

## DISCUSSION

Abortion is the commonest gynaecological emergency. In Kenya, abortion constitutes about 60% of the total gynaecological emergency admissions to Kenyatta National Hospital (Aggarwal and Mati 1980)

Importance of abortion is underscored by high contribution to maternal mortality, Aggarwal and Mati (1980) estimated that maternal mortality was high in Septic group abortion and they have annually lost about 2 patients per 2,000 abortion admissions.

In Makokha's (1980) series of 99 maternal deaths, 43.3% were due to infection and more than  $\frac{1}{2}$  of these, died from postabortal sepsis.

Abortion is now the commonest the cause of death relation to pregnancy and the number of deaths soars when infection complicates abortion. Three-quarters of such fatalities are associated with illegal interference which is a major predisposing factor to septic abortion. However, Dewhurst (1976) caution that it is wrong to equate septic abortion with criminal abortion. Even in ideal circumstances sepsis sometimes develop. Incomplete abortion of first trimester and missed abortion are the other predisposing factors to septic abortion. 119 (53.12%) out of 224 septic abortion patients were single adolescent girls in their first pregnancy.

Aggarwal<sup>1</sup> and Mati (1980) 79 (63.7%) out of 124 patients with septic abortion were single, separated, or divorced compared to 39 (1.4%) who were married in the septic group (Knapp, platt and Douglas (1960).

Prompt completion of all abortions once they become inevitable is a greater factor in reducing not only the incidence of sepsis but also reducing maternal mortality. Any patient who has an infected (septic) abortion may progress to endotoxic shock. Mortality of patients with endotoxic shock is a high ranging from 30 - 90% - Dewhurst (1976). The onset of endotoxic shock is heralded by unexpected collapse, rigors, tachy cardia, peripheral vasodilation, cyanotic tinge with jaundice may ensure. pyrexia is usually but a fall in temperature may occur. Hypotension and oliguria are usual important clinical features and when they occur are bad prognostic signs. Their onset call for prompt and courageous treatment to abort them before they are prolonged and established - Donald 1972, Dewhurst 1976. The management of septic abortion has been outlined by Dewhurst (1976) follows:-

1. Control of infection
2. Removal of focus of infection
3. Vigorous supportive therapy when endotoxic shock occurs.

In the presence of endotoxic shock, gentamycin 80 mg 8 - hourly is the first line of controlling



infection. This is done while waiting for results of culture and sensitivity of specimens sent off. It is recognised that the commonest infecting organisms are gram-negative organisms esp. *Escherichia coli*.

CrySTALLINE penicillin is appropriate addition for gram - positive cocci. We employ in Kenyatta National Hospital routinely a third drug against anaerobes. Removal of focus of infection invariably follows the control of infection by antibiotic therapy. The fear of making a previously local pelvic infection into a generalized septicaemia by surgical intervention makes the sequence logical. However at issue is the time-interval between onset of antibiotic therapy and surgical intervention. We in Kenyatta National Hospital have used 24 - hr interval with success. Douglass (1966) advocate the time interval to be 12 hours or less but preferably within 6 hours. In his series 26 out of 44 cases the interval was 12 hours or less between admission and surgical procedure. This reflects a generally held opinion that prompt removal of the source of endotoxins and exotoxins an important means of preventing from septic hypotension to irreversible shock. Removal of infected products of conception by digital evaluation of the uterus followed by gentle curettage may be all that is required.

However, Stallwathy and Bourne (1977) suggests that aggressive surgical approach is advocated where signs of extensive pelvic infections are present, such as X-ray finding of gas in the uterine wall and evidence of intravascular haemolysis. He outlined the following to be indications of hysterectomy:

1. If patient continues in shock following curettage and adequate supportive measures.
2. Uterus is over 16 weeks gestations since others suggests over 12 weeks.
3. Uterus is **perforated**.
4. Intrauterine clostridium welchii infection is present.
5. corrosive toxic dcuche has been used.

Supportive measures are directed at maintaining blood pressure, normal urine output and combating associated metabolic acidosis. In this regard hydrocortisone has been used in large doses. Hydrocortisone restores regional blood flow and reverses metabolic acidosis. The key to the judgement of overall performance is by measuring kidney function. It reflects the status of tissue perfusion. Central venous pressure monitoring will be useful indicator on the fluid replacement without fear of either overloading or dehydration. Reid 1967, Donald 1972).

The patient under discussion presented overwhelmed with infection with septicaemia. She never developed septic hypotension at any stage. Oliguria threatened but never established itself. The presence of normal blood pressure and renal function were factors in her favour. Vigorous therapy of infection and correction of metabolic acidosis saved her life.

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CASE NO. 9: RUPTURED TUBAL PREGNANCY.

NAME: S.R.                    IP NO. .265328                    AGE: 25 Years.

TRIBE: Kamba.

HISTORY OF PRESENT ILLNESS:

Patient presented with one day history of lower abdominal pain which had spread to cover the whole abdomen. She also had pain in the right hypochondrium radiating to the right shoulder. She had not fainted but felt like she would faint any time. Her abdominal pain was worse when breathing.

PAST MEDICAL HISTORY: - None significant.

SOCIAL AND FAMILY HISTORY: - She was married with four children. She was employed in a tea packing factory. Her husband was similarly employed.

OBSTETRICS AND GYNAECOLOGY HISTORY:

Para 4 + 0. Last delivery was three years prior to admission. Last menstrual period was March, 16 1978 giving her no period of amenorrhoea. She had bled with clots for five days during her last menstrual period. She had regular cycles each menstrual period lasting five days occurring every thirty days. She had not used any method of contraception. She was unable to remember her age at menarche.

PHYSICAL EXAMINATION:

Her general condition was fair, but she was in pain. She had marked pallor. She was not jaundiced.

VITAL SIGNS: - Blood pressure 120/70 mm/Hg. Pulse 92 per minute, respiratory rate 24 per minute Temperature 36.5°C. Respiratory - cardiovascular and Central systems were normal. Abdominal examination revealed obesity and moderate distension. There was generalized tenderness with guarding. There was shifting dullness and fluid thrill was positive. Bowel sounds were reduced. There was no hepatosplenomegaly.

PELVIC EXAMINATION: - External genitalia was normal cervix was closed with a positive excitation test. Uterine size would not be ascertained because of extreme tenderness. There was **tender**, boggy rather diffuse mass in pouch of Douglas. There was no vaginal bleeding.

A provisional diagnosis of ruptured ectopic pregnancy was made. An intravenous line was established, a specimen of blood was taken off for grouping and cross-matching. Patient was advised and prepared for theatre for an emergency surgery.

With the patient under general anaesthesia abdominal wall was opened by subumbilical midline incision. Haemoperitoneum with clots and pelvic haematocele of about 1.5 litres was evacuated. Ruptured right tubal pregnancy at ampullo - isthmal junction was identified, and right salpingectomy was done between haemostatic clamps. Left tube and both ovaries were normal.

Uterus was normal size. Haemostasis was achieved. Abdominal wall was closed in layers with silk to the skin.

Patient received two units of compatible blood-post operatively. Post-operative recovery was uneventful.

Histology report showed tubal mass 55 x 40 x 15 centimetres showing tubal pregnancy.

The patient never came back for follow up in out-patient clinic.



## DISCUSSION.

Ectopic pregnancy is potentially the gynaecologist's most critical emergency. Over 95% of all ectopic pregnancies occur in the tube. After an ectopic gestation, a patient has 1 in 3 chance of producing a live child, but 1 in 20 chance of having another ectopic pregnancy - (Dewhurst 1976). The risk of a second tubal pregnancy is 10 - 15% of all pregnancies, 40 times greater than overall risk of 0.3% (Jeffcoate 1975).

Ectopic pregnancy is the commonest surgical emergency found in women at Kenyatta National Hospital (Carty and others 1976). In six months in 1970 for instance Carty and others found forty eight cases - an average of two cases per week. Webala (1979) estimated the incidence to be one ectopic pregnancy in fifteen full term deliveries at Kenyatta National Hospital. Incidence of a second ectopic was 5.1% (24 patients).

In Webala's (1976) series of 474 tubal gestation, 69% had evidence of salpingitis. There was, however, no evidence of tuberculous salpingitis on <sup>histology</sup> of an excised tubal pregnancy. He suggested that gonococcus was the first offending organism. Carty and others (1976) had earlier suggested that primary lesion in tubal pregnancy was gonococcal salpingitis in the majority of cases. Stewart (1970) had some reason to suspect that ectopic pregnancy is becoming even commoner since antibiotics and Sulphonamide drugs have been used for the treatment of salpingitis.

Infected tube may heal well enough to preserve some degree of patency even though they are narrowed, fibrosed or kinked.

A part from gonococcal infection, post-abortal and puerperal infection play a significance place in tubal salpingitis. Congenital malformation of the tube, use of IUCD, and **blighted** ovum are among predisposing factor.

Tubal pregnancy is a condition of reproductive age group. In Webala's (1979) series 80% of the cases were 30 years and less, and 66% were para 2 and less. Rupture or abortion of a tubal pregnancy is usually sudden and results into copious intra-peritoneal haemorrhage. This causes severe abdominal pain, associated with vomiting and fainting. Initially there is a little drop in blood pressure, rising or high pulse signalling impending cardiovascular collapse. Vaginal bleeding is uncommon, when it occurs is slight and of altered blood. Abdomen is markedly tender with guarding. Shifting dullness may be present. Bimanual examination reveals extremely tender cervix on movement. There is usually a tender mass in pouch of douglas-stewart (1970). Absence of a period of amenorrhoea does not exclude ectopic pregnancy.

In Webala's series 13% had no amenorrhoea, while 42% had a period of amenorrhoea between 6-8 weeks. A ruptured ectopic thus presents like acute abdomen with its myriad of differential diagnosis. Temperature is usually normal or subnormal and white blood cells count remains unchanged distinguishing it from acute inflammatory disorders like acute pelvic inflammatory disease, and appendicitis.

Copious, bright, vaginal bleeding associated with intermittent abdominal pain points more towards abortion than ectopic pregnancy.

Whereas acutely ruptured or aborted tubal pregnancy with features of acute abdomen may be a straightforward diagnosis, unruptured or subacute type calls for ingenuity of the attending physician. Lucas and Hassim (1970) advocate that culdocentesis has an essential place in diagnosis of doubtful or a typical ectopic pregnancy. Pre-operative diagnosis was correct in 93 out of 100 cases in their series, with only 3 false-negative and four false-positive. Dewhurst (1970) calls for endoscopy in suspected cases of ectopic. We, in Kenyatta National Hospital, have used laparoscopy with considerable success.

In the management of ruptured ectopic. There could be no better summary than to quote Stewart (1970). "open quickly, clamp quickly, transfuse quickly, remove tube and get out quickly." The emphasis is on speed to stop bleeding. He (Stewart 1970) further emphasised that there is no place for expectant treatment of ruptured ectopic pregnancy, regardless of the general condition of the patient. Using this principle of action we have kept our maternal mortality in Kenyatta National Hospital from ruptured ectopic pregnancy low. Webala's series (1979) of 479 cases there were only two deaths (.42%) compared to that in England and Wales (1964-1966) of 7% and 9.2% out of 920 maternal deaths in New York City quoted by Dewhurst (1976).

In situations where there is a low index of suspicion, ectopic pregnancy is a major factor in mortality due to pregnancy and typities presentation of ruptured ectopic pregnancy. A young married woman who had three years of infertility despite having unprotected coitus. Puerperal infection, though not obtained from history, could have been responsible for her partial tube damage and subsequent tubal implantation.



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CASE NO. 10 : BARTHOLIN'S ABSCESS

NAME: V.W.                      IPNO. 276842                      AGE: 25 years.

TRIBE: Kikuyu.

HISTORY OF PRESENT ILLNESS:

The patient presented to casualty with a five day history of progressive painful swelling on the left side of the vulva. The pain was worse on walking. There was no history of discharge or no dysuria.

PAST MEDICAL HISTORY: She was a divorcee with five children as her dependants. She works as a hawker in the city. Occasionally drinks, but does not smoke.

OBSTETRIC AND GYNAECOLOGY HISTORY:

Para 5 + 0, Last menstrual period was on June 3, 1978. Last delivery was in 1970. She had regular menstrual periods occurring every thirty days each lasting five days. She had not used any method of family planning. Her menarche was at fifteen years of age.

PHYSICAL EXAMINATION:

General Examination: She was in satisfactory general condition. She was not pale. There was no lymphadenopathy, oedema nor jaundice.

Vital Signs: Blood pressure 110/70 mm. Hg, Pulse 84 per minute, Temperature 36.6<sup>o</sup>c and Respiratory rate 20 per minute. Respiratory, central nervous and cardiovascular systems were normal.

Abdominal examination revealed no abnormality.

VAGINAL EXAMINATION:

EXTERNAL GENITALIA: There was a tender, fluctuant globular swelling on the left minora. It was about 6 centimetres in diameter and swelling was upto posterior fourchette. Labia majora and mons pubis were inflamed. There was no inguinal lymphadenopathy. Bimanual examination was not done. A provisional diagnosis of left Barthlins abscess was made. The patient was advised to undergo an operation.

MARSUPIALIZATION:

The patient was prepared for theatre, for emergency incision and drainage, in the usual way.. General anaesthesia was induced by sodium pentothal and maintained by nitrous oxide and oxygen by mask. Patient was placed in lithotomy position. The vulva was cleaned and draped. A gauze was placed at the introitus. A vertical incision was made through the pointing area on the abscess over labia minus on vaginal aspect. A chocolate, foulsmelling viscous fluid was drained. The cavity of the abscess was explored. Using extrachromic catgut No. I suture the edge of the abscess was stitched-to skin of labium majus using interrupted sutures. Haemostasis was achieved. The cavity was dressed with sofratulle. The pus from the abscess was not taken for culture and sensitivity. Post-operatively, the vulva was cleaned with warm saline. Oral ampicillin 250 mgs. every 6 hours was given for one week. Sofratulle was removed after twenty four hours.

## DISCUSSION:

Acute bartholinitis is usually suspected to be gonococcol in origin. Escherria coli, stapylococcus and streptococcus faecalis and trichomas vaginalis may also cause the condition. The infammation involve both the gland and the duct. When the lining of the duct becomes swollen, the duct canal gets blocked with resultant retention of the secretion and exudate of the gland. Bartholin's cyst is initially /<sup>formed</sup> which may progress to abscess formation (Jeffcoate 1975).

The presence of a bartholin's cyst may cause discomfort. When abscess forms the previously mild discomfort becomes severe. There may be irritation and localized pain is always present. The discomfort leads to inability to sit or walk with ease. Redness and marked tenderness of tissues surrounding a discrete, spherical soft, exquisitely tender mass localised lateral to and near the posterior fourchett<sup>e</sup> is usually diagnostic, when found on examination. The finding of a white area and discolouration of the overlying skin and by its fixation to the mass indicates an impending spontaneous rupture of the abscess (Brewer and Decosta 1969). Brewer and Decosta (1969) emphasize that whereas diagnosis may be apparent specific cause may be impossible to detect. Negative Smears and and cultures of



Secretions from the urethra, paraurethral ducts and cervix are common. The abscess may still be the result of a Neisserian infection.

Hastening of the unripe bartholins abscess is done by local application of heat-during which time the patient is put to bed rest. In most cases, however, the distress is best relieved by immediate incision and drainage. This is the attitude we have adopted in Kenyatta National Hospital in the management of bartholins abscess. We have dealt with the abscess by marsupilisation as described in the case being discussed. With this treatment, the ostium of the gland is preserved and with it the function of the gland. Recurrence is rare (Dewhurst 1976) and our clinical impression support this view. However, HowKins and Stallworthy (1974) say that marsupilisation as a surgical manouvre is essentially a short cut and a half measure that merely releases the surgeon from performing the difficult dissection required to remove the primary condition. They do not perform marsupilisation because the bartholin's cyst is likely to recur.

Bartholin's abscess occurs in the non-pregnant and the pregnant with equal frequency.

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CASE NO. 11:      BILATERAL PYSCALPINGES:

NAME:      P.A.              IP NO:      276806

AGE:      19 Years.      TRIBE:      LUC.

HISTORY OF PRESENT ILLNESS:

The patient presented with gradual lower abdominal pain for three weeks. The pain was colicky and started on left side and spread to the right side and the / <sup>severity</sup> had increased two days prior to admission. There was dysuria and frequency of micturation. She had no gastro-intestinal symptoms. She had slight, foul-smelling vaginal discharge.

SOCIAL AND FAMILY HISTORY:

She was unmarried and employed as a subordinate staff in Nairobi.

PAST MEDICAL HISTORY: - None significant.

OBSTETRIC AND GYNAECOLOGY HISTORY:

Para 1 + 0. Last delivery was in 1974. Last menstrual period was 18 May 1978. She had regular periods each lasting three days and occurring every twenty eight days. She had menarche at fourteen years of age. She had never used any contraceptive device.

PHYSICAL EXAMINATION:

She was in pain and looked unwell. She was not pale. There was no Jaundice nor lymphodenopathy.

VITAL SIGNS: Blood pressure 110/80 mm/Hg; Pulse 100 per minute, Temperature 37.8°C. Respiratory rate of 20 per minute. Respiratory, cardiovascular<sup>F</sup> and Central nervous systems were normal.

On abdominal examination, there was tenderness, distension and guarding in the hypogastrium. No mass could be defined because of tenderness. There was no evidence of free fluid and no hepatosplenomegaly.

VAGINAL EXAMINATION:

External genitalia was normal. She had slight foul-smelling vaginal discharge. Cervix was closed and extremely tender on excitation. Uterine size could not be defined because of extreme tenderness. A tender cystic mass was felt in both adnexae. Pouch of Douglas was tender, but no mass was discovered.

A provisional diagnosis of acute pelvic inflammatory disease with a possible pelvic abscess was made.

INVESTIGATIONS:

Haemoglobin 12.6 gm ldl.

PcV 37.5 per cent; white blood cell count  $8.5 \times 10^9$ .

High vaginal swab - No growth obtained on ordinary culture, of Mid-stream specimen of urine was sterile.

TREATMENT:

Immediately on admission the patient was started on intravenous tetracycline 500 mg. in 500 mls. of 5% Dextrose every six-hours. Intramuscular pethidine of 100 mgs. in a single dose was given.

Review on the second day after admission showed that: the patient was still looking ill, with a temperature of  $38^{\circ}\text{C}$ . Abdominal findings was still the same as on admission vaginal examination revealed there was tender boggy mass in pouch of Douglas with bilateral tender cystic masses.



At this point it was decided that she should have a laparotomy. She was informed that her next line of treatment was by surgery.

OPERATION:

The patient was prepared for laparotomy in the normal way. Two pint of whole compatible blood was prepared. Through subumbilical midline incision, abdominal wall was opened. Huge bilateral pyosalpinx was found. The right tube was attached to the left ovary. Left ovary was normal. Uterus was also normal in size. There was little pus collected in pouch of douglas and inflammed friable broad, infundo-pelvic, ovarian and round ligaments. Using haemostatic clamps, the right tube was separated from the ovary, bilateral salpingectomy was performed with ligation of the pyosalpinx. The pus in the pouch of douglas was drained. The pelvic cavity was washed with rifocin in warm normal saline. The rest of the peritoneal cavity was not involved and had actually been protected by adhesions of omentum and loops of gut. Appendix was normal. Two corrugated drains were inserted in both iliac fossae. Haemostasis was achieved. Abdominal wall was closed in the normal way with silk to skin.



POST - OPERATIVE CARE:

Intravenous fluids: Normal saline alternating with 5% dextrose 500 mls. every six hours for 48 hours. Intramuscular Pethidine 100 mgs. was given in theatre, and two doses subsequently at eight hours interval when she was complaining of pain. The drains were shortened on the fourth day and subsequently removed on the fifth day. Tetracycline was continued as before the operation.

Temperature returned to normal and patient recovered uneventfully. She was discharged on the seventh day post-operatively. Review in outpatient clinic revealed a well-healed wound. It was explained to her that she had been rendered sterile by the operation which was performed. The tubes were irreparably damaged and were a focus of infection which had to be removed if antibiotics were to become effective.

## DISCUSSION:

Acute and chronic infection of fallopian tubes and surrounding structures is the commonest gynaecological problem met with in Kenya (Gobbie 1974). Certy, Mzioki, Verhagen and McGlashan (1976) said that acute pelvic inflammatory disease accounted for about twelve emergency admissions per week in Kenyatta National Hospital. These gentlemen estimated the real incidence of gonococcal infection, in their series with acute pelvic inflammatory disease to be 75%.

Gonorrhoea is one of the commonest causes of acute pelvic inflammatory disease in many parts of the tropics (Rendle - Short and Stewart 1967). Vagina and uterus are relatively resistant. The cervix, among others, develop acute inflammation. The tubes are infected by way of uterus mucosa. Eschenback and Holmes (1975) noted that 14% of cases of acute pelvic inflammatory disease have predisposing factors, namely, dilatation and curettage, hysterosalpingogram, use of intrauterine contraceptive device, previous gonococcal salpingitis, and shedding of endometrium during menstruation.

The primary pathology is an endosalpingitis and then spreads to all tubal layers. Gonococcal salpingitis damages the endosalpinx and increases the susceptibility of the fallopian tubes to future attacks of infection by genital commensal organisms--(Novak 1966, Eschenback 1975). The destructive effect of the infection upon the tubal mucosa usually leads to tubal occlusion, either partial often complete.

Pyosalpinx is a sequol of genococcal salpingitis in the great majority of cases, even though it may also occur with tuberculosis. Blockage of tubal lumen of the fibriated opening, combined with complete or partial blockage at the isthmus or at various other points in the tube, leads to accumulation and retention of purulent exudate leading to tubal distension (Novak 1966).

In acute salpingitis, lower abdominal pain of varying degrees, foul smelling vaginal discharge, dysuria are the leading symptoms. There may be abnormal uterine bleeding. Fever and rapid pulse are frequent findings. Lower abdominal tenderness with tender adenaxae on bimanual examination complete the picture of acute salpingitis. In cases where pyosalpinx or tube ovarian abscesses are present, tender adenexel masses either fixed to the back of the uterus or in the pouch of douglas <sup>may</sup> / be found. Leucocytosis and raised erylhrocyte sedimentation rate are haematological reaction to acute salpingitis. Recovery of the organism - Neisarrie gonorrhoea is difficult, but Eschenback and Holmes (1975) reports recovery rate between 33 to 51% in untreated patients with acute pelvic inflammatory disease when endocervical cultures are routinely employed. While on the other hand, recovery rate is from 5 - 15% of intraabdominal specimens of pus obtained from patient with salpingitis.

Gonococcal acute pelvic inflammatory disease with its sequelae: infertility, chronic pelvic pain, dysmenorrhoea, backache and irregular menses, is a social disease. It is a product of social behaviour of a society and economic struggle. Government legislation may worsen the situation which is already bad. Health education with a view to changing the attitude towards the disease and subsequent social behaviour may be difficult, but may later be rewarding. Tracing of recent and current sexual partners with a view to treating them has made suspected cases of gonorrhoea seek help from unqualified people.

The young lady being discussed was assumed to have gonococcal pyosalpinges. She failed to improve on medical therapy alone. Her tubes were grossly distended with pus threatening to burst. The fact that she rapidly improved soon after bilateral salpingectomy indicate that the surgery was beneficial even though it rendered her sterile.



In appropriate therapy by unqualified people or by patients themselves, makes recovery of organism difficult. Resistance to penicillin has already developed and to other commonly used antibiotics are developing. We still, however, use tetracycline with considerable amount of success in Kenyatta National Hospital.

Whereas, there is general agreement that surgery may be needed in a few cases, there is considerable debate as to the timing and extent of surgery to be carried out. Gebbie (1974) pointed out that surgery is indicated in situations where: 1, Large collections of pus are present, 2, Patient's general condition is worsening inspite of proper and adequate therapy. He adds that surgery should be radical no matter the age of the patient as recurrence after inadequately drained pus or inadequately excised inflammatory tissue is common.

Rupture of tubo-ovarian abscess is a serious complication and carries a mortality of from 65 to 90% when treated medically. In such cases operation preferably, should consist of extirpation of diseased adnexae and total abdominal hysterectomy. Anything short of that the patient usually returns at a later date for further definitive surgery (Collins, Nix and Cerha (1956), thus adopted active surgical attack upon that disease process and their mortality decreased to 12%. In our set up it would be a terrible tragedy indeed for a young woman to stop menstruating as emphasized by (Rendle-Short and Stewart 1967).



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CASE NO. 12: DYSFUNCTIONAL UTERINE BLEEDING:

NAME: A.K.      AGE 35 YEARS.      IP NO: 2645-95.

TRIBE: KAMBA

PRESENT MEDICAL HISTORY: Patient admitted with complaints of vaginal bleeding on and off for four months accompanied with lower abdominal pain. She would bleed for two days every week. Amount was varied from slight to moderate loss. She never passed clots.

PAST MEDICAL HISTORY: Nil significant.

SOCIAL AND FAMILY HISTORY:

Married patient who lives with her husband.

The husband is working as a subordinate staff in town. She is a housewife.

OBSTETRIC AND GYNAECOLOGICAL HISTORY:

Para 7+0. Four children are alive and well.

The other three died at the ages between one month and two years. She had her last menstrual period in October 5, 1977. Previously had normal period lasting three days occurring every thirty days. She was unable to remember the date of her last delivery and menarche.

PHYSICAL EXAMINATION:

a) General Examination:- She was slightly pale with a satisfactory general condition. There was no joundice nor Lymphadenopathy.

VITAL SIGNS: Blood pressure 110/60 mm/Hg.  
pulse 80 per minute. Respiratory rate 20 per minute  
Temperature 36.8°C. Cardiovascular, respiratory and central nervous systems were normal.

On abdominal examination, there was slight tenderness in the hypogastrium. There was no hepatosplenomegaly or ascites. The breasts were normal.

BIMANUAL EXAMINATION: External genitalia was found normal. Speculum Examination revealed a normal - looking cervix with slight bleeding ~~issuing~~ from the cervical os. The vagina was normal. The uterus was normal size, anteverted and mobile. There was no adnexal mass.

A provisional diagnosis was made of dysfunctional uterine bleeding and the patient was prepared for an emergency diagnostic curettage. The patient was prepared in the normal way for general anaesthesia. Anaesthesia was maintained by nitrous oxide and oxygen by mask. The vulva was cleaned and draped. The Bladder was catheterized. Examination under anaesthesia confirmed the previous findings. The cervical os was dilated to Hegar 8 sharp curettage was done and scanty curettings were obtained which were sent for histology. There was minimal bleeding.

The histology report showed scanty and pale curettings which were in proliferative phase.

Later, after discharge, in the gynaecological clinic papanicolaou smear class I was reported.

On subsequent follow up her menstrual period were back to normal. She had normal flow lasting three days every twenty eight days. She had had her three menstrual periods after diagnostic curettage. She was discharged from the clinic and advised to come back in case abnormal bleeding recurred.

## DISCUSSION:

Dysfunctional uterine bleeding (DUB) is defined as an expression of ovarian dysfunction which results in irregular, excessive, scanty or prolonged bleeding of endometrial origin occurring in the absence of organic gynaecological disease, neoplasia, pregnancy or blood dyscrasias. It is characterized by anovulation (Alan 1970).

It affects 10-15% of all gynaecological patients. DUB is one of the most frequently encountered conditions in gynaecological practice Dewhurst (1976). It is most frequent at the time when menstrual function is either being established or is declining - adolescence and pre-menopause respectively. Sutherland (1949) in his 861 cases of DUB analysed the age incidence:- 4% under 20 years; 57% between 20 and 40 years; and 39% were more than 40 years old.

DUB during puberty is frequently due to uncyclical manner in which pituitary gland secretes gonadotrophins, while during pre-menopausal bleeding ovaries fail to respond to gonadotrophins (Dewhurst (1976). During childbearing age, faulty corpus luteum function resulting into inadequate progesterone to counteract effects of oestrogen has been offered as an explanation for DUB at this time.

For a patient to be labelled as a case of dysfunctional uterine bleeding, implies that organic causes of DUB have been excluded. This is a most taxing task both for the physician incharge of the case and the laboratory. Alan (1970) has outlined the pathological conditions which may cause DUB and need to be excluded in the work-up of patients.

Polycystic ovary is associated with excessive ovarian or extraovarian oestrogen production in about 3% of the cases. In a few of these patients, complaints of marked menstrual irregularity, resulting from endometrical hyperplasia may be the major symptom.



Classic symptoms of oligomenorrhoea or amenorrhoea, infertility, obesity and hirsutism may be lacking.

Feminizing Ovarian tumours e.g. granulosa-theca cell tumour before menopause may result in abnormal uterine bleeding.

Pelvic inflammatory disease, gonococcal, pyogenic or tuberculous in origin may present with abnormal uterine bleeding. Although the most common presenting symptom is pelvic pain and fever, abnormal bleeding in the form of intermittent dark staining, is a common complaint. In long standing chronic pelvic inflammatory disease, disturbance in menstrual rhythm may manifest altered ovarian function.

Oligomenorrhoea is seen in about 17% of patients with mild adrenal hyperplasia or Cushing's syndrome. Ovulatory failure has occurred, oestrogen production by ovary may persist.

Thyroid disorders result in ovarian failure and anovulatory bleeding. It occurs most commonly during puberty and perimenopausal period. Over 5% of hypothyroid patients present with menstrual disturbance and of these 75% had menorrhagia.

Non-steroidal hypothalamic depressants include morphine, reserpine, phenothiazines and chlorpromazine may lead to ovarian hypofunction and dysfunctional uterine bleeding.

Anovulation with resulting oligomenorrhoea or amenorrhoea is the common denominator in emotionally disturbed patients who have been studied. In patients studied by Gathinji (1978) with dysfunctional uterine bleeding, 106 (62.5%) patients presented with irregular uterine bleeding, 55 (32.4%) had bleeding twice a month. In this series diagnostic curettage was performed and histological pattern of the endometrium as follows:- 53.0% had normal endometrium; 11.8% had cystic endometrial hyperplasia, and 8.8% had proliferative endometrium.

Uterine curettage is the commonly employed surgical procedure in DUB. The purpose of curettage are:-



- 1) to exclude any lesion in uterus such as incomplete abortion, or endometrial polyp;
- 2) to obtain endometrial tissue for histological diagnosis, and determine functional state of the endometrium. In a patient who is bleeding, curettage is the fastest way in which to control excessive uterine bleeding - Mikuta (1970), Dewhurst (1976). Uterine curettage is mainly a diagnostic tool and any therapeutic effect the operation may have is incidental. The more irregular the haemorrhage, the greater the indication for curettage - Jeffcoate (1975).

Having excluded organic disease, treatment of a case of DUB will either be surgical or medical or both.

#### SURGICAL TREATMENT:

Uterine curettage when employed as the sole treatment for prolonged DUB, a cure rate of 40 - 60% depending upon the presence or absence of hyperplasia - Israel 1967 quoted by Dewhurst (1976). It is indicated and mandatory in all patients who are 40 years and over. It should also be performed in patients between 20 and 40 years old. Persistent and or severe bleeding in patients under 20 years old is an indication for curettage.

Hysterectomy should be considered in women over 40 years where severe or persistent or recurrent bleeding occurs despite a repeat curettage. This is largely because a possibility of a malignant or other organic lesion which may have been overlooked. In patients in their thirties, hysterectomy should be performed with reluctance and only when full investigation has been carried out and medical treatment has failed - it should be a last resort. (Dewhurst 1976).

## MEDICAL TREATMENT:

The principle of medical treatment is to counteract the action of oestrogen on the endometrium. Two commonly used agents are:- a progesterone and clomiphene progesterone may be used in a cyclical manner in combination with an oestrogen as in contraceptive pill; when pregnancy is not desired. Or given alone starting 20th to 25th day of the cycle which has the advantage of not suppressing ovulation. Clomiphene, on the other hand is anti-oestrogenic, acting at pituitary and hypothalamic level. It induces ovulation in 70% of anovulatory patients and thereby enables the ovary to produce large quantities of oestrogen and progesterone. It is used to treat DUB and endometrial hyperplasia. Despite its usage in DUB, it is felt that, clomiphene should be reserved for induction of ovulation in anovulatory infertility where pregnancy is desired - Dewhurst (1976).

The patient under discussion probably benefited from incidental therapeutic effect of uterine curettage, whatever the mechanism, and reversed her to normal menstrual cycles. The possibility of her reverting to normal, had she been left alone cannot be ruled out. The fact that she had proliferative endometrial may indicate that she had not ovulated just at the time curettage was performed.

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CASE NO. 13 SECOND DEGREE

GENITAL PROLAPSE:

Name: C.M.                      Age: 25 years.                      Tribe: Heru  
IP. NO. 291521.

HISTORY OF PRESENT ILLNESS:

Patient presented with something coming down and protruding out of the introitus for six months. The dragging feel had been present for one year before the mass appeared through introitus. She had no frequency of micturition or dysuria.

PAST MEDICAL HISTORY: None significant.

OBSTETRIC AND GYNAECOLOGY HISTORY:

Para 2 + 0. The two deliveries were one year apart. She described them as easy and the duration of labour was short. She delivered at home. The children were alive and well. Her last delivery was a year and a half prior to admission. Last menstrual period was on October 1, 1978. The cycles were painless and regular and occurred for three days every twenty eight days. Her menarche was at fifteen years of age. She had no intermenstrual discharge. She had not used any family planning method.

SOCIAL AND FAMILY HISTORY: The patient is married and a housewife. Apart from helping her husband in the farm most of her time was spent looking after her house.



### PHYSICAL EXAMINATION:

General condition was satisfactory. She had no pallor of lymphadenopathy.

### VITAL SIGNS:

Blood pressure 120/70 mm/Hg, pulse 76 per minute. Temperature 36.8°C; respiratory and central nervous systems were normal.

Abdominal examination revealed no mass. There was no hepatosplenomegaly and no ascite.

### PELVIC EXAMINATION:

External genitalia was normal. Cervix was outside the introitus. There was no decubitus ulcer. Uterine fundus could not be pulled retroverted outside the vulva. The uterus was normal in size, retroverted mobile.

The mass was easily reducible. Adnexae was normal. There was cystocele and rectocele. The perineum was deficient.

From the history and physical findings an impression of 2nd degree genital prolapse was made.

She was advised to have a repair operation.

### INVESTIGATIONS:

Papanicolou Smear Class I

HB 13.7 gm. per 100 ml.

Packed cell volume 39.3%

Urea 35 mg. per 100 ml. Na<sup>+</sup> 140 MEq/Litre,

K<sup>+</sup> 4.3 MEq/Litre.

Hco<sub>3</sub> 25 MEq/Litre.

Urinalysis PH 7, No pus cells. No glycosuria or proteinuria. On culture there was no bacterial growth.



### MANCHESTER REPAIR.

The patient was prepared for theatre in the normal way.

Under anaesthesia: Large cysto - cele and rectocele was found with deficient perineum was at the vaginal introitus.

The uterus was sounded to  $4\frac{1}{2}$  CM. Cervix was dilated to Hegar 8 and sharp curettage was done. Normal looking curettings were obtained. Four points were marked with forceps. One point just above the urethral meatus, the other two postero - lateral to the cervix one on each side, and a fourth directly posterior to the cervix. Using the positions of the forceps as landmarks, an incision was made down to vaginal fascia to join the three points to a point just below the urethral orifice. The vaginal skin was separated by a blunt dissection using gauze - covered finger from the cervix. The bladder was displaced upwards until the cardinal ligaments were identified. Using Kocker's forceps the cardinal ligament was clamped and divided. The cervix which was found to be elongated and hypertrophic was amputated just below the estimated level of the internal os. The divided ends of both cardinal ligaments were brought across the midline anterior to remaining portion of the cervix. The raw cervical os was covered by vaginal skin using No. 1 chronic catgut. Using three interrupted sutures, vaginal skin from posterior fornix was used to cover the posterior lip of the amputated cervix and secured to the cervical stump by a sturmdorf sutures.

A traumatic No. I chronic catgut suture was passed, from patient's left side, lateral point through vaginal skin, through cardinal ligament, and through midpoint of the anterior lip of amputated cervix from out and into cervical canal. The needle was again pushed in the reverse direction as described. The procedure was repeated the right side of the patient.- The right and left sutures were tied in the midline, and the cervix was thus elevated. Vaginal wall on the lateral fornices were used to cover the lateral surfaces of the amputated cervix employing a further two interrupted sutures.

Using a diamond shaped incision which had been made earlier was used to separate the bladder from the vaginal wall upto the external urethral meatus. Laterally, the separation of the vaginal wall from the cystocele was upto the pubo-rectalis muscle. Using a series of transverse interrupted No. I chronic catgut sutures pubo-cervico-vesical fascia was tightened. Redundant vaginal skin was excised and vaginal wall repaired with interrupted No. I chronic catgut sutures. Thus anterior colporrhaphy was performed.

A transverse incision was made on the junction of perineal skin and posterior vaginal skin after stretching with dissecting forceps until reaching a plane of cleavage in the cellular tissue between vagina and rectum. Using a gauze - covered finger the posterior vaginal wall was separated. Redundant vaginal wall was excised with a inverted v-shaped incision, the apex just short of the previous incision on posterior fornix. Using two fingers to push the rectum back the levator ani muscles on either

side were approximated by No. 1 extrachromic catgut. Interrupted sutures were used. Vaginal skin was again repaired as in anterior colporrhaphy, but making sure that vaginal capacity was adequate and <sup>not</sup> under tension as was approximated by two fingers placed in the vagina.

Perineal muscles were sutured together over the levator ani in order to reform the perineal body. Skin was closed to vaginal skin with interrupted No. 0 catgut suture with buried knots.

Haemostasis was achieved during the operation. Blood loss was about 100 ml. The bladder was drained continuously for 48 hours.

The catheter was removed after 48 hours and the patient passed urine spontaneously. The residual urine on the 5th day was 80 ml. Tablets of septrin 2 bd for ten days was given.

Post - operative recovery was uneventful. Vaginal examination done on the tenth day revealed that anterior and posterior vaginal repair had healed well and that there were no adhesions between the walls.

The histology of the curettings showed normal secretory endometrium.

The patient was discharged on the tenth post-operative day. She was advised that in her next pregnancy, she should be confined in hospital.

## D I S C U S S I O N :

Uterine prolapse is used to indicate that the uterus occupies a position lower in the vaginal tract than is normal. However, uterine descent rarely occurs alone, but accompanied by prolapse of anterior/or posterior vaginal walls in most cases. (Brewer and Decosta 1969, Dewhursts 1976).

Prolapse is virtually limited to parous women, although it is occasionally seen in the nulliparous. One fifth of all parous women develop prolapse. Peak incidence is at 50 years of age. It rarely occurs before 40 years or after 60 years. Fat women and white women seem to possess a predilection for genital prolapse. Prolapse is uncommon among Negro-women in United States - (Kimbrough 1965).

Every prolapse is the end result of a diversity of causes either one or another playing a major causative role. The primary causes are childbirth, trauma and inadequacy of supporting tissues - Malpas (1963). However, prolapse is a consequence of failure of the uterine supports, usually thought to be due to congenital tissue weakness. Sometimes supporting tissue weakness develops at the menopause or with increasing age.

Obstetric trauma is the commonest and most important determinant of prolapse. It depends on the degree of distension of the birth canal and duration of such distension. Unnecessary ill-timed expulsive efforts during the first stage of labour results in undue stretching of endopelvic fascia propria surrounding the vagina and cervix and thus weakening them (Kimbrough 1965)



Unwise forceps extraction or a precipitate labour through a partially dilated cervical canal will almost certainly leave a potential prolapse.

Secondary causes are important, but by themselves they are not sufficient to cause prolapse, but they often determine its time of onset and gravity. Prolonged standing, excessive intra-abdominal pressure from lifting and coughing will precipitate prolapse (Malpas 1963).

Apart from the common complaint of "something down" they may urinary symptoms, which range from frequency of micturation to urinary retention.

Difficulty in emptying the rectum is a common symptom associated with rectocele (Jeffcoate 1975).

As the major determinant of prolapse is obstetric trauma, judicious management of labour and in the puerperium has been shown to reduce the incidence of prolapse. Vaginal delivery should be attempted only when cervix is fully dilated. Shortening of second stage by episiotomy or low forceps or vacuum extraction is helpful.

Repair of tears and incisions accurately in layers help sound healing of pelvic supports.

Avoid expressing the uterus during placental delivery or controlling post-partum haemorrhage. Pelvic floor exercises should be carried out in the puerperium. Constipation, leading to increase in intra-abdominal pressure during defaecation should be treated in the puerperium (Jeffcoate 1975).

Palliative treatment attempts to hold the uterus and vaginal wall from descending. For this supporting pessary has been used. Pessaries do not, however, cure prolapse. They are indicated during pregnancy, general disease including old age which make operation unsafe. Pessaries promote healing of decubitus ulcer if it is present (Jeffcoate 1975).

A patient in the childbearing age who still wants more children, should be operated on only if severe distressing symptoms are present.

A vaginal hysterectomy alone does nothing to cure proplase, it is the concomitantsuturing to support the vaginal vault which is important. (Dewhurst 1976).

The cornerstone of any sound operation for uterine prolapse be it manchester repair or vaginal hysterectomy is supporting the vaginal vault in the former. This is done by utilizing the cardinal and utero-sacral ligamets.

The case under discussion is a young woman. She had delivered at home.. This may be by choice or may be because a delivery centre is inaccessible. Even **though** a good number of rural women still deliver at home uterine prolapse is a rare occurrence in this age group.

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CASE NO. 14-VESICO-VAGINAL FISTULA:

Name: L.K.      IP.NO. 340839      Tribe: EMBU      Age: 38 Years

HISTORY OF PRESENT ILLNESS: Patient presented with a history of leaking urine for two years. The patient had had Caeserian section for cord prolapse in Embu Hospital. She had been in labour at home for two days before she went to the hospital. The patient noticed that she was leaking urine soon after she recovered from general anaesthesia.

The baby was a fresh still birth. Abdominal repair of vesico vaginal fistula had been attempted in another hospital without success six months prior to admission.

PAST MEDICAL HISTORY:

None significant.

OBSTETRICS AND GYNAECOLOGY HISTORY:

Para 6 + 0. Last delivery was two years prior to admission. She had had no menstrual period since last delivery. She was unable to remember her age at menarche and had not used any method of family planning.

SOCIAL AND FAMILY HISTORY:

She is married and has five children alive and well. Her husband is a farmer. She is a housewife.

PHYSICAL EXAMINATION:

She was in good general condition. There was no pallor or lymphadenopathy.



VITAL SIGNS: Blood pressure 120/65 mm/Hg, Pulse 80 per minute, Respiratory rate 20 per minute, Temperature 37 °C. Cardiovascular respiratory and central systems were normal.

Except for midline subumbilical scar, abdominal examination revealed no abnormality.

PELVIC EXAMINATION:

External genitalia were normal and there was no excoriation of the vulval skin.

Sims Speculum - with the patient in semi-prone position, urine <sup>was seen</sup> leaking from a point in the anterior vaginal wall. Detailed examination was postponed until later.

A provisional diagnosis of vesico vaginal fistula was made.

INVESTIGATIONS:

Haemoglobin 14.3 g/dl. Haematocrit. 404. Midstream specimen of urine was sterile. Urea 3.3 mmol/l, Na<sup>+</sup> 135 mEq/l, K 3.5 mEq/l H<sup>CO</sup> 327 mEq/l.

Pre-operative Examination under general anaesthesia:

The patient was prepared for general anaesthesia in the normal way. She was placed in lithotomy position. The vulva was cleaned and draped.

Examination revealed vagina of normal capacity. A small mid-vaginal fistula, ½ cm in diameter, in the anterior vaginal wall was identified. There was no fibrosis. The cervix was normal, uterus was normal in size, ante-verted and mobile.

Rubber Catheter was passed into the bladder. Using a funnel, a methylene blue - dye was introduced into the bladder. The dye was seen to be leaking through the fistula. There was no other fistula.

It was decided that repair would be attempted in knee-chest position.

REPAIR: A week later the patient was again prepared for general anaesthesia. She was placed in knee-chest position. Stay silk sutures were placed on labia majora and minora on either side for retraction. A trans-urethral catheter was passed.

A mid-vaginal fistula was exposed and was dissected out upto the bladder mucosa. The edges of the fistula were freshened. Repair was done in three layers by extrachromic catgut no 565.

A catheter was left - situ in the urethra, held by a stitch in the labia majora. The / <sup>bladder</sup> was drained for fourteen . The patient was put on tablets septrin 2 twice daily for 14 days.

A catheter specimen of urine was cultured on third day and was found to be sterile. The patient was dry until catheter was removed and remained dry after removal of catheter.

Speculum examination on day twenty-one after repair revealed that there was no fistula.

The patient was discharged with the advice that she refrains from sexual intercourse for three months and that her next delivery should be by Caesaria Section.

Direct trauma to anterior vaginal wall frequently involving underlying bladder wall during a difficult operative delivery explain the causation of the VVF. The presence of already devitalized tissues due to pressure necrosis, by prolonged labour makes the patient particularly vulnerable to fistula formation. In such cases the mechanism may be difficult to distinguish from pressure necrosis of unrelieved obstructed labour. In the later, compression of intervening soft tissues between the presenting part, usually cephalic and posterior surface of the symphysis pubis anteriorly and or sacrum posteriorly causes ischaemia which leads to devitalisation of the involved tissues. Necrosis and sloughing of the affected tissues occurs between the third and tenth day of the puerperium. Direct trauma on the other hand leads to fistula formation- immediately Lawson (1967) cephalopelvic disproportion especially due to small pelvis is the major cause of obstructed labour. Gebbie (1974) estimated the true conjugate of 33 patients with vesico-vaginal fistula in Kenyatta National Hospital to be less than than 9 cm! Gebbie (1966) found that operative vaginal rate of 21.2% in those patients whose height are under five feet as compared to 4.4% and 7.8% respectively in those who are over five feet.

Obstetric causes of vesico vaginal fistula are the most common and are potentially preventable.

## DISCUSSION:

"Vesica - vaginal fistula (VVF) is pursued by an evil reputation. It is notorious for misery and shame it inflicts and conspicuous because it debases the sufferer - still often in early womanhood from her rightful place in the family life". Those were the words of Chasser Moir (1963) when he was writing about vesico-vaginal Fistula

Greech (1972) was however more explicit than Chasser Moir and writing in the african context had this to say "Patient with a VVF is a social outcast. Because of constant wetting of bed, husband regards her as no longer fit to be a wife. Constant smell of urine, makes her shunned by members of the public including friends and some relatives.

It is against that background that discussion about VVF may be based, leave alone the concomitant loss of fetal life and the often associated recto-vaginal fistula-which adds insult to injury.

Obstetric gynaecological factors are by far the commonest causes of VVF developing countries. Operative vaginal delivery accounted for 57 patients (55.3%) in Greech's series (1972). 47 of whom had forceps deliveries, 7 had destructive operation, vacuum delivery, breech extraction and symphysiotomy, internal version accounted for one case each. Out of Greech's entire series 23 patients had prolonged labour with spontaneous delivery, 7, had ruptured uterus and 15 had caesarean section.



The prevalence of such fistula also reflects upon the frequency of cephalo-pelvic disproportion and inadequacy of maternity services to deal with this problem - (Gebbie 1974).

The management of vesico-vaginal fistula must lay emphasis on the prevention. As a short term measure Gebbie (1974) suggested improvement of maternity services. In this regard education on the utilisation of the existing services by the target group must be emphasized. Equally important is the recognition of cephalo-pelvic disproportion when it occurs and its immediate relief by the safest possible method.

The use of continuous bladder drainage in patients who are at risk of developing vesico-vaginal fistula postpartum will reduce the number of those patients who actually develop it. As a long term measure Gebbie (1974) suggested elimination of childhood malnutrition, an area which in my opinion is beyond a gynaecologist, but needs multi-faceted approach.

Once a fistula occurs, repair is not an emergency operation. A minimum of three months should be allowed between the time of occurrence and attempt at repair. During this period careful planning and preparation of patient should take place. The delay is necessary to allow all sloughs to separate and inflammation to subside, reduction in size by spontaneous healing in, improvement

of blood supply and reappearance of tissue planes are all favourable factors for surgery-(Lawson 1967).

Pre-operative care should aim at improving the nutritional status of the patient. Mental and psychological rehabilitation should be carried out. Physiotherapy especially of pelvic muscles and lower limbs are necessary. Any infection should be looked for and treated.

To determine the method of repair, site of fistula, size of the defect, structures involved and degree of fixing the pelvic wall must be defined at examination under anaesthesia. It is at this time a decision for either vaginal or abdominal approach is made. Juxta-cervical or vault fistula often require abdominal approach while, mid-vaginal fistulae are approached from the vagina..

It is necessary to emphasize that fistula repair is an operation for an experienced surgeon and should be done by a trainee under supervision. Even that he should start with selected easy cases. The principles of repair have been brilliantly summarized by Greech (1972) as: (a) Adequate exposure, (b) wide dissection and mobilization, (c) accurate closure without tension.

Post-operative care is as important as repair itself, for failure will occur where success would have been the outcome. Central in the post-operative care is the protection of suture line from tension by keeping the bladder at rest for fourteen days. The maintenance of free bladder drainage is therefore a prerequisite for the healing of the repair - (Lawson 1967).

Infection must not be allowed in the bladder and prophylactic antibiotic is given during the period of bladder drainage.

Cephalo-pelvic disproportion in a primigravida in unrelieved obstructed labour and a fresh stillbirth form a frequent story in vesico-vaginal fistula. On the other hand cephalo-pelvic disproportion in a multiparous in unrelieved obstructed labour usually ends up with a ruptured uterus and a fresh still birth and may develop VVF therefrom.

CASE NO. 15: PRIMARY INFERTILITY

NAME: E.M. Age: 28 years. Tribe: Meru.

IP NO. 1687-26

HISTORY OF PRESENT COMPLAINT: Patient presented with failure to get pregnant for four years. The patient is married and stays together with her husband.

PAST MEDICAL HISTORY: None significant.

FAMILY AND SOCIAL HISTORY: Patient works as a hawker in the city. She neither drinks nor smokes.

OBSTETRICS AND GYNAECOLOGY HISTORY: Para 0+0. Menarche at 16 years of age. She had never missed a period. Last menstrual period was November 16, 1977 for three days. Had had regular painless cycles each menstrual period lasting three days occurring every twenty eight days. She had never used any contraceptive method.

PHYSICAL EXAMINATION: Her general condition was satisfactory. She had no pollar, or lymphadenopathy. Abdomen was soft with no palpable masses. Breasts were well developed and had no palpable lump. Cardiovascular, respiratory and Central nervous systems were normal.

VITAL SIGNS: Blood pressure 110/70 mm/Hg. Pulse 70 per minute. Temperature 36.8°C and respiratory rate 18 per minute.

PELVIC EXAMINATION: External genitalia was normal.

SPECULUM EXAMINATION: Showed a nulliparous healthy looking cervix. Vaginal was normal.

BIMANUAL EXAMINATION:

The uterus was normal size, anteverted and mobile. Adnexa<sup>s</sup> was free.

INVESTIGATIONS:

a) Papanicolou smear class I

Hb. 11.6 gm %, pcv .348

Urinalysis was negative for sugar and protein pH5.



b) SEMEN ANALYSIS. The husband was advised to abstain from intercourse for five days. Semen was obtained by masturbation

(i) Semen fluid volume 2 ml.

(ii) Total count 22 million per ml.

Motility: Original 50%

After 2 hours 45%

Liquefaction was complete with 12 minutes.

Morphology: Normal forms 76%

Head deformities 18%

Tail deformities 5%

Spermatids. 1%

c) Hystero-salpingogram:

In the diagnostic radiology department, screening room.

The patient was placed in lithotomy position. Vulval toilet was done. Using a speculum, the cervix was exposed and held by a volsellum. A uterine cannula was gently inserted through the cervix. A 20ml. of radio opaque dye (hypaque) was injected into the uterus and at the same time being screened.

The uterus was well outlined. The tubes were outlined with spill of dye on the right tube. There was no spill of dye on the left tube.

The procedure was done in the first half of the cycle. It was outpatient procedure and done without anaesthesia.

d) Laparoscopy and Hydrotubation:

The patient was admitted into the ward. She was prepared for general anaesthesia in the normal way.

Under general anaesthesia, the patient was placed in trendelenburg position. Through a subumbilical stab wound, pneumoperitoneum of three litres of carbon dioxide was introduced by a laparoscope needle. A trocar and cannular was introduced through the same, but slightly enlarged, stab wound. A cannula was withdrawn. A laparoscope was inserted through the trocar. Peritubal adhesions involving both tubes were visualised. Ovaries were hidden in adhesions and were not visualised.

Using a uterine cannular inserted through the cervix, a dye was injected through the cervix. There was definite flow and leakage of dye through the right tube. No dye was seen flowing through the left tube.

It was decided that the patient may benefit from salpingolysis, because of patency of the right tube.

#### Diagnosis Curettage;

Premenstrual diagnostic curettage was done immediately after laparoscopy.

The cervix was dilated upto Hegar No. 8. Curettage was done obtaining bulky curettings. The curettings were sent for both histology and culture of tubercle bacilli. Histology reported to be secretory endometrium.

No tubercle bacilli was cultured from curettings.

Post-operative recovery was uneventful. The patient was discharged on second post-operative day.

The patient was advised accordingly.

#### TUBOPLASTY:

The patient was readmitted into the ward.

She was prepared for general anaesthesia in usual way.

Under general anaesthesia, the abdominal wall was opened through Pfannenstiel incision.

There were peritubal adhesions. The uterus was normal size and mobile.

The left tube was blocked at the ampullary portion and adherent to the mesovarium. Right tube was also blocked at the fimbrial end. Both tubes were thickened throughout the whole length.

Salpingolysis and salpingostomy was done on the left tube. A new ostium was constructed using No. 3/0 nylon. Salpingolysis was done on the right tube with ease.

By injecting normal saline, the left tube was found blocked at the isthmus. Normal saline easily passed through the right tube.

Abdominal wall was closed in layers with silk over skin. Post-operative recovery was uneventful.

The general impression was that the tubes were damaged, and there was minimal chance of conception.

### DISCUSSION

The desire for children by a normal woman is strong. It is a tragedy when a woman cannot conceive or bear children which she greatly desires and would cherish.

In many cultures the problem is serious because her whole social and personal security may depend on her fertility (Stewart 1972).

The importance of children is shown by the fact that, in England and Wales, two thirds of a large number of divorced couples have no children or only one child. (Jeffcoate 1975).

Even though the desire for a child is less strong in the man, infertility is a problem for a couple. The male partner is at fault in 40 to 50% of barren marriages (Brewer and Decosta 1969). It is therefore necessary that evaluation of an infertile marriage must include the man as well as the woman

Infertility is a major problem in Kenya. Mati, Anderson, Carty and McGlashan (1973) estimated that two-thirds of clinical time in Kenyatta National Hospital is spent seeing cases of infertility.

By far the commonest cause of infertility in our practice is pelvic inflammatory disease causing tubal occlusion. Pelvic inflammatory disease resulting into tubal occlusion was found in 73% out of 98 cases of secondary infertility by Walton and Mati. While in primary infertility laparoscopic investigation revealed that 73.1% out of 104 cases had tubal occlusion. Out of 200 cases of infertility fully investigated by Chatfield, Suter, Bremner, Edwards and McAdam (1970) revealed that 56% had tubal occlusion. In this series 2% had tuberculous endometritis. Chatfield and other (1970) concluded that low incidence of pelvic tuberculosis implicates gonorrhoea as the major cause of infertility in Kenya.



66 males were investigated and 5% were found to be infertile (Mati and others 1973). Blasco and Mikhail (1974) - estimated that 15% of female infertility can be attributed to ovulatory disorders. Hormonal analysis in such situations would be used to:-

- 1) determine the aetiology of underlying disorder,
- 2) to guide in choice of management,
- 3) to evaluate the response to therapy. Overall hormonal analysis would reflect one or more malfunctions of hypothalamo - pituitary ovarian axis.

Investigation of infertile couple is expensive and time-consuming. In our circumstance the benefit of such investigation has been doubtful. Mati and others (1973) when investigating cases of primary infertility established the following criteria for tubal surgery:-

- 1) minimal involvement of the tubes with no masses
- 2) few paritubal adhesions causing kinking of the tubes and
- 3) Fimbrial occlusion as demonstrated by dye swelling up the tube. Using this criteria they found that only 12% of primary infertility cases may benefit from surgical reconstruction while about 52.7% of secondary infertility cases were suitable for surgical reconstruction. Chatfield and others (1970) experience at laparotomy found that tubal damage following pelvic sepsis is gross, usually dense adhesions and pus formation, tendering them most unsuitable for plastic surgery.

For some time now we have used hysterosalpingogram and laparoscopic investigations to evaluate the tubes, among others in that sequence. From our clinical impression the two procedures have been useful and fairly free of any major complication to warrant a change. The case under review had blocked right tube and left tube. The decision for tuboplasty was made in order to free the right tube and assess the left tube better and offer the patient a chance of conception. At laparotomy the tubes were damaged more than was initially assessed. The finding was in agreement with what Walton and Mati (1971) found that primary infertility offers less scope for treatment than secondary infertility type.

Owing to the amount of emotion generated in our society about infertility it has been difficult to make a firm policy on who to investigate and how far to go with investigation in our hospital. Except for menstrual disorders and anovulation, prognosis of infertility due to tubal damage by pelvic inflammatory disease is poor.



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GYNAECOLOGICAL LONG COMMENTARY

TUBERCULOSIS OF THE FEMALE GENITAL TRACT IN

KENYATTA NATIONAL HOSPITAL.

## I N T R O D U C T I O N .

Tuberculosis of the female genital tract is one manifestation of systemic disease of the body by tubercle bacilli - usually of human type - from a primary focus - usually the lungs. The disease can remain pathologically active but clinically silent in the genital tract for a decade or more after invasion. Invasion of the female genital tract takes place during the period of activity of primary tuberculous lesion. The organs seem to be maximally vulnerable during adolescence. Mathew in 1949 estimated that genital tract tuberculosis is found in 2, to 2% of all gynaecological cases.

The first case of genital tract tuberculosis was, however, described by Morgani in 1762. He described endometrial tuberculosis. In 1881 Bates and Rucher described for first time tuberculosis of the vulva. Tuberculosis of the vulva is a rare disease which has been described in two major forms: ulcerative and hypertrophic lesions (Corbert 1953).

The frequency of organ involvement is stated by Schaeffer (1970) to be as follows: Tubes 100%. uterus 50 - 60%, ovaries 20 - 30%. Cervix 5 - 15% and vagina 1%.

B. MATERIALS AND METHOD.

A retrospective study of twenty - two proven cases of tuberculosis of the genital tract over a period of five years, Jan 1, 1974 to December, 31, 1978, were analysed. These were patients who were admitted to and investigated in gynaecological wards and found to have tuberculosis of the genital tract. The drug treatment is not analysed as patients were treated by physicians in Infections diseases Hospital (I.D.H.) where they were referred.

C. RESULTS:

(i) Age distribution:

The mean age of patients studied was twenty - nine years with a range of twenty to fifty - five years. Table I showed the distribution of patients in the various age groups. Over fifty percent were twenty - five years and less - emphasizing the fact that tuberculosis of female genital tract is a disease of young females.

Table I : Age distribution.

Age Group (years)	No. of Patients	Per centage
25 and less	12	54.5
26 - 30	5	22.7
31 - 35	1	4.6
36 - 40	2	9.1
41 or more	2	9.1
T o t a l	22	100



(ii) Parity and marital status.

16 patients were married, three single and the other three marital status was not stated. None of the patients had ever been pregnant.

(iii) PRESENTING COMPLAINTS:

Amenorrhoea was the most frequently occurring symptom. 16 (72.7%) of the cases complained of amenorrhoea: one primary and fifteen secondary amenorrhoea. The duration of amenorrhoea ranged from two months to seven years. Nine cases had been amenorrhoeic for twelve months and less, two between thirteen months and twenty - four months. Four had no menses between twenty - five and forty - eight months and one had amenorrhoea for over forty-eight months.

Infertility was second to amenorrhoea in order of frequency of occurrence. 13 (59.1%) of the cases were infertile. It is interesting to note that even though not all patients had complained of failure to conceive, none of them had been pregnant, even among the sixteen who were married. The patients had been infertile for one to twenty - one years. Nine had failed to get pregnant between one and five years of unprotected coitus. Three were unable to conceive for six to ten years. One had been infertile for over eleven years. Where amenorrhoea and infertility were the chief complaints, the latter had invariably preceded the former. Patients sought medical help earlier for amenorrhoea than for infertility.

It is noteworthy that nineteen cases out of twenty - two cases had amenorrhoea and infertility as their chief complaints - making up 86.2%.

Table II Main presenting symptoms

Symptom	No. of patients	Percentage
Amenorrhoea	16	72.7
Infertility	13	59.1
Amenorrhoea and Infertility	19	86.2
Lower abdominal pain ± Swelling	2	9.1
Vulval ulcer ± Swelling	1	4.6
Vaginal bleeding	1	4.6
Vaginal discharge	1	4.6

Lower abdominal pain with or without abdominal swelling was third in order of frequency. The pain had been present for considerable period ranging between three months and six years. Three patients had had it for one year or less and the other three for between two and six years. The six patients had on pelvic examination masses to warrant laparotomy. One had uterine fibroids with tuberculosis salpingitis. The remaining three had tubo-varian masses with adhesions of bowel, tubes, ovaries and omentum.

Salpingectomy was performed which showed tuberculous salpingitis on histological examination.

Vaginal bleeding occurred in a forty-three year old patient who had missed her menstrual period two times consecutively. Endometrial tuberculosis was the only pathological finding to account for her menstrual disturbance. Table II summarises the frequency of occurrence of presenting complaints.

Clinical pelvic examination revealed normal pelvis in twelve cases and eight were found to have a pelvic mass. In two cases of vulval tuberculosis pelvic examination was not done. In all cases no family history was recorded, nor was previous history of tuberculosis elicited. Chest X-ray was carried out in all cases. One only had lesions suggestive of pulmonary tuberculosis.

Dilatation<sup>n</sup> and curettage is usually employed as a diagnostic tool in the investigation of amenorrhoea and/or infertility. It is no surprise therefore that endometrium was the major site from which diagnostic material was obtained as exemplified in Table III. Tuberculous salpingitis was detected in four cases which were removed at laparotomy. The tubes were considered damaged or sites of infection which would be inaccessible to antimicrobials before tuberculosis was diagnosed. The materials obtained were subjected either to histological examination or bacteriology. Both bacteriology and histological study were carried out in case where tuberculosis was suspected and enough specimen obtained. Table IV shows the proportion in diagnostic

methods. In two cases so scanty curettings were obtained that only bacteriological culture was done and proved positive. The currettings were considered inadequate for histological examination. Seven cases had both histological examination and bacteriological study. Thirteen cases had histological examination alone.

Table III - Organ from which diagnostic material was obtained.

Organ	No. of patients	%
Endometrium	16	72.7
Tubes	4	18.2
Vulva	2	9.2
Total	22	100

Table IV - Method of Diagnosis.

	Positive	Not done/Missing
Histology	20	2
Bacteriology	9	13



## EVALUATION OF FALLOPIAN TUBE

The fallopian tube is considered the first site of attack by tubercle bacilli in the whole genital tract. It is from this site that it spreads to the rest of the organs. The tube was evaluated in all cases of infertility by the methods listed in Table V. The results show that the tubes were involved in the disease process. In more than 80% of cases evaluated the tubes were found blocked. One case was found with patent tubes on hysterosalpingogram. The mere patency does not exclude the tube from disease process nor can it be inferred that it is physiologically functional.

Table V: Status of Fallopian Tube on evaluation.

Method	Patent	Blocked	Not done
H S G	1	2	19
Laparoscopy	0	10	12
Laparotomy	0	8	14

Laparotomy is not a classical method of tubal evaluation, but direct inspection at laparotomy gives a fair picture of tubal state of health.

### RESULTS OF TREATMENT.

After treatment four cases had resumed their menstrual cycle. One had secretory and three proliferative endometrium.

None of the cases had been reported pregnant. Pregnancy was however, not expected in view of the fact that most of the cases had blocked tubes.

## CASES OF TUBERCULOSIS OF THE VULVA.

Case No. 1: N.K. was a twenty-five old Kikuyu, para 0+0, who presented with a swelling of the vulva for four months. She was cachetic and in poor general condition. Local examination revealed a proliferative growth on the left labia majora with a finger of tissue ulcer on the left interval aspect of the vagina, enlarged matted inguinal lymph nodes, healed smus fixed to the overlying skin and scarring.

Chest X - ray showed bilaterial opacities highly suggestive of pulmonary tuberculosis. Vulval biopsy revealed features of tuberculous vulvovaginitis. Patient died soon after anti-tuberculosis therapy was started. The immediate cause of death was probably over-whelming tuberculous pneumonia .

Case No. 2: S.K. a fifty-five year old Nubi Para 0+0 presented with a two-year history of progressive swelling of the abdomen, watery vaginal discharge, and one year history of dribbling urine. She was an ill-looking patient with marked pallor. Local examination of the vulva revealed a fungating , ulcerative lesion eroding the urethra, symphysis pubis , bladder and most anterior vaginal wall. The cervix was normal. Circum ferential vesico vaginal fistula was found. Chest X - ray showed no radiological evidence of pulmonary tuberculosis.

A provisional diagnosis of advanced carcinoma of the vulva was made. The patient had ileal of bladder operation and died soon thereafter.

However, histological examination of the biopsy showed granulation tissue containing granulomatous giant cells and necrosis, features which were consistent with active caseating tuberculosis. Patient never had anti-tuberculosis therapy.

Tubercle bacilli in this case was virulent and probably aided by low host resistance. It was so destructive that it was likened in every way to a highly malignant tumour. It was only the duration of the illness which made the latter unlikely, but the co-existent of the two conditions by speculation is a possibility.

#### D I S C U S S I O N

Incidence: During the years under study (Jan. 1, 1974 to Dec. 31, 1978) 1511 females were admitted to I.D.H. with Tuberculosis of various forms. Out of these, twenty 1.3% had genital tract tuberculosis. During the same period 1145 patients were admitted and investigated for infertility into gynaecological wards. Thirteen ( . 113%) had tuberculosis of the genital tract. Johnstone and Ochiel in reviewing cases of amenorrhoea in Kenyatta National Hospital reports that a third of nulliparous patients with secondary amenorrhoea who had diagnostic curettage had tuberculosis of the endometrium. The incidence of genital tract tuberculosis at any given time is a reflection of tuberculosis in the community ten years or more ago.



### CLINICAL MANIFESTATION:

Tuberculosis of female genital tract is a disease of young people. Age incidence is highest between twenty and thirty years of age with a few before twenty years and a few after thirty years.

Previous positive history of extragenital tuberculosis is very helpful in suspecting pelvic disease. Its absence however, is of little significance. Poland in 1965 reviewed 140 cases. In these cases about two-thirds had no previous history of tuberculosis.

Cummulative data indicates that in many instances primary pulmonary lesion was not recognised as tuberculosis or had been arrested and is not evident in chest X-ray films. By the time genital tract tuberculosis manifests itself, which is estimated by many authors to be about ten years or more, pulmonary lesion may have healed. Therefore a negative chest X-ray does not exclude the possibility of genital tuberculosis.

Francis (1964) states that infertility is the commonest and often the only symptom of genital tuberculosis. In his twenty-two year review of 135 cases 93 per (69%) females had infertility as a leading complaint. He went further to state that 4 - 6% of infertile marriages in United Kingdom was then explained by genital tuberculosis. Average incidence of genital TB in infertility clinics throughout the world is 5 - 10% and varies from 0.69% in Australia to 17.4% in India.



2% of 200 cases of infertility had tuberculosis endometritis in East Africa (Chatfield, Suler, Brenner, Edwards and McAdam 1970). No case of tuberculosis was found in 98 cases of secondary infertility in Kenya which were investigated by Welton and Mati (1976). Francis (1964) lists the symptoms of his cases suffering from active genital tract tuberculosis as in Table VI.

TABLE VI.

Symptom	No. of Patients.
Infertility	93
Menstrual disturbance	71
Amenorrhoea (primary - 2)	21
Hypo or oligomenorrhoea	24
Menorrhagia and Epimenorrhoea	17
Postmenopausal bleeding	4
Irregular Uterine Bleeding	2
Dysmenorrhoea	3
Abdominal pain	34

Francis (1964) reports that it is generally agreed that menstrual upsets occur in approximately half of women who suffer from genital tract tuberculosis. It was 52.6% in his series. Schaeffer (1970), however, says that menstrual abnormality in genital tract tuberculosis is variable depending on the country. He quotes the following to support his statement: Ylinen found no menstrual irregularity in 56% of his patients in Finland, Kirchoff found normal menstrual cycles in 62% in Germany, Sutherland

and Garrey found no menstrual abnormality in 46% of patients in Scotland, in Rumania 7.3% of patients had normal menses. In India 18.53% of patients had amenorrhoea. Evidence from Kenyatta National Hospital (Kenya) Johnstone and Ochiel) shows a third of nulliparous patients with amenorrhoea had tuberculosis of the genital tract. Schaffer asserts that in sterile patients who had amenorrhoea the incidence of tuberculous endometritis was 51%.

Schaeffer (1976) reported that pelvic pain was present in 50% of his patients. He says that pelvic pain is the most common symptom of genital tract tuberculosis in the females. The pain is not severe, but is progressive and is worsened by coitus, exercise and menstruation.

Associated with the above symptoms the physical signs on first examination was reported by Townsend in 1955 in thirty cases as shown in Table VII.

TABLE VII.

Sign	No. of cases
Mass in pelvis	22
Peritonitis and Pelvic abscess	17
Pregnancy	4
None	6

It is a marked difference with our series of 22 cases here where twelve had no physical sign on first pelvic examination.

Diagnosis of tuberculosis of female genital tract depends on clinical suspicion and search for it in all patients with unexplained infertility and/or secondary amenorrhoea. The tissue obtained from the genital tract of these cases should be sent for both histological examination and bacteriological study. Endometrial curettings sent for histology alone will miss between 50 - 75% of cases of tuberculous endometritis (Jeffcoate 1975).

#### SPREAD OF TUBERCULOSIS:

Tuberculosis of the female genital tract arises as a result of bacillaemia coming from a remote focus. 90% of such cases, the known primary focus was extraabdominal and 80% of that focus was in the lung. Where tuberculous peritonitis was known to co-exist, it had resulted from upward extension of a pre-existing genital tract lesion (Barns 1955). The fallopian tube form a most favourable site for tubercle bacillus, the earliest lesions being found in the mucosa. The tendency of tuberculosis to affect bilateral organs results in both tubes being involved in the pathological process. Tuberculous infection spreads to the uterus and ovaries from the tube by direct extension. That fact is derived, from the evidence that, tuberculous process shows a progressive decrease in intensity from above downwards. Extension in uterus is along the endometrium and rarely to myometrium. When ovary is involved, it is usually a perioophoritis (Schaeffer 1970).



Hysterosalpingogram and laparoscopy have been reported to reactivate a quiescent infection, among others. We have used these procedures routinely in the investigation of infertility and flaring of infection has not reached a level to necessitate a change in our practice. The risk of a viscus perforation was not increased as most patients had normal pelvic findings and the others had palpable pelvic masses to contra-indicate laparoscopy.

PREGNANCY:

Theoretically expected conception rate is reported to be as high as 20% in favourable cases where treatment is started before there is gross tubal damage (Snaith and co-workers 1962). The above assertion presupposes early diagnosis. As genital tract tuberculosis is a silent and insidious disease the diagnosis is easily overlooked and early diagnosis remains a wish. Out of Francis (1964) 135 cases, ten conceived after diagnosis of tuberculosis was proven. Thirteen pregnancies occurred: eight were tubal in site, one had two successive ectopic pregnancies, five were intrauterine pregnancies. Of the latter: four aborted between eight weeks and twenty - five weeks. Only one went to term. Genital tuberculosis predisposes to ectopic pregnancy (33%), abortion rate is high and is agreed to be taken between 10 to 20% of all intrauterine pregnancies (Snaith et al 1962). Despite this predisposition to ectopic pregnancy Webala (1978) found no case of TB



salpingitis in his series of 479 cases of tubal pregnancy in Kenyatta National Hospital. From review of world literature and personal experience Schaeffer expresses that successful intrauterine pregnancy is a very remote possibility following tubercle bacilli infection of the genital tract with or without tuboplastic surgery.

CONCLUSION:

From the foregoing a few points come to light, whereas our patients mode of presentation is comparable to the rest of the world, our incidence is unexpectedly low in comparison to India which is a developing country like ours. It is perhaps reasonable to make the following assertion. In our environment where extragenital tuberculosis is considered common, we should suspect and must exclude genital tract tuberculosis in all those patients who present with primary infertility or secondary amenorrhoea or both. It would be now imperative to send a specimen of endometrial curettings for bacteriology if we are to increase our yield.

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