitive to Gentamicin. The drug was not available at that material moment and that treatment was delayed for several days.

There are many patients with septic abortions who are managed conservatively[3]. There are criteria which necessitate operative treatment in septic abortions. These include signs of pelvic abscess or unresolving peritonitis by antibiotic therapy and evidence of perforated viscera[4] S. S. had features suggestive of peritoneal fluid collection and obvious infection. There were no signs of obvious uterine perforation on abdominal X-ray. Laparotomy was done for exploration, lavage and draining of the peritoneal cavity. At laparotomy usually one goes in with an open mind not knowing exactly what will be encountered. When a septic, necrotic uterine perforation is encountered it is usually difficult to spare the uterus[4]. However many patients who have had to undergo hysterectomy under these circumstances, subtotal hysterectomy has been the norm. The commonest excuse for leaving behind the cervix has been to expedite the reversal of anaesthesia lest the patient dies under it. Anaesthetic techniques have improved greatly, therefore this should no longer dictate operative treatment. S. S. had subtotal hysterectomy not as the most ideal surgery but as a procedure of convenience to let the patient get out of anaesthesia fast! In some places, women who for one reason or the other had to have their uteri removed, leaving behind the

cervix has been considered a malpractice. The dictum then becomes 'if the uterus has to be removed, then the cervix as well' for fear of future stump malignancy and difficulties on brachytherapy.

Therefore subtotal hysterectomy seems to have no absolute indications in modern gynaecology but removal of the cervix alone would have many.

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G.3 PRE-OPERATIVE PREPARATIONS IN PROCIDENTIA WITH DECUBITUS ULCERS

Registration number	:	719226
Name	:	Mrs. R. A.
Age	:	51 years
Parity	:	Para 7 + 0
Address	:	Bagamoyo
Date of admission	:	2.9.92
Date of discharge	:	5.12.92

SUMMARY:

A 51 year old woman with symptoms and signs of genital prolapse of 2 years duration is being presented and discussed. She was Para 7 + 0 and 5 years postmenopausal.

A ring pessary had been inserted to temporarily reduce the prolapse and allow decubitus ulcers to heal. A vaginal hysterectomy and anterior colporrhaphy as a definitive therapy was performed in the same week of pessary removal. Her postoperative recovery was uneventful and was discharged home in good health 10 days later.

History of present illness:

Mrs. R. A. had been referred from a district hospital on account of:

(i) Mass protruding through the vagina for approximately 2 years.

(ii) Intermittent urine retention for a year

(iii) Ulceration on the protruding mass with foul smelling discharge for 6 months.

The patient had noticed a sensation of fullness in the perineum for some months before she eventually noticed a mass protruding at the vulva. Initially the mass could be easily felt by a finger at douching, but about 2 years subsequently the mass noticeably protruded beyond the vulva both on straining and on slight exertion e.g. a short walk. Eventually this mass spontaneously protruded out on adopting an upright position and remained so even in the absence of straining. The size of the mass showing at the vulva progressively increased with time up until she could not manage to reduce it manually.

Later on, spontaneous voiding of urine became difficult and this could be achieved only after self manipulative manouvres to the perineum. Having learnt this technique she continued applying it to assist herself in emptying the bladder. She also discovered that the more she strained to void, the bigger the mass became outside the vagina and less urine would come out, and eventually she could not initiate micturition by straining alone but had to persistently reduce the mass. It was at this time that she sought medical help from the referring district hospital.

Antiseptics for douching and analgesics for lower backache were given. She was kept there for 2 months before she was finally referred to this Centre.

She denied having had chronic cough, asthma or chronic constipation. She had not noticed any post coital bleeding although of recent she had foul smelling vaginal discharges with a noticeable ulcer at the tip of the protruding mass.

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Obstetric history:

She was para 7 with 6 living children. All labours and deliveries had been conducted at home under assistance of traditional midwives. None among all deliveries was preceded by difficult labour.

The last born child was aged 10 years.

Past medical history:

Had no noteworthy illnesses in the past.

Family and social history:

She was a 4th born in a family of five siblings. None among her siblings had similar illness but remembered that her mother had a similar problem later in life and she died without medical care. She thought this illness was what killed her mother.

She neither drank nor smoked cigarettes.

General examination:

She was an old lady with a fair nutritional status. She was not pale and the body temperature was 37^{0}C she was not obese or sick looking. The blood pressure was 140/90 mm Hg.

Cardiorespiratory examination:

Chest moved well and symmetrically on respiration.

Breasts were atrophic and there were no masses or nipple discharges. Both lungs had good air entry and without crepitations or rhonchi.

Abdominal examination:

The abdomen was scaphoid and moved with respiration. There was no loin tenderness on either side. The liver, spleen and kidneys were not palpably enlarged. No free peritoneal fluid was demonstrated and bowel

sounds were normal.

Pelvic examination:

Both labia were atrophic. The cervix and uterus were wholly extruded beyond the vulva. The cervix had a shallow, but wide ulcerative lesion on the posterior lip. The ulcer was not bleeding on contact. The extruded vaginal mucosa was dry and devoid of rugae.

Reduction of the uterus was successfully done but prolapse recurred easily on minimal straining.

Sim's speculum was inserted into the vagina and it was applied to the posterior wall while the patient was lying in Sim's position; on straining a soft swelling which felt fluctuant appeared from the anterior vaginal wall. This was a cystocele, but there was no urethrocoele. The speculum was then transferred to support the anterior vaginal wall and on straining there was no protrusion from the posterior vaginal wall.

Digital examination in the rectum showed that there was no outpouching of the rectum into the posterior vaginal wall.

Diagnosis: 1) Procidentia with cystocele

2) Decubitus ulcer

Investigations and results:

1. Haemoglobin was 10.3 g/dl.
2. Urinalysis
   (i) Microscopy - no pus cells.
   (ii) Negative for sugar and protein
   (iii) Culture and sensitivity - No bacterial growth.
3. Serum creatinine 88 um/L.

4. White cell count:

   Total 6300 cell/mm^3.

   Differential count - Normal

   Blood film normal.

5. Chest x-ray - No cardiomegaly.

   No features of chronic bronchitis,

   bronchiectasis or pulmonary tuberculosis.

6. Intravenous urogram (I.V.U)

   Normal urinary system and kidneys

   Both kidneys excreted the dye.

7. Blood group and Rh: AB Rh positive

8. Diagnostic D & C showed atrophic endometrium without malignant cells.

9. Pap smear: Class II pap smear

   Most cells were inflammatory .

OPERATIVE PROCEDURE:

The patient was scheduled for vaginal hysterectomy and anterior colporrhaphy under general anaesthesia. With the patient anaesthetized a repeat examination was done. All previous findings at admission were confirmed except those which required the patient's participation e.g. straining or coughing.

Catheterization yielded clear urine.

The labia majora were retracted into the thighs and fixed by silk stitch No.1. This was to achieve more exposure. Then the cervix was grasped with a tenaculum and traction was maintained on the latter when normal

saline was being infiltrated into the cervical tissues to create an artificial oedema for ease on dissection of vaginal mucosal plane from the cervix. No adrenaline was added to saline due to a slightly elevated blood pressure at induction of anaesthesia.

A transverse incision above and around the cervix was made low enough to avoid the urinary bladder. The separation of the bladder from the cervix was made by a combination of sharp and blunt dissection up to the pelvic peritoneal reflection. On reaching the peritoneum, stay sutures were inserted for ease of later identification of the peritoneal edges.

The peritoneal cavity was opened and a bladder retractor inserted below it. Then the uterine fundus was grasped by Littlewoods tissue forceps and brought down through the peritoneal opening.

Hysterectomy then proceeded as in abdominal surgery by systematic clamping and division of the round ligaments, fallopian tubes and ligation of the stumps by catgut number 2.

The broad ligaments were opened and dissected to their bases, the uterine vessels were identified, doubly clamped with Kocher's forceps, then divided and ligated twice with transfixing stitches of catgut number 2.

The uterosacral ligaments were divided between clamps and tied with similar stitches as the rest of the stumps.

Finally the transverse cervical ligaments were divided like the rest and transfixed; and the uterus was delivered.

The peritoneal edges were closed by a continuous catgut stitch number 00 and the stumps were tied together in the midline to strengthen the vault.

The repair of cystocele was done after separation of the vaginal mucosa

from the bladder and excision of the redundant mucosa after having approximated the pubocervical fascia. Buttressing of the bladder was done by interrupted transverse stitches with Polyglycolic acid stitch (PDS) number 00 and then again redundant vaginal mucosa was excised and edges approximated by a strong catgut stitch.

A Foley's catheter number 16F was inserted into the bladder and ballooned. The vault and vagina were cleaned with antiseptics and a Vaseline gauze pack inserted. The patient was reversed from anaesthesia and sent to the recovery room.

After a brief observation in there, she was transferred to the gynaecological ward.

Post operative care:

1. The blood pressure, pulse and respiratory rate were monitored hourly for the first 12 hours. They were found stable within that time.
2. Observation for vaginal bleeding was done and there was none.
3. The vaginal pack was removed 12 hours post operatively.
4. Injection Pethidine 100 mg was given six hourly for 24 hours for analgesia.
5. The urethral catheter was removed on the fifth day post operatively.
6. She remained afebrile all the time following surgery.

Her subsequent recovery from the operation was smooth and uneventful. She was discharged in good health ten days post operatively.

She was to come back for check up 6 weeks post operatively but she never

showed up in time. She was seen three months post operatively and was in good health. There was no vault prolapse or recurrence of cystocele.

COMMENTARY:

Genital tract prolapse occurs in young women if they have an inherent pelvic floor weakness. In the elderly, child bearing, aging, and deficiency in oestrogen at menopause put a great strain on a woman whose pelvic structures are inherently weak and this makes genital prolapse common in this age group[1]. Chronically increased intra-abdominal pressures which occur in asthmatic patients, chronically constipated and bronchitic ones predisposes one to genital prolapse.

Some authorities believe that a partial denervation of pelvic floor occurs at vaginal deliveries causing a "descending perineum syndrome" and weakening of the pelvic floor tissues at menopause [2,3].

Mrs. R. A. was a multiparous patient who had reached menopause five years previously therefore the predisposing factors to genital prolapse were present in her case. She had no associated risk factors like those which chronically raise the intra-abdominal pressure. When these are present, they aggravate the disorder in predisposed individuals.

She had a decubitus ulcer which healed after insertion of a 77 mm PVC ring pessary and some antiseptic douches. She could not afford oestrogen creams which are said to hasten epithelization and cornification of the vaginal and ectocervical epithelia [3,4].

However the ulcers healed promptly with reduction of the prolapse due to increased blood supply with less stretching of the vascular pedicles and moisturizing effect on the cervix when replaced into the vagina. With

desiccation of the cervical epithelium when it is outside the vagina healing becomes difficult. The reduction of the prolapse with a pessary brought about tremendous relief of symptoms from the patient, especially backache and urine retention. Backache is also thought to be due to chronic overstretching of the supporting ligaments to the uterus and cervix . Mrs. R. A. seemed to be satisfied with the pessary even if no further treatment was offered. However, this form of treatment is only definitive for those whom operation would carry high risks to their lives e.g. those with chronic respiratory diseases, overweight, diabetics and debilitated or very old patients who can not stand surgical trauma and anaesthesia. However in post menopausal patients this pessary is supposed to be combined with a estrogen cream application to minimize infection, ulceration and atrophic injury with prolonged use of the ring.

Most of the perineal muscles are usually weak before prolapse becomes evident. The patient may expect a 'tighter' perineum post operatively which an operation like colporrhaphy following vaginal hysterectomy can not offer because the weakened tissue due to hypoestrogenism and aging can not be replaced by surgery.

The message should be clear to the patient in the progress of preparation for surgery lest she expects more than what can be achieved at surgery.

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G.4 MANAGEMENT OF RUPTURED TUBAL PREGNANCY IN A MULTIPAROUS WOMAN

Registration number	:	727716
Name	:	Mrs. H. M.
Age	:	36 years
Residence	:	Kariakoo, Dar es Salaam
Date of admission	:	19.11.92
Date of discharge	:	28.11.92

SUMMARY:

Mrs. H. M. was 36 years old Gravida 8 Para 7 who had secondary infertility for 5 years. She was admitted with symptoms and signs of a ruptured ectopic pregnancy. At laparotomy the left fallopian tube was excised and the other ligated by Pomeroy's technique. She recovered uneventfully and remained in good health at outpatient follow up. Her case is being presented plus a commentary on management of ruptured ectopic pregnancies in multiparous patients.

History of present illness:

Mrs. H. M. was admitted in our gynaecological ward with a nine week history of amenorrhea followed by sudden abdominal pains and vaginal bleeding. These symptoms had persisted for five days prior to admission. She had experienced pregnancy symptoms from the fourth week of amenorrhea. The pain she experienced was described as stabbing, constant and localized on the suprapubic region. There was no shoulder tip pains or vomiting. She felt weak and dizzy but could walk with support. No fainting attacks had been experienced before admission. Dark watery bloody discharge from the vagina had been experienced on and off for two days prior to

admission. There were no other complaints.

Past Obstetric and Gynaecological history:

H. M. attained menarche at 14 years of age. She had regular cycles of 30 days. Had seven full term vaginal deliveries. All the children were alive. The last born was six years old. She denied to have had puerperal infection or sexually transmitted diseases after the last confinement. No contraceptives had ever been used. For the past five years she had failed to conceive despite adequate exposure. However at admission she had amenorrhea of 9 weeks.

Past medical history:

There was no history of serious illnesses in the past.

Family and social history:

She was unemployed. Had not attended any formal school. She neither drank alcohol nor smoked cigarettes. Her husband was a fellow peasant.

General examination:

The patient was in obvious pain, but fully conscious and oriented. She was pale but not jaundiced. The axillary temperature was $37^{0}C$.

Cardiovascular system:

The pulse was 110 beats per minute regular with low volume. The blood pressure was 90/50 mm Hg. There was an obvious tachycardia on auscultation.

Respiratory system:

There were normal vesicular breath sounds.

Abdominal examination:

The abdomen was slightly distended and moved slightly with respiration.

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

The liver, kidneys and spleen were not palpable. The uterine size could not be appreciated due to guarding.

Pelvic examination:

The vulva was normal in appearance but dark blood covered the area. The vagina was healthy. The cervix was healthy, bluish in colour and closed. Watery dark blood was coming from the os. Digital examination revealed a fluctuant and tender pouch of Douglas. No mass was felt and cervical excitation was not attempted. Gloved fingers had no foul smell. Rectal examination was not done.

Other systems were essentially normal.

Diagnosis: Ruptured ectopic pregnancy.

Investigations and results:

1. Blood grouping and cross-matching.

   1000 ml of Group A Rh D Positive compatible blood was obtained and reserved for transfusion.

2. Haemoglobin estimation - 10.8 g/dl.

3. Mid stream urine specimen:

   (i) Microscopy: Few epithelial cells.

   No pus cells

   (ii) Bacteriological culture:

   Sterile after 24 hours of incubation at 37^{0}C.

The diagnosis and plan for laparotomy and tubal ligation was explained to the patient and an informed written consent was obtained for both.

Operative findings:

The patient was given parenteral Sodium thiopentone 250 mg and atropine sulphate 0.6 mg. This was followed by 50 mg of suxamethonium hydrochloride intravenously before intubation.

Ketamine Hydrochloride drip was used to maintain anaesthesia because she was hypotensive.

A subumbilical midline incision was made and the abdomen was opened. There was haemoperitoneum of about 2000 ml of fresh blood which was obtained for autotransfusion. About 250 ml were lost in small clots and packs. Both ovaries were normal and the uterus was about six weeks size. The right fallopian tube was kinked and its fimbrial end was adherent to adjacent large bowel. A left isthmal rupture was found with the pregnancy still attached to the tube.

Bleeding was arrested by application of Kocher's clamps on both sides of the tubal rupture.

Total left salpingectomy was done and it was submitted for histology. Right tubal ligation was performed by Modified Pomeroy's technique.

The peritoneal cavity was mopped dry and after swab and instrument counts were ascertained, the abdomen was closed in three layers.

Catgut number 00 was used for closure of parietal peritoneum, while vicryl no.1 and silk no.1 were used for the rectus sheath and skin respectively. The skin incision was dressed with dry gauze. The patient was sent back to the gynaecological ward after recovery from anaesthesia.

Post operative treatment:

1. The blood pressure and pulse rate were observed and charted hourly

for 6 hours and then 4 hourly for 12 hours. They remained stable.

2. Intravenous dextrose-saline 2.5 L in 24 hours was given.

3. An input and output chart was kept for 24 hours.
   She passed 1500 ml of clear urine in the first 24 hours post operatively.

4. On the fourth day post operatively the haemoglobin had fallen to 8.2 g/dl.

She recovered well and the stitches were removed on the sixth post operative day. Ferrous sulphate and Folic acid were prescribed for two months.

Follow up at Gynaecological outpatient clinic:

Mrs. H. M. was seen at the outpatient clinic four weeks after laparotomy. She had not resumed her menstruation yet but was in good health.

The haemoglobin estimation was 10 g/dl.

The wound had healed by primary intention and pelvic examination was normal.

Histology results confirmed the presence of normal placental tissue in the fallopian tube and a male fetus in the materials submitted.

COMMENTARY:

Ectopic pregnancy is a condition of immense gynaecological significance in Africa. Its incidence varies from 0.63% in Zimbabwe to 1.70% in Nigeria[1]. The occurrence of ectopic pregnancies is higher in African than in Western countries where it is a significant cause of maternal morbidity and mortality [1].

The high incidence is attributed to gonococcal, tuberculous and chlamydial endosalpingitis although in more than 1/3 the histology shows normal fallopian tubes[1]. Pelvic inflammatory disease which may cause some pathology outside the tube is very common in Africa due to (i) poor socio-economic circumstances, (ii) promiscuity, (iii) poor hygiene and (iv) septic abortions[2]. Tubal ectopic pregnancies account for more than 50% of all ectopic in Africa. In contrast to Caucasians, ectopic pregnancies in Africa tends to occur in multiparous rather than nulliparous women[1]. This may suggest puerperal sepsis as a relevant causative factor in African women.

Lawson Tait reported successful treatment of tubal pregnancy with salpingectomy in 1884, before then ectopics were being managed expectantly with mortalities above 60%[2]. The effect of extirpative treatment in reducing maternal mortality was an impetus for that treatment exclusively for the subsequent 70 years[4]. In 1953 Stromme reported the first case in English literature of a conservative operation (salpingostomy) for tubal pregnancy. Since then several types of operations including salpingotomy, fimbrial expression and segmental resection have been performed to conserve the affected fallopian tubes[5]. Recent advances in laparoscopic surgery have been used to remove tubal pregnancies with a concomitant reduction in morbidity and hospital stay[3]. However conservative operation for the management of tubal pregnancies must be individualized in the choice of both the patient and surgeon.

The patients choice usually is based upon her desire for future fertility. Mrs. H. M. was a multiparous patient who had tried to conceive for five years but failed. She succeeded in the sixth year but only to end up with

a tubal pregnancy. Although she had made efforts to get pregnant, she is not among patients who satisfy the clients criteria for conservative treatment. Here it comes to light in this case that parity and the number of living children should be among criteria for conservation of a damaged tube.It would be unwise to conserve a fallopian tube for a para 8 patient who would come back with another ectopic pregnancy a few years later. It is known that those fallopian tubes managed such have higher chances of getting another ectopic pregnancy(2).

The management of the second tube is not discussed in most literature because it seems obvious that if it has no concomitant ectopic, it should not be disturbed. In Mrs. H. M.'s case, salpingectomy of the affected tube was done, but the other one showed pathology which could predispose her to another tubal pregnancy. Taking into consideration the high parity, the advanced age, tubal ligation was undertaken in the interest of the patient. Although H. M. consented for both operations, a patient in shock and in severe pain after a ruptured ectopic can not be taken to have made a `really free' and informed consent for tubal ligation then. Therefore despite recent advances in surgical management of tubal pregnancies, selection of candidates for these should not include a wish for future fertility but also an ectopic free a life thereafter.

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G.5 MANAGEMENT OF AMBIGUOUS SEX WITH LIMITED DIAGNOSTIC FACILITIES.

Registration number	:	676047
Name	:	Miss P. M.
Age	:	15 years
Address	:	Tabora
Date of admission	:	2.10.91
Date of discharge	:	2.12.91

SUMMARY:

A patient with ambiguous external genitalia is described and management approach is discussed in relation to limited diagnostic facilities.

Miss P. M. was 15 years old and had presented with primary amenorrhea. Age of onset of thelarche was similar to her siblings. However no cyclic moliminal symptoms were felt, and there was no established menses at 15 years, the time she presented to hospital.

Examination revealed a tall, (160 cm) feminine looking girl with normal breasts and secondary sexual characteristics. The external genitalia had a large abnormal clitoris as well as a small blind ending pouch.

Successful surgical correction was achieved after some baseline investigations.

History of present illness:

The patient was born at home. Delivery had been conducted by a traditional birth attendant. She was the last born in a family of four, two males and one female among her siblings. She had been brought up like a girl and at 12 years of age she had normal development of breast buds.

She acquired fully developed breasts at about 14 years, similar to the other sibling. Menarche never ensued until 14 years of age despite early growth of pubic and later axillary hair. However the habitus and the voice were feminine.

None among her relatives had ever been born with a large clitoris or abnormal genitalia or with delay of onset of menses. The patient had no knowledge of whether her mother had received any medications during pregnancy.

About a year before admission she noticed cyclic abdominal discomfort which was accompanied with passage of blood stained urine. This was disregarded and assumed normal as most of her age mates in the village had such episodes before menarche and this was universally assumed and accepted to be urinary schistosomiasis because the disease is endemic in the area.

The normal breast development and thelarche without menarche are the signs which prompted parents to seek medical consultation for P. M. at such a late age despite the ambiguity of the external genitalia from birth.

Otherwise P. M. had no other complaints and she had never attempted coitus before.

Past medical history:

No noteworthy illnesses had occurred to her in childhood.

Family and Social history:

Both parents were alive and well. There was no consanguinity in their marriage. First born was a female sibling whose onset of menarche was normal at 13 years. She was parous. The rest of siblings were boys.

Physical examination:

Healthy young patient, tall 160 cm. Had no webbing of the neck and no balding. Had a feminine habitus and voice. The skin was well oestrogenized and soft.

Chest examination: Normal chest contours

Breasts:They were fully developed with normal areola.

There were no Montgomery tubercles.

Nipples were not wide apart and no lumps were felt. No galactorrheic secretion on expression of both breasts.

Cardiovascular system:

The pulse rate was 76 beats per minute regular and good volume.

The Blood pressure was 110/70 mm Hg.

Heart sounds were normal and without murmurs.

Musculoskeletal system:

She had no pedal oedema.

Abdominal examination:

She had normal abdominal contours. The abdomen moved with respiration.

The liver, spleen and kidneys were not palpably enlarged.

No free peritoneal fluid was elicited.

Bowel sounds were normal.

Pelvic examination:

She had well developed pubic hair which had a feminine distribution. A grossly enlarged "clitoris" with a longitudinal slit at its tip was seen. A prominent prepuce covering the 'glans' halfway its length was noted. She had a large, soft scrotal like folds at the site of labia majora. The

folds had pronounced rugae and a 'median raphe' was present at the site of labia minora. Testicles were not palpated within the folds. A depression could be felt along the 'median raphe' of the scrotal folds. A tiny opening at the base of the 'shaft of the clitoris' was seen. The vagina and urethra were not seen.

Rectal examination:

The anus was normally situated and on rectal examination a firm mass whose dimensions could not be discerned was felt in the pelvis. No other masses were felt.

Diagnosis: Ambiguous sex

? Female hermaphrodite

Investigations and results:

1. Haemoglobin was 12.0 g/dl.
2. Urine was negative for both sugar and protein
3. Serum creatinine 71 umol/L
4. Serum electrolytes Na^+ and K^+ could not be determined.
5. Intravenous urogram (I.V.U) to rule out concomitant urinary tract malformations was normal
6. Buccal smear for Barr bodies
   - More than 20% of cells counted were positive

   (Normal range for females is between 20 and 40%)
7. FSH levels 2.13 U/L

   LH levels 4.62 U/L

   Prolactin levels 156 I.U.

8. Enzyme assays below were not performed.

   11 & 12 hydroxylazes

   3 - dehydrogenase

   Urinary 17 - OH Ketosteroids

9. Vaginal probe ultrasonography was not feasible.

Examination under anaesthesia and Laparoscopic findings:

No testicles were palpated deep in the labio-scrotal swellings. Inguinal areas were palpated for the same but also nothing was found.

An opening at the proximal end of the labioscrotal swelling measuring less than 1/4 cm in diameter was probed and found going deep into the pelvis. The smallest catheter could not be negotiated into it.

A Depression in the labio-scrotal swelling was appreciated again. No vagina was seen and the urethra also was not visible.

Findings at Laparoscopy:

Visualization of the pelvic organs was difficult.

A large gonad (? ovotestis) was visible on one side but the uterus and the other ovary/testis or fallopian tubes were not visualized.

Post laparoscopy recovery was uneventful and she was scheduled for exploratory laparotomy at a later date for search and biopsy of the gonads.

In the interim period, the patient was persuaded to pass urine under observation so as to determine the exact site of urine egress. It was discovered that the opening at the proximal end of the labioscrotal fold was the outlet for urine and the urethra-like slit at the tip of the glans clitoridis was a blind pouch.

Laparotomy findings:

Under general anaesthesia, a sub-umbilical midline incision was made and the abdomen opened.

A normally looking uterus and normal fallopian tubes were found. There was no cryptomennorhea. Both ovaries were present and the urinary bladder was normal. Biopsy from the gonads was taken and it revealed ovarian stroma with graafian follicles.

The abdomen was closed immediately and vaginal reconstruction was contemplated.

Vaginal reconstruction:

Incision through the 'median raphe' of the labio scrotal fold was made to join the tiny opening at the proximal end of the fold. A fairly spacious vagina was found but a vagino-vesical septum was seen which was later divided.

A new urethra was constructed by apposing tissues from the divided septum to extend the urethral canal from the bladder to the vulva. The vaginal epithelium was apposed to the incised edges of the labio-scrotal folds (now labia minora) medial to the ragged labia majora in order to maintain a patent vagina.

A simple partial amputation of the clitoris was done and haemostasis achieved. A vaginal mould wrapped in paraffin gauze was inserted into the vagina.

She was then observed briefly in the recovery room and later transferred back to the gynaecological ward.

Post operative progress:

1. She was given intravenous Dextrose-Saline for 24 hours.
2. Indwelling urethral catheter was maintained for one week.
3. Nitrofurantoin 100 mg twice was given orally as long as she was on urethral catheter.
4. The vaginal mould was removed after 12 hours.
5. Vital signs were stable throughout the post operative period.

Ms. P. M. did very well post operatively and was discharged home on the seventh day. She came back 12 weeks later and she was doing well and regular menstrual cycles with a normal flow had been established.

COMMENTARY:

Aetiology of ambiguous genitalia include true hermaphrodites, male pseudohermaphrodites, female pseudohermaphrodites, maternal ingestion of hormones, mixed gonadal dysgenesis and the Stein-Leventhal syndrome[1,2]. About 1:2000 newborns have ambiguity of the external genitalia. The extent of ambiguity gives no clue to the underlying aetiology.

In true hermaphrodites the individual has a mosaic of 46XY and 46XX chromosomes in about equal proportions and possesses both ovarian and testicular tissues.

Female pseudohermaphrodite has 46XX and includes congenital adrenal hyperplasia in which there is usually an enzyme deficiency of 21 hydroxylase or 11B-hydroxylase.

Male pseudohermaphrodites are 46XY including deletion syndromes with Y cell (45X, 46XY), agonadia, various enzyme deficiencies, e.g. 5 X

reductase 17 X hydroxylase etc., testicular feminization (androgen insensitivity) syndrome and the non endocrine, non chromosome defects. Although P. M.'s hormonal and enzymatic values were undetermined due to lack of facilities the clinical features were of a female pseudohermaphrodite.

An individuals social sex (the sex of rearing) and the subsequent legal sex is determined by many factors. These factors are chromosomal, gonadal, hormonal and psychological.

Genetic sex is determined at fertilization but gonadal sex remains undifferentiated until the 6th week of intra uterine life [1].

Genetic sex usually determines the gonadal sex by permitting differentiation of the different embryonic gonad into either testis or ovary. A normal testis or ovary is a pre-requisite for normal sexual, internal and external differentiation.

This is the sexual differentiation of the sex ducts Wolffian and Mullerian and the external genitalia is depended upon the proper endocrine function of the developing gonad[2]. So, although the family with which a subject is usually labelled as either male or female is taken for granted there are few cases in which this is very difficult. Such cases present with ambiguous phenotypic indices especially the external genitalia as in P.M. Many babies with ambiguous sex have had the wrong sex assigned to them and if left uncorrected in early childhood, later they present a most difficult psychological problem to manage.

To avoid confusion and psychological disaster many studies of cases of ambiguous genitalia have recommended that such infants should be

thoroughly assessed within the first 1- 1 $^{1}/_{2}$ years of life and that a firm decision should be reached on the sex most suitable for the child.

Surgical techniques and hormonal therapy are then applied to bring the reproductive structures in line with the assigned sex. Furthermore the gonads of these patients undergo varying degrees of dysplasia with time. Unfortunately as a result of an absolute lack and an inequitable distribution of specialized facilities and manpower in developing countries older children and even adults are seen whom the more appropriate sex was not correctly assigned in infancy. A decision would have to be taken in such cases as to whether the wrongly assigned sex should be changed or whether the reproductive structures should be brought in line with the assigned sex by means of combined surgery and hormonal therapy.

In P.M.'s case, most of the decisions and surgery were easy because the gender she was brought up in and the findings at laparotomy, complemented each other as well as the patients wish to be identified as a girl.

Similarly constructing a female external genitalia from a pseudo-male is easier than one where a functional male genitalia is to be created from a pseudo female.

However due to shortcomings of the Centre's capacity to investigate as evidenced in many hormones and enzymes not being assayed, the specific enzyme deficiency in P. M. could not be established. This affects statistics of occurrence of these conditions as well as scientific basis on management of such cases.

However this shortcoming does not appear to have affected P. M.'s

management as such but some may not be as lucky to have a straight forward corrective surgery.

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G.6 RADIOTHERAPY FOR CARCINOMA OF THE CERVIX IN A YOUNG WOMAN

Registration number	:	682244
Name	:	S. H.
Age	:	24 yrs
Parity	:	Para 3+0
Address	:	Moshi, Kilimanjaro
Date of admission	:	4.11.91
Date of discharge	:	28.11.91

SUMMARY:

Mrs. S. H. was a 24 years old para 3+0 patient who presented with advanced carcinoma of the cervix. She had been diagnosed to have early carcinoma of the cervix five years earlier but was lost from follow up. She appeared at the referring hospital after she had delivered twice vaginally. The third delivery was by caesarean section due to advanced disease, but again she declined treatment until about a year later. When she presented to us she had a stage IIIB disease for which she received only palliative radiotherapy.

Her case is being presented with a short commentary on radiotherapy in young women with carcinoma of the cervix.

History of present illness:

Mrs. S. H. was admitted in the gynaecological ward as a referral from Kilimanjaro Christian Medical Centre (KCMC). At first presentation in 1986 she had been diagnosed by the referring hospital as having carcinoma of the cervix stage IB. Then she was aged 19 and nulliparous. Surgery as a treatment for the condition was advised but on consulting her parents,

this form of treatment was not accepted. Subsequent to this she absconded from follow up for 5 years. In the course of 5 years of non-follow up she became pregnant and delivered twice vaginally at a different health institution without disclosing the existence of the disease.

In 1987 she was admitted at KCMC, pregnant for the third time and a caesarean delivery was done due to carcinoma of the cervix then staged as IIB. She was again advised on treatment but declined on account of having a neonate to take care of. Eight months after the last delivery she was readmitted at KCMC with excessive vaginal bleeding, foul smelling vaginal discharges and right lower limb swelling of six months duration. Had also a significant weight loss and generalized body weakness.

Pelvic examination confirmed an advanced carcinoma of the cervix stage IIIB.

Gynaecological history:

Menarche was at 14 years of age.

She married at 18 years and her first sexual exposure was only after this marriage. Denied having had any other sexual contacts and that she had never been on oral contraceptives. Had no history of vulval warts or schistosomiasis.

Past medical history:

No previous serious illnesses.

Family and social history:

S. H. was a business woman. She was a third born in a family of seven children. None among siblings had any chronic disease.

General examination:

Clinically she was pale, not jaundiced. Had a grossly swollen right lower limb with moderate pitting. Had bilateral inguinal lymphadenopathy.

Cardiorespiratory system:

Pulse rate was 100 beats per minute with full volume. Blood pressure was 110/60 mm Hg.

She had tachycardia of 100 beats per minute. The volume of the pulse was normal. There was an early systolic murmur (ejection) due to anaemia. There was no gallop rhythm. Both lung fields were clear of crepitations and good air entry noted on both sides.

Abdominal examination:

A sub umbilical midline scar from previous operation was notable. There was no distension. The liver, spleen and kidneys were not palpably enlarged. There was no renal angle tenderness. She had no ascites and the uterus was not palpable.

Pelvic examination:

The vulva and vagina were normal in appearance. They were stained with dark red blood which was foul swelling and flowed freely from the vagina. The vaginal mucosa was pale.

Speculum examination:

A huge cauliflower growth was seen arising from the whole circumference of the portio vaginalis. No part of normal cervix could be visualized. The growth bled easily on contact and gave an offensive odour.

The upper vaginal mucosa was involved with the new growth. The parametria were infiltrated by the cervical mass and on the right side was fixed to

the pelvic wall. The rectal mucosa was free of infiltration.

Musculoskeletal system:

Had pitting oedema of the right lower limb. The left lower limb was normal.

Diagnosis:

1) Carcinoma of the cervix stage IIIB.

2) Anaemia

Investigations and results:

1. Haemoglobin 7.4 g/dl.
2. Midstream urine specimen
   (i) Microscopy - few pus cells
   (ii) Bacteriological culture - No growth
3. Serum creatinine - 100μmol/L
4. Blood smear showed hypochromic and anisocytotic picture
5. Biopsy of the cervical lesion:
   Tumour cells had abundant clear cytoplasm with mild anaplasia
   Tumour cells formed nests and invaded the stroma.
   Histopathological diagnosis was: Adenocarcinoma of the cervix - clear cell.
6. I.V.U. facilities were not available at the centre then.

Management:

1. Examination under anaesthesia:

Intravenous Pethidine 100 mg and Diazepam 20 mg were given.

The patient was positioned in lithotomy, cleaned and draped with sterile linen. The bladder was catheterized and 300 ml of clear urine was

obtained. A Sims speculum was introduced into the vagina and findings corroborated to those noted earlier on (vide supra).

Digital examination also confirmed parametrial infiltration on both sides, but on the right was fixed to the pelvic bone. the uterus was normal size and freely mobile. A wedge biopsy was taken from the lesion and submitted for histology. Rectal examination was done and confirmed parametrial fixation to the pelvic bone on both sides. No adnexal masses were palpated.

Cystoscopy and sigmoidoscopy were not done.

Clinical diagnosis: Carcinoma of the cervix stage IIIB.

2. Correction of anaemia

Blood transfusion amounting to 1000 ml of Group A Rh D positive compatible to her was given. She was then maintained on Imferon 5 ml on alternate days for 6 doses, folic acid 5 mg once daily for 4 weeks.

Radiotherapy:

Mrs S. H. was given 24 Gy by external beam using Cobalt 60 at daily dosage for 2 Gy. This was palliative teletherapy and the tumour mass shrunk significantly. Intracavitary radiotherapy was not done due to difficulties in introduction of tandems through the external os. Bleeding stopped by palliative radiotherapy.

Thereafter she was discharged home for terminal care.

COMMENTARY:

Carcinoma of the cervix is a disease which is attributed to some sexual behaviour of the patients. The sexual activities which predispose to the

disease include early (pre-menarcheal) intercourse, multiple sexual partners, high coital frequencies like in prostitutes and human papilloma virus (HPV) infections with serotype 16 and 18 [1].

Many authorities agree that invasive cancer of the cervix is proceeded by a spectrum of disease which extends for many years. Mrs. S. H. is a biological experiment conducted by her reluctance to have definitive treatment when the disease was at stage IB. Adenocarcinoma of the cervix is less common than squamous cell carcinomas, and it is not a pure histologic entity but a mixture of more than ten different patterns including endometroid, clear cell, adenoid cystic and undifferentiated carcinoma.

S. H. had clear cell adenocarcinoma.

In adenocarcinoma it is reported that the survival rates are poorer in patients with age below 30 years[2]. S. H. was 19 years at diagnosis and the disease progressed fast from stage IB to IIIB. Also she might have reduced the chance of maintaining it at earlier stages by delivering vaginally twice. Treatment success for adenocarcinoma of the cervix is difficult to compare from one centre to another and from one patient to another because of variations in staging criteria, treatment protocols, histologic criteria and subtypes. For many years radiotherapy was the treatment of choice for early stage cervical carcinoma until 1930's where mortality and morbidity of radical surgery were reduced. It was assumed that adenocarcinoma is less radiosensitive than squamous cell carcinoma, but it has been found out that adenocarcinoma is equally sensitive[2]. For young women with early stage disease like when S. H. presented at first,

surgery has several advantages including the opportunity for accurate assessment of disease spread, avoidance of radiotherapy together with its resultant complications, ovarian function conservation and psychological boost knowing that all the disease has been removed.

In S. H.'s case, this chance was lost due to delay so she had to receive palliative teletherapy. In general, patients with stage III and above their prognosis is poor. In some centres these are again sub grouped into those with negative paraaortic nodes and those with disease confined to the pelvis whereas in the latter an attempt can be made for cure with radiotherapy[2] but in developing countries this distinction can not be made because staging is done on clinical basis only.

It is unfortunate in Mrs. S. H.'s case that no known predisposing factor to the development of carcinoma could be elucidated. It is sometimes assumed to be an extension of adenocarcinoma of the endometrium,[4] but again S. H. had no predisposing factor to that latter. Some authorities link the development of adenocarcinoma to the use of oral contraceptives[3] but S. H. had never used oral contraceptives in her life.

Mrs. S. H.'s case demonstrates a rare experience whereby a teenage and nulliparous patient developed adenocarcinoma of the cervix. She then continued to have the disease and bore children vaginally only to present at an advanced stage where curative treatment could not be undertaken. Despite her age, ovarian function had to be sacrificed, not to a curative but only to a palliative teletherapy.

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G.7 PELVIC KIDNEY PRESENTS AS ADNEXAL TORSION:

Registration Number	:	689553
Name	:	B. A.
Age	:	24 years
Parity	:	Para 1+0
Address	:	Kinondoni, Dar es Salaam
Date of Admission	:	11.1.92
Date of Discharge	:	14.2.92

SUMMARY:

Mrs. B. A. was referred from a peripheral hospital on 11.1.92 complaining of acute lower abdominal pain and lower abdominal swelling which had persisted for four days prior to this admission.

Examination revealed a tender abdomen and a swelling in the hypogastric region which was mobile but very tender. The mass was about 5 cm in its largest diameter. Laparotomy was done on presumptive diagnosis of a twisted adnexa but findings were of multiple congenital anomalies of the genito-urinary tract among which a pelvic kidney was discovered. Mrs. B. A. case is presented with a brief commentary on relationship of urinary and genital tract malformations in gynaecological practice.

History of present illness:

Mrs. B. A. was well until a month prior to admission when she developed a gradual onset of lower abdominal pain which was throbbing and radiating to the back. Three days prior to referral pain suddenly became severe necessitating admission at a peripheral hospital.

Parenteral fluids and analgesics were prescribed for pain relief but to no

avail. Pain persisted and worsened with time. It was on account of the latter that the patient was referred on the third day of admission there. On arrival the clinical findings were similar to those from the peripheral hospital but she was dehydrated as well. Only scanty urine had been passed in the preceding 12 hours.

Gynaecological history:

Menarche had been at 13 years of age.

Her cycles were 28-30 days with a menstrual flow of approximately 6 days.

She was not on any contraception.

Obstetric history:

Was a primipara having delivered by caesarean section 3 years previously. She had not been informed on the indication for the operative delivery! The child was alive and well.

General examination:

The patient was in good general nutritional status. Clinically she was not pale and the temperature was 37^{0}C. There was no oedema.

She was in overt pain and her blood pressure was 120/80 mm Hg and the pulse was 112 beats/minute regular with low volume.

The lungs were clear of crepitations or rhonchi and heart sounds were normal.

Abdominal examination:

There was an ugly suprapubic abdominal scar and no umbilical stump was seen. An obvious distension was noted in the suprapubic region. On light palpation it was tender, firm and equivalent to 16 week pregnant uterus. It was slightly mobile in the transverse plane only.

The liver and spleen were not palpably enlarged. Renal angles were non tender and free of masses. There was no evidence of free peritoneal fluid.

Pelvic examination:

The vulva appeared normal but was anteriorly placed that the fourchette was visible when she lied supine. The vagina was normal and healthy. The cervical os was pinhole and round. There was no portio vaginalis. The uterus was palpable and separate from the suprapubic mass. The mass could be palpated vaginally and had limited mobility but very tender.

The symphysis pubis was missing from the pelvic bone and hence there was a big gap between the medical borders of the innominate bone.

Procedure and findings:

Ketamine Hydrochloride drugs was used to maintain anaesthesia for fear of intra-operative hypotension. For intermittent muscle relaxation Pavlon was used. Examination under anaesthesia confirmed findings obtained at initial clinical evaluation.

The abdomen was cleaned with antiseptics and dressed with sterile linen. A longitudinal incision was made along the previous scar. It was about 7-8 cm long. Entry into the peritoneal cavity was very difficult due to adhesions. The urinary bladder was plastered to the anterior abdominal wall.

Some serosanguinous fluid was found within the peritoneal cavity. This was collected for bacteriological and cytological examination. There were no signs of peritonitis. Self retaining retractors were inserted and the bowel was packed away to expose pelvic viscera. The uterus, tubes and

ovaries were found to be macroscopically normal and healthy. A large retroperitoneal mass in the pelvis, at the bifurcation of the abdominal aorta was found. It was mobile, cystic with a lobulated surface. Several large vessels entered its posterior surface from the aorta. Palpation of both lumbar regions failed to identify both kidneys. The spleen and the liver appeared normal. The pelvic bone was palpated from within the peritoneal cavity and complete absence of symphysis pubis was confirmed. The medial borders of both hip bones left a gap between 3 and 5 cm between them anteriorly.

There was no retropubic space of Retzius as the bladder neck obliterated it.

The rest of the abdominal viscera looked normal. The intraoperative diagnosis was torsion of the pelvic kidney. The abdomen was mopped dry of the peritoneal fluid and it was closed after a correct instrument count was confirmed. Closure of the abdomen was done using catgut no.00 for the parietal peritoneum and polyglactic 910 no.1 for the rectus sheath. The skin was sutured by silk number 1.

The wound was dressed by dry gauze.

Anaesthesia was reversed and upon total recovery and stability of vital signs in the recovery room, the patient was transferred back to the ward.

Post operative care:

1. The blood pressure, pulse rate and respiration were monitored hourly for 4 hours and then after every 2 hours. They remained normal and stable.
2. She received 3.5 litres of Dextrose saline in 24 hours following

surgery.

3. Intramuscular pethidine 100 mg was being given every 6 hours for 24 hours for pain relief.
4. An input and output fluid balance chart was used to monitor fluid requirements and renal output. 1500 ml of clear urine was passed in 24 hours and hence urethral catheterization was discontinued.
5. Intravenous ampicillin 500 mg six hourly was given for 48 hours and them oral capsules continued for another 3 days.

She was ambulant within 18 hours of the laparotomy and recovered uneventfully. On the seventh day postoperatively she was discharged home. She came back for outpatient evaluation four weeks later.

Outpatient follow up:

B. A. was in good health four weeks after laparotomy and had no complaints.

The abdominal wound had healed well. An intravenous urogram was requested which confirmed the presence of a single pelvic kidney and one ureter draining it to the urinary bladder.

It was thence clearly explained to her that she was born with a single pelvic kidney, a split pelvis and that probably had an ectopia vesicae at birth and associated absence of anterior abdominal wall all which commonly occur together[5].

Probably the ectopia vesicae and congenital absence of anterior abdominal wall were repaired in childhood and hence the ugly abdominal scar (vide supra). The acute abdomen was probably due to torsion of the freely mobile single kidney which resulted into compromised blood supply and

therefore oliguria and haemorrhagic peritoneal reaction. It is not known when this visceroptosis got reduced but intra-operatively nothing definitive was done.

COMMENTARY:

Incidence of malformations in the urogenital system is one of the highest of all body systems reaching up to 10%[1]. Congenital malformation of the genital tract are usually accompanied with those of the urinary tract because both are divided from the intermediate mesoderm [1,2,3,]. 3%-4% of population have abnormalities of kidneys and ureters which include variations in blood supply, location and urinary tract duplications.

Kidneys develop on the 5th week of intra-uterine life. Initially they are in the pelvis but with growth, caudal elongation of the embryo causes an apparent' ascent of the kidneys to their adult position in the abdomen. Pelvic kidneys result from failure of the ascent and are called ectopic kidneys and may become arrested anywhere in their course.

B. A. had several malformations pertaining to the kidneys which included absence of the second kidney, a single ureter and an anomalous blood supply to the kidney.

The urinary bladder and urethra are derived from the urogenital sinus and from adjacent mesenchyme.

This development occurs in the 4th week of intrauterine life. Exstrophy of the bladder is exposure and protrusion of the urinary bladder from the abdomen and this is associated with wide separation of the pubic bones [4]. Exstrophy is caused by incomplete median closure of the anterior part of

the anterior abdominal wall which simultaneously involves the anterior wall of the urinary bladder and thence the bladder mucosa communicates with the exterior.

B. A. had these defects at birth because usually absence of symphysis pubis invariably is associated with the following defects; bifid clitoris, short vagina, stricture of the introitus, divarication of the foreparts of labia majora, absence of hair bearing skin of the pubes, predisposition to uterine prolapse and anterior displacement of the vagina[2,5].

The presence of an ugly abdominal scar which was too wide to be explained by the caesarean delivery is a strong indication of a possible repair of some defects in childhood for which B. A. was not aware of.

The presence or absence of bifid clitoris, short vagina and stricture of introitus in childhood can not be ascertained in B. A. due to partial reconstructive surgery and possible dilatation at coitus after marriage. However it is clear that B. A. had multiple congenital malformation of the urogenital system. Some were corrected in childhood but other persisted to date. B. A. was not aware that she was born with any deformities and she had lead a normal life and had carried a pregnancy to term.

The indication for operative delivery could not be discerned.

Whenever a malformation of the genital tact is encountered in practice, some investigations to exclude urinary tract anomalies are mandatory. Lesion of absence of one kidney, double ureter or pelvic kidney may not call for immediate treatment but may do so later in life. The most important aspect of "harmless" malformation is when they cause a confusion

in adulthood in an emergency as in B. A.'s case.

Torsion of an aberrant organ may not arouse suspicion and may lead to excision of a vital organ being mistaken for a tumour! For example in B. A.'s case in such an emergency one would have easily assumed it to be a vascular pelvic tumour which needed removal.

In emergency situations, time does not allow for one to perform an intravenous urogram and hence the importance of investigations when one encounters such patients in non emergency situation. Pelvic kidneys have been confused with haematocolpos at laparoscopy and drainage being wrongly proposed [2].

B. A. case brings to light the importance of screening newborn babies. It is possible that B. A. was born with abnormal number of umbilical vessels which was overlooked at birth, this also denotes urinary tract malformations.

Also it is important to communicate with the patient on all known information so that she may volunteer it when being attended by somebody else. B. A. knew for the first time in adulthood that she was born with multiple congenital malformations.

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G.8 STRESS INCONTINENCE FOLLOWING REPAIR OF OBSTETRIC URINARY FISTULA: IS IT AN ISSUE?

Registration No.	:	712365
Name	:	Miss D. K.
Parity	:	1+0
Age	:	21 years
Address	:	Msasani, Dar es Salaam
Date of admission	:	7.2.93
Date of discharge	:	15.4.93

SUMMARY:

Miss D. K. was a primipara patient who was admitted with history of total urinary incontinence following a difficult vaginal delivery 2 years previously.

Examination revealed a juxta-urethral vesico-vaginal fistula (VVF) about 2 cm in diameter whose margins were not fibrotic.

Repair of the VVF was done and D. K. was back to hospital 3 months later complaining of stress incontinence. She however declined to have another surgery to correct her stress incontinence.

Her case is being presented with a commentary on the significance of stress incontinence in women.

History of present illness:

Miss D. K. had prolonged labour at term which culminated into assisted vacuum extraction of a macerated fetus at a health centre. The weight of the baby was 3500 g at delivery.

She had attended antenatal care at the same health centre throughout

pregnancy and there was no risk factor noted. She was not advised on any special requirements for the place of confinement.

Therefore she started labour at home and was immediately transferred to the health centre where she laboured for two days without delivery. Fetal movements and uterine contractions ceased on the second day of labour! Subsequent to this she could not pass urine as well. She was hence catheterized.

Eventually she was delivered by a vacuum extractor. A day later she started leaking urine despite having been catheterized. No urine came out through the urethral catheter. No stool incontinence accompanied the urinary leakage but when she resumed walking there was a noticeable inability to lift the left foot off the ground. This dragging of the left foot improved spontaneously over time.

There was an accompanying amenorrhea of one year duration following this traumatic labour and delivery.

After a two week stay in the health centre she was then referred to a regional hospital. From the regional hospital she requested to be discharged so that her relatives would bring her to this centre.

Gynaecological history:

Menarche was at 14 years of age and subsequent cycles were regular. The cycles were on average between 28 and 30 days and she would bleed for 4 to 5 days. There was no previous history of sexually transmitted diseases.

Past medical history:

Nothing contributory was volunteered.

Family and social history:

She was not married and had conceived as a result of a casual sexual relationship. There was no history of tuberculous contact from among close relatives.

Physical examination:

There no was pallor. The height was 148 cm and she had no lower extremity deformities. There was no foot drop on either limb.

She was not depressed and communicated freely.

Cardiovascular system:

The pulse rate was 74 beats per minute and the blood pressure was 110/70 mm Hg. The heart size was normal and heart sounds were normal and without murmurs.

Abdominal examination:

The abdomen was scaphoid and moved with respiration. It was soft and non tender. The spleen, kidneys and liver were not palpable. The renal angles were not tender.

Central nervous system:

The tone, power and tendon reflexes were normal and equal on both lower limbs. No muscle atrophy was notable. Sensation was also normal on both sides.

Pelvic examination:

The external genitalia was normal in appearance but soaked with free flowing urine. An ammoniacal smell arose from the perineum. The perineum was covered with small granulomas.

There was a healed episiotomy incision on the left side of the labia. The

vaginal could easily admit two fingers and the mucosa felt normal. A single fistula of about 1.5 cm diameter could be palpated on the anterior vaginal wall about 2.5 cm proximal to the external urethral meatus. Mild fibrosis could be felt beyond the fistula but its edges were free and pliable.

Speculum examination confirmed the findings obtained by digital palpation.

Rectal examination:

The anal sphincter had a normal tone. The rectal mucosa was smooth and without fistulae or fibrosis.

Diagnosis: Obstetric urinary fistula.

Investigations and results:

1. Haemoglobin was 12.5 g/dl.
2. Midstream urine specimen for bacterial culture was sterile.
   - Urine for sugar and albumin was negative for both
   - Urine for schistosomiasis was negative
3. Intravenous urogram

   Both kidneys and ureters were visualized and excretory.
4. Serum creatinine was 80 μmol/L
5. Stool for schistosomiasis and helminths:

   no worms or ova were seen.
6. Blood grouping and Rh: B Rh positive

Examination under anaesthesia:

Miss D. K. was put in lithotomy position and the vulva, vagina and perineum were cleaned with antiseptics and draped in sterile linen. General anaesthesia was induced as in other gynaecological cases.

Digital examination was done again and later speculum examination. All findings corroborated to the findings at admission. Even after methylene blue dye instillation into the urinary bladder no new fistulae were visualized. The patient was planned for repair of the fistula on a later date.

Vesico-vaginal (Juxta-urethral) fistula repair:

The patient was operated upon after basic investigations were found normal. Cross-matched blood was reserved for the operation but it was not used as she had a good pre-operative haemoglobin.

The patient was anaesthetized in lithotomy position with intravenous thiopentone 250 mg which was followed by 100 mg of suxamethonium hydrochloride before a cuffed endotracheal tube was inserted. Maintenance of anaesthesia was done by nitrous oxide and oxygen with the former acting both as an anaesthetic and an analgesic agent.

The patient was then turned to the genu-pectoral position for ease of visibility of the middle third of the urethra.

She was then cleaned with antiseptics and draped in sterile linen and another examination under anaesthesia was conducted to confirm the suitability of the position for repair.

The labia majora were retracted and fixed to the skin on the thighs by a strong stitch to gain more exposure of the vagina and hence the fistula.

The actual repair:

The vaginal wall was dissected off the symphysis pubis where some fibrosis was noted. The tissues became freely mobile immediately.

The bladder mucosa was dissected off the vaginal wall all around the

fistula's edges and free flaps were obtained. This dissection was difficult and some fibrosis which was not apparent at EUA was encountered. The free flaps were apposed in a transverse plane while inverting the bladder mucosa using extra-chromic catgut number 00 in an atraumatic needle.

The second layer of sutures picked up the deep surfaces of the vaginal wall in order to cover the bladder mucosa suture line. The same suture material and size was used in this layer.

The third layer was the vaginal mucosa. It was repaired with deep bites away from edges of the flaps to obliterate dead spaces between suture lines. The stitch used here was vicryl number 00 on an atraumatic needle. An indwelling 2-way Foley's catheter number 16F was introduced into the bladder and fixed externally to the labia majora and into the thigh with a non absorbable stitch. At the end of the operation the patient was turned over to lithotomy position and anaesthesia was discontinued. She gained consciousness soon after stopping nitrous oxide inhalation. She was observed briefly in the recovery room and then sent back to the gynaecological ward.

Post operative treatment:

1. Intravenous Dextrose-Saline 3 L in 24 hours was given and later a lot of fluids was taken orally.
2. Injection Ampicillin 500 mg intravenously 6 hourly for 24 hours was given as prophylaxis, then to continue for 5 days with oral capsules with the same dose.
3. Pethidine 100 mg 8 hourly was given for analgesia.

4. Continuous bladder drainage for 10 days was done and later bladder training was initiated.
5. Input and output fluid chart was used to observe fluid balance.
6. Blood pressure, pulse and respiratory rates were monitored and recorded for 12 hours post operatively.

Post operative follow up:

Miss D. K.'s recovery was smooth in general. Bladder drainage showed non blood stained urine and adequate urine volumes a few hours of the post operative period.

The bed was dry throughout and there were no symptoms and signs of sepsis. The catheter was removed on the 10th post operative day. The catheter specimen of urine for culture was sterile. She was advised to visit the toilet every hour to pass urine without waiting for an urge to micturate. There was no leakage of urine whatever position she assumed.

She was discharged home with instructions to do pelvic exercises and that she should abstain from coitus for six months post operatively. Six weeks post operatively she was seen at the outpatient clinic. The repair was successful and she had no complaints.

Three months from date of repair, she appeared again at the outpatient clinic complaining of stress incontinence but in the meantime had had two normal menstrual periods for the first time since injury. There was no dysuria, frequency or retention.

She was examined again under anaesthesia and no residual fistula was seen, but some fibrosis had occurred at the repair site and the integrity of the

urethral sphincter could not be ascertained. Boney's test was done at the ward but it was inconclusive.

Cystometry could not be done. Miss D. K. was advised to have another surgical correction to relieve her of stress incontinence following VVF repair. She declined from this offer for want of childbearing role now that she had resumed regular menses.

She was therefore counselled to have antenatal care at a hospital where abdominal delivery would be done in all subsequent pregnancies.

COMMENTARY:

Urinary incontinence is defined as a condition in which involuntary loss of urine is a social or hygienic problem and is objectively demonstrable.[1] Miss D. K. had presented with a total urinary continence which fulfilled the definition. This was accompanied with amenorrhea which to her it implied infertility as well. After repair of the VVF, D. K. established regular menses but she also developed stress incontinence.

To her the stress incontinence became a less serious problem when she thought that fertility had been established by resumption of menstrual cycles. Therefore she neglected the stress incontinence for the time being.

This presents an interesting picture which differentiates the attitudes towards a disability between physicians and patients. It would seem to a medical practitioner (gynaecologist or urologist) that a patient transformed from total incontinence to stress incontinence is not a job well performed. The physicians have several parameters which must be

fulfilled to declare a patient cured from incontinence [2] but these parameters matter less to the patient who becomes satisfied before she is cured.

In women, due to their short urethra, at different times of their lives pass through some stages of stress incontinence (i.e. they involuntarily pass a few mililitres of urine on sudden increases of intra-abdominal pressures e.g. on sneezing, laughing, hiccough etc).[3] Also with aging, women develop some stress incontinence due to relaxation of pelvic supports. This relaxation causes the intra-abdominal portion of the urethra to be away from the pinching effect of pressure when there is a sudden increase in intra-abdominal pressure. Therefore the intravesical pressure momentarily exceeds intra-urethral pressure and hence urine spurts.

In normal women, when there is no prolapse of the upper $^1/_3$ of the urethra this does not happen. When this part of urethra lies in the abdomen it subjected to intra-abdominal pressure variations similar to the urinary bladder. So, when the patient coughs or sneezes, if the intra-vesical pressure increases by a value A, the same pressure value pinches the intra-abdominal urethra hence one cancels the other and there would be no urine leakage whatever pressure is reached.

When repair of juxta-urethral fistula is undertaken and then healing and fibrosis pulls the bladder neck and the upper $^1/_3$ of the urethra below the pelvic floor, the urethra becomes no longer subjected to intra-abdominal pressure influence and sudden cough causes incontinence. This might have happened in D. K.'s case. This problem is not amenable to surgical

correction by Marshall-Marchetti-Krantz vesico-urethropexy [3].

It is a blessing in disguise that women can bear stress incontinence better than men because even in normal girls at ages between 18 and 24 years they have this incontinence which is never reported as a social problem[3].

The most difficult issue in D. K.'s issue is that before she conceived, or before repair of VVF would be undertaken, stress incontinence was never ruled out. So it is not clear whether this was bearable to her because it was there before or not. On top of this, it is not possible for one to diagnose stress incontinence in a patient with total incontinence.

However there are many other conditions which mimic stress incontinence and these must be differentiated from the stress incontinence by specialized investigations like cystometry and urethral pressure profiles. Detrusor instability, central nervous system and psychological disorders may mimic stress incontinence.

In order to specifically diagnose stress incontinence urine leakage must be observed to occur only at the instant when intra-abdominal pressure is elevated and urine leakage should cease once this pressure is removed. Secondly during urine leakage there should be no detrusor muscle activity. The patient must therefore have a normal cystometry. None were done in D. K.'s case but the diagnosis was based on history alone. Now to bank the possibility of cure of stress incontinence at urethropexy is a delicate issue.

The patient seemed not to mind this type of incontinence; None would be sure that the subsequent surgery would correct the disability without

causing more damage like creating a fistula especially following what was a difficult and delicate VVF repair.

Shortening of the urethra, disturbing the posterior urethro-vesical angle and scarring in the region of the posterior urethra and bladder neck are some of the predisposing factors to stress incontinence after a VVF repair.[5]

However if the patient is satisfied with cure of total incontinence one would hesitate to make an extra effort to convince her to agree to an operation whose priority has changed from it to childbearing.

Therefore in females mild to moderate stress incontinence is not an issue and many get used to live with it and never present themselves to urologists.[6]

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G.9 MOLAR PREGNANCY PRESENTS FOR THE FIRST TIME IN LABOUR AT 32 WEEKS

Registration Number	:	757273
Name	:	Mrs. M. Y.
Age	:	23 years
Parity	:	Gravida 2 Para 1
Residence	:	Tandale, Dar es Salaam
Date of Admission	:	25.8.93
Date of Discharge	:	27.9.93

SUMMARY:

M. Y. was 32 weeks pregnant and presented with antepartum bleeding of one week duration. A faster growth of pregnancy had been noticed accompanied with exaggerated symptoms of pregnancy compared to the previous one. She had reported one episode of painless vaginal bleeding a week before admission and this was mild in intensity. Prior to this she had made five un-eventful antenatal visits at a peripheral clinic. Fetal heart tones were detected as well.

She was admitted because of profuse vaginal bleeding and premature labour. Fetal heart tones were no longer heard and the abdomen felt tense and moderately tender. Abruptio placenta was suspected. An intrapartum ultrasound was done and much to the surprise of everybody a complete molar gestation at 32 weeks was found!

History of present illness:

M. Y. had been admitted from home with complaints of labour pains at 32 weeks and vaginal bleeding on and off for one week.

She had amenorrhea of 32 weeks and had made five uneventful antenatal

visits. In the index pregnancy she had mentioned of slightly exaggerated morning sickness compared to her first pregnancy and the fundal growth rate was faster compared to the previous one.

She had no features of EPH gestosis, hyperthyroidism or cough in the index pregnancy.

Her blood pressure had ranged between 100/70 to 120/70 mm Hg throughout her antenatal attendance. From 24 weeks fetal heart tones had been noted and registered. The fetal presenting part was recorded as breech throughout. Weight gain was less than 0.5 kg per week and had no pedal oedema or proteinuria. The patient was not sure whether she had ever felt any fetal movements in that pregnancy.

Past Obstetric history:

She had a previous full term normal delivery 3 years previously and the child was alive and well and had been on oral contraceptives for 1 1/2 years subsequently.

Gynaecology history:

Her cycles were regular occurring every after 28-30 days since menarche at 14 years. Menstrual loss was normal and lasted for 4 days. There was no accompanying abdominal pains.

Past medical history:

No noteworthy illnesses in the past.

Family and Social history:

She was a second born in a family of 5. She had completed primary school education recently and was married to a peasant.

Physical examination:

Appeared in obvious pain and was pale but not jaundiced. She was afebrile. The Blood pressure was 120/80 mm Hg and the pulse 100 beats per minute with good volume.

Lungs were clear of crepitations or rhonchi and heart sounds were normal.

Abdominal examination:

The abdomen was distended and corresponded to 32 weeks pregnant uterus. This corresponded to the calculated duration of amenorrhea. It was tense with board like rigidity and was very tender. Fetal presentation could not be ascertained clinically but the level of engagement was recorded as 5/5. Fetal heart tones were not heard. With the above observations, abruptio placenta at 32 weeks was strongly suspected. An abdominal ultrasound was done and a complete mole was diagnosed. No theca luteal cysts were seen on both ovaries.

Pelvic examination:

The vulva and vagina were normal. There was dark brown blood oozing from the vagina. Digital examination revealed a soft and effaced cervix with 2 cm. dilatation. A soft mass was felt at the cervix with a spongy consistence and on withdrawal of the examining finger a few molar vesicles were seen coming out of the vagina.

Investigations and results:

1. Haemoglobin 9.7 g/dl.
2. Blood grouping and cross-matching.

   Blood group O and Rh D positive was obtained for transfusion.
3. Chest X-ray - was normal

4. Blood smear for malaria parasites - was negative.

Plan for management:

The patient was informed of the diagnosis; counselled and told of the management plan.

In the absence of working suction currete at that material moment, the plan was to induce expulsion of the mole by oxytocin drugs. Thus she was put under parenteral infusion of oxytocin 10 I.U in one litre of Normal saline and titration started at 10 drops per minute. She expelled a large volume of molar vesicles six hours after start of oxytocin and the uterus contracted well below 18 weeks size.

The patient was then transferred to theater where she was anaesthetized and proof evacuation was done. Few more vesicles were obtained and these were submitted for histological examination. Blood loss amounted to about 500 ml. Intravenous ergometrine 0.5 mg was given at the end of the evacuation and oxytocin drip maintained. The uterus contracted firmly and the oxytocin drug was discontinued 4 hours later.

Post operative management:

1. The patient was given 2 litres of blood group O Rh positive because the haemoglobin had fallen to 5.4 g/dl.
2. Antibiotics were prescribed which included capsules chloramphenicol and metronidazole for 5 days because she had developed fever and foul smelling lochia. The blood smear for malaria parasites was negative.

   Midstream urine specimen culture for bacteria was sterile as well.

   She improved on antibiotics.

3. The blood pressure remained stable between 120/70 and 120/80 mm Hg and the pulse rate came down to 76 beats/minute after blood transfusion.

4. White cell count was:

   Total white cell count 5.3 x 10^9/L.

   Differential white cell count was

Segmented neutrophils	60%
Eosinophil	5%
Lymphocytes	32%
Monocytes	3%

5. Abdominal ultrasound.

   Snow storm appearance without any fetal parts.

   No theca - lutein cysts on ovaries.

Progress in the ward:

The haemoglobin improved to 7.5 g/dl after 2 litres of blood transfusion. She had some serosanguinous discharge from the vagina which was foul smelling but responded well to antibiotic treatment. However she developed a non productive cough on the second day post operatively although the temperature had already become 37^{0}C.

Chest examination did not reveal any crepitations or rhonchi and the X-ray was normal.

In view of the advanced gestation of molar pregnancy and a corresponding big uterine size, the now productive cough after evacuation and unreliable follow-up without human chronic gonadotropin assays, M. Y. was empirically put on methotrexate 15 mg daily after baseline investigations. Renal and

liver functions were normal and the blood elements could stand the course of cytotoxic chemotherapy.

She tolerated well five courses of methotrexate and the cough subsided on the second course. M . Y. was discharged home on oral contraceptives and she was to be reviewed at outpatient clinic 4 weeks later.

Outpatient follow up:

She was seen four weeks later and was in good health. The uterus had involuted fully. There was no history of vaginal bleeding, dyspnoea, chest pain cough or haemoptysis. The urine for pregnancy test was negative. M .Y was to be seen monthly for 3 months and then every month for 6 months. She had not completed the follow up when this case report was being prepared.

COMMENTARY:

Complete mole is characterized by generalized hydropic swelling of chorionic villi and trophoblastic hyperplasia without identifiable embryo or fetus. Usually it has 46XX Karyotype with all molar chromosomes being paternal in origin[1,3].

97% of complete moles present with vaginal bleeding which occurs between 16-18 weeks of gestation. The amount of bleeding varies widely but when excessive may cause anaemia in 50% of patients. The patient described here presented with bleeding for the first time at about 31 weeks of gestation. This mode of presentation was atypical in that she had not experienced any features mimicking threatened abortion which commonly occurs in molar pregnancies in the first trimester [3].

About 51% of patients with complete mole present with excessive growth of the uterus due to retained blood and expansion of the uterus as a result of molar tissue proliferation[8] M.Y presented with a uterus which corresponded to the calculated duration of amenorrhea all through the antenatal attendances.

It is usually difficult to palpate for presence of theca lutein cysts when the uterus is enlarged to 30 weeks or above but even at ultrasound M. Y had no enlargement of adnexa. Among other common symptoms of complete moles which M.Y did not present with included hyperemesis gravidarum, pre-eclampsia and hyperthyroidism.

Post evacuation she developed a non productive cough which was not accompanied with dyspnoea, pleuritic pain or haemoptysis. It is possible that she had suffered from minimal trophoblastic tissue embolization after oxytocin induction. However chest Xray did not confirm this and an electrocardiogram was not done. However majority of patients who develop pulmonary embolism are those with features of elevated levels of human chorionic gonadotropin (HCG). Elevated HCG levels are thought to be the causes of hyperemesis, enlarged theca lutein cysts and excessive uterine growth in molar pregnancies[8]. M.Y developed a negative pregnancy test early in the course of treatment which may indirectly reflect a mild to moderate elevation of HCG. Also this atypical presentation of gestational trophoblastic disease i.e. without the typical signs and symptoms in early pregnancy may be reflective of the same. HCG levels could not be determined before or after evacuation of the mole at that time at this centre.

Chemoprophylaxis was indicated in M.Y's case despite not having had baseline or follow up HCG on account of an enlarged uterus with molar pregnancy.

Chances of recurrence are approximately 1.6% and increases to 28% in patients who had two previous molar pregnancies[8]. Also patients who have complete moles have high chances of developing persistent disease or choriocarcinoma[9]. So it is still justified to have given M. Y an empirical course of methotrexate for fear of persistence, recurrence or malignant transformation.

This patient is presented as a rare experience where one presented with a third trimester vaginal bleeding and that despite her having had a complete molar gestation she had minimal symptoms and signs which usually accompany majority of patients with that diagnosis.

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428 East Preston Street

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G.10 CAUTERY OF VIRAL WARTS IN PREGNANCY: WHO BENEFITS?

Registration number	:	757829
Name	:	Mrs. T. A.
Age	:	19 years
Parity	:	Gravida 2 Para 1
Residence	:	Kinondoni, Dar es Salaam
Date of admission	:	3.9.93
Date of discharge	:	12.9.93

SUMMARY:

Mrs. T. A. was referred to the gynaecological clinic because of vulval growths. She was 20 weeks pregnant attending prenatal care at her local antenatal clinic.

Examination revealed extensive viral warts covering the whole perineum. There was a malodorous smell emanating from the warts. There were no ulcers and the growths did not bleed on contact.

Warts were treated by electrocauterization. Substantial haemorrhage amounting to approximately seven hundred mililitres was encountered in the course of surgery.

Benefits of surgical treatment of warts during pregnancy is discussed in the commentary.

History of present illness:

T. A. was admitted complaining of growths on the perineum which had persisted for 4 months. She was also amenorrheic for 20 weeks for which she had attended a peripheral antenatal clinic twice. The pregnancy progress was reportedly good. The patient had no other complaints except

for the vulval growths. She described them as many, fast growing and that they had started around the vulva and spread to involve the anal region. There had not been any bleeding episodes from those growths.

Coitus had not been possible in the previous 2 months because of the big size of the growths around the vulva.

Review of other systems:

There was no history of cough or palpitation .

Past medical history:

There was no noteworthy major illnesses in the past.

Past obstetric and gynaecology history:

Menarche had been at 13 years. She then had regular cycles of 30 days and bleeding lasted approximately 4 days with a normal flow. The last normal menstrual period had been on 26.4.93.

Family and Social history:

She was married. Had attended formal education to the level of primary school. She was un-employed. She neither drank alcohol nor smoked cigarettes. Husband had no genital warts or sores.

General examination:

She was in good general health. There was no pallor. The blood pressure was 110/70 mm Hg and the pulse rate was 76 beats per minute. The temperature was 37^{0}C and there was no lymphadenopathy.

Abdominal examination:

The abdomen was slightly distended suprapubically. The liver, spleen and kidneys were not palpably enlarged. The uterus was equivalent to 20 weeks of gestation and corresponded to the calculated duration of amenorrhea.

Pelvic examination:

The perineum was covered with extensive multiple warty growths. The vulva was not visible. The growths were of different sizes and arising from labia, the fourchette and extending to the anal region. The area between the labia majora and the thighs was also involved. Foul smell emanated from the growths although there were no signs of bacterial infection. The vagina, urethra and the cervix were not tender and did not bleed on contact. There was no vaginal discharge.

Rectal examination:

At anal the ring the warts were abundant but the rectal mucosa was spared. The anal sphincter had a normal tone.

Diagnosis: Extensive genital warts in pregnancy.

The patient was planned and prepared for electrocauterization.

Investigation and results:

1. Haemoglobin was 10.4 g/dl.
2. Serology for syphilis (VDRL) was negative
3. HIV screening by Elisa was negative.
4. Total white cell count was 4500/mm^3

   Differential count: Neutrophils 65%

   Lymphocytes 32%

   Monocytes 2%

   Eosinophil 1%

   Red blood cell morphology and staining characteristics were normal.
5. Midstream specimen of urine

   a) For sugar and protein was negative

b) Sediment microscopy - no pus cells were seen.

c) Bacteriological culture : no growth after 24 hours of incubation.

6. Blood grouping and Rhesus: She was group B Rh positive.

7. Histology from warts: Moderate parakeratosis and acanthosis. Minimal lymphocytic infiltration in the dermis consistent with condylomata acuminata. No malignant features.

Pre-operative preparations:

Blood for cross-matching was collected and three units of whole blood were available and reserved for her.

She was under daily Sitz baths with Habitane solution for 3 days prior to cautery because cleaning into the warty crevices was not feasible.

Operative procedure:

The patient was placed in lithotomy position after being anaesthetized with 250 mg of sodium thiopentone intravenously. She was maintained on halothane and oxygen 6 L/minute by mask.

The vulva, vagina and perineum were cleaned by an antiseptic and then painted with weak iodine. She was then draped in sterile towels.

Bipolar electrocauterization was done serially starting from the uppermost lesions to those around the anus. Cutting mode of the cautery was used to excise the warts while alternating with coagulation mode to control bleeding. Some troublesome bleeding was encountered in the course of surgery and transfixion with catgut stitch no.00 had to be undertaken. Eventually haemostasis was achieved but she had already lost about 700mls. of blood. This necessitated intraoperative blood transfusion.

The operation field was dressed with paraffin gauze and dry sterile dressings on top.

The excised tissues were submitted for histopathological examination (see histological results above).

Post-operative care:

1. Her blood pressure, pulse rate and respiratory rate were monitored half hourly until she had recovered fully from the effects of anaesthesia.
2. Inspection of the operation site revealed non-significant post operative oozing.
3. Intravenous fluids were discontinued 7 hours post operatively.
4. Intramuscular pethidine 100 mg for pain relief was given for 2 days.
5. She recovered well and was discharged home on the fifth post-operative day.

Follow up:

The patient was seen at the gynaecological outpatient clinic 4 weeks after discharge. She had recovered well. There were no new growths and the surgical wound had healed well. The vagina and the cervix were free of growths. The pregnancy was growing well and she had no other risk factors, she was advised to continue attending the peripheral clinic. The patient was discharged from the clinic.

COMMENTARY:

Genital warts is a common disease in women and more so in pregnancy [1,2]. Warts are caused by human papilloma virus (HPV) which is a sexually transmitted pathogen([2]). However not all exposed to HPV develop warts but

only those with predisposing factors like immune suppressing conditions eg. chronic illnesses, diabetes mellitus and pregnancy states.

Chronic vaginal discharges which make the perineum moist or wet most of the times are also among predisposing factors. Individual genetic constitution may also be among co-factors to ones expression of an overt disease.

Treatment of vulval and vaginal condylomata during pregnancy is an important issue since occasional transmission to the infant during vaginal delivery is suspected[1,3,5]. In untreated cases abdominal delivery is indicated since nasopharyngeal HPV infection of the neonate is a suspected to occur at birth.[4]

There are many modalities of treatment of viral warts including local application of 25% podophyllin, 5-Fluorouracil creams and trichloroacetic acid all of which can not be used in pregnancy due to suspected harmful effects to the fetus if absorbed[1]. Therefore the safest methods for treatment in pregnancy are surgical. Cryosurgery and Laser ablation are not available in many centres in the third world although are described as the easiest and safest to use. Most centres are left with limited surgical options ie cold knife surgical excision and electrocautery.

The latter is also not universally available. Viral warts, like most tissues in pregnancy, they also become highly vascular and this predisposes to haemorrhage during surgical excision. Postponement of treatment until puerperium is suggested by some authorities for fear of this complications[1]; but then abdominal delivery together with its accompanying risks becomes indicated. Abdominal delivery service also is

not available in all health facilities and this requires great motivation to the pregnant mother to understand the implications of warts to the unborn baby.

Despite the use of electrocautery and coagulation in T. A's case still blood loss amounted to about seven hundred mililitres intra-operatively. This is not an insignificant loss in a pregnant lady whose reserves are already taxed by the pregnancy.

In Dar es Salaam, being a malaria endemic area, many patients would appear with extensive warts, advanced pregnancy and anaemia in which case surgical excision of the warts bears no priority while abdominal delivery would also be risky due to anaemia. It was sheer luck in T. A's case that she presented with good haemoglobin and at 20 weeks of gestation but still had lived with the warts for 4 months without presenting herself for treatment.

Follow up of patients like T. A's is difficult because even though excision was done and the husband had no warts. Condom use would not be compatible with reproductive wishes to this couple whose wish was to have more children. Even if this couple agreed on its use, then for how long would they use condom?

The only person who is protected by this risky surgical excision in pregnancy is the unborn baby even though the chances of peripartum infection are not 100%[1].

Despite surgery and all other modalities of treatment the virus is never eradicated from the mother. The woman will continue to be infective to the husband, will have high chance of recurrence of warts, will still have

the same risks to development of cervical and vulval anaplasia because of the inherent oncogenicity of HPV.[7]

It is now thought that there is a possibility of transplacental transmission of HPV.[8] Therefore in pregnancy, haemorrhagic electrocauterization seems not to benefit the mother, the fetus or the sexual partner instead it is a risky operation without significant advantages.

After all if a polymerase chain reaction is undertaken as an investigation, 80-90% of sexually active women are HPV positive[6]. If these findings are confirmed, then it is doubtful whether HPV is an infection to be treated for fear of genital cancer or should be regarded as a saprophyte if it is present in such a big proportion in the human population!

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OB.1 PLACE OF DESTRUCTIVE DELIVERY IN MODERN OBSTETRICS

Registration number	:	40/93
Name	:	Mrs. M. R.
Age	:	19 years
Address	:	Mbwewe, Coast Region
Parity	:	Gravida 1
Date of admission	:	10.6.93
Date of discharge	:	24.6.93
Delivery number	:	8425

SUMMARY:

Mrs M. R. was admitted into the labour ward after having laboured unsuccessfully for 3 days. She was found to be dehydrated, toxic exhausted and in second stage of labour. Fetal heart tones were not heard. Resuscitation and antibiotics were prescribed and given before fetal craniotomy and delivery was undertaken in theatre. A macerated stillborn male baby weighing 2500 g was obtained.

She recovered uneventfully from the operation and was discharged home after a fortnight of continuous bladder drainage,

The place of destructive deliveries in contemporary obstetrics in presented and discussed.

History of present illness:

M. R. was a primigravida. Her antenatal care at a peripheral clinic had been good. No risk factors had been identified in the course of all her attendances. Spontaneous labour had started at home at around 38 completed weeks of pregnancy. On the following morning she was

transferred to a nearby dispensary for continued intrapartum care. Labour progressed well to full dilatation on the day of admission and she was encouraged to bear down in second stage. However no further progress occurred for the whole day and on the following morning it was discovered that delivery was in no way imminent. Uterine contractions had ceased and the fetal heart tones had already disappeared. Arrangements for transfer to the nearby district hospital was made but patient was never moved until a day later when transport was available. Her general condition had deteriorated in the interim period at the dispensary and a decision to transfer directly to Muhimbili Medical Centre, more than 100 kilometres away was made.

Gynaecology history:

Menarche was at 14 years. Her menstrual cycles were regular occurring every 30 days. No contraceptives had ever been used.

Past medical history:

No serious medical or surgical illnesses had been experienced in the past.

Family and Social history:

There was no history of diabetes mellitus in the family. She was married and stayed with her husband. Both were peasants.

General examination:

She looked very sick. The blood pressure was 90/60 mm Hg. Her temperature was 39^{0}C and the pulse was thready with a rate of 120 beats per minute. She was mildly pale, dehydrated and tachypneic with a respiratory rate of 40 per minute.

Abdominal examination:

There was gross distension of the abdomen. The liver, spleen and kidneys were not palpably enlarged. The uterus corresponded to that of gestational age of 34 weeks. The uterus was atonic without any contractions fetal parts could not be felt. Fetal heart tones were not heard. The fetal size was estimated to be 2600 g. The flanks were distended but tympanitic. No shifting dullness was elicited. Bowel sounds were distant.

Pelvic examination:

There was a foul smell emanating from the vulva. The vulva was reddish and oedematous. There was pus-like discharge trickling from the introitus. The cervix was fully dilated and the fetal skull had severe moulding and a huge caput and the level of the presenting part could not be ascertained vaginally. The position of the vertex also could not be determined due to impaction. Catheterization was done with difficulties and scant bloody urine was obtained.

Diagnosis:

1. Obstructed labour with intra-uterine fetal death.
2. Amniotic fluid infection
3. Maternal distress.

She was planned for energetic resuscitation, antibiotic cover and destructive delivery.

Management:

1. Intravenous fluid therapy with Ringer's lactate was started immediately with a wide bore cannula.

2. Blood for grouping and cross-matching was obtained at setting of the intravenous line.

3. A combination of

   (i) Ampicillin 1 g was given as a single dose, then 500 mg was continued six hourly thereafter.

   (ii) Metronidazole 500 mg 6 hourly was started.

   (iii)Gentamicin 80 mg 12 hourly.

4. Urethral catheter remained in situ for urine output monitoring.

After about 4 hours of resuscitative measures and antibiotic therapy, the patient was cleared for anaesthetic fitness and subsequent destructive delivery. She consented for both and was transferred to the operating theatre.

Destructive operation - Craniotomy:

The patient was placed in lithotomy position. The vulva and vagina were disinfected with savlon and weak iodine. The patient was covered with sterile drapes. Examination under anaesthesia confirmed previous findings (vide supra).

A large vulsellum forceps was used to fix the fetal head and a Simpson perforator was inserted through the dilated cervix between fingers of the left hand placed vaginally against the fetal cranium to avoid the perforator from slipping away. After the perforator had entered into the cranium the blades were spread open and turned repeatedly to pulverize the brain. The skull collapsed with the extrusion of brain substance and gentle traction was made. While guarding bone spicules from injuring the maternal tissue. At the delivery of the head it was discovered to have

been in occipito-posterior position.

The shoulders were checked and it was found that they could be delivered with a hook in the axillae without cleidotomy.

The trunk and lower limbs followed with gentle traction. A gush of foul smelling, meconium stained liquor followed the delivery of the fetus.

The placenta and membranes were delivered with ease. Ergometrine 0.5 mg intravenously and uterine massage encouraged a firm uterine contraction. This happened without much ado. The total blood loss was estimated to be 350 ml. Inspection of the cervix and the vagina for traumatic injuries was negative except for an ischaemic spot on the anterior vaginal wall. The posterior vaginal wall and the rectal wall were healthy.

Continuous bladder catheterization was done with a ballooned Foley's catheter number 16 for 14 days. Anaesthesia was reversed and after a brief observation in the recovery room she was wheeled to the postnatal ward.

Post operative care:

1. The blood pressure, pulse and respiratory rate were monitored half hourly for 4 hours. The blood pressure stabilized at 120/70 mm Hg and the pulse at 80 beats per minute pre-operatively. Thereafter the pulse continued to fall to 76 beats per minute on the third post operative day.
2. Antibiotics were continued as previously outlined (vide supra).
3. She continued to receive parenteral fluids which were now changed to Dextrose-saline for 3 days.
4. 500 ml of concentrated and blood stained urine was passed in the first

12 hours but later improved in amount and became clear.

5. She was ambulant without weakness of lower extremities on the second day post operatively.
6. The fever settled with the combined antibiotic therapy; and she remained afebrile throughout her hospital stay.

Subsequent recovery was un-eventful and on the 14th day the catheter was removed after the ischaemic vaginal wall had healed. She was discharged and advised to come back for review 6 weeks later.

Outpatient follow up:

She was seen six weeks later and was menstruating during the visit. Pelvic examination was normal. She was counselled on contraception and was started on combined oral pills.

COMMENTARY:

With notable exceptions, indications for embryotomy or destructive operations on the fetus are almost non existent. Few residents in obstetrics now receive more than a token training in embryotomy, the oldest operation in obstetrics or in the use of the instruments employed in destructive operations [1,3,5]. The need for destructive deliveries on dead fetuses is so rare that almost present day obstetricians in the developed world are totally unfamiliar with such procedures [2]. Mention is usually made in teaching for historical background but not for current or future use.

Hence in these countries, destructive delivery is an art of the past [3]. The use of safe antenatal intrapartum and postpartum care has obviated the

need for these operations. It is a rare finding to have a patient who has laboured for more than 3 days ending with fetal demise which would require this operation. When this rare indication arises, then recourse to Caesarean delivery with adequate antibiotic cover or extra peritoneal operations are undertaken.

It has been noted for long that whatever is tried to be avoided by doing destructive delivery, worse complication are encountered[7]. Displaced fetal parietal bones may saber the vagina, bladder or rectum; haemorrhage and tissue trauma provide cultural material for severe pelvic sepsis, debilitated condition of the patient cause or contribute to maternal morbidity or mortality. Blind cleidotomy is a direct cause of maternal injury attributable only to destructive delivery.

In developing countries, destructive delivery still has a place as seen in M. R's case and others [4]. In these countries there is no place where adequate antenatal and intrapartum care is given to all pregnancies. Firstly, the proportion of population which is pregnant at any one time is bigger than in most developed countries and hence too many labours need to be attended to at any one time. Secondly the infrastructure to reach health facilities or to reach patients is so poor that most patients arrive in debilitated states. In such states of admissions they are usually septic, toxic and dehydrated such that they are surgical risks. Therefore destructive delivery looks like a minimal intervention to an exhausted mother if she is to survive. In such situation a caesarean section is usually followed by uncontrollable sepsis, shock and death and sometimes death occurring on the table. Antibiotics are not always

available to cover sepsis which usually follows these septic caesarean sections.

In such cases, a skillfully performed destructive operation is much more safer than a caesarean section although the extent of destruction is to be minimal no avoid maternal injury [1]. As in M. R.'s case only evacuation of skull. contents and the use of hooks effected a smooth delivery.

In most series, craniotomy and cleidotomy fulfills most of the requirements for diminution of the fetal size. Other manouvres like decapitation, evisceration and multiple resections are seldomly required and are associated with excessive risks to maternal injury [1].

Therefore in developing countries, destructive delivery still has a place in modern obstetrics [4] as seen in M. R's smooth recovery despite the grave condition she was admitted in.

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OB.2 VAGINAL DELIVERY IN PLACENTA PRAEVIA

Registration number	:	E 107/93
Name	:	Mrs. Z. J.
Parity	:	Gravida 3 Para 2+0
Address	:	Buguruni, Dar es Salaam
Date of admission	:	8/10/93
Date of discharge	:	11.10.93
Delivery number	:	14684

SUMMARY:

Mrs. Z. J. was 30 year old and gravida 3 para 2+0. She had presented with painless vaginal bleeding at 34 weeks of gestation. Utrasonographic examination revealed a grade II placenta praevia. On this count she was planned for elective caesarean section at 38 completed weeks.

At 37 weeks she went into spontaneous labour and a few hours later she delivered a 2700 g female baby with good Apgar scores.

Her case is presented with a commentary on modern diagnosis of placenta praevia.

Present Obstetric history:

Mrs. Z. J. was referred to the Muhimbili Medical Centre high risk antenatal clinic due to unprovoked painless fresh vaginal bleeding at 32 weeks of gestation. She had not experienced similar episodes previously. The bleeding had amounted to about 200 ml and it had stopped spontaneously at home. She had not fainted and fetal movements could still be perceived. Drainage of liquor and was not reported.

The patient had booked at 24 weeks of amenorrhoea with fundal height

corresponding to 26 weeks. The blood pressure was 120/80 mm Hg and the haemoglobin was 11.7 g/dl. Neither oedema nor proteinuria were noted at booking. Two more visits were made at the peripheral clinic and no risk factors were identified. The fourth visit was that which ended up with her being referred to Muhimbili for admission.

Past Obstetric history:

Mrs. Z. J. had had two previous full term deliveries without complications. Both children were alive and well. The last born was 2 1/2 years old.

Gynaecology history:

Menarche was at 14 years.

She had regular cycles every 28-30 days. She had been on oral contraceptives after the last confinement.

Past Medical history:

No significant illnesses had occurred in the past.

Family and Social history:

She was a banker and her husband was a businessman.

None smoked cigarettes or drank alcohol.

Physical examination:

She was healthy and not pale. The blood pressure was 120/70 mm Hg. The pulse rate was 80 beats per minute. The heart sounds were normal without any murmurs.

Abdominal examination:

The abdomen was globularly distended. The liver, spleen and kidneys were not palpably enlarged. The fundal height was equivalent to 32 weeks of

pregnancy.

The uterus was soft and non tender. The fetal size was approximately 1000 g. The lie was longitudinal with a cephalic presentation. Fetal heart tones were audible and normal.

Vaginal examination:

Mild vaginal bleeding was noted on inspection of the vulva. No egress of liquor amnii from the introitus was noted. Speculum examination was not done. Abdominal ultrasound showed a singleton fetus with biparietal diameter equivalent to 32 weeks. Fetal heart tones were seen. Liquor was adequate in amount. Placenta praevia grade II posterior was diagnosed on more than one occasion of scanning.

Plan for management:

1. The patient was counselled for admission and complete bed rest. She complied to this.
2. Grouping and cross-matching was done and 3 units of compatible blood group A Rh positive were reserved.
3. An intravenous line was set up with Dextrose-Saline.
4. Observation chart for blood pressure, pulse rate and respiratory rate was started.
5. A perineal cotton pad was applied for estimation and monitoring blood loss.
6. Utrasonographic localization of the placenta (vide-supra)
7. Chart for fetal movements.
8. Elective caesarean section at 38 completed weeks.

Within five days of admission the patient was found stable and had no more

vaginal bleeding. Fetal movement counts were normal. Following this apparent stability, the patient requested for permission to rest at home, this was not granted but she absconded from the ward 2 days later [1,2,3]. She never attended Muhimbili antenatal clinic again but at 37 weeks labour started spontaneously at home. She had moderate bleeding at home but was haemodynamically stable.

On arrival she was in well advanced labour and had ruptured membranes spontaneously at a peripheral clinic where vaginal examination had been accidentally performed and the cervix was reported to be 7 cm dilated. She delivered while being prepared for caesarean section. The baby weighed 2700 g with Apgar Score 10 and the placenta and membranes followed soon after. The uterus contracted will after 0.5 mg of parenteral ergometrine.

Total blood loss in labour was approximately 300 ml. Mrs. Z. J. was discharged home with her baby on the second day post delivery.

COMMENTARY:

Classification of placenta praevia into complete, partial marginal and low lying was originally based on palpation of placenta through the cervical os has remained unchanged despite the advent of modern obstetric care and the widespread use of ultrasonography in the diagnosis of placenta praevia[1,2,3].

This is at least partly due to the standard method of transabdominal ultrasonography which is often insufficiently precise in determining the exact relationship of the placental edge to the internal os; the latter

being the criteria for diagnosis of the severity of placenta praevia, it falls short on this.

However, this being far too crude, abdominal sonography becomes an inferior technique considering the cost a precise negative diagnosis everts. The patient is rescued from operative delivery and its attendant consequences by such a simple undertaking. Trans-vaginal ultrasonography has shown to be a safe technique in placenta praevia and to be superior to transabdominal ultrasound in predicting placenta localization at delivery [2,6]. Where the placental edge encroaches on the os, the intervening distance can be measured at transvaginal ultrasonography [2,7].

The terminology of the traditional classification of placenta praevia was derived from digital palpation of placenta through a partly dilated cervix in labour [3].

There is little debate about the diagnosis and management of a complete praevia in late pregnancy but the terms partial and marginal placenta praevia are no longer applicable to the antenatal ultrasonographic appearance of the cervix which is visualized as a discrete point [5]. Similarly, the concept of low lying placenta provides little information about its clinical significance. In those cases where the placenta does not cover the os antenatally what is really required from ultrasonography is a prediction of the likely course and mode of delivery on the basis of actual distance between the placental edge and the internal cervical os [7]. A change in the relative position of the placenta or placental migration can occur in the third trimester [2,7] and this may explain the case in Mrs. Z. J. who managed to deliver vaginally after diagnosis of a grade II

posterior placenta praevia.

Unfortunate still, there is no absolute and bold standard for the diagnosis of placenta praevia; and whereas successful vaginal delivery excludes clinically significant praevia, the performance of abdominal delivery does not prove that vaginal delivery could not have happened!

It has now been shown that vaginal ultrasonographic measurement of placental edge to the internal os of more than 2 cm reliably predicts safe vaginal delivery and a shorter distance is often associated with bleeding necessitating caesarean section [7].

From this account, it is clear that vaginal ultrasound would re-classify placenta praevia severities and pragmatic management depending on the absolute measurements. Where vaginal ultrasonography is not done routinely in placenta praevia, there is an urgent need to incooperate this service in the care of such patients.

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OB.3 PROGRESS OF LABOUR IN ABRUPTIO PLACENTA:

Registration number	:	170/92
Name	:	A. M.
Age	:	24 years
Parity	:	Gravida 3 Para 2+0
Address	:	Magomeni, Dar es Salaam
Date of admission	:	3/10/1992
Date of discharge	:	6/10/1992
Delivery number	:	14526

SUMMARY:

Mrs. A. M. a 24 years old gravida 3 Para 2+0 lady was admitted into the labour ward with complains of abdominal pain and vaginal bleeding for 4 hours at 38 weeks gestation.

On examination she was found to be pale, with a tender and hard uterus. The fetal heart sounds could not be heard. Abruptio placenta was diagnosed and labour was augmented by amniotomy and oxytocin. She delivered a fresh still birth 4 hours later although she was 2 cm dilated at admission. She had un-eventful recovery and was discharged 3 days later. Her case is being presented with a commentary on progress of labour in abruptio placenta.

History of present illness:

A. M. was 38 weeks pregnant and had booked at 24 weeks. Her booking blood pressure was 130/80 mm Hg and the haemoglobin was 10.4 g/dl. She had no oedema and the urine for protein was negative. She made 3 more visits after booking and no risk factor was diagnosed. Her weight gain was good

and the fundus grew correspondingly to the length of gestation.

Four hours prior to admission she experienced a sudden onset of constant generalized abdominal pains which was accompanied with minimal vaginal bleeding. The progress of pain was not labour like and within a few hours she could no longer feel any fetal movement, and she developed fainting attacks and shivering. The vaginal bleeding then had remained as a constant trickle of dark blood without clots when she was rushed to hospital.

Past Obstetric and Gynaecological history:

She attained menarche at 14 years and had normal menstrual flow of 5 days after every 30 days. She had 2 full term deliveries. All children were alive and well. No complications accompanied the previous pregnancies.

Past medical history:

There was no history of febrile illnesses in the past and had never been hospitalized before.

Family and social history:

She was a second born in a family of four. There was no family history of hypertension, diabetes or twinning. The husband was a petty businessman and she was unemployed.

Physical examination:

The patient was fully conscious, pale and afebrile. Her body temperature was 37^{0}C. The pulse rate was 100 beats per minute, regular but of low volume. The blood pressure was 120/80 mm Hg.

There was neither proteinuria nor oedema.

Abdominal examination:

She had a globularly distended abdomen. the liver, spleen and kidneys were not palpably enlarged. The fundal height was equivalent to 36 weeks of gestation. The uterus was tender and tense. The fetal lie was longitudinal but the level of presenting part was difficult to discern. Fetal heart tones were absent.

A provisional diagnosis of abruptio placenta was made and ultrasound confirmed the absence of fetal heart tones but no retroplacental clot was visualized, there was no placenta praevia seen hence vaginal examination was undertaken.

Pelvic findings:

The vulva was healthy, there was dark blood trickling from the introitus. Digital examination revealed a moderately thick, soft cervix which was 50% effaced and 2 cm dilated at the os.

Membranes were palpable above the internal os and amniotomy was performed. Blood stained liquor egressed with some meconium stains.

The presentation was cephalic at level station-0 and the pelvis was adequate for the baby.

Diagnosis:

1. Revealed abruptio placenta
2. Intra-uterine fetal death.

Management plan:

1. A wide bore cannula was inserted on one of the antecubital veins for resuscitative fluids and oxytocin infusion was set on a different intravenous line.

2. Ringers lactate infusion was given fast for one hour while blood was being crossmatched.
3. A total of 2 litres of compatible blood group A Rh D Positive was transfused to the patient.
4. Bedside clotting time was found to be 8 minutes and repeatedly revealed same time, except the final clotting time at delivery was 10 minutes.
5. An indwelling catheter was inserted for urine output monitoring. 200 ml of urine were obtained from the bladder at initial catheterization. Thereafter she produced approximately 50 ml every hour.
6. Augmentation with Oxytocin 2.5 I.U in 1L of normal saline was done. Titration was done at 10, 20, 30, 40, 50 and 60 drops per minute every 30 minutes.
7. Blood pressure and pulse rate were monitored every $^{1}/_{2}$ hour. The pulse rate improved to 80 beats per minute after blood transfusion.
8. Injection pethidine 50 mg intramuscularly was given for analgesia and sedation.

Vaginal examination was repeated after 4 hours the cervix was found to be fully effaced and fully dilated. She immediately delivered a fresh stillborn male baby weighing 2800 g.

The placenta which weighed 500 g followed immediately after delivery of the baby. On inspection, the maternal surface of the placenta was found to have an adherent clot which was dark and firm making a depression on the placental cotyledons. The clot was estimated to be equivalent to 400

ml of blood. Third stage blood loss was 200 ml making a total loss of approximately 1500 ml. The uterus contracted effectively and there was no more fresh bleeding.

She was observed in labour ward for 12 hours and the Blood pressure and pulse had stabilized at 130/70 mm Hg and 80 beats per minute respectively when she was transferred to the postnatal ward.

She produced 1500 ml of clear urine against 5 L of infusions.

Postnatally the haemoglobin was 8.5 g/dl and serum creatinine was 100 umol/L. She was discharged 3 days later in good health and was to be reviewed at the postnatal clinic 6 weeks later.

Postnatal follow up:

Six weeks postnatally she was found to be in apparent good health. She had experienced painful breast engorgement at home which had waned spontaneously.

She had no symptoms and signs of anterior pituitary destruction or renal failure. The haemoglobin was 12.7 g/dl and serum creatinine was 78 umol/L. She was discharged from the postnatal clinic.

COMMENTARY:

Abruptio placenta is one of the serious obstetric emergencies which is accompanied with high perinatal and maternal losses.

The aetiology of abruptio placenta is yet to be known although there are few un-related conditions which eventually may lead to pre-delivery separation of the placenta with its attendant sequelae. Some of the conditions associated with abruptio placenta include hypertensive

diseases, shortened umbilical cord and placental anomalies, external trauma to the abdomen, sudden intra-uterine decompression, supine hypotensive syndrome, folic acid deficiency, suboptimal weight gain and poor nutrition, cigarette smoking and amniocentesis[1]. None among these produce abruptio placenta in all pregnancies at all times.

The management of abruptio placenta depends on many factors; one is stability of the patient haemodynamic systems at diagnosis, fetal gestation and viability in extra-uterine life, haemostatic status and an estimate of the time required to effect delivery [1]. The last factor has the most important bearing on the rest of the other factors. If delivery can not be effected within 8 hours of onset of abruptio, longer delays are potentially accompanied with serious hypofibrinogenemia [1,6]. Longer delays may compromise the fetal wellbeing if the fetus is alive at diagnosis because control of vascular volume (in the absence of central venous pressure (CVP) manometer) becomes difficult, taking into account that with 50% placenta separation is incompatible with preservation of fetal life [1].

The amount of time needed to effect vaginal delivery (which should always be strived for in the absence of obstetric indication for abdominal delivery) depends on the parity, condition of the cervix, presentation, station and quality of labour. When these factors are standardized, except for the presence of abruptio it has been established that labours in abruptio progress faster than in non abruptio pregnancies [2].

This is so exemplified in Mrs. A. M.'s case who was admitted with 2 cm dilatation of the cervical os but 4 hours later she was fully dilated and

delivered vaginally. This is a rate of about 2 cm cervical dilatation per hour. Abruptio placenta, seems to enhance the progress of labour in vaginal deliveries. This obviates recourse to abdominal delivery in such patients who may not tolerate anaesthesia due to deranged haemodynamics. The reason for the fast progress of labour in abruptio is not clear, but some of the reasons may be due to increased prostaglandin release from membrane stripping done by the abruptio itself or because of the over distension of the uterus with haemorrhage hence resulting into reflex contraction of overstretched uterine muscle fibres. Whether oxytocin infusion is initiated or not, most labours progress fast and some may even end up in precipitate deliveries leading to genital injuries. However patients with viable fetuses and without evidence of disseminated intravascular coagulopathy, after an initial evaluation and stabilization of haemodynamics, caesarean section should be performed unless vaginal delivery can be effected promptly. In abruptio, prediction of time of delivery is difficult since strength and frequency of uterine contractions may not be easy to discern due to uterine hardness and constant pain; but cervical dilatation would easily tell whether progress is fast enough. This case exemplifies the importance of expectant management of labour in abruptio despite unfavourable cervical characteristics although what enhances labour progress in abruptio is still not known.

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OB.4 BAD OBSTETRIC HISTORY PATIENT DELIVERS AT TERM AFTER PROLONGED BED REST

Registration number	:	19/93
Name	:	Mrs. J. N.
Age	:	32 years
Parity	:	Gravida 5 Para 0+4
Address	:	Magomeni, Dar es Salaam
Date of admission	:	20.05.93
Date of discharge	:	01.11.93
Delivery number	:	17938

SUMMARY:

Mrs J. N. was a gravida 5 para 0+4 who was admitted at 14 weeks of pregnancy on account of recurrent second trimester abortions. Cervical cerclage had been done in two of the previous pregnancies but both ended up in abortion.

In the index pregnancy she had prolonged bed rest in hospital and tocolysis and she delivered a term baby.

Limitations of diagnosis of aetiologies of bad obstetric history patient is then discussed in the commentary.

Present Obstetric history:

Mrs. J. N. was referred to Muhimbili from a regional hospital with a diagnosis of Bad Obstetric History (BOH). She was 12 weeks pregnant at the time of her referral. Her first pregnancy had been 3 years prior to the index. She had spontaneous abortion at about 14 weeks. The abortion was preceded by rupture of membranes without labour pains. Draining

continued for a week and later she aborted a severely macerated fetus. The abortion was complete. In the same year she had another pregnancy which ended up in a similar sequence of events. In none of the two abortions did she experience any febrile illness before onset of liquor draining. Also she had no preceding vaginal discharges.

Investigations were not done on both occasions because the abortion occurred before booking and thereafter she felt normal..

In the following year, she had her third pregnancy and she booked early at the regional hospital. Having given the history of previous experiences some investigations were done. These included serology for syphilis (VDRL), Blood group and Rh for herself and the husband, and renal function tests. All results did not give a diagnosis for the BOH.

Despite her having no history typical for an incompetent cervix, an "empirical cervical cerclage" was performed at 16 weeks of pregnancy. She remained under bed rest and tocolytics for one week in hospital and later was discharged home in good health.

Two weeks following discharge from hospital she developed strong uterine contractions at home. She was brought back to the regional hospital and the cerclage was removed because abortion was imminent. She again aborted a macerated fetus. In the same year she had her fourth pregnancy which again ended up in abortion despite another cerclage at 14 weeks.

She was admitted into antenatal ward on arrival at Muhimbili and baseline investigations were done. All results were normal (see results below). She was kept under strict bed rest and serial ultrasonographic follow up was done on fetal growth and well being.

Gynaecological history:

She had attained menarche at 14 years and had regular 28 day cycles with a normal flow of approximately 4 days. She had never used any hormonal contraceptives. There was no history of genital surgery or cervical dilations.

Past Medical History:

Had no history of genital sores, renal diseases on vaginal discharges. None among close family members had suffered from tuberculosis or other communicable diseases.

Family and social history:

There was no history of diabetes, hypertension or cardiac disease in the family.

None among her female siblings had recurrent abortions.

Physical examination:

Mrs. J. N. had a good nutritional status, was not pale and was afebrile. She was not jaundiced. There was no oedema or proteinuria. Her height was 162 cm and she weighed 60 kg.

Cardiovascular system:

The pulse rate was 80 beats per minute regular and full volume. The blood pressure was 120/70 mm Hg. There were no murmurs.

Abdominal examination:

There was a slight suprapubic distension midway between the umbilicus and the pubic symphysis. The liver, spleen and kidneys were not palpably enlarged. The fundal height was equivalent to that of 16 week pregnancy; hence longer than dates.

Pelvic examination:

The perineum, vulva and vagina were healthy. There was no draining or discharge. The cervix was healthy, long soft but closed. There were no scars of healed tears on the cervix. It could not admit even a tip of the index finger. There was no discharge or foul smell on the gloved finger. However endocervical swab for microbial investigation was collected.

Investigations and results:

1. Haemoglobin was 12.0 g/dl.

   The red cell morphology, total white cell count, differential white cell counts and platelet distribution were reported as normal.

2. Mid stream urinalysis.

   - No albumin or sugar was detectable in urine

   There were no casts or pus cells on microscopy of the urine sediment.

   - Microbial culture was sterile.

3. Fasting blood sugar was 3.5 mmol/L.

4. Serum creatinine was 80 umol/L.

5. VDRL test was negative.

6. Blood group and Rh for the husband and the mother:

   Both were A Rh positive.

7. Endocervical swab

   (i) Gram stain - Epithelial cells were seen.

   No pus cells seen

   (ii) Bacterial culture - Sterile after 24 hours of incubation.

8. Ultrasonography:

(i) Initial ultrasound ruled out obvious congenital malformations to the fetus and uterine malformations.

(ii) The internal cervical os was found to be closed and there was no amniotic fluid and membrane herniation (coning).

(iii) The fetal biparietal diameter, femoral lengths and abdominal girth measurements corresponded to the gestational age at all examinations.

(iv) Biophysical profile was done from 30 weeks of pregnancy till delivery and was normal.

Diagnosis: Habitual abortion ? Cause

Having the patient admitted into the antenatal ward follow up was close and easy. The pregnancy grew satisfactorily at all ultrasonographic evaluations. Fortnightly speculum examinations and swabs were collected for bacteriological investigation. No amniotic fluid leakage was noted at any one time. The blood pressure ranged between 110/70 and 120/80 mm Hg and she neither developed oedema nor proteinuria throughout her stay in hospital.

At about 30 weeks of pregnancy she developed mild to moderately strong uterine contractions for which salbutamol 4 mg and phenobarbitone 60 mg both thrice daily were given.

At 37 weeks of gestation she went into labour and was transferred into the labour ward. She had stayed in hospital under bed rest for a total of 23 weeks.

At initial vaginal examination in the labour ward the cervix was found to be fully effaced and 5 cm dilated. Amniotomy was done and clear liquor without cord prolapse was obtained. Labour progressed well and after 6 hours she delivered a 2800 g male baby with an Apgar score of 10. The baby was examined and there were no congenital malformations. The third stage was uneventful.

The mother and her baby were observed in the postnatal ward for 24 hours. The baby was sucking well and both were discharged home.

Postnatal review:

Six weeks later she was seen again and was in good health and the baby was growing normally. Both were discharged from postnatal clinic.

COMMENTARY:

Bad obstetric history (BOH) in not a single disease entity but a continuum of disorders whose effects are bad outcomes to pregnancies. It is defined as any obstetric event which occurred in a previous pregnancy or pregnancies with adverse effects and is likely to occur and similarly affect an index pregnancy or subsequent ones.

Cervical incompetence has been incriminated in majority of BOH patients irrespective of whether there was an objective diagnostic evaluation or not[1]. Where cervical cerclage has managed to prolong pregnancy to term, then the diagnosis has been reinforced in retrospect due to the favourable outcome.

Mrs. J. N. had no features suggestive of an incompetent cervix but in two of her pregnancies she had cervical cerclage but still they were aborted.

Had she carried these pregnancies to term following cerclage she would have been labelled as BOH due to cervical incompetence without objective diagnosis.

Most of J. N's abortions missed the classical presentation of painless dilatation and effacement of the cervix, rupture of amniotic sac prior to any significant contractions and the relatively painless quick deliveries of incompetent cervix. In some typical cases delivery of a live fetus in an intact amniotic sac completes the picture.

However in developing countries it is unfortunate that even in patients with history typical of incompetent cervix, they never present to hospital in non pregnant states where definitive investigations could be performed to confirm the diagnosis.

Hysterosalpingography (HSG) or hysteroscopy can also rule out the presence of septate uterus or other Mullerian anomalies, intrauterine synechia or submucous leiomyoma which are thought to produce inhospitable implantation sites by interfering with vascularization and distorting or reducing the size of uterine cavity. These may mimic an incompetent cervix when repeated abortions occur in the second trimester.

Bed rest which is encouraged in patients after cerclage improves the outcome of cervical cerclage whereby the uterine contents are not allowed to apply direct pressure on the internal os.

Mrs J. N. had bed rest alone up to gestational age of 30 weeks of pregnancy and no threatened abortion occurred. This shows the presence of some advantages on rest alone in some patients whose cause of recurrent abortions is not established.

It is very difficult especially in developing countries to pin point the specific causes of second trimester abortion when high technological equipments are required. Most of the investigations commonly done in BOH patients may be normal as shown in J. N.'s results above.

Other maternal causes of second trimester abortion include systemic diseases and infections, endocrine disorders renal and hypertensive diseases and connective tissue disease.

Non among those screened were found positive in J. N. However a decreased maternal immune response to HLA or cross reactive trophoblast lymphocyte antigens with inadequate production of the blocking factors necessary for feto-placental allograft survival has recently been suggested as an immunologic cause of some of recurrent abortions[2].

Some of the fetal causes of second trimester abortion include chromosomal abnormalities. These account for more than 7% of abortions after 24 weeks. Commonly these are autosomal trisomies. Trisomy 16 and 22 have never been reported in live fetuses and they are suspected to be among the most lethal trisomies followed by mild ones like 18 and 21[3].

Also it has been established that the relative frequency of non-disjunction leading to a trisomic offspring is higher in oocytes than in spermatocytes. If the defect occurs in oocyte the tendency of recurrence among fetuses is high because all future oocytes are already formed at birth unlike spermatocytes which are formed continuously in life[3,4].

In a small percentage of cases one member of the couple is a carrier of a balanced translocation; offspring of these parents may be repeatedly aborted[4,5].

Therefore cytogenetic examination of both partners would be important to establish the probable cause but in developing countries, the investigation which could be undertaken was only blood group and Rh from the father.

In J. N.'s case, among the abortuses none were live or fresh. It follows that maybe all had succumbed in utero and the uterus had to get rid of already dead fetuses as it is the expected response to an intrauterine demise but not the other way round whereby an incompetent cervix lets a live fetus slip out of the uterus and die as a result.

Therefore in centres where chorionic villus sampling, karyotyping and cytogenetic studies can not be performed, diagnosis and treatment of recurrent fetal wastage has a long way to go. However recourse to empirical cerclage without confirmation of diagnosis of an incompetent cervix should be discouraged because this diagnosis can be established with certainty even in developing countries.

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OB.5 INTRAPARTUM ECLAMPSIA: UNPREDICTABILITY

Registration Number	:	142/92
Name	:	E. P.
Gravidity	:	Primigravida
Address	:	Makongo, Dar es salaam.
Date of admission	:	11.9.92
Date of discharge	:	15.9.92
Delivery number	:	13280

SUMMARY:

Mrs. E. P. was a 20 year old primigravida who was admitted into the Intensive Care room of the labour ward due to antepartum eclampsia at 36 weeks of pregnancy.

Induction of labour with syntosinon and aminiotomy led to a successful vaginal delivery of a 2400 g baby with Apgar score 7 and 9 at one and five minutes respectively.

Uneventful pueperium with resolution of features of pre-eclampsia followed the delivery.

Discussion is done on predictive signs for eclampsia and their reliability.

Present obstetric Illness:

Mrs E. P. had been apparently well till about three hours prior to admission when she developed eclamptic fits at home. She had complained briefly of headache and nausea a few minutes before she went into repeated generalized convulsions which were followed by immediate loss of consciousness. No urine or stool incontinence ensured. She was then in

her 36th week of pregnancy and was not in labour.

From home she was transferred to a nearby dispensary where parenteral diazepam was given before referral to Muhimbili.

History of present pregnancy:

Mrs. E.P had booked at a peripheral antenatal clinic at about 22 weeks of pregnancy. The booking blood pressure was recorded as 100/70 mm Hg and there was no pedal oedema. Urine for protein was not tested. The haemoglobin, and serological screening for syphilis (VDRL) were not recorded at booking. The weight was 49 kg. She made four more antenatal attendances at the same clinic. Once she was seen at Muhimbili antenatal clinic and then her haemoglobin was recorded as 12.0 g/dl and VDRL was recorded negative. The average weight gain throughout antenatal care was approximately 0.35 kg per week. She remained free of oedema and the blood pressure ranged from 100/70 to 110/80 mm Hg throughout. The last antenatal visit was on the day she fitted at home. All the vital signs recorded on the same day were within normal range and the fundal height corresponded with the length of gestation. On admission at Muhimbili she had another eclamptic fit which was immediately controlled by parenteral diazepam.

Gynaecological history:

Menarche was attained at 13 years. The menstrual periods lasted four days, and the cycle was 28 to 30 days. She had not used any form of contraception before.

Family and Social history:

There was no family history of epilepsy or hypertension. She was a

housewife married to a peasant. She neither smoked cigarettes nor drank alcohol.

Physical Examination:

She was semiconscious and restless with a puffy face. There was no cyanosis, pallor or fever. The body temperature was 37^0C.

Her pulse rate was 100 beats per minute, regular with a full volume. The blood pressure was 120/90 mm Hg. She had no pedal oedema, but had a heavy proteinuria of 4+. Urine for sugar was negative and the blood sugar was 4.0 mmol/L.

Central Nervous System:

The pupils were equal in size and both reacted to light. Corneal reflexes were present. The neck was soft and Kernig's sign was negative. There was a mild to moderate hypertonia in both upper and lower extremities and the deep tendon reflexes were slightly exaggerated. No clonus was elicited and there were no lateralizing signs.

Chest Examination:

The breasts were engorged and had no masses. No secretions were seen. The respiratory rate was 25/minute. Both lungs had vesicular breath sounds without rhonchi.

Heart sounds were normal and there were no murmurs.

Abdominal Examination:

The abdomen was globularly distended. The liver, spleen and kidneys were not palpably enlarged. The fundal height was 36 week size corresponding to the gestational age. The lie was longitudinal, the presentation cephalic and the level 5/5. The fetal size was estimated to be about 2600

g. There were no contractions detected on palpation and the fetal heart rate was 140/minute.

Vaginal Examination:

This was done as a sterile procedure whereby the examiner put on sterile gloves after scrubbing with soap and water. The patient being heavily sedated, the flexed and parted thigh and legs had to be supported by two assistants, one on each side of the bed while the patient was being examined.

The vulva was cleaned with antiseptics and on examination the cervix was found to be 1-2 cm dilated and 50% effaced and after ascertaining the adequacy of the pelvis then amniotomy was done by Kocher's forceps. Clear liquor without cord prolapse egressed from the cervix.

Syntocinon infusion was set up 5.I.U in 500 ml of 5% Dextrose to be titrated at 10, 20, 30, 40, 50 and 60 drops/minute every half hour.

Diagnosis:

Intrapartum eclampsia.

Management Plan:

1. Immediate control of convulsions:
   (i) Diazepam 10 mg 6 hourly or 20 mg intravenously if another fit occurred.
   (ii) Injection Pethidine 100 mg intramuscularly for analgesia when labour pains were established.
   (iii) Injection Hydrallazine 10 mg intravenously if diastolic blood pressure rose above 100 mm Hg.

2. Delivery:

(i) Amniotomy was done at pelvic examination.

(ii) Syntocinon 5 I.U. in 5% Dextrose set up.

3. Investigations and results:

(i) Serum creatine 90μmol/1, serum electrolytes could not be done.

(ii) Blood slide for malaria parasites was negative.

(iii) Haemoglobin estimation was 11.8 g/dl.

(iv) Random blood sugar was 4 mmol/l.

(v) Urine for protein 4+

(vi) Urine for sugar was negative.

4. Supportive measures:

(i) The oropharynx was sucked clear of secretion and a mouth gag was inserted.

(ii) She was catheterized and urine output monitored hourly. She produced 1500 ml of clear urine on the first 24 hours of admission

(iii) An intravenous drip of 5% Dextrose was set up and a total of 2500 ml were infused in 24 hours.

(iy) Her lying position was changed every 2 hours to avoid bed sores.

(v) The blood pressure pulse and temperature were monitored. They did not rise above admission values.

(vi) Chart for convulsions was made - No more fits were observed in the subsequent 24 hours of admission.

(vii) Level of consciousness was monitored.

Obstetric Management:

As noted above, a syntoncinon drip was set up with 5 I.U. in 500 ml of 5%

Dextrose , this was titrated at 10, 20, 30, 40, 50 and 60 drops per minute every 30 minutes. Amniotomy was done to accelerate labour progress. Labour progressed well and fast. The cervix was 9 cm dilated after 6 hours of augmentation.

She delivered 7 hours after admission by assistance with a vacuum extractor as in case no. O.B. 9.

The baby weighed 2400 g and had an apgar sore of 7 and 9 at 1 minute and 5 minutes respectively. The third stage was completed and the episiotomy repaired.

The total blood loss was about 200 ml. The syntosinon drip continued to run for 4 more hours to assure a firm uterine contraction.

Follow up:

Progressively her blood pressure settled at 100/70 mm Hg within 24 hours of delivery. No antihypertensives had been instituted. The sedation was tailed off. The urine continued to test positive for protein but the serum creatinine was normal. The facial puffiness waned quickly and after withdrawal of sedatives the patient was alert and out of bed.

Both the mother and baby were discharged in good health 4 days after delivery and she was informed of the importance of early booking in subsequent pregnancies.

COMMENTARY:

Eclampsia is one of the most serious of all obstetric emergencies because it is the major cause of maternal mortality and morbidity world wide. [1]

The diagnosis of eclampsia is usually easy. Finding of elevated blood pressure, proteinuria with or without oedema in the absence of other causes of convulsions virtually signifies nothing else but eclampsia [1,2,3].

Unlike for other conditions in pregnancy the management of eclamptic patient is not plagued with a lot of controversies, but has straight forward objectives. These constitute control of convulsions, lowering of blood pressure, delivery of the placenta and supportive therapy. However for one to have an upper hand in situations like that, there must be some predictors for patients who are likely to have eclampsia before signs of the disease set in.

There are many clinical, biophysical and biochemical tests that have been reported in the world literature to predict the development of pre-eclampsia and hence eclampsia[4].

Several reports have suggested the use of average mean arterial pressure in the second trimester (MAP-2) to identify patients destined to develop pre-eclampsia. Where MAP = (Systolic blood pressure + Diastolic blood pressure)x2 ÷3.When a cut off point is set for 105 mm Hg, this is said to have a sensitivity ranging between 0-92% and specificity between 53 and 97%.

This is a result from a study where 36,876 patients of pre-eclampsia and 207 of eclampsia were tested by MAP-2- alone as a screening test. It was concluded that this test was more of a predictor of transient hypertension

than pre-eclampsia-eclampsia syndrome.

To improve the predictor value of MAP-2 some authorities included the `Roll over test' as two screening tests in series. Still the sensitivities ranged between 0-93 and specificity between 54-91%. The results of pooled data in clinical practice for the tests lacked agreements between serial tests such that none among them was sufficiently reliable for use as screening instrument [5].

The angiotensin II test is an invasive procedure that requires infusion of this hormone and measurement of response at 26 to 30 weeks.

The test results in low sensitivity with high false positives. It did not win good use in clinical setting for its being invasive, gestational age specific and requirement for serial testing of the same patient (resulting in poor reproducibility even in a patient who subsequently develop eclampsia) [6].

The isometric hand grip exercise test for predicting gestational hypertension was reported by Degani et al as useful. The authors reported 80% true positive prediction of pre-eclampsia. New evaluation in 200 pregnant women while patients were evaluated at 4 week intervals at the third trimester till delivery. The test showed 21% false positive and 7% false negative in predicting pre-eclampsia[7].

There are numerous reports disobeying the predictive value of every possible substance that can be measured in maternal plasma, serum or urine. Some of the substances that have been evaluated include cations, hormones, prostaglandin metabolites, various parameters of coagulation and haemostasis and uric acid levels.

The reports differ wildly on their methodology and include heterogenous groups of patients with all forms of hypertension, parity, gestation age at the time of applying the tests [8]. Their results therefore are not uniformly predictive when any of the parameters standardized.

E. P. had an average weight gain well below the expected 0.5 kg per week in her pregnancy. There was nothing in her pregnancy which could make one suspect her developing peripartum eclampsia. The patient had visited the antenatal clinic on the same day she developed eclampsia but no sign could predict what would befall her later on the day!

However for best maternal and fetal outcomes, preparation for care of an eclamptic patient are essential. These can only be available if prediction can be done, but as seen above no test can do this alone or when several are done in series. Therefore it seems that any pregnant woman may go into an eclamptic fit without warning and in ill-equipped centres this worsens their prognosis. There is hence a need for further research for predictive indices which have better sensitivities and specificities so that vigilance can be focused on those few who are likely to develop eclampsia.

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OB.6 MODE OF DELIVERY IN SICKLE CELL GRAVIDAS

Name	:	Mrs. A. M.
Age	:	19 years
Parity	:	Gravida 1 Para 0+0
Residence	:	Mwananyamala, Dar es Salaam
Date of admission	:	6th July 1993
Date of discharge	:	10th July 1993
Delivery number	:	13132

SUMMARY:

Mrs. A. M. was referred to Muhimbili Medical centre because of severe anaemia in pregnancy. A peripheral blood smear revealed sickle-shaped cells and a sodium metabisulphite test on a fresh blood specimen showed most of red blood cells sickled. Haemoglobin electrophoresis confirmed homozygous SS genotype. She was put under obstetrician and haematologist care until 38 weeks of gestation when she went into spontaneous labour and had a female baby weighing 2600 g with good Apgar Score. Her case is being presented with discussion on modes of delivery among sickle cell gravidas.

Present obstetric history:

Mrs A. M. was referred to Muhimbili high risk antenatal clinic from periphery with a diagnosis of severe anaemia at 24 weeks of gestation. She had faired well in the early weeks of pregnancy but later on she developed what was described by the referring centre as `resistant anaemia'. She had booked at 20 weeks of gestation and generally felt weak and tired at rest. She had shortness of breath and could not lie flat

comfortably. She denied having had pedal swelling, chest pain or chronic non productive cough. Had not experienced recurrent malarial attacks, urinary tract infection or any haemorrhagic events. Haemoglobin estimation at booking was recorded as 5.4 g/dl and she was put on haematinic supplements and chloroquine prophylaxis.

Her appetite remained good throughout early pregnancy and her diet was fairly balanced. Referral was made after two subsequent visits at the periphery where her haemoglobin was found to be 5.2 g/dl despite haematinics.

Gynaecological history:

Menarche was at 13 years. Her menstrual cycles were regular occurring every after 30 days. Menstrual loss was not heavy and lasted 3 days on average. She had never been on contraceptives.

Past medical history:

From early childhood she had been hospitalized many times for anaemia. She had received frequent blood transfusions from a regional hospital. A. M. was diagnosed to have sickle cell anaemia in childhood and had been put on folic acid since then.

From the age of 10 years, she had not had any more blood transfusions after what she described as "getting cured" of sickle cell by a traditional healer. She therefore never volunteered this diagnosis at antenatal booking.

Family and social history:

She was the first born from a consanguineous marriage. All her siblings died in childhood from recurrent fevers and anaemia. Both herself and the

husband were engaged in petty business.

Physical examination:

She looked very pale but not jaundiced. The haemoglobin was 5.4 g/dl but she was not in cardiac failure. The body temperature was 37.2^{0}C. Had no pedal oedema. She had no pathognomonic sickle cell facies and her height was 163 cm. The blood pressure was 100/60 mm Hg and the pulse rate was 90 beats per minute, regular and full volume. It was non collapsing. The jugular venous pressure was not raised and there was no gallop rhythm on auscultation of heart sounds. No haemic murmur was heard.

Abdominal examination:

There was a globular distension of the abdomen. The liver was palpable 2.5 cm below the right costal margin. It was smooth and non tender its edge was sharp. The spleen was not palpably enlarged and the renal angles were free of tenderness and masses. The fundal height was corresponding to the gestational age of 24 weeks. Fetal heart tones were heard and they were normal.

Diagnosis:

Sickle Cell Anaemia in pregnancy.

Management plan:

Admitted for investigation confirm previous reported findings and treatment of anaemia in pregnancy.

Investigations and results:

1. Blood smear for malaria parasites was negative thrice.
2. Stool for hookworm ova was negative.
3. Sickling test - Positive.

4. Haemoglobin electrophoresis - HbSS.

5. Midstream urinalysis and culture.

(i) Urinalysis

- No pus cells or red blood cells
- No granular casts

(ii) Culture

- No bacterial growth

6. Serum creatinine 70 μmol/L.

7. Blood analysis.

(i) Haemoglobin ranged between 5.4 and 8.2 g/dl.

(ii) Reticulocyte count 2%

(iii) Peripheral blood film.

- Few sickle cells seen
- Target cells present.

(iv) White blood cells: Total count 7600 mm^3

- Normal differential count
- No macropolycytes (giant polymorphs)

8. Serology for syphilis - (VDRL) - Negative

9. Blood group and Rhesus factor - O Rh Positive

10. HIV screening - Elisa test - Negative

11. Husbands haemoglobin electrophoresis - AS

Final diagnosis:

Confirmed Sickle Cell Disease in pregnancy.

Treatment Plan:

1. Folic acid tablets 5 mg thrice daily.

2. Chloroquine prophylaxis for malaria 300 mg base weekly.
3. Blood transfusions to keep haemoglobin at least 8.0 g/dl.
4. Any fever to be urgently worked up and appropriate treated.
5. To watch for any sickle cell crises and manage them expeditiously.

Antenatal care:

After baseline work-up and blood transfusions to improve her haemoglobin status, she was discharged home but continued to attend the antenatal clinic weekly. At discharge the haemoglobin had risen to 7.6 g/dl and remained at 7.4 g/dl until delivery at 38 weeks. No febrile illnesses or painful crises occurred during outpatient care. She continued to attend the haematologists sickle cell clinic throughout pregnancy.

The reticulocyte count did not rise above 2% with haematinics. Ultrasonographic follow up of the fetal growth and well being were done by the author as a private case and both progressed satisfactorily.

Delivery:

At 38 completed weeks while in the antenatal ward she went into spontaneous labour. On examination the cervix was 6 cm dilated and in the labour ward, artificial rupture of membranes was done. Clear liquor without cord prolapse egressed from the cervix. There was neither caput nor moulding and the position was in occipito - anterior with vertex at S + 1 station. Four hours later she was delivered of a female baby weight 2600 g with Apgar score 9 and 10 at one minute and five minutes respectively. Oxytocin was given and the placenta was deliver by controlled cord traction. The placenta weighed 400 g. Third stage blood pressure was 100/60 mm Hg and the temperature was 37^{0}C. After neonatal .

vaccinations both were discharged home and advised to be reviewed after 6 weeks.

Postnatal review:

Both the mother and baby were doing well. Her haemoglobin was 6.8 g/dl again lower than the discharge level. She had established lactation and was breast feeding. An intrauterine contraceptive device had been inserted at a peripheral family planning clinic despite her low hemoglobin level.

Haemoglobin electrophoresis from the baby's blood showed AS genotype. The mother was counselled on the 50% chance of having sickle cell disease (SS) children and 50% chance of AS.

She continued to attend the haematologists sicklers clinic thereafter.

COMMENTARY:

Sickle cell disease is characterised by a number of serious medical problems including sickle cell crises, acute chest syndromes and multiple organ abnormalities[1].

Painful vasooclusive crisis is the most common cause of morbidity and the most frequent reason for short term hospitalization. Pregnancy has been associated with an increase in the frequency of painful crises especially in the last trimester and immediately postpartum [1,2].

Although fetal surveillance tests have been used in the evaluation of pregnancies complicated by sickle cell diseases, the characteristic of the tests during crises have not been described in order to extrapolate the intra-uterine effects to the fetus. It has however been established that the increase in uterine vascular resistance suggests the transient effect

of sickling crisis may not compromise umbilical blood flow[1]. For adverse neonatal outcomes in pregnancy, complicated with sickle cell, require both maternal and fetal circulation to be compromised and this is a time dependent phenomenon. There are many authorities who, without objective studies suggest abdominal deliveries in sickle gravidas so as to optimize the neonatal outcome. This method usually jeopardizes both the mother and the fetus unless there is an obvious obstetrical indication.

Together with idiopathic causes of crises in sickle patients, hypoxia, dehydration, infections and acidosis are known to predispose sicklers to sickling crises[2,4,6]. Therefore caesarean delivery should be undertaken with great care as the risk of hypoxia at induction of anaesthesia is great. It is not too early to emphasize that sickle cell disease is rarely an indication for abdominal delivery. When a sickler gravida goes under a sickling crisis, however long it persists, and if she is not in labour, the intrauterine atmosphere reverts to normal and without long term effects on the fetus after proper management of the crisis[1].

Dehydration which may occur in elective surgical patients who fast for more that 6 hours pre-operatively increases the risk of triggering off a crisis at anaesthesia[5].

After an abdominal delivery, together with chronic anaemia, the chances of puerperal sepsis are high. If this happens the prognosis of a sickler mother post operation becomes very poor. Some authorities have gone to an extent of giving prophylactic antibiotic cover even in vaginal deliveries[5].

Mrs. A. M. had smooth antenatal intrapartum and puerperal periods. She

had few blood transfusions and no painful crises during pregnancy. The disease had followed an indolent cause from the age of 10 years and she had few blood transfusions and no painful crises after this. The mild type of sickle cell anaemia is usually accompanied with elevated levels of fetal haemoglobin (HbF) which persists from neonatal periods in those with haemolytic diseases [3]. Haemoglobin A and F co-migrate at electrophoresis and hence are not separable with this test[5]. Patients with homozygous SS as Mrs. A. M. succumbed in early childhood when blood transfusion facilities were not advanced enough to take care of these. This is exemplified by all of A.M.'s siblings who died in early childhood. However the presence of heterozygous HbSC has a mild disease course in childhood but becomes a worse disease in pregnancy. There are chances of A. M. to have had this type of heterozygosity but which could not be detected by haemoglobin electrophoresis at this centre. It is apparent in Mrs. A. M.'s case that the disease had followed a mild course from the age of 10 years. Also in the antenatal period she did not experience any painful crises. The puerperium was uneventful.

This indolent course of the disease where SS was diagnosed at haemoglobin electrophoresis is rare unless one accepts the possibility of her having high proportion of HbF persisting into adulthood.

The course of labour was smooth and this emphasizes the importance of reserving caesarean delivery only to those with obstetric indications, taking into account the risks one is put under when anaesthesia is given.

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OB.7 CERVICAL INCOMPETENCE: DELIVERED BY CAESAREAN SECTION

Registration number	:	103672
Name	:	Mrs. E. S.
Age	:	24 years
Parity	:	Gravida 5 Para 0+4
Residence	:	Kinondoni, Dar es Salaam
Date of admission	:	15.9.92
Date of discharge	:	13.1.93
Delivery number	:	17060

SUMMARY

E. S. was admitted at a gestational age of 22 weeks. She had had four consecutive mid trimester abortions previously and this time had a cervical cerclage and a prolonged hospital stay.

Spontaneous onset of labour did not happen after removal of cerclage at 38 completed weeks. She was then delivered by caesarean section at 39 weeks of pregnancy. A 3000 g male baby in good health was obtained and both were discharged home a week later.

Her case is being presented with a short commentary on diagnosis of cervical incompetence.

History of present illness:

E. S. had her first and second pregnancies in 1989. Both were aborted at about 5 months of gestation. The abortions were not preceded by any febrile illness, abdominal pains or vaginal bleeding. A sudden rupture of membranes which was shortly followed by expulsion of small live fetuses occurred in both pregnancies. Some abdominal pains and minimal blood loss

followed before expulsion of the placenta in both instances.

The third and fourth pregnancies presented with similar events and almost same gestations in 1990 and 1992 respectively. In non of the four pregnancies did she have an elevated blood pressure or generalized body swelling. No abnormalities were picked up at peripheral antenatal clinics in any of the pregnancies.

In the index pregnancy she had been attended to thrice before being referred as a case of recurrent abortions. The fundal growth corresponded to the period of amenorrhea.

Review of other systems:

Had no pain or difficulties in passing urine.

Gynaecological history:

No history of sexually transmitted diseases.

Past medical history:

Had had no previous admission or gynaecological surgery.

Family and Social history:

She was married and stayed with her husband.

Both were peasants and they did not smoke cigarettes or drink alcohol.

General examination:

She was healthy, pink, afebrile and not icteric. The pulse was 76 beats per minute, regular with full volume and the blood pressure was 110/70 mm Hg.

Abdominal Examination:

She had no obvious abdominal distension.

The liver, spleen and kidneys were not palpably enlarged. The uterus

corresponded to 22 weeks of amenorrhea.

Speculum examination: Bluish, short closed cervix without discharges. The internal os could easily admit a finger. No membranes were seen.

Cardiorespiratory system:

The respiratory rate was 22 per minute, and lung fields had good air entry without crepitations or rhonchi. Heart sounds were normal and without murmurs.

Diagnosis:

Recurrent mid-trimester abortions

? Cervical incompetence.

Plan for Management:

- Baseline investigations followed by cervical cerclage.

This plan was communicated to the patient and it was acceptable to her.

Investigation and Results:

1. Haemoglobin was 12.1 g/dl.
2. Midstream urine specimen was negative for protein and sugar. No bacterial growth was noticed after 24 hours of culture.
3. Serum creatinine was 71 umol/L.
4. VDRL for syphilis was negative.
5. High vaginal swab.

(i) Microscopy

Gram positive cocci and rods were seen.

- No gram-negative diplococci seen

- No trichomonas vaginalis seen

(ii) Culture:

- No bacterial or candida growth.

6. Pelvic ultrasound

- Singleton fetus noted with positive cardiac activity.

  Adequate liquor amnii and the placenta was fundal.

  Biparietal diameter was 55 mm equivalent to 22 weeks gestational age.

- No obvious congenital malformations were seen.
- No coning of the fetal membranes into the internal cervical os was noted.

Cervical cerclage:

The patient was anaesthetized as per previous gynaecological cases and was put in lithotomy position. The vulva and vagina were cleaned with antiseptics and sterile linen was used to cover the patient. Catheterization was done and clear urine obtained.

Digital examination revealed a short cervix about 1.5 cm with an internal os admitting a finger. An Auvard speculum was introduced into the vagina and the cervical lips were grasped by ring forceps at 12, 3, 6 and 9 o'clock positions. Using a round bodied needle with a doubled number 3 nylon stitch, bites were taken from the substance of the cervix at sites grasped by the ring forceps at the level of internal os. In the intervening spaces (between the bites) the stitch was buried into the cervix. Tying of the stitch was done around a number 7 Hegar's dilator.

The knot was placed at 12 o'clock position leaving the ends of the nylon stitch long for easy removal at term.

The dilator was then removed and inspection for draining of liquor or bleeding was found negative. The patient was transferred to the antenatal ward after recovery from anaesthesia.

Post operative care:

1. Her blood pressure, pulse rate and respiratory rate were monitored hourly for 4 hours and then 2 hourly for 24 hours. They remained stable.
2. Salbutamol 4 mg three times a day were started on the first day post operatively.
3. Intramuscular pethidine 100 mg six hourly was given for 24 hours for analgesia.
4. She was under strict bed rest for 72 hours.
5. A perineal pad was put for 12 hours to observe bleeding or loss of amniotic fluid. It remained dry all the time.

She remained afebrile and without uterine contractions for 7 days post operatively. She was discharged home a week after cerclage and was instructed to avoid heavy work and coitus for six weeks. She was to be seen regularly at the centre's high risk antenatal clinic. Two weeks after discharge from hospital, she was re-admitted with vaginal discharges and labour like abdominal pain. She denied to have had heavy physical work or coitus after discharge. The uterus was found to be growing steadily and fetal movements were present.

A high vaginal swab was taken and the laboratory findings were as shown

above. The cerclage was in place. Ultrasonic evaluation of the pregnancy confirmed an intact internal os and a viable singleton fetus.

In regard to the bad performance in the previous pregnancies and the attempted miscarriage after cerclage, the attending physician was ill at ease getting her discharged again! A consensus between the patient and the attending physician was reached to keep her in hospital till delivery. She was put on strict bed rest with Salbutamol 4 mg and Acetyl salicylate 600 mg trice daily as tocolytics. Regular physical and ultrasonic examinations were done and apart from mild Braxton-Hicks contractions, she remained stable with good fetal growth.

At 37 completed weeks the cerclage was removed but the cervix was found to be long, thick and closed. These findings persisted for one week despite her not being restricted in bed any more. Spontaneous onset of labour was not forthcoming as expected after removal of cerclage from an incompetent cervix at term.

Operative delivery:

The pregnancy continued to the end of 38 weeks of gestation. On account of bad obstetric history, repeated poor Bishop scores, and to optimize the outcome of that particular pregnancy, an elective caesarean delivery was planned. The patient was informed and she consented for it.

Lower segment Caesarean Section:

A sub-umbilical midline incision was made and the abdomen was opened. The intestines were packed away from the pelvic structures. The lower segment had already been formed and vesico-uterine peritoneal fold was incised and the bladder pushed downwards.

A transverse incision on the exposed lower segment of uterus was made and the uterine muscle was cut to expose membranes. Extension of the incision on the uterine muscle was done with a pair of scissors. The membranes were ruptured and a 3000 g male baby was delivered. The baby cried immediately after birth and its mouth and nostrils were wiped dry before it was handed over to the midwife. Ergometrine 0.5 mg intravenously was given immediately after delivery of the baby. The placenta was manually separated and delivered completely with membranes. The uterine wound was repaired in 3 continuous layers using catgut no. 0, 1 and 00 respectively. The instruments and gauze counts were ascertained before closure of the abdomen. The latter was closed in 3 layers with catgut no. 00 for peritoneum, PDS no.1 for rectus and silk no.1 for skin.

The abdominal wound was dressed with sterile gauze. The fundus was squeezed and few clots were expelled. Clots in the vagina were removed by gauze held in a ring forceps. A vulval pad was applied. The total blood loss was estimated to be 350 ml and the placenta weighed 450 g.

The baby had scored 10 on the Apgar scale at birth. It looked mature; healthy and without obvious malformations. It was sent to the neonatal unit to await the mother's full recovery from anaesthesia.

Post-operative care:

After a brief observation in the recovery room the patient was transferred to the postnatal ward.

1. The blood pressure, pulse, and respiration were monitored $^{1}/_{2}$ hourly for 2 hours and then hourly for 4 hours and then 4 hourly for 12 hours. All remained normal and stable.

2. She received a total of 3.0 litres of Dextrose saline in 24 hours following surgery and she produced 1.5 litres of clear urine in the same period.
3. She remained afebrile throughout the postoperative period and was ambulated from the second day.
4. Lochial discharges were non offensive and normal. Her subsequent recovery was uneventful and the post operative haemoglobin was 10.2 g/dl.

Stitches were removed on the seventh day and the wound had healed by primary intention. She was discharged home with her baby and advised to come for review after 6 weeks.

Postnatal follow up:

She was seen six weeks post-operatively. She had no complaints and the wound had healed well and uterine involution was complete. The baby was well and she had established lactation successfully. She was discharged from the postnatal clinic and was to continue with the MCH underfive clinic for the baby's care.

COMMENTARY:

Cervical incompetence is regarded as a cause of middle trimester abortion and premature labour. In some series it is the cause of about 20% of late habitual abortions [1].

The characteristic history of patients with cervical incompetence is one where two or more middle trimester abortions have occurred painlessly and usually following rupture of membranes. It has been suggested that the diagnosis of incompetence in the non pregnant cervix can be made by the

passage of a number 8 or 9 Hegar dilator through the cervix, by traction test with a filled Foley catheter or by hysterography. However non of these is considered to be an absolute indication of cervical incompetence[2].

Some corrective surgeries are done on the cervix on the basis of clinical suspicion and history rather than any mechanical diagnostic modalities. Hence there are no well controlled studies of significant number of patients to guide the clinicians in selecting the best methods in diagnosing cervical incompetence[3].

E. S. was diagnosed as having incompetence of the cervix after having had 4 midtrimester painless abortions. No mechanical diagnostic attempts were done because she had never presented to hospital in a non pregnant state. It has long been recognized that history alone is the best diagnostic aid of cervical incompetence [4] but there is little agreement regarding the diagnosis. The diagnosis is of exclusion that requires careful evaluation to rule out potential courses of mid trimester abortions [5]. An accurate prediction of whether or not a given cervix will be incompetent in a subsequent pregnancy is difficult [5].

The cervix may be functionally incompetent though the structural defect may not be obvious [6]. In typical incompetence of the cervix, removal of cerclage is often followed by the onset of labour and a relatively rapid delivery [5]. In E. S.'s case, labour did not follow removal of cerclage at 38 weeks, this poses several questions. One, whether the diagnosis from a typical history is always correct. Second, whether cerclage produced some healing of an incompetent cervix such that subsequently she

may not require cerclages. Third, whether together with cerclage, bed rest was the most effective treatments in her case [7]. These questions can not be easily answered because there are many middle trimester abortions which mimic incompetent cervix in presentation and are managed as such with a good outcome, but the correct diagnosis would be different if case control studies were possible in this condition. Unfortunately women with cervical incompetence are usually so desperate such that no one would like to have some as 'untreated controls' to determine whether bed rest alone would have worked!

Mrs. E. S. case also poses some problem in diagnosis in that unlike most incompetent cervices which go into labour easily after removal of cerclage, this did not happen. Despite her being released from bed confinement, still weight of uterine contents did not initiate cervical dilatation. With these examples it seems that what is diagnosed as cervical incompetence is not a single entity but a mixture of different conditions which result into silent cervical dilatation and abortion in the middle trimester but most of them benefit from cervical cerclage!

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OB.8 DEHISCENCE OF A PREVIOUS CAESAREAN SCAR IN LABOUR

Registration number : 129/92

Name : E. M.

Age : 26 years

Parity : Gravida 2 Para 1+0

Address : Magomeni

Date of admission : 6.7.1992

Date of discharge : 11.7.1992

Delivery number : 12188

SUMMARY:

Mrs. E. M. was admitted in labour for trial of a previous caesarean section scar at term. The abdominal delivery had been 3 years previously due to cord prolapse in labour and the postoperative recovery was uneventful. She had had antenatal care at a peripheral clinic to the gestational age of 34 weeks, thereafter at Muhimbili Medical Centre high risk clinic.

Trial of scar at term resulted into a live baby weighing 2800 g but with an incomplete rupture of the uterus discovered after third stage of labour. The case is being presented with a commentary on management of dehiscence of a previous caesarean scar.

Obstetric history:

Mrs. E. M. was referred to the high risk antenatal clinic at 34 weeks of pregnancy due to a previous caesarean section in the previous pregnancy. In the past pregnancy E. M.. had an intrapartum cord prolapse for which an emergency caesarean section had to be undertaken. This had been three

years previously and recovery had been smooth and the abdominal wound had healed by primary intention. A week after surgery she was discharged home in good health. She was on oral contraceptives for 2 years following the delivery and conceived a few months after cessation of the pill.

In the current pregnancy, she booked at a peripheral clinic at 22 weeks of gestation. The weight was 60 kg and the height 162 cm at booking. The blood pressure was 120/80 mm Hg and her haemoglobin was 11.8 g/dl.

Examination of the abdomen revealed a thin and soft sub umbilical midline scar. The fundal height corresponded with the duration of amenorrhea at 34 weeks. The blood group was B Rh Positive and serological investigation for syphilis (VDRL) was negative.

Pelvic assessment at 36 weeks of gestation found the pelvis adequate for the fetus which was estimated to weigh 2600 g. She was planned for trial of scar at Muhimbili Medical Centre.

Gynaecology history:

She attained menarche at the age of 13. Her menstrual cycles were regular after every 30 days. Menstrual flow was scanty and lasted 2 days on average. She had been on oral contraceptives for 2 years prior to conception.

Past medical history:

E. M. had no previous admissions other than that following caesarean section in the last pregnancy.

Family and social history:

She worked as an accountant in a private firm. Her husband was a businessman. Both were trained accountants. Neither drank alcohol nor

smoked cigarettes.

Trial of scar:

At 38 weeks of gestation she was admitted in the labour ward with history of labour pains which had started about 3 hours earlier. The membranes had not ruptured.

Examination revealed her to be in good health and the body temperature was 36.8^{0}C. Her pulse rate was 80 beats per minute and the blood pressure was 120/70 mm Hg. She had no pedal oedema or proteinuria.

Abdominal examination:

The abdomen was globularly distended. The liver, spleen and kidneys were not palpably enlarged. The fundal height was equivalent to that of 36 weeks with fetus lying longitudinally and presenting by the vertex. The level of engagement was 4/5 above the pelvic brim. She had moderately strong contractions. The fetal heart rate was 140 beats per minute.

Vaginal examination:

The vulva and vagina were healthy. Blood stained mucoid discharge was visible at the introitus. The cervix was fully effaced, soft and 4 cm dilated. Amniotomy of the forewaters was performed and clear amniotic fluid egressed from the cervix. There was no cord prolapse and the vertex was firmly applied to the cervical rim after amniotomy. There was neither moulding nor caput. The pelvis was re-assessed and found adequate for the baby.

Diagnosis:

Previous Caesarean section scar for trial.

Management of labour:

The decision to undertake trial of scar was re-affirmed taking into count that the indication for the primary caesarean section was a non recurrent one and that healing following the operation was not complicated by sepsis or wound dehiscence.

Preparation for trial of scar:

1. The patients blood was obtained for cross-matching and 2 units of compatible blood were reserved.
2. An intravenous line was set up with Dextrose-saline given slowly to keep the vein open.
3. She was prepared as for a repeat caesarean section i.e.
   (i) Consent forms were signed for surgery and anaesthesia
   (ii) The abdomen and pubic area were shaved and cleansed with savlon.
   (iii) Nothing orally was allowed from the onset of trial of scar.
   (iv) Vital signs were charted regularly on the partograph.

Labour progress:

Labour progressed well and contractions were monitored and recorded every 30 minutes and the descent of the presenting part recorded hourly. The pulse rate was recorded closely and scar palpation for tenderness was done 2 hourly. The pulse rate remained between 80 and 90 beats per minute and the scar remained non tender throughout labour.

Six hours from admission, when another vaginal examination was performed, the cervix was found to be fully dilated and the occiput had descended well below the ischial spines.

Soon thereafter she developed an urge to bear down and this was encouraged and within 5 minutes the head was found crowning. With a generous mediolateral episiotomy she delivered a 2800 g male baby with Apgar scores 9 and 10 at 1 and 5 minutes respectively.

Ergometrine 0.5 mg was given parenterally after the birth of the baby. The placenta was delivered by controlled cord traction. The membranes and placenta were found complete and weighed 500 g.

Vaginal examination was then performed. There were no vaginal or cervical tears. Digital exploration of the lower segment of the uterus revealed a transverse rent which measured about 2.5 cm but did not communicate with the peritoneal cavity. This was an incomplete uterine rupture. However there was no uterine bleeding after if had contracted. The total blood loss through the third stage of labour was 350 ml.

The episiotomy was then repaired in 3 layers.

The patient was put under strict observation of vital signs for 48 hours:

1. Vaginal blood loss was monitored.
2. The pulse rate and blood pressure 2 hourly.
3. Lower abdominal tenderness and guarding were monitored for development of peritonism and free peritoneal fluid.
4. Uterine involutional progress.
5. Body temperature.

After 48 hours she was found stable and the strict vigilance on vital signs and abdominal signs were slackened. She was discharged home in good health 96 hours post delivery.

Follow up:

She was seen again 6 weeks later at the postnatal clinic and she was found to be in good health. The uterus had involuted completely and had no tenderness. She was counselled on what had been discovered after the trial of scar and was advised to book at Muhimbili in the subsequent pregnancies.

COMMENTARY:

Caesarean section is not an innocuous procedure that is not without significant maternal or fetal risks. A variety of complications including unexplained fever, endometritis, wound infections, haemorrhage, aspiration, atelectasis, urinary tract infections, thrombophlebitis and pulmonary embolism occurs in as many as 25-50% of patients [1]. But some of them being too mild go unrecognized and hence the reported incidence vary from one institution to the other.

Abdominal delivery is advantageous only to a fetus who is subject to definite risk from labour or vaginal delivery. Given ideal circumstances for vaginal delivery and for caesarean section, vaginal delivery is more advantageous to both than is caesarean section [1].

Late complications of caesarean section are many which include intestinal obstruction from adhesions and dehiscence of the uterine incision in subsequent pregnancies. Even incisions in the lower segment may dehisce before onset of labour[1] but more often the scar thins to a transparent "window" that holds during pregnancy but may rupture with uterine contraction. Most of the symptomatic ruptures and those that cause maternal deaths are from ruptures of classical incisions.

Although attitudes towards caesarean section have changed radically and

indications have become more liberally interpreted, wide variations in the use of caesarean section within practices of physician sometimes reflect the status of litigations rates in that community rather than absolute indications.

The debate about the safety of vaginal delivery following previous caesarean section is not new but there continues to be divergence of opinion. However, present data indicate that maternal and fetal risks are sufficiently low and that labour and vaginal delivery should be considered for all women with previous caesarean section if no contraindication exist.

Contraindications include the presence of a previous classical caesarean section or similar scar of the corpus, evidence of feto pelvic disproportion or delivery in a facility not equipped to handle the emergency of uterine rupture during labour or delivery.

It is the obligation of physician who delivers a fetus vaginally to explore the uterine cavity carefully after delivery to rule out uterine rupture and to be adequately prepared for it.

However the identification of postpartum uterine scar dehiscence is not an easy exercise. There are many false negative examination findings which go unnoticed and the scars which had previously given way are sometimes subsequently retried! Only when catastrophic dehiscence occurs is the diagnosis simple and the management straight forward.

In incomplete uterine scar tears, a more aggressive approach would be to explore and repair abdominally. This has a questionable integrity advantage in subsequent pregnancies and labour. If such repair is to be

done then edges have to be freshened so as to ensure sound union between lower and upper edges of the lower segment [3].

The management given to Mrs. E. M.'s case was adequate whereby vital signs, signs of peritonism and evidence of free fluid in the peritoneal cavity were monitored and found negative before any aggressive surgical approach was undertaken. The dilemma persists on how to manage subsequent pregnancies. In most uterine ruptures sterilization is advocated after repair but when conservative management has worked, then subsequent pregnancies have to be delivered by elective caesarean section. This scar after dehiscence is regarded as two previous scars.

The most important commitment is to have an absolute indication before a primary caesarean section is undertaken in the first place. This is the committing step which triggers a cascade of probable subsequent complications.

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OB.9 PRIMARY POSTPARTUM HAEMORRHAGE IN A CARDIAC PATIENT

Registration No. : 734902

Name : Miss M. S.

Age : 22 years

Parity : Primigravida

Residence : Manzese, Dar es Salaam

Date of Admission : 2.7.92

Date of discharge : 30.8.92

Delivery number : 10118

SUMMARY:

M. S. was a primigravida with valvular heart disease for which she had several episodes of heart failures. In the third trimester she had another attack of heart failure for which digitalization and diuresis were essential for her survival.

She survived the failure and at 37 weeks of pregnancy labour commenced spontaneously and the second stage of labour was shortened by ventouse extraction.

Moderately heavy postpartum haemorrhage complicated the third stage of labour and its management in patients with cardiac disease is discussed.

Present Obstetric history:

M. S. had her last menstrual period on 7.11.91 and the expected date of confinement was on 14.8.92. Her antenatal card records showed that she had booked at 20 weeks of pregnancy.

She concurrently attended cardiac and antenatal clinics and she received regular digoxin from the former.

The booking weight was 74 kg and increased normally throughout her later attendances. The blood pressure was 100/60 mm Hg and her haemoglobin was 10 g/dl. Both urine for protein and glucose were negative. Serology for syphilis (VDRL) was negative and the blood group was B RhD positive.

Gynaecological history:

She attained menarche at 12 years of age, and had been menstruating for 4 to 6 days after every 30 days. No contraception had ever been practiced.

Past medical history:

M. S. had been under treatment for suspected rheumatic heart disease for 10 years prior to the pregnancy and had 3 admissions in that period due to heart failure.

M. S. had been on monthly injections of Benzathine penicillin. She had been advised against conception but failed to take heed of this advice. She had to be admitted at 30 weeks of gestation until delivery for closer follow up and surveillance of the pregnancy and its outcome.

Social and family history:

M. S. was not married and had no formal primary school education due to chronic ill health in childhood. There was no family history of heart diseases or other chronic medical disorders.

General examination on admission:

She was well nourished, afebrile and not cyanotic. Had a mild pitting pedal without finger or toe clubbing. Oedema and mild dyspnoea was observed at rest.

Cardiovascular system:

The pulse rate was 100 beats per minute regular with full volume. There

was no pulse deficit. It was non collapsing. The blood pressure was 100/60 mm Hg. The Jugular venous pressure was about 4 mm of H_2O above the praecordium.

The praecordium was hyperdynamic. No thrill was felt. The apex beat was felt at 5th intercostal space in the anterior axillary line on the left side. First and second heart sounds were normal.

A soft mid-diastolic murmur could be heard best at right parasternal area and an early systolic murmur was heard best at the apex with radiation to the left axilla.

Respiratory system:

She was tachypneic and dyspnoeic at rest. The respiratory rate was 30 per minute. Breath sounds were vesicular with occasional fine basal crepitations. There were no wheezes.

Abdominal examination:

There were no surgical scars. Hepatic enlargement was noted to be about 2 cm below the right costal margin. Its inferior edge was smooth and non tender. The spleen and kidneys were not palpably enlarged.

The fundal height was 24 weeks size, significantly shorter than expected at gestational age of 30 weeks. The fetal heart tones were present and normal.

Investigation and results:

1. Haemoglobin estimation 10 g/dl.
2. Urine for albumin was negative.

   Microscopic examination of the urine sediment showed few epithelial cells.

3. Serum electrolytes K^+ and Na^+ could not be determined in Muhimbili Medical Centre at that time.
4. Chest Xray: Notable cardiomegaly was seen.
   Moderate pulmonary congestion but no obvious Kerley B lines.
5. Electrocardiogram.
   Left and Right ventricular hypertrophy
   Sinus tachycardia and T wave inversion.

Diagnosis: Mitral valvular disease
(Cardiac disease NYHA grade III).

Drugs and nursing:

The patient was admitted at 30 weeks of pregnancy for rest and surveillance of her cardiac status.

Frequently in the last trimester she developed breathlessness, orthopnoea, chest pain and productive cough. These were not accompanied with fever, urinary symptoms or meningism. She was often managed by diuretics, and bronchodilators because she had signs of pulmonary congestion.

Treatment:

1. Nursing was done in Fowlers position
2. Frusemide 80 mg was given parenterally on admission and later on maintained on oral tablets.
3. Daily Digoxin 0.25 mg was maintained throughout admission.
4. Potassium chloride 600 mg (slow 'K') was given daily.
5. Benzathine penicillin 2.4 mu intramuscular was being administered monthly.

Progress in the antenatal ward:

The heart failure was well controlled but she continued to oscillate between pulmonary congestion and good health. She was being reviewed by a cardiologist regularly and she remained in the ward for 6 weeks. At 37 completed weeks labour pains started spontaneously at 4 a.m. M. S. was transferred to the labour ward.

On admission at the labour she had no signs of cardiac failure.

The liver was no longer palpable and the JVP was normal.

The fundal height was 36/40 and the baby size was estimated to be 2400 g.

The lie was longitudinal with cephalic presentation. The fetal heart rate was 140 beats per minute.

Pelvic examination:

The vulva and vagina were normal.

The cervix was effaced and 6 cm dilated.

The pelvis was assessed and found adequate for the baby and hence amniotomy was done. Clear liquor without cord prolapse egressed from the cervix.

In labour she was nursed in propped up position and oxygen was kept nearby.

Ampicillin injection 1 g was given for prophylaxis against bacterial endocarditis. Preparations for assisting the second stage of labour were made.

M. S. progressed well in labour and in 3 hours she was found to be fully dilated. The patient was transferred onto a high delivery bed and put in lithotomy position. The perineum was cleaned with antiseptic solution and

then she was draped in sterile linen. Local anaesthesia was obtained by infiltrating 1% Lignocaine on the perineum.

Another sterile vaginal examination was done and the position of the vertex was found to be left occipito-anterior. The bladder was emptied by catheterization.

A mediolateral J-shaped episiotomy was made onto the perineum, avoiding the anal sphincter. A number 5 cup and traction chain were guided by fingers and applied onto the occiput. Then it was ascertained that no maternal tissues were caught up between the cup and the presenting part. Negative pressure was gradually built up to 0.8 kg/cm^2 and during contraction, the head was pulled downwards and posteriorly to disengage it from the symphysis and then upwards without any maternal effort. The head was delivered with ease by a single pull.

After delivery of the head, the negative pressure was released and the fetal trunk was delivered routinely. The baby weighed 2600 g with an Apgar score of 10. No obvious malformations were seen on inspection.

The placenta and membranes were delivered spontaneously 10 minutes later. Total blood loss was 600 ml. The episiotomy was repaired with catgut no.1 in 3 layers.

Post delivery the blood pressure was 90/60 mm Hg and the pulse rate 110 beats per minute. An intravenous line was established to keep the vein open in case further bleeding would have necessitated blood transfusion. However bleeding stopped after repeated uterine massage and a firm contraction occurred.

Bilateral tubal ligation under local anaesthesia was performed a day after

delivery.

M. S. was maintained on digoxin, Frusemide, slow 'K' and monthly Benzathine penicillin. Follow up at the cardiac clinic was maintained throughout the puerperium. This was uneventful.

Review at the end of puerperium:

She was seen 6 weeks post delivery. Lactation had been established and both mother and baby were in good health.

COMMENTARY:

Rheumatic heart disease (RHD) presenting in pregnancy is always a cause of alarm to the obstetricians.[1] It usually involves the mitral valve where mitral stenosis accounts for 90% of RHD seen in pregnancy and mitral incompetence in 6%. The rest are a mixture of both.[2]

Pregnancy worsens the haemodynamic problem of mitral stenosis and the overall mortality of these patients during pregnancy and the puerperium. One must not be lulled into a false sense of security because the patient is asymptomatic at the onset of pregnancy. Patients maybe in cardiac status class I of New York Heart Associations (NYHA) and deteriorate to class IV before third trimester. Pregnancy aggravates severity of RHD for a variety of reasons.

1. The physiologic tachycardia of pregnancy which shortens diastole and thus reduces the time available for blood flow across the mitral valve.
2. The need for increased cardiac output during pregnancy which necessitates further increases in left atrial and pulmonary capillary pressure.

3. The increased blood volume of pregnancy which may be up to 40% of pre-pregnant state and increased pulmonary capillary blood volume.
4. The decreased serum albumin concentration of pregnancy which allows the development of pulmonary oedema at lower pulmonary capillary pressures (Lower oncotic pressure).
5. The increased incidence of atrial arrhythmias during pregnancy.

The early puerperium also is a dangerous time in patients with cardiac disease since the venous return to the heart is promoted by the relief of uterine pressure on the vena cava and by the mobilization of extracellular fluid into vascular compartment [3].

Congestive cardiac failure can easily set in when the uterus contracts and pushes more than 500 ml of fluid into circulation. It is even worse if for the fear of the cardiac disease, some crystalloid infusion is given in labour and then ergometrine is given at the end of the second stage. Although it is a precarious situation to nurse a sick patient without an intravenous line, here it is usually better avoided for fear of fluid overload. Ergometrine is also not given for the same reasons but also to avail increases in peripheral vascular resistance which increases the afterload to the weak heart.

M. S. had primary postpartum haemorrhage amounting to approximately 600 ml. In cardiac patients this amount of haemorrhage is viewed as a "blessing in disguise." It helps overcome the cardiac congestions which would otherwise ensue. Otherwise in congested patients alternate tourniquet applications to the four limbs or venesection are advocated [3]. However it is difficult to assess without a central venous pressure

manometer, when this postpartum bleed becomes excessive.

Estimating blood loss in labour is usually very tricky and almost always is an underestimate. Most wetness in labour is attributed to that caused by amniotic fluid even when it is due to plasma and hence blood!

If the patient bleeds to an extent that hypotension sets in, the blood transfusion is indicated even in patients with cardiac lesions [5]. Cardiac output returns to non pregnant state two weeks after delivery. This is another dangerous time for the patient to develop puerperal infection which can be complicated with acute bacterial endocarditis. Therefore these patients need to be observed in hospital for two weeks post delivery so that the cardiovascular system stabilizes while they are still under observation.

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OB.10 TRUE RH ISOIMMUNIZATION: A RARITY AMONG BLACK AFRICAN WOMEN?

Registration number	:	M 142/92
Name	:	Mrs. M. M.
Age	:	32 years
Parity	:	Gravida 3 Para 2+0
Residence	:	Magomeni, Dar es Salaam
Date of delivery	:	11.9.92
Date of discharge	:	14.9.92
Delivery number	:	13214

SUMMARY:

Mrs. M. M. was referred to the high risk antenatal clinic at Muhimbili Medical Centre on account of being Rhesus negative. She had been diagnosed at first pregnancy six years past to be of blood group O Rh Negative and her husband was group B Rh positive. She had delivered previously at a regional hospital and no anti-D was given. Coomb's tests were reported negative for both the mother and the babies. None among the babies had developed neonatal jaundice. In the index pregnancy, she developed no antibodies during antenatal care and she delivered uneventfully at 38 weeks of gestation, a healthy 3000 g male baby of blood group O Rh Positive. No antibodies were found at delivery, she was given 250 µg of Rh immune globulin 24 hours post delivery and was discharged home. The myth of Rh iso-immunization among black African Rh negative women is being discussed in the commentary of this case.

→ Obstetrics history:

Mrs. M. M. had attended a peripheral clinic from the gestation of 24 weeks

and was referred at 30 weeks. She had no complaints but the worry about her Rh negativity which was discovered at the first pregnancy six years previously. No other risk factors were detected. She was examined and blood samples were obtained to confirm the blood group and Rhesus factor. This was confirmed to be of blood group O Rh Negative. Antibodies against Rh were negative. Ultrasonographic follow up of fetal development was done by the author. The fetus continued to grow well without features of hydrops fetalis. Amniotic fluid bilirubin was not studied.

Gynaecological history:

She had her menarche at 14 years. The menstrual cycles were regular of about 28 days. Menstrual periods were painless. She used combined oral contraceptive pills between pregnancies. Had no previous abortions or blood transfusions.

Past medical history:

She had been in good health all the time.

Family and social history:

She was married and worked as a personal secretary in a private firm. She was not of mixed ethnic origin. Her husband was a civil servant, also of black African stock. There was no consanguinity.

Physical examination:

She had a good nutritional status and was not jaundiced. She was not pale. There was no edema, proteinuria or lymphadenopathy.

Her pulse rate 76 beats per minute and the blood pressure was 100/70 mm Hg. The lungs and heart sounds were normal.

Abdominal examination:

The abdomen was distended and the fundus corresponded to the calculated gestational age of 30 weeks. The lie was longitudinal with cephalic presentation. The liver, spleen and kidneys were not palpably enlarged. Fetal heart tones were heard and were normal.

Follow-up antenatal care:

1. Her haemoglobin remained about 11.5 g/dl till delivery.
2. Her husbands blood group was determined again and found to be B Rh Positive as reported by the patient at the initial visit.
3. Maternal indirect Coomb's tests were done at 32 and 36 weeks and on both occasions no antibodies were found.
4. Blood smear for malaria parasites was negative.
5. Serological determination for syphilis (VDRL) was negative.
6. Pelvic assessment was done and feto-pelvic disproportion was excluded.

Delivery:

At 38 completed weeks she went into spontaneous labour and was admitted into the labour ward 4 hours after onset of uterine contractions.

Physical examination in labour:

She was found to be in good general condition. The body temperature was 37^{0}C. There was no pallor or jaundice. Her blood pressure was 120/70 mm Hg and had neither proteinuria nor oedema. The fundal height was 36 weeks size with a longitudinal lie and a cephalic presentation. Fetal size was estimated to be 2800 g. The head was 3/5 above the pelvic brim and fetal heart tones were regular at 138 beats per minute. Moderately strong

uterine contractions were palpated.

Pelvic examination:

The vulva was covered with show. The cervix was fully effaced and 6 cm dilated. Amniotomy was performed and clear liquor egressed. No cord prolapsed at amniotomy. The position of the presenting part was left occipito-transverse and there was no moulding or caput. Normal vaginal delivery was anticipated. Labour progressed well and four hours later she deliverered a healthy 3000 g male baby with Apgar score 9 and 10 at 1 and 5 minutes respectively.

Blood was obtained from the cord for determination of baby's blood group, Rhesus factor, haemoglobin and direct Coomb's test. (See result below).

Ergometrine was given parenterally and the placenta was delivered by controlled cord traction. Third stage blood loss was 200 ml. The baby was examined and found pink, not jaundiced and without congenital malformations. It was sent to neonatal unit for observation. Blood was drawn from the mother for indirect Combs test and Kleinhauer-Betke test. (See results below).

Immunoprophylaxis:

The results from the baby's blood showed blood group O Rh Positive. Its haemoglobin was 17.0 g/dl. Direct Coomb's test was negative No. Rhesus D antibodies were detected in the maternal blood. The Kleihauer-Betke test was not done due to lack of reagents at that particular time.

The mother was given a prophylactic injection of 250 ug of hyperimmune anti D globulin intramuscular within 24 hours of delivery. The mother and

baby were discharged from hospital in good health 3 days post delivery.

Postnatal review:

They were seen again after 6 weeks at the postnatal clinic. The mother was in good health and the baby was growing normally. It had not developed any jaundice postnatally.

They were discharged from the clinic.

COMMENTARY:

Rhesus factor isoimmunization is caused by maternal antibody production in response to exposure to fetal erythrocytes antigens of the Rh group including C, D, and E (the Rh alleles). The antibody response may potentially destroy fetal red blood cells causing anaemia and may result in erythroblastosis fetalis. All of the Rh alleles on the surface of erythrocytes stimulate an IgG antibody response in the Rh negative mother. In the United States approximately 1.5% of all pregnancies are complicated by red cell sensitization from Rh incompatibilities and 15% of women are Rh Negative. 1/8 of all abortions involve Rh Negative women with Rh positive man[1,8]. However there are important racial differences in the distribution of the Rh antigens. American Indians and Asians are almost 99% Rh positive. While 7% of Black Americans and 13% of white Americans are Rh negative.

African Tanzanians show very low Rh negativity compared to Western Europeans and Basques. In all populations studied in Tanzania, Rh negativity is between 3-4% while the Swedes and Basques show Rh negativity as 42 and 49% respectively[3]. This low Tanzania Rh negative prevalence partly explains the very low incidence of hydrops fetalis or

severe neonatal icterus requiring exchange transfusions as a result of Rh iso-immunization.

The Rh factor incompatibility between Rh negative mother and Rh positive fetus are not the only determinants of appearance of isoimmunization and its severity, but there are concomitant factors like:

The degree of sensitization which depends on factors other than the occurrence of fetal cells reaching the maternal circulation and stimulating antibody production i.e.

a) The rates of occurrence of Rh incompatibility which vary among individuals irrespective of prior risk to iso-immunization.

b) The difference in immunogenicity of the offending antigens i.e. C and E produce more antigenic response than Kidd.

c) The low rate of transfer of the antigen from fetus to mother reducing the severity of maternal antibody response.

d) The low rates of antibody transfer from mother to fetus reducing the fetal effects of the maternal antibody production.

e) The variability of maternal response due to different degrees of incompatibility and other interfering antibodies (eg. ABO incompatibility).

f) Differences in binding of the maternal antibody to the fetal red cell antigens.

ABO Incompatibility:

This has a protective effect for an Rh negative mother carrying an Rh positive fetus for the following reasons:

a) A and B antigens are capable of mounting a strong immunogenic response.

b) Because the A and B cells are cleared so quickly from the maternal circulation, the full Rh antibody response is blunted.

c) Risk of Rh sensitization developing as a result of an ABO incompatible Rh positive pregnancy is 20% of the risk with ABO compatibility [2].

Accordingly it is necessary in any population to map out not only Rh gene frequencies in order to predict the chances of union between parents of different Rh groups for the extrapolation of the risk of iso-immunization, but also the ABO blood groups distributions.

ABO blood group distributions have been determined in several parts among black Africans. The flowing findings are indicative.

In Bendel state of Nigeria, the blood ABO blood group distribution were as follows.

A 24.3%, B 18.35, AB 2.27%, and 0 55% and at Benin Teaching hospital where 10817 subjects were tested the findings were:

A 23.34%, B 16.57%, AB 2.47%, 0 55.59% RhD positive was 94.5% and 5.49 were negative 3

In East Africa, same studies have been done and the results were as follows:

A 26.93%, B 22.46% AB 4.49% and 0 46.12% Rh positivity was 97.86% and 2.14% were Rh negative.

In a study done in Dar es Salaam among 100,807 blood donors, the ABO

blood groups were as follows.

A - 25%, B 19%, AB 4%, & O 52%.

In majority of Black Africans more than 50% are blood group O and Rh positivity is above 95%. The low RhD negativity among black contrasts to 15% Rh negative among British whites as reported by Dacie and Lewis[5].

In Mrs. M. M.'s case there was no finding suggestive of Rh isoimmunization in the two previous births. The third delivery also was normal. This shows how Rh isoimmunization may be operating differently among ethnic black Africans. There are many possibilities of the circumstances which were operative in this lady's pregnancies. One, even after so many Rh positive pregnancies she was not sensitized. It is on record that even after 5 Rh positive pregnancies only about 10% of mothers form anti-D[5].

Two, may be she was unable to respond by producing anti D even though repeated exposures to Rh positive cells occurred. It has been found that 30% of Rh negative women seem unable to respond by producing anti-D even though repeated injections of Rh positive cells are given[9].

In patients with ABO incompatibility, Rh sensitization fail in 90% of A blood group, white B incompatibility gives 53% protection but M. M.'s fetus was ABO compatible with the mother still she was not sensitized. Sometimes the volume of fetal red cells which get into maternal circulation is too small to initiate antibody formation, this can not be refuted in Mrs. M. M.'s because studies were not done to quantify fetal cell volume in maternal circulation.

It is also possible that the mother was tolerant to fetal antigens during

pregnancy due to immunological privilege of the fetal environment.

May factors seem to contribute to the low incidence of haemolytic disease of the newborn or hydrops fetalis resulting from Rh isoimmunization among black Africans as shown above. It has been established that blood group O and Rh positivity are the primitive groups in humans while A, B and AB are adaptations to an unknown stimulus. Rh negativity also is a recent development in the evolution. Therefore it seems that ethnic Black Africans are far less prone to have marriages among blood groups which can induce iso-immunization ie low percentage of population are Rh negative, and high percentages are blood group O (vide supra) hence the chances of having an Rh negative lady married to an Rh positive man with ABO blood group compatibility is a rare phenomenon.

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L O N G O B S T E T R I C C O M M E N T A R Y

DETERMINATION OF SOCIO-DEMOGRAPHIC CHARACTERISTICS OF WOMEN WHO UNDERGO SURGICAL STERILIZATION IN TANZANIA.

ABSTRACT:

Female surgical contraception is still a new method among childbearing women in Tanzania. In 1991/92 only 0.7% of all women in the age group 20-29 years had been sterilized in the country. This age group has the highest fertility rate among childbearing women in Tanzania.

The aims of this study were to determine the age and parity at which women are being sterilized under Voluntary Surgical Contraception (VSC) programme in three referral hospitals in the country. Also other socio-demographic attributes of the same group were studied.

A total of 525 women underwent surgical sterilization at the three referral hospitals between September and December 1993. The results showed that the mean age at sterilization was 35.5 years and the mean parity was 6.

More than 62% of women sterilized were aged 35 years and above and 92% were married. Majority of those sterilized (49%) were Protestants while Catholics and Moslems were 23% each.

The sex ratio among living children in the sterilized women was M:F 100:97.

54% of those sterilized were primary school leavers.

36% of women studied were not using any contraceptive method before they were sterilized despite having decided not to have any more children. Also among those who used some contraception, some still had unwanted and unexpected pregnancies before they were

sterilized. This may be attributed to poor compliance, user errors or fatigue but for sure this is a result of delay in sterilization service provision.

The results of the study indicate that the age groups and parities of women being sterilized in Tanzania are off the target if this method is to be used for control of population growth. This partly explains the continued population growth in Tanzania.

INTRODUCTION AND LITERATURE REVIEW:

Voluntary female sterilization is one of the world's most used family planning method and one of the fastest growing [1]. An estimated 138 million women of reproductive age use this method today, this being 43 million more than in 1984 [2]. Millions are expected to ask for the method in the next decade. Female sterilization involves ligating the fallopian tubes and hence preventing the ova from reaching the uterus and the spermatozoa reaching the mature ova. This can be done by minilaparotomy, consisting of making a small incision and opening the abdomen, moving each fallopian tube to the incision, ligating each and removing a segment of the tied tube. Laparoscopic tubal ligation is done by applying clips, rings or heat to block them. Both methods are safe and effective.

The major reason for the growth of female surgical contraception in developing world is the effect of fast expanding family planning services. Women have discovered that female sterilization is cheap, convenient, effective and safe for protecting them from unwanted pregnancies and that it does not require regular supplies and no further action is needed once the procedure is performed.

Unlike many temporary contraceptive methods the method is known not to

have long term side effects.

Voluntary surgical contraception (VSC) programme has revolutionized female sterilization as it has eliminated the necessity for clients to be hospitalized for the procedure. Tubal ligations are done under local anaesthesia and hence clients do not have to qualify for general anaesthesia and the attendant policies for it. Also this programme has down played the role of spousal consent for female sterilization. Single parents, divorced women and widowed benefit from this loop-hole. It has now been established that the decision to limit childbearing is among the basic rights to women, therefore this eliminates the necessity for the husband's signature before sterilization can be undertaken.

Population growth:

Globally there has been a big concern on the rate of growth of human population against the fixed resources on the Earth. It has been shown that 2000 years ago, the Earth's population was 50 million while in 1930 it was 2000 million and in 1992 was 5,400 million [3]. With this trend of population growth it is extrapolated that the Earth's resources will soon not be able to support the human population.

Worldwide more than 15% of married women are sterilized for contraceptive reasons. In some countries like Panama 29% are sterilized while in China it is 27%, South Korea 23%, Thailand 19%, Brazil 18%, El Salvador and Fiji are 18% each [4].

Among married women in the US, voluntary sterilization is now the most widely used contraceptive method accounting for 17.4% in 1982 [4].

In Africa, Kenya is a prominent example. This is the country with the shortest population doubling time in the continent i.e. less than 20

years[5]. However Kenya now is one of the countries where female surgical sterilization has become the most widely used contraceptive method among women above 30 years of age. In 1990, more than 11,000 procedures for sterilization were performed in Kenya although the method was unheard of some few years ago [6]. In a study done at the Kenyatta National hospital, 62% of women being sterilized had already delivered more than five children and 40.8% were within the age group 30 and 34 years.Majority of those sterilized were married (81.7%).

In Tanzania, women aged between 15 and 44 years only 1% were found to be using any contraception in 1986. The Ministry of Health showed that in a span of about 10 years the cumulative contraceptive prevalence was very low i.e. between 5 and 7%.

One of the factors that affect most of contraceptive methods used is poor compliance and discontinuation. These factors make estimated figures on cumulative contraceptive prevalence false.

This error does not affect cumulative sterilization rate comparisons because it is a permanent method.

The Tanzania Demographic Health Survey (TDHS 91/92) has shown that sterilization is used in 0.7% of women aged between 20 and 29 years while the age specific fertility rates are highest in this group[7] .

The coverage for vaccination of the underfives in Tanzania was 80% in 1989 (Grant 1989). This high coverage uses the same infrastructure family planning services could have used to gain higher coverage rate than that projected by the National Family Planning Plan 1989-93 of 25%. This could be achieved if the chance when mothers brought their children for vaccines was exploited for contraception. At the same sitting all family planning services could be offered and hence achieve

a coverage close to that for under fives vaccinations. But non availability of some or all methods of contraception at any one time in these clinics affects user rates in Tanzania. Now to bank on these inconsistent supplies of temporary contraceptives to control population growth rate becomes unreliable and an unrealistic approach. In 1948, Tanzania (then Tanganyika) had a population of 7.7 million and forty years later (1988) the population had trebled to 23.1 million. At this rate it is estimated that Tanzania's population will be 33 million by the year 2,000. If we have to curb this trend, then some deliberate efforts should be made to use AVSC programme to offer sterilization to those women who do not wish to have anymore children especially those in the highest fertility rate age groups.

Rapid population growth rates in many developing countries has been recognized as a contributor to poor economic growth. The Tanzanian government supports family planning and child spacing by indirectly:

(i) giving one paid maternity leave of 84 days once every 3 years.

(ii) giving income tax relief up to 4 children for all workers.

(iii) giving travel allowances for up to 4 children once every 2 years when the worker is on annual leave.

Therefore it is evident that the government would 'like' a family size of 4 children or less through indirect motivation as cited above. However given the socio-economic structure of this country less than 10% of the whole population will be affected as more than 90% are either not employed or are rural inhabitants who will not recognize the above motivation.

This exemplifies the importance of explicit policy on family size and population growth rates in this country.

Benefits of family size limitation to the family:

To the individual woman there are innumerable advantages to family size limitation. Pregnancy related complications like hypertensive disorders, and haemorrhagic episodes of pregnancy are positively influenced by the woman's age at that particular pregnancy.

Women having their fourth and fifth births have double the risk of dying at childbirth than those having the second and third.

Fetal deaths also increase with increasing birth order. Babies born as third and above in the family have more than four times chances of sustaining early death than those in the first and second birth ranks [9].

Children born in large families grow less well compared to those from small ones. It has been shown that with increasing birth order, there is a decrease in the intelligence quotient (I.Q.) [12].

Many people think that women in developing countries have large families simply because they want to. This is not true. Some women have born several children before marriage and when they eventually marry, they start their childbearing afresh so as to foster strong marriage bonds. These end their childbearing career with more children than they had intended to have. Others in the quest for search of specific gender among offsprings, they continue childbearing beyond the fourth decade of their lives. This gender search is dictated by socio-cultural settings of different communities here in Tanzania . In some communities boys are preferred to girls while others the opposite is the case.

Some prefer many children to maintain their lineage and for their security in old age where children are supposed to take care of their elderly parents.

Reality about family sizes in developing countries:

In many developing countries a large proportion of women with at least 3 living children want no more children but they are not using any contraception.

Studies done in different countries showed that in Bangladesh 70% of women with 3 living children wanted no more while the proportions in other countries with same decision were as follows:

Costa Rica	60%
Republic of Dominica	55%
Fiji	50%
Mexico	55%
Sri-lanka	75%
Thailand	62%

It was however discovered that the 50-80% of women who did not want to conceive again were either not using any family planning method or were using ineffective methods like douching.

If these needs were satisfied by prompt sterilization services, then the same proportion of women would have been sterilized in the above countries and hence reducing fertility rates and population growth.

This may be the case in Tanzania but so far there are no studies done to substantiate or deny the presence of unmet need to sterilization.

However it is now established (TDHS 1991/92) in Tanzania that the highest fertility age group among women of childbearing age is between 20 and 29 years [7] (see graph overleaf fig. 3.1). This implies that this age group bracket is the main contributor to population increase in Tanzania and hence if we are to control the latter we have to aim at these women when undertaking sterilization.

In the age groups 35 years and above, the fertility rates are so low such that even if 100% of these were sterilized, there would be no impact on population growth rate. Most of the women at 35 years and above have parities of 6 and above and hence benefits for sterilization will be on individual clients but not on population dynamics.

Statement of Research Problems and Rationale for the Study:

In Tanzania, the Association of Voluntary Surgical Contraception (AVSC) in collaboration with Family Planning Association of Tanzania (UMATI) has introduced a programme for training minilaparotomy surgeons and counselors to offer surgical sterilization to both men and women. Both vasectomy and tubal ligations are performed under local anaesthesia and on outpatient basis.

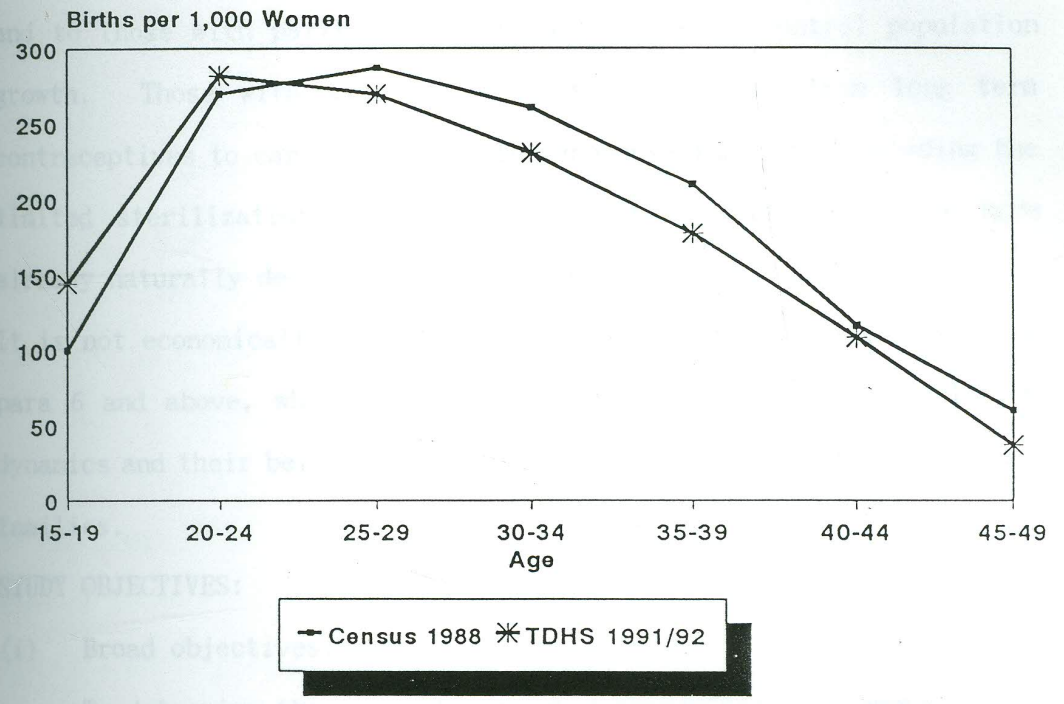
The programme started in 1985 and by the end of 1991, 2605 clients had had sterilization and 34 surgeons and 91 counselors were working in the 9 full functional AVSC sites in the country.

AVSC programme has obviated some of the medical barriers to female sterilization. Consent from the spouse or husband is no longer essential before sterilization services are offered to the clients. There is no minimum parity, marital status or minimum age at which this service can not be offered.

In most of the AVSC centres in Tanzania it has become evident that there is a greater demand for sterilization services than what the programme can offer at the moment. This is evidenced by the long waiting lists in most of the centres and therefore long delays in sterilization.

The author intended to study the socio-demographic characteristics of those women undergoing surgical sterilization under AVSC programme from

Figure 3.1
Age-Specific Fertility Rates
1988 Census and 1991/92 TDHS



3 referral hospitals in Tanzania namely Muhimbili Medical Centre (UMATI), Mbeya Referral Hospital (MRH) and Kilimanjaro Christian Medical Centre (KCMC). The obtained results would influence the programme to strategically offer priority services to women who volunteer for surgical sterilization at ages between 20 and 29 years and to those with parities less than 4 so as to control population growth. Those with ages above 35 would benefit from long term contraceptives to carry them over to menopause instead of crowding the limited sterilization facilities while their fertility rates have already naturally declined(see fig.3.1).

It is not economically sound to offer sterilization to women who are para 6 and above, who have already caused damage to the population dynamics and their being sterilized would not reduce their already huge families.

STUDY OBJECTIVES:

(i) Broad objectives:

To determine the socio-demographic characteristics among women undergoing surgical sterilization in three referral hospitals in Tanzania.

(ii) Specific objectives:

1. To determine the mean age at which women undergo surgical sterilization in the three referral hospitals.
2. To determine the mean parity at which women undergo surgical sterilization in the three referral hospitals.
3. To determine the sex ratio among children born to women who undergo surgical sterilization.
4. To determine the proportion of women who seek consent

from spouses before sterilization.

5. To determine whether there is a relationship between having step children and parity at sterilization.
6. To determine religion distribution among those sterilized.
7. To determine marital status among those sterilized.
8. To determine the relationship between delay of sterilization and frequency of unwanted pregnancies.
9. To determine the methods of contraception before sterilization in relation to frequency of unwanted pregnancies .
10. To determine the educational level among women being sterilized.

METHODOLOGY:

Area of Study :

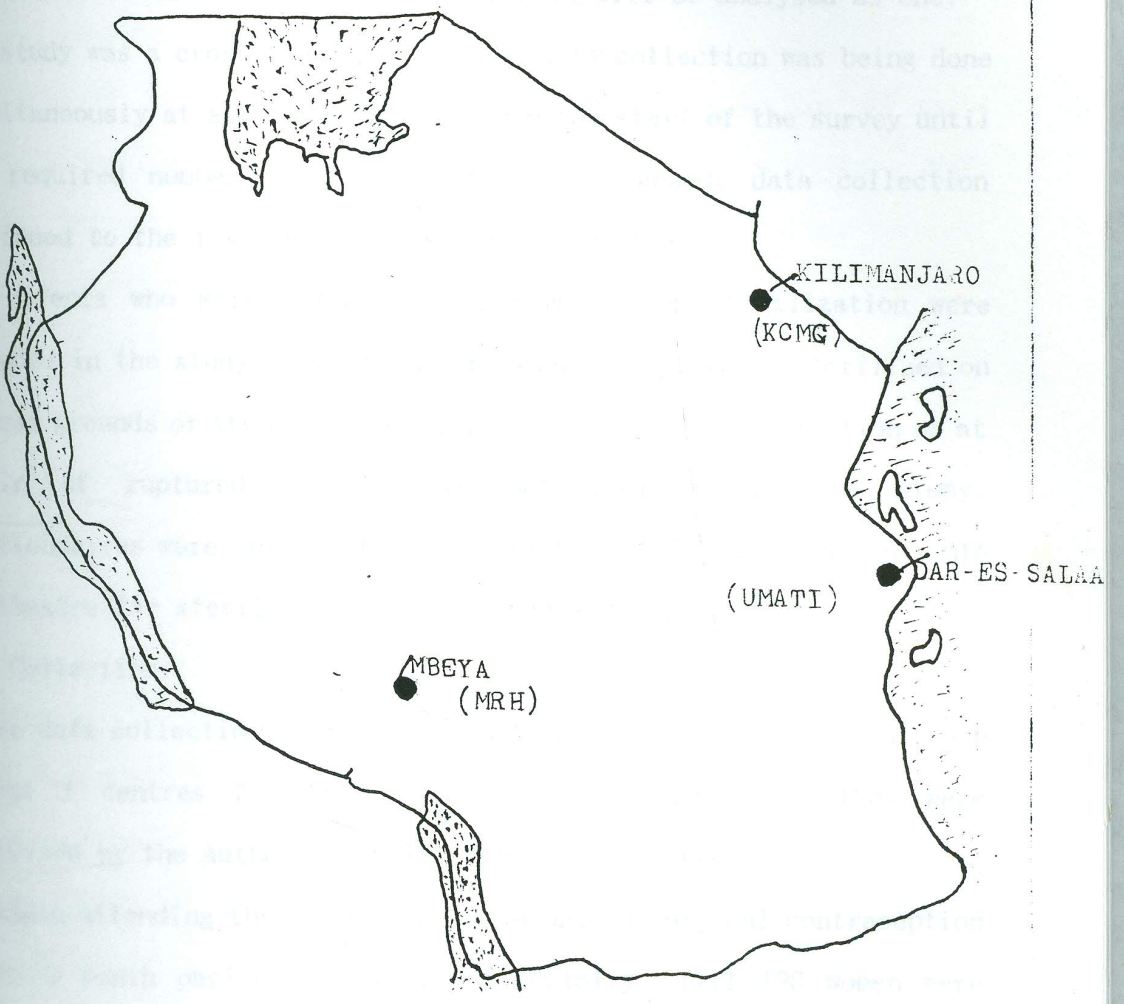
With the above preamble the author conducted a cross-sectional survey on use of the AVSC services in the country. The study was conducted in 3 referral hospitals namely MMC, KCMC and MRH. The study was done concurrently in the 3 centres from September to December 1993. The 3 centres were selected for convenience and short time allocated for the survey. These centres conduct many sterilizations than any of the other AVSC programme centres in Tanzania.

The three centres are wide apart in the country and majority of clients served at each come from nearby areas and none are referred from anywhere for sterilization(See figure 3.2 overleaf).

The study was conducted in the three centres so as to obtain the sample size required in a short time due to logistic constraints and time

FIGURE 3.2

TANZANIA : STERILIZATION CENTRES.



limitation. No comparison analysis will be made for the attributes from one centre to the other but the whole data will be analysed as one.

The study was a cross sectional one and data collection was being done simultaneously at all the centres. From the start of the survey until the required number for each centre was reached, data collection continued to the last case. No sampling was done.

All clients who were voluntarily coming in for sterilization were included in the study. Those who had been advised to be sterilized on medical grounds or those who were sterilized at Caesarean section or at repair of ruptured uterus were not included in the study. Questionnaires were only applied to clients just before they went into the theatre for sterilization and not after the procedure.

Data Collection:

Before data collection, the author conducted a one day seminar at each of the 3 centres for the counselors and thereafter they were supervised by the author at their respective centres.

All women attending the 3 centres for voluntary surgical contraception in the 3 month period were included serially till 190 women were recruited for each centre or untill time for the survey was up. No sampling was done due to the small numbers of women being sterilized every day at each centre.

The socio-demographic attributes were recorded on a prestructured questionnaire as clients were about to be sterilized. (See appendix 1).

Data analysis:

While in the field coding was begun and the data was brought to Dar es Salaam for statistical analysis at the Epidemiology Department of MUCHS and Statistical Packagefor Social Sciences programme (SPSS) was

used.

RESULTS:

General characteristics of the study group:

A total of 525 women undergoing surgical sterilization at three referral hospitals in Tanzania, namely Muhimbili Medical Centre- UMATI Clinic, Kilimanjaro Christian Medical Centre (KCMC) and Mbeya Referral Hospital (MRH) were studied.

The proportions of the study group contributed by each Centre is as shown in figure 1.

Their socio-demographic attributes were recorded. These included age, education level, marital status, parity and religion. The other characteristics which were recorded are as shown in the questionnaire appended (appendix 1).

Findings of the study:

49% of the study subjects were Protestants while Roman Catholics and Moslems accounted for 23% each as shown in figure 2.

Figure 3 shows that 63.5% of the women sterilized at the three Centers were aged 35 years and above while 30.7% were between 30 and 34 years and 5.8% were aged between 25 and 29 years.

The mean age at sterilization was 35.5 years.

Figure 4 shows that 92% of sterilized women were married and 3% were divorced or single while 2% were widows.

Among those sterilized 36.6% were not using any method of contraception at the time of sterilization while 34.5% were on the Pill, 11.8% on intra uterine contraceptive devices, 10.2% on Depo Provera and the remaining percentage were on other methods as shown in figure 5.

54% of the women sterilized had completed Primary School education

STUDY SAMPLE BY PLACE (N=525)

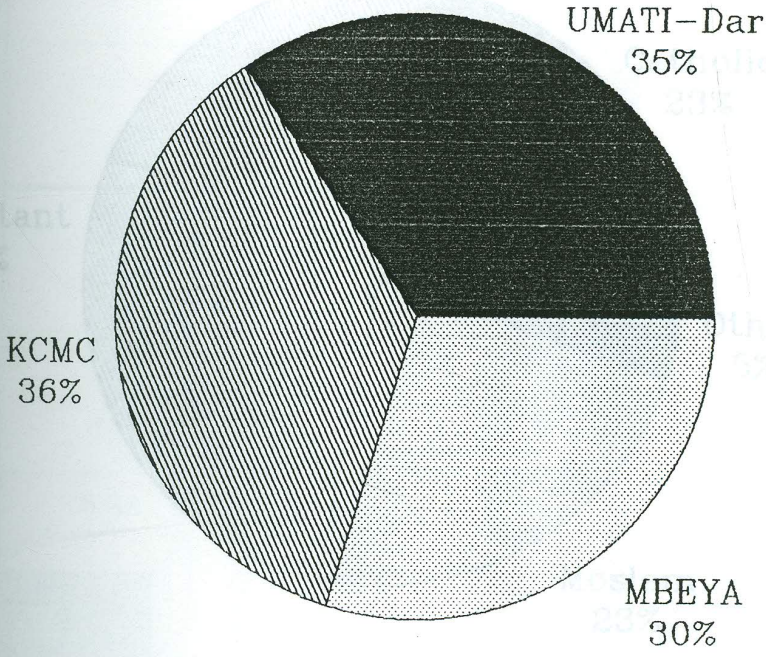


Figure 1

RELIGION AT STERILIZATION (N=525)

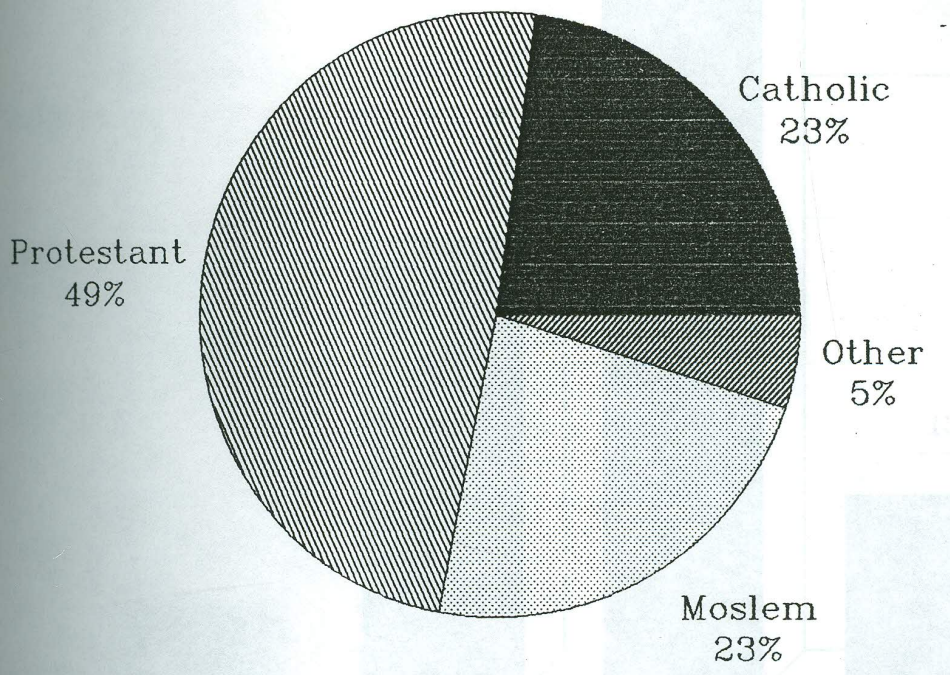


Figure 2

AGE AT STERILIZATION (N=525)

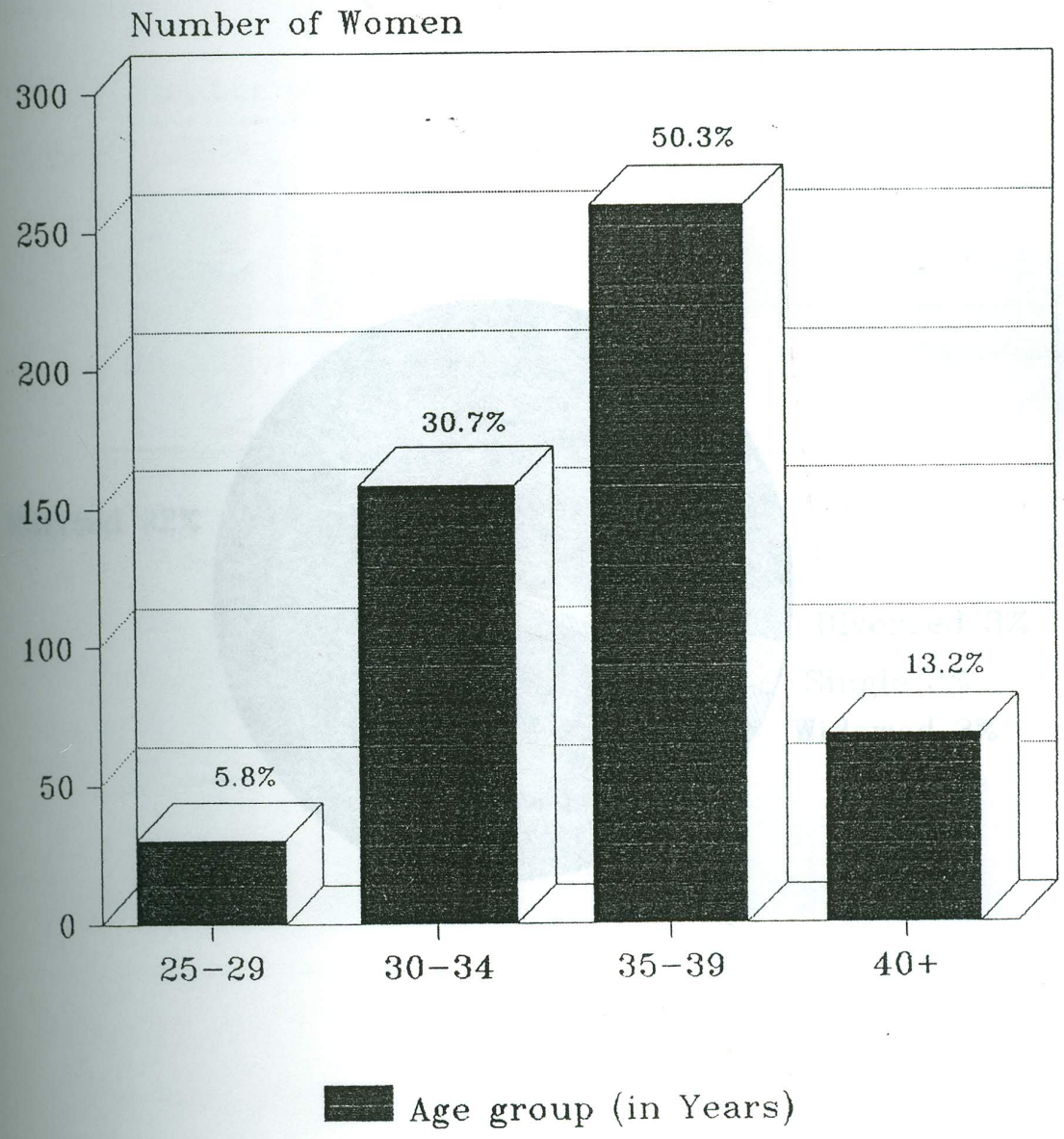


Figure 3

MARITAL STATUS BEFORE STERILIZATION (N=525)

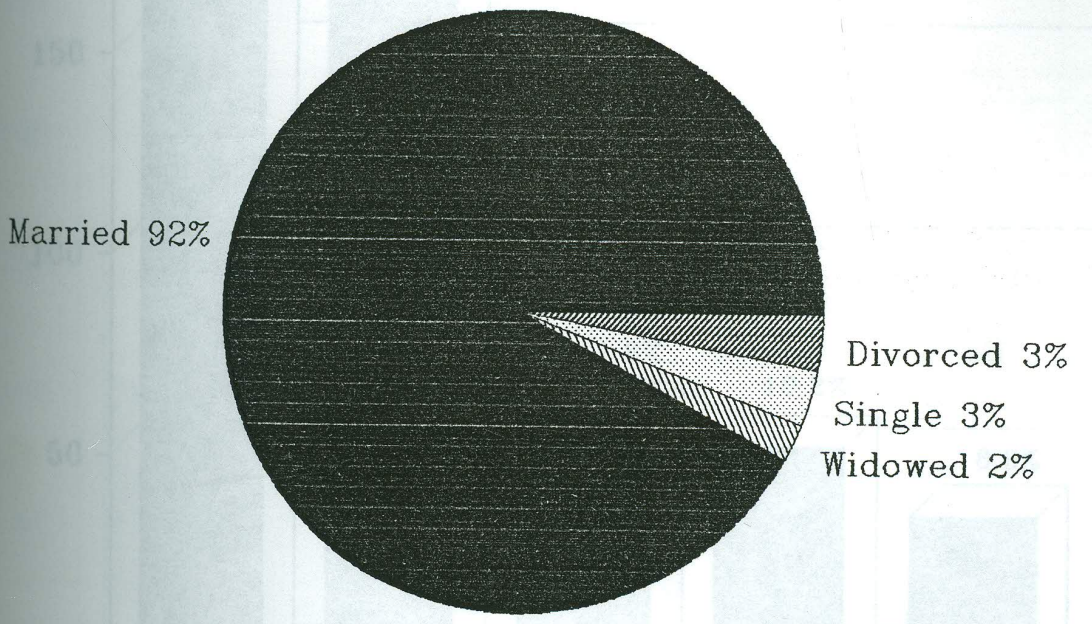


Figure 4

CONTRACEPTIVE METHODS BEFORE STERILIZATION (N=519)

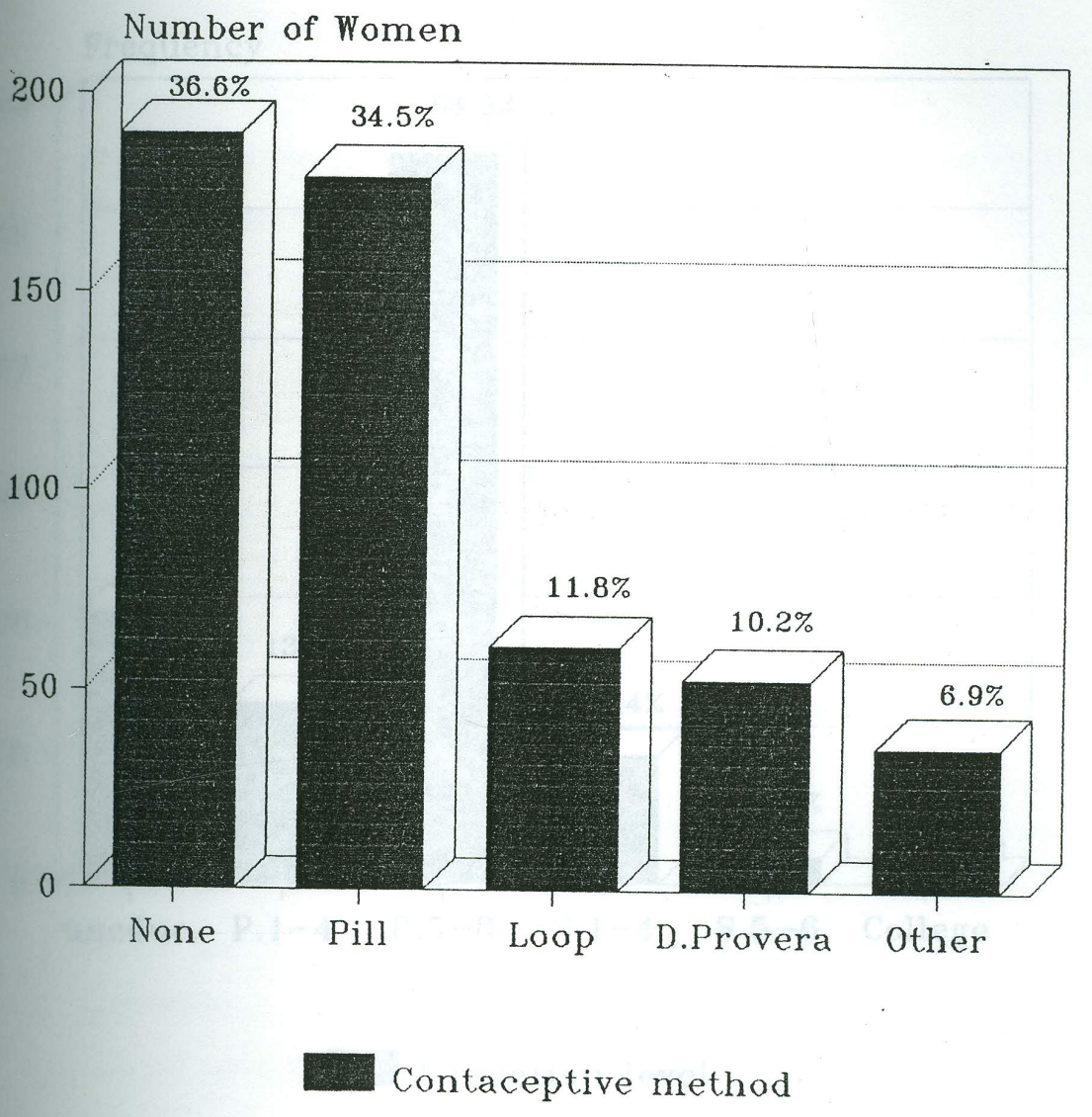


Figure 5

EDUCATION LEVEL REACHED BEFORE STERILIZATION (N=525)

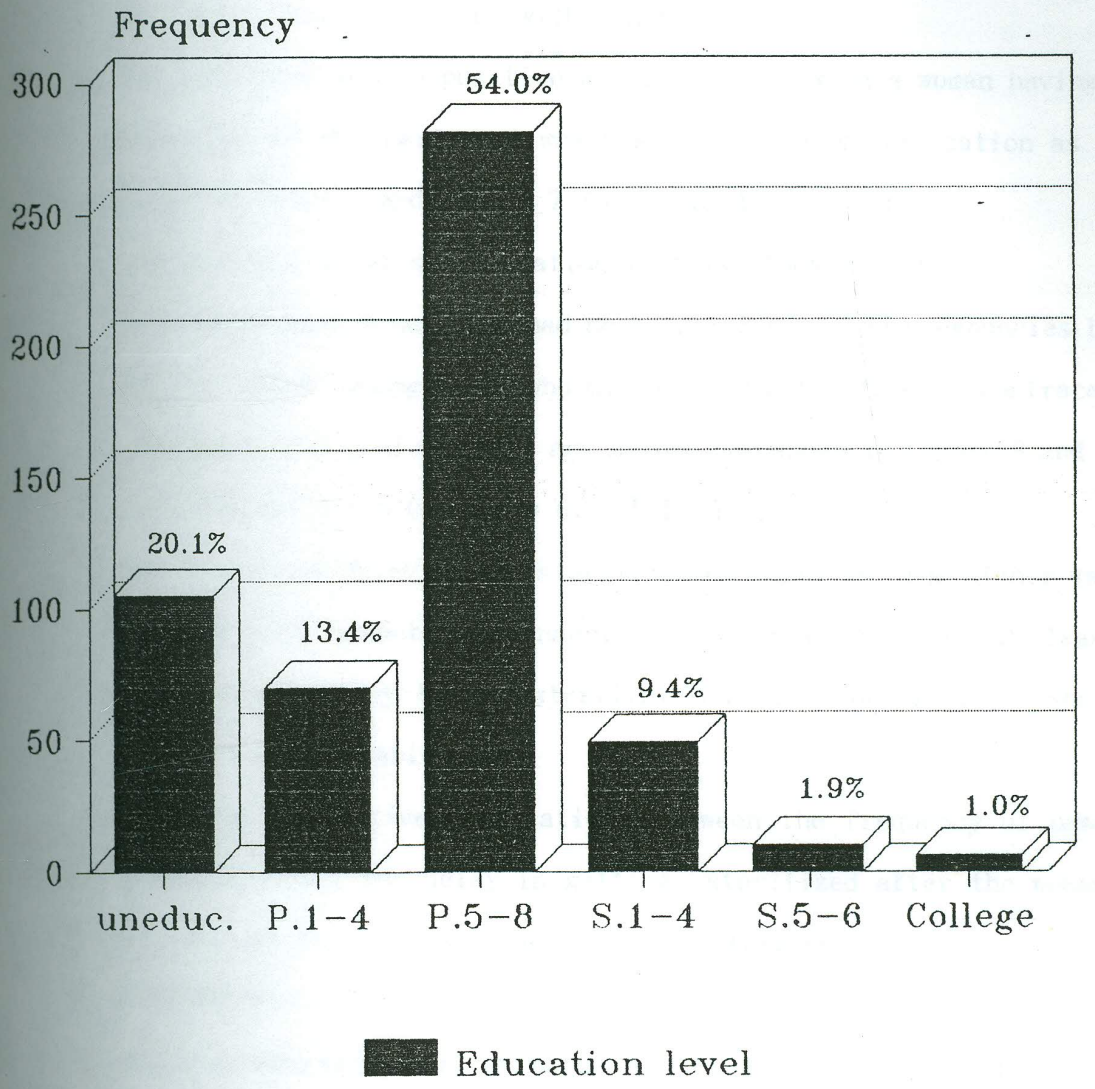


FIGURE 6

between class 5 and 8, 20.1% had had no formal education and about 11% had Secondary school education and above as shown in figure 6.

About 24% of the women who underwent sterilization their spouses had children (step children) with other women.

However there was no positive association between a woman having step children and the parity at which she accepted sterilization as it is shown in table 1 and figure 7 ($p > 0.10$ $X^2 = 6.77$).

The mean parity at sterilization in this study was 6.

There were many women who had more than 3 unwanted pregnancies before sterilization among those who did not use any method of contraception than those who used at least any method as shown in figure 8 and table 2 ($0.0025 < p < 0.05$ $X^2 = 6.2$ D.F. 2).

The longer the delay to get sterilization services, the higher was the frequency of unwanted pregnancies. More than 56% had at least an unwanted pregnancy before sterilization was undertaken as shown in figure 9 and in table 3.

There was a positive correlation between the frequency of unwanted pregnancies and the delay in getting sterilized after the woman had decided not to have any more children (figure 9).

DISCUSSION:

Surgical sterilization is rated as the most widely used method of contraception today in the world [8,9] . Data(TDHS 91/92) available shows that the extent of use of this method in Tanzania is very low. However, from AVSC initiative surgical sterilization is expected to be on the rise in the country. More surgeons and counselors are still being trained to cater for the increasing demand. In this study it is shown that there is a long delay of sterilization services in the three

centers studied. This delay results in unplanned and unwanted pregnancies which occurred in 56% among those sterilized.

In most centers where sterilizations are undertaken, theaters used for the procedures are the same which handle gynecological and obstetric emergencies. As a result, preference is given to emergencies and other operations in the maternity wings. This, coupled with lack of alternative working theater facilities contributes to low number of sterilizations in all the three centers. The majority of clients needing sterilization had to be kept on waiting lists for very long durations in all centers.

It is possible that some of them had a change of mind after waiting for too long and did not return for this method of family planning at all and got pregnant.

Minimum age and parity have continued to be among controversial factors in the provision of surgical contraception [15,16] with respect to female sterilization. The controversies are worse in developing countries where majority of women are still uninformed on the basic rights on deciding how many children they would like to have in their childbearing period.

In many of these countries, high parity, delivery at advanced ages and poor socioeconomic conditions predispose these women to serious health hazards.

Most countries in Europe which have laws on surgical contraception, have put 25 years as the earliest age at which a woman qualifies for sterilization, while in most developing countries the earliest age is between 30-35 years [15,16].

In Kenya, the Ministry of Health requires a minimum of three children

Table 1: Relationship between the number of living Children in the family to number of living step children.

Number of Children in family	Number of Step Children				Total
	1 - 3	4-7	>=7	N.A	
1 - 3	3 (6.3)	7 (14.3)	1 (8.3)	16	27
4 - 7	38 (79.2)	27 (55.1)	9 (75)	276	350
>=7	7 (14.5)	15 (30.6)	2 (16.6)	100	124
TOTAL	48 (100)	49 (100)	12 (100)	392	501

$p>0.10$
Chi-square =6.77

Table 2: Number of Unwanted Pregnancies Against methods of Contraception before Sterilisation

Contraceptives	How Many Times			Total
	1 - 2	>=3	N.A	
Pills	74 (34.4)	21 (30.9)	81	176
Loop	24 (11.2)	5 (7.4)	28	57
Depo	19 (8.8)	4 (5.9)	28	51
Other	14 (6.5)	6 (8.8)	15	35
None	84 (39.1)	32 (47.1)	69	185
TOTAL	215 (100)	68 (100)	221	504

$0.025<p<0.05$
Chi-square = 6.2
D.F = 2

Table 3: Number of Unwanted Pregnancies Against time lapse from decision to be Sterilised

Duration (Months)	How Many Times			Total
	1 - 2	>=3	N.A	
0 - 6	30 (14.4)	4 (5.9)	35	69
7 - 12	24 (11.3)	14 (20.6)	32	70
>= 12	159 (74.6)	50 (73.5)	154	363
TOTAL	213 (100)	68 (100)	221	502

Chi-square = 2.34

Relationship between the number of living children & step children (N=525)

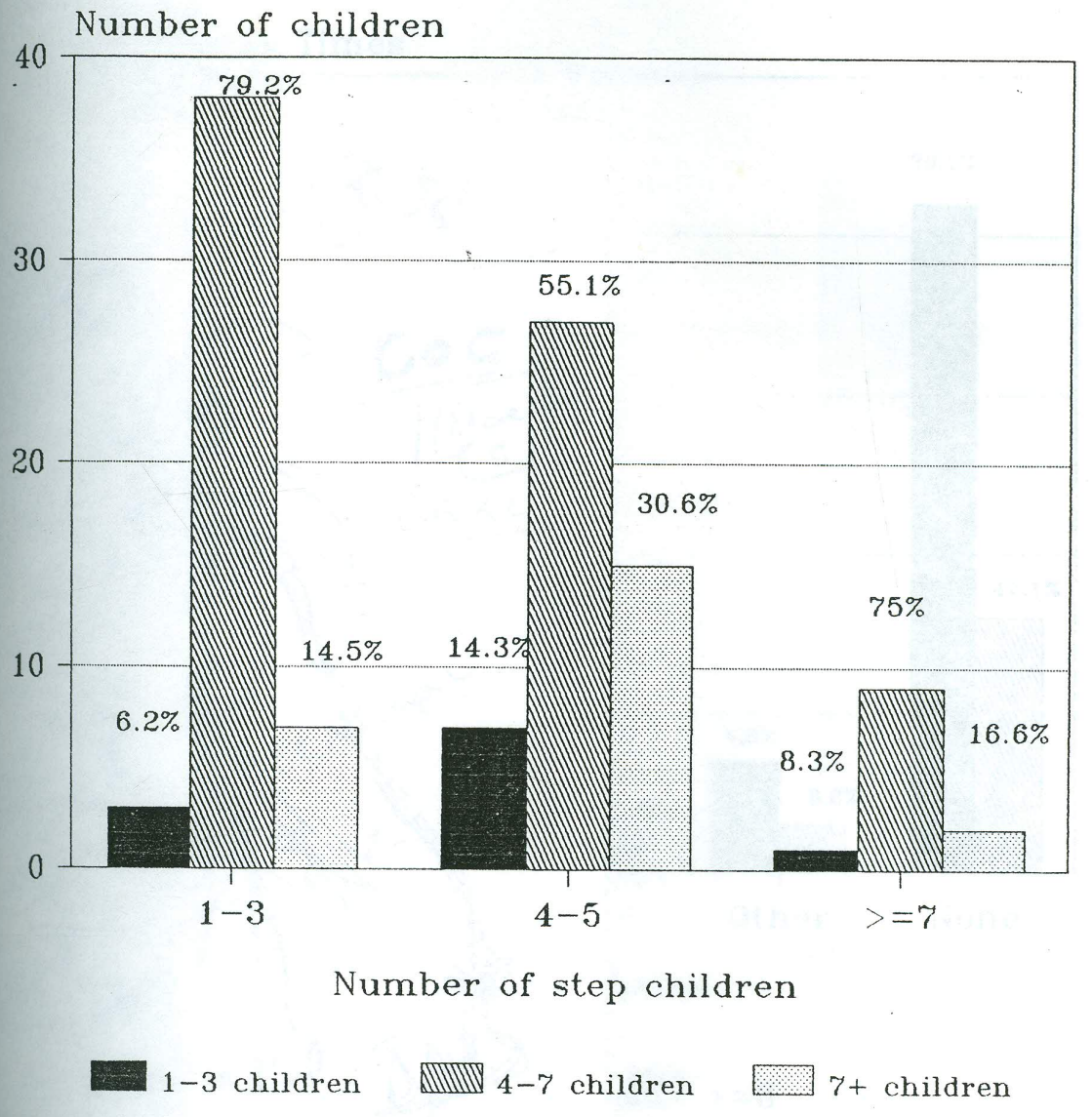


Figure 7

Unwanted pregnancies against methods of contraception (N=504)

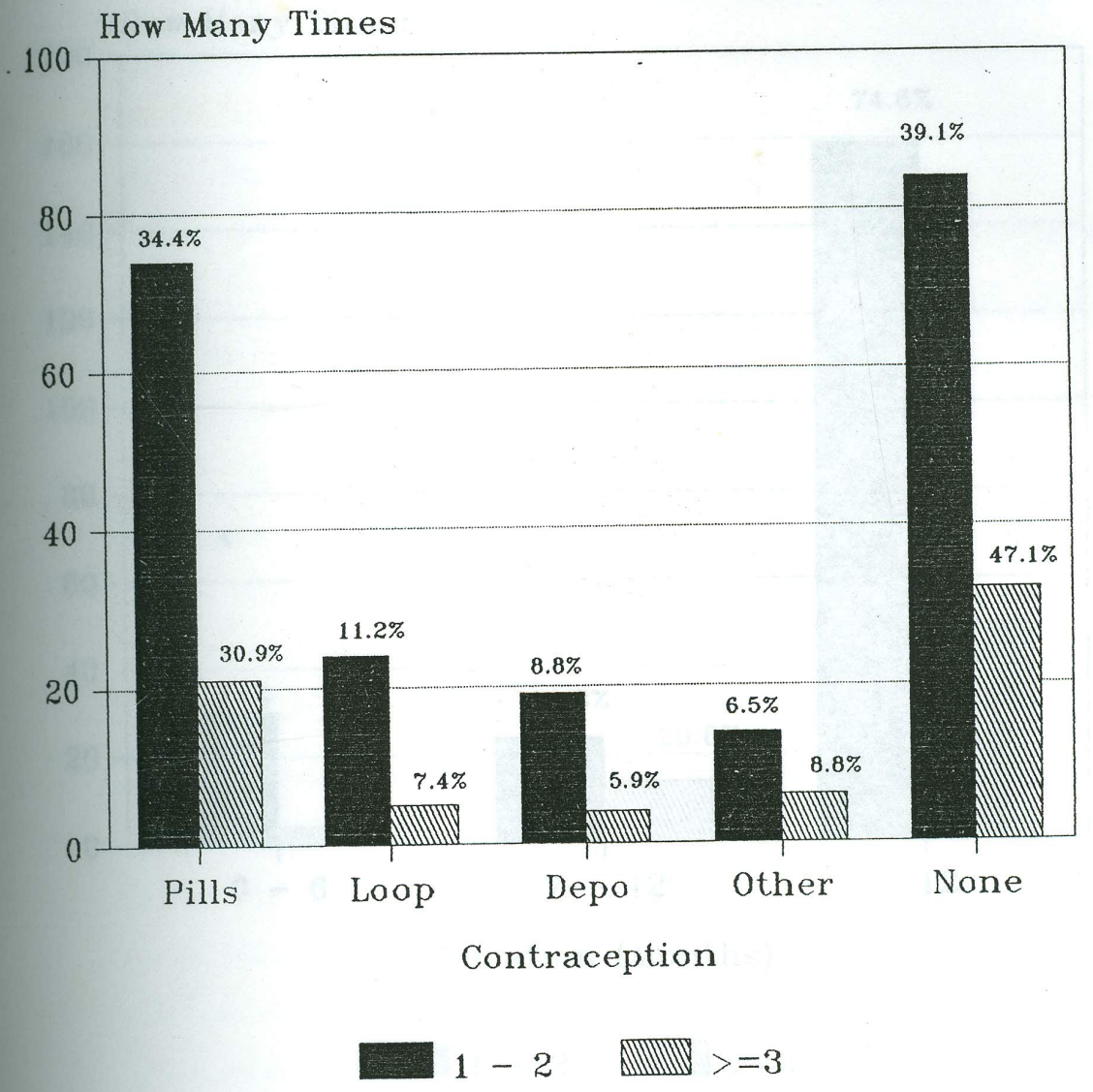


Figure 8

Unwanted pregnancies against time lapse to Sterilization (N=502)

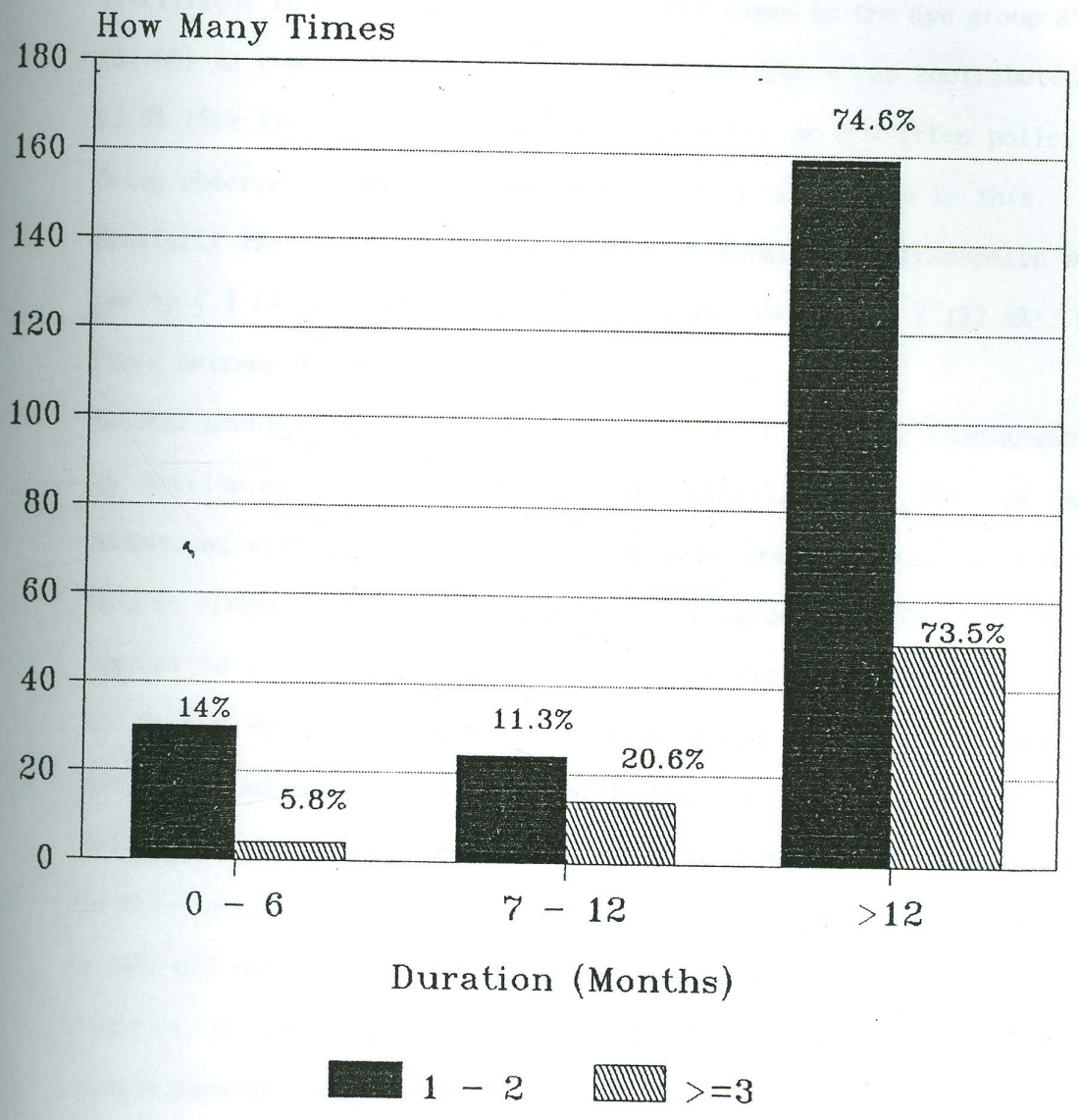


Figure 9

irrespective of sex [17] . The policy in Tanzania is not explicit on requirements for age or parity before a woman is voluntarily sterilized. In this study there were fewer women in the age group 25-34 (35.8%) as compared to those between 35 and above who contributed to 62.5% (See figure 3). It is not clear whether an unwritten policy is being observed or whether some other factors contribute to this.

Similarly there were fewer women offered surgical contraception with parity ≤ 3 (4.5%) compared to those who are above para 7 (32.6%); and those between 4-7 (60%). (See figure 3).

Another prohibiting factor in the provision of surgical contraception in developing countries is spousal authorization. This is more emphasized with regard to female than male sterilization. Reason for this is either desire for more children, religious beliefs to the whole concept to contraception especially among Catholics and Moslems and the fear of encouraging promiscuity among women (See figure 2). The net effect of adhering to spousal authority is high parity, frequent deliveries and old age pregnancies with their attendant health risks. In this study, 86% sought consent from spouses while the remaining (14%) did not. This shows the 'male' dominance on women's decision on limiting childbearing in Tanzania. In this study, 14 (2.7%) were single parents among those sterilized. This is encouraging because in some developing countries, e.g. Kenya, some of the institutions deny access to surgical sterilization to single parents [17].

The creation of special facilities (clinic and theater) for this service is an encouragement to those seeking the service. It avoids the bureaucracy of hospital procedures and possible bias against this service by medical personnel due to preference accorded to other

obstetrical/gynecological surgical procedures. Among the three centers studied, only Muhimbili Medical Center (UMATI) had a separate facility for both clinics and theater activities.

Age and parity should not be overemphasized as criteria on client selection for surgical contraception. Given the current early marriages at 15 years of age for some women [7], and sometimes late marriages, emphasis on these 2 factors will only deny relatively young but parous women a vital method of fertility control and hence population growth control.

According to TDHS(91/92) the highest fertility rate in Tanzania is between 20-29 years. They are the target group for sterilization if one has to control population growth. Women aged 35 years and above should be given long term temporary methods of contraception to carry them over to menopause. These are the women whose opportunity for intervention was missed earlier on. Sterilizing them at an age when their fertility is already declining and at a time when they have already attained parities of 7 and above is futile as a method of population control! The limited facilities for sterilization could be better used by the younger target group and reduce crowding of the facilities at the moment in the country.

The fear that death of children, divorce or death of husband might occur after sterilization and therefore make delivery of more babies necessary is unscientific. These hazards can occur at any age and parity. They can actually strike after menopause, so there is no logic in continued childbearing in order to 'compensate' for future mishaps.

CONCLUSION:

As predicted, majority of women who undergo surgical sterilization are above 35 years of age.

The mean parity is 6 at sterilization.

These are missed opportunity clients who needed this service at an earlier age and parity. It shows that the sterilized women are off the highest fertility peak rate age group (see fig.3.1) so population growth can not be controlled if the picture shown by this study reflects on the demographic characteristics of women who undergo sterilization in the whole country. However the presence of step children seems not to influence the parity at which the woman is sterilized, neither is the sex ratio of the children in the step family. Therefore these attributes can not be used positively to influence low parities at sterilization in Tanzania.

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