

**CASE NO. 12 : MISPLACED INTRAUTERINE CONTRACEPTIVE DEVICE  
RETRIVAL BY DILATION AND CURETTAGE.**

Name: W.W. D.O.A: 12/4/2003  
Age: 32 years D.O.D: 13/4/2003  
Unit: 0881753

**Presenting Complaint**

She was referred from the family welfare clinic for removal of a misplaced intrauterine contraceptive device.

**History of Presenting Illness**

She had presented at the family welfare clinic complaining of inability to feel the threads of the coil at the end of her menses one week before. She had not seen it fall out. Attempts to remove the displaced IUCD at the clinic with a pointed forceps failed.

**Obstetric and Gynaecologic History**

She was para 4+0. All her deliveries were vaginal and the children were alive and well. Her last delivery was in 1990. She had the IUCD inserted eight weeks after delivery. She had not used any contraceptive before. She had used the IUCD for four years without any complications. Her periods were regular, normal flow and there was no dysmenorrhoea. They came every 28 days and lasted 3 days. Her last period was on 2/4/2003. She had attained her menarche at the age of 15 years.

**Past Medical History**

There was nothing significant.

**Family and Social History**

She was a married housewife staying at Eastleigh with her family. She was educated upto form two. She neither smoked nor took alcoholic beverages.

**Physical Examination**

She was in good general condition. She was neither pale nor febrile. She had no oedema or lymphadenopathy. Her vital signs were as follows; blood pressure 110/70mmHg,

temperature 36.5%, respiratory rate was 22 per minute, pulse 78 per minute. The cardiovascular and respiratory systems were essentially normal.

### **Abdominal Examination**

The abdomen was not distended. It was soft and not tender. The liver and the spleen were not enlarged. The uterus was not palpable and there were no other masses.

### **Pelvic Examination**

The vulva was normal. On speculum examination the vaginal walls were healthy, the cervix was normal with its os closed. There were no threads seen.

Digital examination confirmed a firm cervix with a closed os. The uterus was normal sized, anteverted and mobile. The adnexae were free of any tenderness or masses. Attempts to remove the IUCD at this stage also failed.

### **Diagnosis**

An impression of a displaced intrauterine contraceptive device was made.

### **Investigations**

1. Haemogram

Hb = 11.2g/dl

WBC =  $6.0 \times 10^9/l$

PLT =  $290 \times 10^9/l$

2. Urea/Electrolytes

Na<sup>+</sup> = 136mmol/l

K<sup>+</sup> = 4.5mmol/l

Urea = 2.6mmol/l

3. Pelvic ultrasound:

There is an intrauterine device within the endometrial cavity. The adnexa is normal.

## **Management**

The patient was planned for the removal of IUCD under general anaesthesia by dilatation and curettage.

An informed consent was obtained from her. She was premedicated with intramuscular atropine 0.6mg, half an hour before the theatre.

In theatre, anaesthesia was induced with thiopental sodium 250mg and maintained by mask with nitrous oxide and oxygen. The patient was placed in lithotomy position, vulvo-vaginal toilet was done, draped and the bladder characterized. A bimanual pelvic examination was done which confirmed earlier findings. An auvarde's self retaining speculum was inserted into the vagina exposing the cervix whose anterior lip was then grasped using a volsellum forceps. The uterine cavity was sounded and the IUCD felt in the uterus. The cervical canal was then gradually dilated up to Hegar size 8. A small curette was introduced into the uterine cavity upto the fundus. Curettage of the uterus was done and a tailless copper I IUCD was removed. It had been felt on the anterior uterine wall. IUCD was preserved for the patient to see. There was no significant bleeding. The patient was then reversed from anaesthesia.

## **Post Operative Care**

Her vital signs were observed every half hour until she was fully awake, then four hourly. She was given paracetamol 1gm every six hours for three days. Prophylactic antibiotic were in form of tetracycline 500mg every six hours for five days. She was reviewed the following morning and found to be in good general condition. She opted to have bilateral tubal ligation as a permanent method of contraception after counseling, which was carried out in main theatre as a day case three days after discharge.

## COMMENT

The patient presented was a 32 year old, para 4+0 presenting with misplaced IUCD. A pelvic ultrasound located the device in the endometrial cavity and curettage under general anaesthesia.

The intrauterine contraceptive device (IUCD), first described by Richter in 1909, was a ringshaped device made of silkworm gut. Since then IUCDs have been made in various shapes including rings, loops, spirals, T-shapes, and others. The materials used to make IUCDs have also varied and have included silver, copper and plastic. One device contains progesterone, most do not contain hormone. Today the IUCD commonly inserted in new IUCD acceptors in most countries is the copper T380A.<sup>1</sup>

Although, some of the devices are threadless, most commonly used are those with the threads, which self-examination reassures the patient that the IUCD is in situ. The patient presented had been inserted a copper T IUCD with threads but presented with inability to feel the threads.

It is estimated that 10-15% of the IUCD users report missing tails.<sup>2</sup> Approximately 2 – 8% of the users spontaneously expel a correctly available IUCD within the first year.<sup>3</sup> The symptoms of IUCD expulsions may include; unusual vaginal discharge, cramping or pain, intermenstrual spotting, postcoital spotting, dyspareunia (male or female), lengthening of the IUCD string, ability to feel hard IUCD at the cervical os or in the vaginal or passage of the IUCD itself from the vagina. All these symptoms were not elicited from the patient.

If the threads of the IUCD are not felt or visualized, the IUCD may have been expelled or the device may be in the abdominal cavity; or the IUCD strings may merely have been drawn up into the uterine cavity.<sup>1</sup> Sometimes the strings could have cut off or the device could be malpositioned within the uterine cavity.<sup>4</sup> Our patient had her threads off but the device was in the uterine cavity.

Problems of missing tail call for localization of the IUCD since expulsion, extrauterine location or even malpositioning within the uterine cavity all predispose to the risk of pregnancy. Extrauterine location carries an extra risk of gut perforation, and for copper containing devices on intense inflammatory reaction with subsequent adhesions and intestinal obstruction.<sup>5</sup>

The missing IUCD can be traced by ultrasonography which is reliable and safe where an intrauterine pregnancy is suspected. Other methods include two dimensional radiography with a marker IUCD in situ or a uterine sound, hysteroscopy and hystero-graphy .<sup>5, 6</sup> In these cases pregnancy should be ruled out before radiation. In our unit we usually use sonography. Removal of "Missing" IUCD can be achieved by using small forceps to explore the cervical canal, exploring the uterine cavity with a hooked or spiral fine plastic curette, or cervical dilation followed by exploration and curetting the uterine cavity.<sup>4,7</sup> Cervical dilatation using lamical has been found to be easy and safe as an out patient procedure .<sup>4</sup> In our unit dilatation and curettage is commonly used method for removal of displaced IUCDs. Where the IUCD is extrauterine, removal is done using laparoscopy or laparotomy.

## REFERENCES

1. Hatcher R.A., Konal D., Guest F. et al. Intrauterine Devices (IUCDs) Contraceptive technology; International Edition. Atlanta Georgia USA: Prineted Matte, INC 1989 pp 307 – 333
2. Cunningham F., Gant N. F. Contraception. Williams Obstetrics 21<sup>st</sup> Ed. Appleton and Lange/McGraw Hill New York pg 1517-1554, 2001.
3. Family Health International. Network 6 (2), 1996.
4. Johnson N., Moodley J. Retrieval of Intrauterine contraceptive devices with missing tails using lamichel. Br. J. Obstet. Gynaecol. 1988; 95:97-100
5. Cunningham F.G., Machorald PC et al. Mechanical methods of contraceptions. In: William Obstetrics 19<sup>th</sup> Edition. Appleton & Lange Norwalk 1993 pp 1341-7.
6. Shearman R.P. Contraception and Sterilization Dewhust textbook of Obstetrics and Gynaecology for post graduates.
7. Ansan A., Hoffman D. Retrieval of IUCD with missing tails by means of plastic spiral curette. Am. J. Obstet. Gynaecol. 142:1061-62, 1982.

## **CASE NO. 13: VESICO-VAGINAL FISTULA-SUCCESSFUL REPAIR**

Name: E.M. Age: 23 years  
Parity: 1+0 IP: 0891603  
D.O.A: 2/7/03 D.O.D: 28/7/03  
L.D: Feb 2002

### **Presenting Complaint**

The patient was admitted from gynaecological clinic with complaints of dribbling of urine for one year, which developed one week since the last delivery.

### **History of Presenting Complaint**

She had been in labour at a dispensary for three days before she was transferred to Bungoma District Hospital where the obstructed labour was relieved by caesarian section. She was left with a bladder catheter after the caesarian section but had started leaking urine on the seventh postoperative day. After removal of stitches she got a burst abdomen and secondary stitching was done. However the urine leakage had been present since then she was left with a catheter for one month, but the leakage was persistent. She had tried to seek medical help in a private hospital but could not afford the medical bill so she was referred to Kenyatta National Hospital.

### **Obstetric and Gynaecologic History**

She was para 1+0, her last delivery was in 2002. She had been attending her antenatal clinic at the said dispensary and there were no problems reported. She had been amenorrhoeic since delivery.

She attained menarche at 16 years. Her periods were normal occurring after every 28 days and lasting four days. She had not used contraceptives.

### **Past Medical History**

This was not significant

### **Family and Social History**

She hailed from Bungoma, now separated from her husband because of this problem. There was no family history of any chronic disease.

### Physical Examination

She was in good general condition. She was neither pale nor febrile and had no leg edema. Her vital signs were as follows: blood pressure 110/70mmHg, temperature 36.8°C, respiration 20 per minute, pulse 80 per minute. The respiratory and the cardiovascular systems were normal.

### Central Nervous System

The abdomen was not distended and moved with respiration. There was a rugged lower midline scar. The abdomen was soft, there was no tenderness and there were no palpable masses.

### Pelvic Examination

She smelled of urine. The pad was soaked with urine. The vulva had moderate excoriations. A speculum examination revealed a large midvaginal fistula of 1.5cm diameter. The cervix appeared normal.

Digital examination revealed a fistula that could admit the index finger. There was loose tissue around it. Fibrosis was minimal and the cervix was firm and the os was closed. The uterus was normal sized and anteverted. The adnexae were non-tender and there were no palpable masses felt.

### Diagnosis

An impression of vesicovaginal fistula was made.

### Investigations

- |    |                   |                             |
|----|-------------------|-----------------------------|
| 1. | Haemogram         | Hb = 15.9g/dl               |
|    |                   | WBC = $8.0 \times 10^9/l$   |
|    |                   | PLT = $219 \times 10^9/l$   |
| 2. | Urea/Electrolytes | Na <sup>+</sup> = 135mmol/l |
|    |                   | K <sup>+</sup> = 4.7mmol/l  |
|    |                   | BUN = 5.6mmol/l             |



### 3. Urinalysis

Ph = 6, Glucose - Nil, Protein-Trace, SG=1.030, Leucocytes 2+ blood-Nil, Microscopy-Few pus cells, No Yeast cells, Culture-No growth obtained, No trichomonous Vaginalis.

She was on plenty of fluids (5lts in 24hrs) and prepared for VVF repair.

#### **Examination under Anaesthesia and Repair**

An informed consent was taken from the patient. She was premedicated with intramuscular atropine 0.6mg and pethidine 50mg half hour before theatre.

In theatre, anaesthesia was induced with thiopentone intravenously and maintained by mask. She was placed in lithotomy position, vulvovaginal toilets was done with hibitane and then draped. On examination the earlier findings were confirmed. There was a vesicovaginal fistula situated about 3.0cm from the introitus and the diameter was 2cm. There was plenty of loose tissues around it. A Nelaton's catheter was introduced into the bladder via the urethra and methylene blue dye was passed through the catheter into the bladder. The dye leaked through the fistula. There was no other fistula noted.

It was decided that the fistula is easily accessible and an attempt should be made to repair the fistula on the same sitting and the position elected was lithotomy.

The fistula was well visualized. The infiltration with "Jungle juice" containing 1:100,000 adrenaline solution given. The edges of the fistula were excised then the vaginal mucosa and bladder wall were separated. The bladder wall was repaired in two layers with chromic catgut 3/0 round bodied needle. The stitches were interrupted and the margins of the fistula inverted towards the bladder. After the bladder repair, methylene blue was introduced into the bladder to check any other unseen fistulae. No leakage of the dye was seen. The vagina was then repaired.

The Nelaton's catheter was secured to the vulva with a silk suture, passed through both the labia minora and tied to the catheter in the midline. The blood loss was minimal and there was no need for transfusion. Anaesthesia was reversed and the patient returned to the ward.

#### **Post Operative Management**

The blood pressure, pulse and temperature were observed half hourly until she was fully awake then 4 hourly. Analgesia was given as pethidine intramuscularly 100mg 8 hourly for 2 days followed by paracetamol 2 tablets 8 hourly for five days.

Adequate and generous fluid intake was encouraged (5liters in 24hrs). Continuous bladder drainage was maintained for 14 days. On the third day check haemoglobin and urine culture results were as follows; haemoglobin 14.6g/dl, urine culture – No growth obtained.

The urine output from the bladder as between 4-4.5lts/day. The patient remained dry post operatively and the catheter was removed on the 14<sup>th</sup> post operative day, when the patient was re-examined using a sims speculum. She had remained dry throughout. The bladder was catheterized and 100mls of urine was obtained. A piece of clean gauze was inserted into the vagina, and the methylene blue dye put into the bladder through the catheter. There was no staining of the gauze and therefore no leakage of the dye had taken place. The bladder was emptied, catheter removed and the patient discharged to be seen in the VVF clinic six weeks later.

She was advised to abstain from coitus for three months and was told that all her subsequent deliveries would be elective caesarian sections.

### **Follow up**

The patient never came again.

## DISCUSSION

VVF is a distressing condition characterized by the involuntary passage of urine through an abnormal communication between the bladder and the vaginal canal.

These fistulae fall mainly into four groups;

1. Those resulting from obstetric injury.
2. Those resulting from operative accidents (chiefly during total abdominal hysterectomy).
3. Those resulting from the extension of the carcinoma of the cervix or Radium treatment for the disease and
4. A small miscellaneous group, example infections/congenital.

In developing countries VVF develops due to mainly obstetric complications and this is usually linked to low socioeconomic condition, poor antenatal and intranatal care.

About 90% of the VVFs seen at Kenyatta National Hospital are labour related<sup>2,3</sup>. In the developed world however about 70-80% of the VVFs results from radical pelvic or urological surgery, the rest due to cancer and radiation therapy.<sup>1,4,5</sup>

The pathophysiology of VVF in prolonged labour is pressure necrosis. As the presenting part descends, the bladder is displaced upwards into the abdomen, resulting in compression of the bladder base and urethra between the presenting part and the symphysis pubis. As the pressure and obstruction continue, the interposing soft tissue becomes devitalized by Ischemia and separated as a slough between three to ten days. Direct trauma for example during operative vaginal bleeding, caesarean child birth and ruptured uterus can also result in a VVF formation<sup>1,5</sup>.

In the patient presented, pressure necrosis was the most likely aetiology of the VVF. Lack of competent health centres to adequately monitor labour and diagnose intrapartum complications for timely referral to tertiary health institutions or lack of transport is a major problem in this part of the world. This lady laboured for two days in a dispensary. The most likely reason was probably lack of transport.

Prolonged labours which result in VVF formation are associated with a high still birth rate of 64 – 79%<sup>2,3</sup>. The majority of the VVFs occur in young primigravida whose peak

age is 20-24 years and the labour usually lasts more than two days due to cephalopelvic disproportion<sup>2,3</sup>. The patient presented was a 23 year who had laboured for two days in her first pregnancy and started leaking urine on the seventh day.

Diagnosis of a VVF is made from history and examination findings. Urinary incontinence is usually continuous and not related to posture if the fistula is large. For small fistulae the patient may be able to void large amounts of urine and become incontinent only in certain positions<sup>1</sup>. With marked incontinence the vulva becomes reddened, tender and excoriated over time. The odour of the urea may become so offensive as to be disgusting to the patient and repulsive to others. The patient was separated from the husband for this.

If a fistula opening cannot be readily demonstrated by careful pelvic examination, often it may be found by filling the bladder with a dilute solution of methylene blue and then inspecting the anterior vaginal wall and vaginal vault. For tiny fistulae whose openings are not discovered in either the dorsal lithotomy or knee-chest positions the three – tampoo tests of moir is used. Methylene blue dye is instilled into the bladder after three cotton tampons are placed in the vagina. The patient walks about for 1-15 minutes; the tampons are removed and examined. If the lowest tampon is wet and stained blue the patient may be presume to have transurethral urinary incontinence. If the upper tampon is wet but not blue, a low vesicovaginal fistula is indicated. If the upper tampon is wet and blue, a high vesicovaginal fistula is the likely diagnosis<sup>1</sup>.

In the patient presented the diagnosis was obvious from the history and pelvic examination. Other investigations that could be used to confirm genitourinary fistulae include intravenous urogram (IVU), hysterosalpingogram (HSG) and cystoscopy.

Repair of the fistulae is usually done after 3 months following trauma so that the healing of the tissues is complete.<sup>5</sup> However the prolonged period of waiting makes the patient uncomfortable with the indwelling catheters which do not make the patient dry and may cause more irritation; the patient is embarrassed, depressed and restricted in her social and marital activities. This has made other authors to suggest a short waiting period – 6 weeks.<sup>1</sup>

The principles of fistulae repair include adequate exposures, wide dissection and mobilization of tissues, asepsis, adequate post operative hydration and bladder drainage.<sup>4</sup> The position of repair was decided at EUA and repair was attempted immediately

because of accessibility of the fistula and availability of surgical instruments. Success rates of 85.7% for first attempts are reported compared to 10-15% for second attempt.<sup>6</sup>

Post operatively continous bladder drainage is very important to avoid distension of the bladder which will win a good VVF repair. Should a catheter get blocked, this could be changed immediately and this is usually done in theatre under general anaesthesia. The patient is instructed to rest the site of repair for at least three months hence she should avoid coitus or insertion of tampons to allow adequate healing.

The patient did not have any post operative complication and we hope she followed our instruction at discharge.

## REFERENCES

1. Mattingly R.F., Thompson J.D. Vesicovaginal fistulae. In T. Linde's Operative Gynaecology 6<sup>th</sup> edition. J.B. Lippincott Company 1985 pp 635 –667.
2. Gunaratne M., Mati J.K.G. Acquired Fistula of female lower genital tract. A comprehensive 5 years Reviews. J.Obstet Gynaecol. E. Central Afr. 1:11; 1982.
3. Olienyo E.A. A retrospective Study of 166 cases of acquired genital and rectovaginal fistula treated at Kenyatta National Hospital between 1979 – 1982 Mmed Thesis UON, 1984.
4. Myerscough P.R. Maternal Injuries. Munro Kerrs Operative Obstetrics Bailleire Tindal 10<sup>th</sup> Edition pp 461 1996.
5. Lawson J.B. Obstetric and Gynaecology in the Tropics and developing countries. ELBS/Edward Arnod, 1<sup>st</sup> Edition, Reprint 1982.
6. Lister U.G. Vesicovaginal fistula. Post grad. doc. 6:321:1984.

## CASE NO. 14: CERVICAL CARCINOMA STAGE III<sup>B</sup> – RADIOTHERAPY

NAME: N.N. IP: 0878736  
AGE: 36 years PARITY: 7+0  
DOA: 15/12/2002 DOD: 19/4/2003

### Presenting complaints

The patient was admitted through casualty as a referral from Makueni Hospital with a 10 month history of per vaginal bleeding and discharge and left sided low abdominal pain.

### History of presenting illness

The patient had been well till ten months previously when she started having a watery foul smelling discharge. This had been persistent despite treatment at a local dispensary. In the same duration she also experienced irregular vaginal bleeding especially when straining at passing stool. She also experienced low abdominal pain mainly in the left side and was progressively becoming worse. She attended Makueni hospital where she was admitted for a week before being referred to Kenyatta National Hospital for investigations.

### Past medical history

This was not significant

### Past Obstetric and Gynaecological History

She was para 7+0. Her last delivery was in 1997. Her menarche was at 17 years. Her last normal menstrual period was on 20/2/2002. Since then she had had irregular bleeding, otherwise prior to this her periods used to occur every 28 days and lasting 4–5 days. They were of normal flow and there was no dysmenorrhoea.

### **Family and social background**

She was a widow. Her husband died in 1989. The reason was unknown. She was a peasant farmer staying with her children. She neither took alcohol nor smoked cigarettes. There was no family history of diabetes, tuberculosis or hypertension.

### **Physical Examination**

She was in fair general condition. She was not pale. There was mild pitting leg edema on the left leg. There was no fever or lymphadenopathy. The vital signs were normal.

The cardiovascular, respiratory and the central nervous systems were normal.

### **Abdominal Examination**

The abdomen was slightly distended in the hypogastric region more on the left side. There was a pelvic mass that was 16 weeks size equivalent of gravid uterus. It was smooth, firm, fixed and slightly tender. There was no hepatosplenomegally.

### **Pelvic Examination**

Speculum Examination: The external genitalia was normal. There was necrotic haemorrhagic fungating mass on the cervix involving the lower third of the vagina.

Digital Examination: Revealed an enlarged uterus 10 weeks size with parametrial thickening bilaterally involving the pelvic walls.

### **Diagnosis**

A provisional diagnosis of advanced Carcinoma of the cervix was made.

### **Management**

She was prepared for examination under anaesthesia for staging and biopsy of the cervical tumour.

### **Investigations**

Haemogram: Haemoglobin = 10.0 g/dl  
WBC =  $8.0 \times 10^9/l$   
274



	PLT	= 2.86 x 10 <sup>9</sup> /l
Urea and Electrolytes:	Na <sup>+</sup>	= 143mmol/l
	K <sup>+</sup>	= 4.8 mmol/l
	Urea	= 7.9 mmol/l

### **Examination under Anaesthesia**

This was carried out on 20/12/2002.

### **Findings:**

The external genitalia was normal, on speculum examination, there was an ulcerative necrotic and haemorrhagic lesion involving the cervix and the lower third of the vagina. It was quite friable and bled easily on touch.

The uterus was enlarged 16 weeks and firm. The parametrium were involved bilaterally. On the left side, the tumour was attached to the pelvic wall. On rectal examination, the rectal mucosa was free and mobile. The uterosacral and cardinal ligaments were involved and on the left there was no tumour free space between cervix and the pelvic wall.

A biopsy of the cervical lesion was taken for histopathology.

A diagnosis of carcinoma of the cervix stage IIIB was made awaiting confirmation by histology report; then radiotherapy.

She was discharged home to come after two weeks for histology report.

### **Histology report 71/411 (1.2.2003).**

#### **Cervix:**

Gross: One friable tissue 10 x 6 mm

Histology: Sections show an infiltrative non keratinizing poorly differentiated squamous cell carcinoma.

### **Readmission and Radiotherapy**

She was readmitted on 26.1.2003 for radiotherapy. However she was found to be pale with haemogram level of 7.7 g/dl having had episodes of bleeding at home.

She was transfused two units of blood and her repeat haemoglobin level was 12.4g/dl. Marking was done for both anterior and posterior fields and was started on external beam radiation on 11.3.96. She tolerated irradiation quite well, and had 22 fractions of external radiation in all. These were 40 Grays (400 rads) given 10 Grays per week (5 days) for 4 weeks. In this period she was on haematinics and analgesia provided with DF118 tablets.

The pelvic pain had subsided and there was no vaginal discharge or vaginal bleeding. She was discharged home to be seen in the radiotherapy clinic after 3 months for intracavity radium therapy. However, by the time of writing this report intracavitary therapy was not being given due to lack of facilities. She was therefore referred to a private hospital for this.

## DISCUSSION

The cervix is the commonest site for the female genital cancer in Britain while in the United States ranks as the third most common type of cancer in women after cancer of the breast and of the endometrium.<sup>1,2</sup> The incidence of the invasive carcinoma of the cervix in women aged over 20 years is of the order of 15 per 100,000 per annum. It is estimated that up to 8000 women in the United States of America die of this disease each year.<sup>2</sup> The mortality associated with the carcinoma of the cervix would be greatly reduced if cancer of the cervix was detected early and treated properly since over 95% of the patients with early cancer of the cervix can be cured.<sup>2</sup>

In Kenya, carcinoma of the cervix is the most common gynaecological cancer. Its true incidence is unknown but about five cases are seen every week at Kenyatta National Hospital.<sup>3</sup> The situation is similar in other parts of Africa.<sup>4,5,6</sup>

Although invasive cancer of the cervix is reported at all ages, even at birth, it now has two peaks, one at about 35 years and another at about 50-55 years following which there is reduced incidence.<sup>1</sup>

In Kenya, Ojwang'et al<sup>3</sup> found the mean age to be 42 years when they studied all age groups and this was at least 10 years lower than what was seen in developed countries. However in a study involving younger women aged less than 35 years, Ojwang<sup>7</sup> found peaks at 25,30 and 35 years although the significance of these peaks was unclear.

Human papilloma virus induces atypical changes in the cervical epithelium which biologically evolve into carcinoma over 10-15 years. Subtypes 16, 18 and 31 are known to be most virulent. Predisposing factors include:

- Sexually related factors – promiscuity; number of sexual partners and age of first sexual intercourse.
- Male role – circumcision and number of male sexual partners.
- Smoking.
- Dietary deficiencies – B-carotene, Vitamin C and folic acid.
- Hormonal and Contraceptive effects – long term use of oral contraceptive pills (has a two fold increase in cervical neoplasia).

- Immunosuppression – Human immunodeficiency virus potentiates the effect of human papilloma virus on cervica epithelium.
- Low socioeconomic status – This is associated with high risk sexual behaviour, excessive smoking; and the partners occupation may involve jobs exposing them to carcinogenic materials such as metals, chemicals and oils. It is also associated with low standards of cleanliness (including penile hygiene) <sup>1, 2, 7</sup>
- A new concept of the aetiology emphasizes the role of “tumour suppressor gene” – P53 and retinoblastoma (Rb) in the development of the disease. The normal cells are now viewed as if they are potentially cancerous, but prevented from doing so by proteins transcribed by the tumour suppressor genes. Loss of activity of these proteins eventually enables a cascade of changes to occur, leading to development of cancer.<sup>7</sup> Characteristics of the tumour cells could be reversed by genetically engineering tumour suppressor genes into them. However this concept is not fully understood and it is possible that all the above factors act in synergism.<sup>7</sup>

The patient presented was a 36 years old of a high parity (para 7) and of low socioeconomic status. The predisposing factors in this patient could be related to her sexual activity and probably dietary deficiencies.

Squamous cell carcinoma accounts for about 90% of cases and columnar (adenocarcinoma) or mixed adenosquamous for the rest of the malignant epithelial neoplasms of the cervix. The patient presented had the squamous type.

Intermenstrual bleeding is the most frequent symptom of invasive cancer. The first episode of bleeding commonly follows coitus, straining at passing stool or any circumstances leading to trauma to the cervix. Later on losses can be quite heavy. Vaginal discharge is usually sanguinous or prevalent odorous and non pluritic. This odor is due to infection of necrotic tissue by saprophytes. Other symptoms usually occur late and these include frequency, dysuria, urinary incontinence, rectal pain, deep pelvic pain, low backache, sciatica, ureteric colic, oedema of legs, loss of weight, anaemia, anorexia and malaise.<sup>1,2</sup> In Kenya, Ojwang<sup>8</sup> found that the commonest symptoms were abnormal vaginal bleedig and pain and vaginal discharge.

Infiltrative cancer produces enlargement, irregularity and hardness on the cervix. An exophytic growth generally appears as friable, bleeding, cauliform lesion of the portio vaginalis.

Ulceration may be present, and in the early stages, the change is only superficial, so that it may resemble cervical ectopy or chronic cervicitis. Later on ulcer becomes deeper and necrotic, with indurated edges and a friable bleeding surface. With progression of the disease, the vaginal fornices are involved; then parametrium infiltration producing nodular thickening of the uterosacral and cardinal ligaments with resultant loss of morbidity and fixation of the cervix.

The patient presented came with vaginal bleeding and vaginal discharge. She also had pelvic pain and edema of the left leg. This was a late presentation. In Kenya, over 60% of the patients present late; when the disease is in stage III or IV, majority of who are in stage III<sup>B</sup> (8)

Diagnosis is usually confirmed on histology. The commonest histological type is squamous cell carcinoma. Others are: anaplastic, adenocarcinoma, clear cell and sarcomas.<sup>8</sup> The patient presented had a poorly differentiated squamous cell type.

The differential diagnosis include; cervical ectopy, acute or chronic cervicitis, condylomata acuminata, cervical tuberculosis, ulceration due to sexually transmitted disease (syphilis, granuloma inguinale, lymphogranuloma venerium, chancroid), abortion of a cervical pregnancy, metastatic choriocarcinoma and rare lesions such as actinomycosis or schistosomiasis.

Management of patients with cervical carcinoma depends on the clinical stage of the disease according to the International Federation of Gynaecology and Obstetrics (FIGO) classification.

Radical hysterectomy is given for stage I and II disease<sup>2</sup> and radiotherapy for the rest. Chemotherapy may also be given as a palliative measure. The patient presented had stage III disease and therefore managed with Cobalt 60 to shrink the tumour mass after which intracavitary treatment with caesium is given.

The 5 year survival rates for stage III disease after radiotherapy are in the region 30-35%.<sup>1</sup> In Kenya most patients come in stage III or IV and as such are treated with radiotherapy. The follow-up has been poor and the 5 year survival rates are not known.

Complications of cervical cancer are related to tumour necrosis, infection and metastatic disease<sup>2</sup> and also problems related to treatment. For radiation this includes; diarrhoea and frequent micturation – these occur in early treatment, late complications include fistulae formation, loss of ovarian function and general fixation of tissues after treatment. The patient tolerated the initial treatment quite well.

Prevention of morbidity and death from cancer of the cervix involves early recognition and treatment. Avoidance of early sexual experiences and promiscuity and recognizing cervical dysplasia. Universal cytological screening of all post pubertal women must be continued on regular annual basis, treating cervical dysplasias, improving personal hygiene, and male circumcision, use of condoms, all go a long way in preventing cervical cancer.

New approaches include screening the cervical tissue for mutations in the gene products of the P53 or Rb with antibodies that recognize such mutations, which if found gene therapy by P53 and Rb genes may be useful as a future treatment option.

Efforts are being made to develop a safe vaccine against human papilloma virus.<sup>7</sup>

## REFERENCES

1. Tindale V.R.,  
Tumours of the Cervix Uteri  
Jeffcoates Principles of Gynaecology 5<sup>th</sup> edition.  
Butterworth & Co (Publishers) LTD, 1987 page 395
2. Holschneider C. H. Premalignant and malignant disorder of the uterine cervix. 9<sup>th</sup>  
Ed. Appleton & Lange/ Mcgraw Hill New York pg 894-915,2003.
3. Ojwang' S.B.O., Mati J.K.G. Carciconoma of the Cervix in Kenya  
E. Afr Med J 57: 131, 1980.
4. Lawson J.B., Olafimihan, K.A. Cancer of the Cervix at Ibadan  
J.Obstet. Gynaecol. Brit. 71:701, 1964.
5. Hutt, M.S.R., Barbara W. Cancer in Uganda. Cancer in Africa. Pp1 East African  
Publishing House,Nairobi, 1968.
6. Hubber A., and Boldt H.W. Carcinoma of female genitalia in Ethiopia  
Cancer in Africa pp 73 East African Publishing House,  
Nairobi, 1968.
7. Bornstein J., Rahat M.A., Abramocici H. Aetiology of Cervical Cancer: Current  
Concepts Obstetrical & Gynaecological Survey. 1995: Vol. 50, No. 2 pp 146.
8. Ojwang' S.B.O. Some aspects of cervical cancer in Young African Women in  
Kenya. E.Afri. Med. J. 1985, 62:889.

## **CASE NO. 15 : INCOMPLETE ABORTION: MANUAL VACUUM ASPIRATION.**

NAME: F.A. Age: 19 years  
PARITY: 0+0 LMP: 5/8/2002  
DOA: 23/10/2002 DOD: 24/10/2002  
IP No: 0877940

### **Presenting problem**

The patient was admitted through casualty to the acute gynaecology ward with history of vaginal bleeding and lower abdominal pain for two days.

### **History of presenting illness**

She was well prior to the onset of these symptoms. The bleeding preceded the abdominal pain, it started spontaneously and it was profuse associated with passage of clots. Lower abdominal pain was colicky in nature and radiating to the back. She had no symptoms of systemic illness.

### **Obstetric and Gynaecologic History**

Her menarche was at 14 years. Her periods lasted 4 days and occurred every 21 days, were painless with moderate flow. Her last menstrual period was on 5/8/2002 giving an amenorrhoea of 10 weeks.

She was para 0+0 and she had never used contraceptives.

### **Past medical History**

This was not contributory

### **Family and social history**

She was the second born in a family of 6 siblings. She had dropped out of school at standard seven. She was unemployed and depended on her parents who were residents of



Makongeni estate in Nairobi. She did not smoke cigarettes or drink alcohol. There was no family history of chronic disease.

### **Physical Examination**

She was in good general condition and not pale. She had no jaundice, oedema or lymphadenopathy. She was afebrile with a temperature of 36.5°C, the pulse was 78 beats/minute regular and good volume, respiratory rate was 20 per minute and blood pressure was 100/70mmHg. The respiratory, cardiovascular and central nervous systems were essentially normal.

### **Abdominal Examination**

The abdomen was not distended and moved with respiration. There were no areas of tenderness and no masses were palpated.

### **Vaginal Examination**

The external genitalia was normal. The cervix was soft and the os was 2cm dilated with products of conception felt within it. The uterus was bulky and about 10 weeks size and antverted.

There were no adnexal masses and the cul-de-sac was not full. She had mild vaginal bleeding.

### **Diagnosis**

An impression of incomplete abortion was made.

### **Management**

The patient was prepared for evacuation of the uterus in the procedure room by use of the manual vacuum aspirator.

### **Manual vacuum aspiration.**

The patient voided the bladder before walking into the procedure room. No medication was administered before the operation.

In lithotomy position the vulva was cleaned with antiseptic lotion and drapes were applied. A cuscus speculum was introduced into the vagina to expose the cervix. The cervix was inspected and no local lesions were seen. The cervix was cleaned with a savlon soaked swab mounted on a sponge holding forceps. The anterior cervical lip was then held by a tenaculum and gentle traction applied to align the uterus in the desired position.

A sponge holding forceps was used to remove products of conception blocking the os. A Karmans vacuum aspirator with size 12 canular was then inserted into the uterus.

Forward and backward then rotational maneuvers were made. About 50ml of fresh looking products of conception were obtained. The canular was withdrawn when a gritty sensation was felt all around the uterus. The cervix was then released and the vagina and vulva cleaned.

Post operatively, the patient was observed overnight and discharged in the morning on tabs doxycycline 100mg bd daily and tablets metronidazole 400mg 3 times daily. She was counseled on the need to use effective contraception.

## **DISCUSSION**

Abortion is the termination of pregnancy by any means before the fetus is viable. The internationally accepted definition is delivery of a fetus of weight less than 500g or gestation less than 20 weeks.<sup>1</sup>

The frequency of abortion in a population is difficult to estimate because some women do not report to medical institutions.<sup>1</sup>

At Kenyatta National Hospital, abortions constitute 60% of acute gynaecological emergencies.<sup>2,3</sup> If the early and induced abortions are excluded then the incidence of abortion is estimated to be 10-15% of all pregnancies.<sup>1,4</sup> Aggarwal<sup>2</sup> found 62.3% of the patients with incomplete abortion at Kenyatta National Hospital had induced abortions.

Lwang<sup>5</sup> found 15-20% of the abortions at Kenyatta National Hospital were induced. He noted that the majority of patients with induced abortions were unlikely to attend hospital unless they had complications. Of significance in Lwanga's series was that induced abortion patients were mostly below 25 years of age with no living children, mostly school girls and unemployed. Aggarwal found that 79% of induced abortion patients were single.<sup>6</sup>

The patient presented was 19 years old primary school drop out. She was childless, single and unemployed. Although she denied history of interference it is possible that she had an induced abortion for socio economic reasons. However there was no clinical evidence of interference.

An estimated 50% of fertilized ova fail to implant and of those that do implant 15-30% abort.<sup>7</sup> Approximately half the abortions occur in the first trimester and the other half in the second trimester.<sup>8</sup> Before 8 weeks of pregnancy, the gestational sac tends to be expelled complete and the decidua is shed later. However between 8 and 20 weeks it is more common for the fetus to be expelled but for the placenta to be partially or wholly retained (incomplete abortion) and such cases account for the majority of hospital admissions.<sup>19</sup> The patient presented had an amenorrhoea of 10 weeks.

There are many possible causes of spontaneous abortions. In the early months of pregnancy abortion is almost always preceded by death of the fetus, while in the later months the fetus is frequently born alive.<sup>10</sup> Fetal death may be due to chromosomal abnormalities, congenital malformations or maternal systemic illness. Late abortions may be due to infectious diseases, venereal diseases, maternal medical diseases, uterine abnormalities and drug ingestion.<sup>1, 4, 10</sup>

The treatment of incomplete abortion is evacuation of the products of conception and replacement of blood volume if there are signs of haemodynamic derangement. Our patient had not lost much blood and she only required evacuation of the uterus. The suction curettage technique using Karman's canula is now widely preferred for evacuation of the uterus to the old method of sharp curettage under anaesthesia. This procedure was introduced to Kenyatta National Hospital in 1988 and had proved quite cost effective.<sup>11</sup> It has now been introduced to many district or provincial hospitals in Kenya. Antibiotics are prophylactically given to all patients after evacuation to prevent dissemination of possible latent infection especially with induced abortions.

Abortion, especially if induced may be complicated by genital infection, peritonitis, perforation of the uterus or other organs and death.<sup>5</sup> Makoha.<sup>12</sup> found 22.2% maternal deaths to be due to post abortal sepsis. Haemorrhage is a major cause of maternal morbidity and mortality.

Until the use of contraceptives is widely accepted, induced abortion with it's complications will remain a major gynaecological problem in our country.

## REFERENCES

1. Tindall V.R.. Abortions. Jeffcoates principles of gynaecology ch. 12 pp 191 Butterworths 1987.
2. Aggarwal V.P., Mati J.K.G. Epidemiology of induced abortion in Nairobi, Kenya J.Obst. Gyn. East. Cent. Afri. 1:54,1982.
3. Omuga B.O.O. Presentation of abortion and its preventive problems at Kenyatta National Hospital. M.Med Thesis University of Nairobi 1989.
4. Whitefield C.R. Spontaneous abortion. Dewhurts textbooks of obstetrics and gynaecology for postgraduates ch 14 pp 165. Blackwell scientific publications 1988.
5. Lwanga C. Abortions in Mulago Hospital. East.Afr. Med. J. 54: 142, 1977.
6. Aggarwal V.P., Mati J.K.G. Review of abortions at Kenyatta National Hospital East.Afr. Med. J. 57: 138, 1980.
7. Biggers J.D. In vitro fertilization and embryo transfer in human beings N.Engl. J. Med. 304: 336, 1981.
8. Harlap S. A prospective study of fetal losses after induced abortions N. Eng. Med. 301: 677, 1979
9. Hibbard B.M. Principles of obstetrics pp 628. Butterworths 1988.
10. Cunningham F.G., MacDonald P.C., Gant N.F.Abortion. Williams Obstetrics pp 489.

11. Rogo K., Bradley J. The cost of treating incomplete abortion in Kenya: A cost comparison of 2 Treatment regimes. Department of obs. Gyn, University of Nairobi (Unpublished).
  
12. Makoha A.E. Maternal mortality in Kenyatta National Hospital. East.Afr. Med. J. 57: 451,1980.

## LONG GYNAECOLOGICAL COMMENTARY

**TITLE: - SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PATIENTS ADMITTED WITH GYNAECOLOGICAL EMERGENCY CONDITIONS AT THE PROVINCIAL GENERAL HOSPITAL KAKAMEGA**

### ABSTRACT:

#### ***Background***

In 1987, the Safe Motherhood International Conference in Nairobi followed by the 1994 Cairo Conference on Population and Development (ICPD) endorsed by 179 countries including Kenya prompted the Kenya Government to set up the National Reproductive Health Strategy (NRHS) in 1996. Among its components, are; Management of STI/HIV AIDS, Promotion of Adolescent and Youth Health, Gender issues, Reproductive rights and Safe Motherhood. Preliminary findings of the Safe Motherhood Demonstration Project (SMDP) in Kakamega showed a high maternal morbidity/mortality. However, the contribution of acute gynaecological conditions to the female morbidity/mortality was not known, thus the need to study the magnitude of gynaecological emergencies and the socio demographic characteristics of patients admitted at Provincial General Hospital Kakamega with gynaecological emergency conditions.

#### ***Materials and methods:***

This was a descriptive retrospective study covering a period of one year from 1<sup>st</sup> January 2002 to 31<sup>st</sup> December 2002. All files of eligible cases were retrieved, tracing them from the admission book of the gynaecology ward. Socio-demographic data, diagnosis, treatment options and outcome were recorded from 400 files randomly chosen from the total number of admissions in the gynaecology unit over the study period.

## **Results**

In this study 80.0% of gynaecological patients admitted at PGH Kakamega were of an acute nature with 45% being teenagers. The mean age was  $17 \pm 3$  (mean  $\pm$  SD). The majority had primary level of education or below (69.0%), unemployed (86.5%) and were rural residents (71.0%). Patients with abortion formed 42.5% of the study group while those with inflammatory disease, pelvic abscess and ectopic pregnancy formed 23.5%, 10.0% and 7.5% respectively.

## **Conclusion:**

Most gynaecological admissions in PGH Kakamega are of acute nature, with abortion being the commonest diagnosis. It is recommended that, stronger community based healthcare, stronger referral systems and better transport infrastructure should be put in place by the government.

## **INTRODUCTION**

Mother Nature bestowed on a woman the responsibility of self-perpetuating the human species. In the process of carrying out this noble responsibility the woman is exposed to dangers ranging from complications of pregnancy and childbirth to infections, tumors of the reproductive organs and their sequel. Such responsibility should go side by side with rights protecting the woman, but despite international meetings on safe motherhood (safe motherhood initiative 1987 Nairobi; ICPD Cairo 1994), women in developing countries continue to experience a high childbirth and reproductive organ disease related morbidity and mortality. Half a million women die annually due to pregnancy and childbirth related complications, 90% of these occurring in the developing world<sup>1</sup>

Kenya, the birthplace of Safe Motherhood, was among 179 countries that endorsed the programme of action of the 1994 United Nations International Conference on Population and Development (ICPD). The world governments recognized reproduction and sexual rights as important factors in development and endorsed the definition of reproductive health.



Following the ICPD resolutions, the National Reproductive Health Strategy (NRHS) was set up by the Ministry of Health in 1996<sup>2</sup>. Several NGOs have been involved in various ways in realizing the NRHS objectives. The Ministry of Health in collaboration with Population Council and the University of Nairobi started the Safe Motherhood Demonstration Project (SMDP)<sup>3</sup> in Kakamega , Vihiga,Bungoma and Lugari Districts with the objectives of:

- *Arranging effective district based safe motherhood committee and safe motherhood (project) working group to facilitate the development of appropriate program models at the district level.*
- *Developing appropriate safe motherhood intervention models to improve maternity care at the home and community, dispensary, health centre and hospital levels for four districts, each representing a different but typical combination of health care structures. These models were developed on the basis of baseline assessments that described the status and identification of the deficiencies of maternity care at the community, health centre/ dispensary and hospital levels.*
- *Under the auspices of the district based and project oversight committees, the project aimed to implement the Safe Motherhood intervention models in each district in a phased manner that permitted periodic review and model improvement.*
- *Monitoring the feasibility, accessibility and change in quality of care of the safe motherhood intervention models using indicators recommended by WHO.*
- *Developing recommendations regarding the models and promote implementation of these recommendations to other districts.*
- *Holding a follow-up national reproductive health workshop to disseminate the projects' findings and facilitate expansion of the models to other districts.*
- *Further disseminating project results in the region, internationally and through publication.*

In the initial survey, the demonstrated high levels of morbidity and mortality were associated with the rampant poverty in the region<sup>18</sup>.

Acute gynaecological conditions are significant contributors to morbidity and mortality as shown in the epidemiology of induced abortions in Nairobi where it was demonstrated that 60% of gynaecological emergency cases at KNH were abortions<sup>9</sup>. In Lesotho, it was found that 50% of gynaecological conditions in the country were due to abortions<sup>11</sup>. However the contribution of acute gynaecological conditions to female morbidity/mortality in Kakamega is unknown.

This study was therefore undertaken to determine the magnitude of acute gynaecological emergencies and the socio-demographic characteristics of patients admitted with acute gynaecological conditions at the PGH Kakamega, a rural setting in Kenya, and determine the contribution of these ailments to the female morbidity/mortality in the hospital.

## LITERATURE REVIEW

In a study carried out at the Aga Khan University, Karachi, Pakistan in 1992 investigating the prevalence and predictors for specific perceived gynaecological morbidities among Pakistani women, early sexual onset was associated with a large burden of reproductive ill health<sup>4</sup>. A total of 717 women were identified and demographics, contraceptive use and gynaecological morbidities elicited detailed information. Cases of uterine prolapse constituted 19.1% and pelvic inflammatory disease accounted for 12.8%. The prevalence of uterine prolapse (adjusted odds ratio 1.8; 95% confidence interval 1.0-3.0) was significantly higher among women who married at younger age i.e. 16 yrs and below, independent of education, socio-economic status and parity. That of PID was significantly higher among those under 21 yrs of age (adjusted O.R 2.3; 95% C.I 1.1-4.8). Young Pakistani women report an immense burden of reproductive ill health, especially those who began sexual activity at an early age.

According to the demographic data of the Ministry of Health<sup>5</sup> 2001 polygamy is still high in Western Kenya despite dwindling inherited family assets – principally land. Most women attending antenatal, postnatal or Family planning Clinics are not accompanied by their male partners. An interview with some of them revealed that the male partners are unwilling to discuss reproductive health matters. This completes the vicious cycle of poverty, ignorance and disease.

It is clear that a girl child and woman who are discriminated against access to means of production are ill equipped in making informed decisions about abstinence, safe sex practice, seeking medico-legal attention following rape, prompt treatment and contact notification after contracting sexually transmitted diseases as noted by a study in 1994 on health seeking behaviour related to the transmission of STD in Kenya.<sup>6</sup>

A study in Gambia to determine the prevalence of reproductive organ disease among rural women revealed 70.3% of them had at least one reproductive organ disorder, more than half being reproductive tract infections. Minority of these women sort health care for their symptoms<sup>7</sup>.

Pelvic inflammatory disease with its immediate complications of pelvic abscess, peritonitis, endotoxic shock and long term complications of ectopic pregnancy alongside induced abortion with post abortal haemorrhage, sepsis and bleeding due to gynaecological tumours are the acute gynaecological conditions that these women will present with in a tertiary medical institution.

A strong relationship of pelvic inflammatory (PID) with STD/HIV/AIDS was demonstrated in a study of 133 women in KNH in 1997<sup>8</sup>. Almost half of these women (38%) were HIV positive, 31% positive for gonorrhoea, 16% had trichomonas infections and 7% had syphilis. In this study 50% of contact partners, had an STD of whom, 42% had concurrent infections with their female partners. In comparison with the control group, they were younger, less educated and had more sexual partners. She concluded that tracing contact partners of PID patients, empirical treatment and counseling should be an integral part of PID management.

In the epidemiology of induced abortions in Nairobi, 60% of gynaecological emergency cases at Kenyatta National Hospital were abortions out of which 53% were under 14 years of age. In Brazil and Latin America, the percentage of abortion cases was 40% and 42% respectively, significantly lower than in Nairobi.<sup>9</sup> In KNH 80% of deaths from abortion related complications were due to induced abortions with 97.4% of them dying from sepsis<sup>10</sup>.

A survey of unsafe abortion and post abortion complications in Lesotho found that 50% of gynaecological admissions in the country were due to abortions. About 25% of maternal deaths were secondary to complications of abortions. Contributing factors to unsafe abortions included; educational needs, failed contraception, stigma attached to child bearing out of wedlock, lack of support from spouse/family, religion and lack of family planning services for adolescents<sup>11</sup>.

A broader review of mortality of women in the reproductive age admitted in acute gynaecology ward found that 41.6% of them died from pregnancy related causes with more than a third being from septic abortions<sup>12</sup>.

Bed occupancy in a health delivery system is a major concern. An average of 91 hours bed occupancy for septic abortions as compared to 39 hours for non-septic conditions was demonstrated in a review of abortions in KNH in 1980<sup>13</sup>. The use of Karman's<sup>14</sup> canular, even in primary health care facilities, to minimize abortion cases turning septic can drastically reduce bed occupancy since in most cases this can be an outpatient procedure. Unfortunately very few health workers in the rural areas are trained in the use of this simple equipment despite its introduction more than 10 years ago. It was against this background that the SMDP trained nurses, clinical officers and Doctors in PGH Kakamega and satellite Health Clinics in the use of Karman's canular.

Quality of care for patients with acute gynaecological conditions remains a major concern in most rural hospitals. In a study of 281 cases admitted with acute gynaecological conditions in Nyahururu District Hospital Mbugua noted that, on admission, 52.1% were scheduled for surgical intervention. Laboratory investigations were rarely ordered, the commonest being a full haemogram (13.9%). Only 32.2% of those scheduled for surgical intervention were taken for surgical procedures, the rest missing theatre due to various reasons ranging from non-availability of surgeons, anaesthetists or other supportive staff to non-functioning theatre. He concluded that inappropriate patient care was responsible for prolonged hospitalization and unexpected complications

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## RATIONALE

Socio-economic status in the rural areas directly influences the health seeking behaviour especially in matters relating to reproductive health. Early medical intervention forestalls an otherwise protracted course of simple gynaecological conditions that usually precipitate gynaecological emergencies. Studies carried out in Gambia, Lesotho and Pakistan show a high prevalence of reproductive tract infections among rural women. In Kenya most studies have been facility based with Mugo <sup>8</sup> demonstrating a strong relationship between PID and STI/HIV/AIDS. Mbugua in Nyahururu demonstrated hospital-based factors affecting bed occupancy and rate of complications among patients admitted with acute gynaecological conditions<sup>15</sup>. There has been no focus on factors precipitating acute gynaecological conditions and their magnitude among rural women, hence a need to determine the socio-demographic characteristics of patients admitted with acute gynaecological conditions at the Provincial General Hospital Kakamega and the magnitude of these conditions.

The centre is an ideal place since it is the referral hospital for eight districts of Western Province among which is Vihiga with one of the highest fertility rates in Kenya. The study was undertaken to determine the socio demographic factors associated with acute gynaecological conditions at the PGH Kakamega.

## **OBJECTIVES**

### **Main Objective**

To study the profile of patients admitted at the Provincial General Hospital Kakamega with emergency gynaecological conditions.

### **Specific Objectives**

- To determine the socio-demographic characteristics of patients admitted with acute gynaecological conditions.
- To determine the proportions of acute gynaecological cases in the gynaecology unit.
- To determine the proportions of various gynaecological conditions among women admitted with acute gynaecological conditions.

## **RESEARCH QUESTION**

What are the socio-demographic characteristics of patients admitted at the P.G.H. Kakamega with acute gynaecological condition?

### **7.1 Hypothesis**

Young women predominantly from poor socio-economic background form the majority of patients admitted with acute gynaecological conditions at the P.G.H. Kakamega.

## **METHODOLOGY**

### **Study Design**

This was a descriptive retrospective study covering a period of one year from 1<sup>st</sup> January 2002 to 31<sup>st</sup> December 2002 both dates inclusive.

### **Study Area**

The study was carried out in Kakamega General Hospital where the principle investigator represented the University of Nairobi in the Safe Motherhood Demonstration Project in the capacity of a Registrar between March and November 2001. This is a referral hospital for the eight districts of Western Province: Kakamega, Vihiga, Lugari, Butere-Mumias, Teso, Busia, Mount Elgon and Bungoma.

It has nine departments in the clinical area i.e. obstetrics and gynaecology, surgery, internal medicine, pediatrics, psychiatry, ENT, ophthalmology, casualty, a private wing and recently high dependency unit courtesy of Spanish Aid. It has two theatres attached to obstetrics and gynaecology department and surgery. Obstetrics/gynaecology department has a maternity wing and theatre and a gynaecology ward. This is manned by an obstetrics/gynaecology specialist and a team of medical officers with clinical officers, and interns working under supervision. Administration has seven departments, i.e. finance, personnel, records, laundry, catering, transport and maintenance headed by the Hospital Secretary and Matron. The Medical Superintendent is overall head of the hospital.

### **Study Population**

All patients admitted to the hospital with a diagnosis of acute gynaecological ailment. These included abortion, genital tract infections, rape, imperforate hymen



with haematocolpos, ectopic pregnancy, abnormal uterine bleeding, and torsion of ovarian cyst admitted between 1<sup>st</sup> January 2000 and 31<sup>st</sup> December 2000.

### **Sample Size**

The following formula was used to calculate sample size.

$$N = \frac{Z^2 P}{C}$$

Where N –(desired sample size.) = (384) ~ 400

Z = 1.96 for 95% confidence level

P = prevalence rate (here taken as 50% of all gynaecological admissions being of acute nature as shown in studies in KNH and Lesotho)

C – (Precision with which to measure P) = 5%

### **Study Instruments**

A structured questionnaire comprising of close-ended questions and precoded responses was used. A number, omitting the name for ethical reasons, identified each questionnaire (to avoid breach of confidentiality). Sources of information were from admission and discharge/death registers, theatre notes and patient's files retrieved from the records department.

### **Data collection**

The principal investigator and a medical records staff retrieved all the files of eligible cases tracing them from the admission book of the gynaecology ward. 400 cases were sampled randomly and information entered in the questionnaire by the study nurse. The total number of admissions in the gynaecology unit was recorded. Data collected included socio-demographic status, diagnosis, treatment options and outcome of treatment.

### **Data Analysis**

Data was counter checked and proofread before being entered in the computer. Analysis was done using computer statistical package i.e. SPSS-PC package. Chi-square, student t-test and where appropriate odds-ratio were calculated.

### **Eligibility Criteria**

All patients admitted with a diagnosis of acute gynaecological ailment.

### **Exclusion**

- All males
- Cases with inadequate information

### **Ethical consideration**

- (a) Permission to carry out research was sought from the ethical and research committee, Ministry of Education, Science and Technology and PMO western province. The case files were precoded and no names were used.
- (b) All information obtained from the study was treated in confidentiality and used only for the intended purposes.
- (c) All questionnaires were identified by serial numbers not patient name.
- (d) Feedback shall be availed to the study area on request.

## **RESULTS**

A total of 537 patients with gynaecological conditions admitted at the Provincial General Hospital Kakamega between 1<sup>st</sup> January and 31<sup>st</sup> December 2002 were recorded in the admission book. 500 corresponding files were retrieved from the registry, giving a retrieval rate of 93%. Out of these 400 were of acute nature i.e 80%

**TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF WOMEN ADMITTED IN ACUTE GYNAECOLOGY WARD.**

Variable	Number (N=400)	Percentage
<b>Age (yrs)</b>		
< 20	166	45
20- 24	42	9.5
25 - 40	160	40.0
> 40	23	5.5
<b>Previous deliveries</b>		
0	130	32.5
1	91	22.8
2	46	11.6
3	33	8.2
4	31	7.8
5	25	6.2
> 5	44	11
<b>Occupation</b>		
House wife/unemployed	239	60.0
Student	70	17.5
Self-employed	36	9.0
Public/Civil Servant	20	5.0
Private firm employee	14	3.5
House help	20	5.0
<b>Formal Education</b>		
None	89	22.0
Primary	209	50.0
Secondary and above	112	28.0
<b>Place of residence</b>		
Rural	285	71.0
Urban	115	29

Table 1 shows that about half of the cases admitted in acute gynaecological conditions were teenagers (45%). Those aged between 20 – 24 years constituted 9.5% while 40% were aged between 25-40 years. 5.5 percent were above 40 years of age. The mean age

was  $17 \pm 3$  ( $m \pm SD$ ) years. The majority of patients had between 0 to 2 previous deliveries (66.8%) with a mean of 1 previous delivery.

Majority of the cases (60.0%) were either unemployed or housewives, while students formed 17.5%. The self-employed group formed 9.0%, while public servants; private firm employees and house help workers formed 13.5%

About 50% of the cases were educated up to primary school level. Those with secondary school education and above were 28% while woman with no formal education were 22%. About 71% of the cases resided in the village and 29% in urban region.

**TABLE 2: MORBIDITY PATTERN IN ACUTE GYNAECOLOGY WARD**

<b>variable</b>	<b>NumberN=400</b>	<b>Percentage</b>
Abortion	170	42.5
Ectopic Pregnancy	30	7.5
Pelvic Inflammatory disease	94	23.5
Abnormal Uterine Bleeding	20	5.0
Bartholin's Abscess	4	1.0
Peuperal sepsis	40	10.0
Pelvic Abscess	40	10.0
Imperforate Hymen with Haematocolpos	1	0.25
Dysfunctional Uterine Bleeding	1	0.25
<b>Total</b>	<b>400</b>	<b>100</b>

Abortion formed 42.5% of all cases admitted with acute gynaecological conditions while pelvic inflammatory disease and pelvic abscess accounted for 33.5% of the cases. Cases with peuperal sepsis accounted for 10% while ectopic pregnancies formed 7.5% of the cases. Abnormal uterine bleeding formed 5% while Bartholin's abscess, imperforate hymen with haematocolpos and dysfunctional uterine bleeding accounted for 1.5%.

**TABLE 3: CHARACTERISTICS OF PATIENTS WITH ABORTION**

Variable	Number	Percentage
<b>Age (yrs)N=170</b>		
< 20	87	51
20 – 24	66	39
30 – 35	10	5.8
>35	7	4.2
<b>Marital statusN=170</b>		
Single	70	41.0
Ever married	100	59.0
<b>EducationN=170</b>		
None	34	20.0
Primary	84	49.0
Secondary	62	31.0
<b>Occupation N=170</b>		
Housewife/unemployed	120	70.6
Student	25	15.0
Self employed	13	7.5
Public/civil servant	8	4.5
Private firm employee	3	1.7
House help	1	0.7
<b>Place of ResidenceN=170</b>		
Rural	110	64.7
Urban	60	35.3

As shown in table 3, majority of patients with abortion (51%) were under 20 years of age. Almost half of these patients (41%) were single. More than half (69%) had either no formal education or were primary school leavers. Unemployed women and housewives constituted a big majority of the patients (70.6%). Students formed 15% of the patients, while rural residents formed 64.7% of the patients.

**TABLE 4: CHARACTERISTICS OF PATIENTS WITH PELVIC INFLAMMATORY DISEASE AND PELVIC ABSCESS.**

Variable	Number	Percentage
<b>Age(Yrs)N=134</b>		
< 20	79	58.8
20 – 30	31	23.4
31 – 35	18	13.4
>35	6	4.2
<b>Marital StatusN=134</b>		
Single	78	58
Ever married	56	42
<b>EducationN=134</b>		
None	31	23
Primary	79	60
Secondary	24	17
<b>OccupationN=134</b>		
Housewife/employed	70	52
Student	35	26
Self employed	8	6
Public/civil servant	3	3
Private firm employee	4	3
House help	13	10
<b>Place of residenceN=134</b>		
Rural	106	79
Urban	28	21

Teenagers constituted the majority of patients (58.8%) admitted with PID or pelvic abscess. Single women accounted for 58% of PID and pelvic abscess cases while those who were ever married accounted for 42% of the cases. Patients in this group with primary or no formal education constituted 83%. Housewives and unemployed women account for 52% of the women admitted with PID/pelvic abscess. Students accounted for 26% while house help workers constituted 10%. Rural residence constituted 79% of women with PID/pelvic abscess.



**TABLE 5: CHARACTERISTICS OF PATIENTS WITH PEUPERAL SEPSIS IN ACUTE GYNAECOLOGY WARD.**

Variable	Number	Percentage
<b>Age (years)N=40</b>		
< 24	4	10.0
24 – 40	33	82.5
> 40	3	7.5
<b>Marital StatusN=40</b>		
Single	10	25.0
Ever married	30	75.0
<b>EducationN=40</b>		
None	15	37.5
Primary	16	40.0
Secondary	9	22.5
<b>OccupationN=40</b>		
Housewife/employed	20	50.0
Student	1	2.5
Self employed	10	25.0
Public/civil servant	5	12.5
Private firm employee	4	10.0
House help	0	0
<b>Place of residencN=40</b>		
Rural	25	62.5
Urban	15	37.5

Majority of patients admitted with peuperal sepsis were aged between 24 – 40 years. Adolescents constituted 10% while 75% were married. The level of education was evenly distributed between none to secondary and above education. Half of the women in this group were either housewives or unemployed and 62.5% were rural residents.

## DISCUSSION

In this study, the total number of retrieved case files of gynaecological patients admitted at the Provincial General Hospital Kakamega between 1.1.2002 and 31.12.2002 was 500, of which 400 were of an acute nature i.e 80%. About half of these women (45%) were teenagers with a mean age of  $17\pm 3$  years. This falls within the adolescent group, suggesting an early age of sexual activity, and compares with a study in Pakistan where young women were found to have immense burden of reproductive health ailments especially those who began sexual activity at an early age.<sup>4</sup>

The majority of women had either primary school education or none at all (72%), while 86.5% had no gainful employment and 71% were rural residents. In the Nyahururu study<sup>15</sup>, set in similar background as this study, patients were more educated with 55% having attained at least secondary education. The level of unemployment was lower (68.5%) in comparison with this study. This is further corroborated by data from central bureau of statistics on poverty eradication where 90% of rural residents in Kakamega district live on less than one dollar per day in comparison with rural residents in Nyahururu district where 57% live on less than one dollar per day<sup>18</sup>.

In this study, 42.5% of all patients admitted with acute gynaecological conditions had an abortion. Elsewhere similar studies in Nyahururu showed 87.2% admitted with abortion, KNH 60%, Lesotho 50%, Brazil and Latin America abortion cases were 40% and 42% respectively<sup>9, 12, 16</sup>. This would seem to be a relatively low percentage compared to other studies until one considers the rate of attendant common abortion complications. Poorly managed abortion can give rise to several short term and long term complications among which are haemorrhage, perforated uterus, PID (post abortal sepsis), pelvic abscess, ectopic pregnancy and infertility due to tubal factor. Pelvic inflammatory disease accounted for 23.5% while pelvic abscess constituted 10% and ectopic pregnancy 7.5% of patients admitted with acute gynaecological conditions at the PGH Kakamega. In the Nyahururu study, PID accounted for 4.1%, pelvic abscess 0.8% and ectopic pregnancy 3%.

The women admitted at the PGH Kakamega with acute gynaecological conditions came from a poorer socio-economic background than their counter parts in Nyahururu. It is interesting to note that the Kakamega group had a higher rate of PID, pelvic abscess

and ectopic pregnancy than the Nyahururu one. Given that these are mostly complications of such primary conditions as abortion and lower uro-genital tract infections, the Kakamega patients reached a tertiary medical institution at a more advanced disease process, than in Nyahururu.

The demographic characteristics of women admitted at the PGH Kakamega with abortion, were similar to those with PID and pelvic abscess. The majority were young, single or in early years of marriage with inadequate formal education, not engaged in any gainful employment and residing in the rural area. The majority of women admitted with puerperal sepsis were between 24-40 years, 75% of them either in an ongoing marriage or ever married. Women above 24 years were mostly married and more likely to have a pelvic infection following delivery than their counterparts aged below 20 years who were mostly single and likely to have pelvic infection due to abortion or lower genital tract infection.

This descriptive study may not be generalized to other institutions. Secondly, this was a retrospective study thus it was not possible to correlate the development of the illness and to determine the health seeking behaviour of the patients. Inadequacies in health information systems, patients seeking alternative healthcare including traditional healers, succumbing before reaching hospital hindered the study from appreciating the full impact of acute gynaecological conditions on the population.

In conclusion, majority of patients admitted at the PGH Kakamega in acute gynaecology unit were young, unemployed, with low parity, residing in the rural area. Abortion was the commonest acute gynaecological ailment with its complications accounting for the longest hospital stay in comparison with other acute gynaecological conditions. This situation could be addressed by providing a stronger community based health care, stronger referral systems and better transport infrastructure.

## **8.0 REFERENCES**

1. Otsea K. The place of Abortion in safe Motherhood. *J. Obstet Gynaecology East and Central Africa* 11(1): 3-7, 1993.
2. Ministry of Health Reproductive Health Strategy 1997-2010.
3. Ministry of Health, Population Council and University of Nairobi. Safe Motherhood Project-A demonstration Project on approaches to providing quality maternal care in Kenya. Preliminary findings from the baseline survey of December 2000. Draft of 2001.
4. Sajan F., Fikree F.F. Does early age at marriage influence gynaecological morbidities among Pakistani women. *J.B Biosc Sci* 34(3): 407-17 2002.
5. Ministry of Health. Health information Systems. Demographic Data for women within the reproductive age bracket (15-49yrs). 2001.
6. Moses S, Kimani J. Health Seeking Behaviour related to the transmission of sexually transmitted diseases in Kenya. *A.M.J of Public Health* 84: 12 1994.
7. Walraven G., Scherf C, West B. et. al. The Burden of Reproductive Disease in rural women in Gambia West Africa. *Lancet* 357(9263): 1161-7 2001.
8. Mugo R. The socio-demographic and bacteriologic profile of women with pelvic inflammatory disease and their sexual partners. Gynaecological long commentary. MMed Thesis University of Nairobi 1997.
9. Aggrawal V.P., Mati J.K.G. Epidemiology of induced abortions in Nairobi. *J. Obstet Gynae East & central Africa* 4:54, 1992.

10. Murugu N.M. A 10-year review of Mortality due to abortion in KNH, 1974-1983 MMed Thesis, University of Nairobi 1985.
11. Misuse M.L., Tlebera P. Unsafe Abortion & Post-Abortion Family Planning in Africa: the case of Lesotho. *Afri J Fertil Sexual Reprod. Heal* 1(1): 26-28 1996.
12. Rogo K.O. Mortality in acute gynecology unit-clinical diagnosis. *Int. J. Obstet Gynae* 30(4): 343-7 1989.
13. Aggraval V.P Mati J.K.G., Review of abortions in Kenyatta National Hospital. *East Afri Med J* 57(2): 138 - 46 1980.
14. Rogo K.O., Kizza A.P. Assesment of MVA equipment in management of incomplete abortion. *East Afri Med J* 67(11): 812-21 1990.
15. Mbugua F.K. Morbidity patterns in the acute gynaecology unit in rural District Hospital, Kenya. MMed Thesis University of Nairobi 1999.
16. Sweet R.L. Diagnosis and treatment of Pelvic inflammatory disease in the emergency room. *Sex Transm Dis* 1981:8 (Suppl): 156.
17. Preventing the tragedy of maternal deaths. A report of the international safe motherhood conference, Feb. 1987, Nairobi, The World Bank 130988, Washington D.C.
18. Ministry of Planning and National Development. Poverty eradication programme. Draft Manual 1997; 1998; 2000.

**APPENDIX I**

**QUESTIONNAIRE-OBSTETRICS**

**QUALITY OF RECORDS IN THE INTRAPARTUM  
PERIOD AT THE PROVINCIAL GENERAL HOSPITAL  
KAKAMEGA**

<b>General demographic survey: -</b>	<b>Yes</b>	<b>No</b>
9.3.1.1 Name-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.1.2 Age-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.1.3 IPNo-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.1.4 Level of education -----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.1.5 Residence -----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.1.6 Religion -----	<input type="checkbox"/>	<input type="checkbox"/>
<b>9.3.2 History taking</b>	<b>yes</b>	<b>No</b>
9.3.2.1 Main complaints-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.2.2 History of present illness -----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.2.3 Past medical history-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.2.4 Family and social history-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.2.5 If yes to (9.3.2.4) answer the following if no go to (9.3.2.6).		
Marital status-----	<input type="checkbox"/>	<input type="checkbox"/>
Employment-----	<input type="checkbox"/>	<input type="checkbox"/>
Chronic illness in the family-----	<input type="checkbox"/>	<input type="checkbox"/>
History of twin pregnancy in the family-----	<input type="checkbox"/>	<input type="checkbox"/>
Potentially dangerous indulgences:-		
9.3.2.6 Alcohol consumption-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.2.7 Smoking-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.2.8 Obstetrics' and gynecology history-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.2.9 Menarche and its characteristics-----	<input type="checkbox"/>	<input type="checkbox"/>

- 9.3.2.10 Parity-----
- 9.3.2.11 If parous history of previous pregnancy---
- 9.3.2.12 If primigravida go to (9.3.2.12) -----
- 9.3.2.13 Contraceptive use-----
- 9.3.2.14 Last normal menstrual period-----
- 9.3.2.15 EDD (Expected date of delivery) -----
- 9.3.2.16 Gestation by dates (GBD) -----
- 9.3.2.17 ANC (Ante natal clinic) -----
- 9.3.2.18 ANP (Ante natal profile) -----

**9.3.3. General Examination**

**Yes No**

- 9.3.3.1.Pallor-----
- 9.3.3.2. Oedema-----
- 9.3.3.3. Jauntice-----

**9.3.4. Obstetric Examination**

**Yes No**

- 9.3.4.1. Fundal height-----
- 9.3.4.2. Lie -----
- 9.3.4.3. Presentation -----

**Diagnosis and Management**

**Yes No**

- Diagnosis-----
- Plan of management-----
- Partograph used-----

- **Foetal condition**-----  
  - (a) Foetal heart rate-----
  - (b) Status of membranes and liquor--
  - (c) Degree of moulding-----
  - (d) Caput-----

• **Progress of labour**

**Yes No**

- (a) Cervical dilation-----
- (b) Descent of presenting part-----
- (c) Uterine contractions-----
- (d) Action line crossed-----

If yes to (d) proceed

- (e) Active management commenced
- (f) Mode of delivery
  - Spontaneous Vertex Delivery--
  - Vacuum Extraction-----
  - Caesarian Section-----

• <b>Maternal Condition</b>	<b>Yes</b>	<b>No</b>
○ B/P (Blood Pressure-- - - - - -	<input type="checkbox"/>	<input type="checkbox"/>
○ Pulse-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Respiration-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Temperature-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Urine volume-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Ketonuria-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Protenuria-----	<input type="checkbox"/>	<input type="checkbox"/>
○ I.V fluids-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Drugs-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Outcome-----	<input type="checkbox"/>	<input type="checkbox"/>

• <b>Summary-----</b>	<input type="checkbox"/>	<input type="checkbox"/>
○ Duration of 1 <sup>st</sup> stage-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Duration of 2 <sup>nd</sup> stage-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Duration of 3 <sup>rd</sup> stage-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Blood loss assessment-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Status of placenta-----	<input type="checkbox"/>	<input type="checkbox"/>
○ Syntocinin/ egometrine given--	<input type="checkbox"/>	<input type="checkbox"/>



- Status of membrane-----
- Status of cord-----
- Status of newborn-----
- Duration of labour-----

- ❖ <12 hours-----
- ❖ 12 to 18 hours-----
- ❖ >18 hours-----

- **Apgar score at 10 minutes**
  - ❖ 8 – 10-----
  - ❖ 6 – 7-----
  - ❖ < 6-----

- Sex----- M  F
- Birth weight-----

<b>9.3.6. State of record linkage</b>	<b>Yes</b>	<b>No</b>
9.3.6.1. Patients intrapartum notes-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.6.2. Treatment sheet-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.6.3. Observation chart-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.6.4. Newborn notes -----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.6.5. Postnatal records-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.6.6. Antenatal records-----	<input type="checkbox"/>	<input type="checkbox"/>

<b>9.3.7.state of record storage and retrieval</b>	<b>Yes</b>	<b>No</b>
9.3.7.1. Is the record secure? -----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.7.2. Nature of the record-----	<input type="checkbox"/>	<input type="checkbox"/>
9.3.7.3. Is it centrally stored? -----	<input type="checkbox"/>	<input type="checkbox"/>

**9.3.8. Other records**

- 9.3.8.1. Delivery book? -----
- 9.3.8.2. Operating room register-----
- 9.3.8.3. Maternity death book-----

**APPENDIX II**

**QUESTIONNAIRE-GYNAECOLOGY**

**Demographic survey**

1. Age (years).....
2. Marital Status..... 
  - (i) Single.....
  - (ii) Married.....
  - (iii) Divorced.....
  - (iv) Widow.....
3. Parity.....  +
4. Occupation:
  - (i) None.....
  - (ii) Housewife.....
  - (iii) Student.....
  - (iv) Self-employed.....
  - (v) Public/civil servant.....
  - (vi) Private firm employee.....
  - (vii) Others, specify.....
5. Residence:
  - (i) Village.....
  - (ii) Urban.....
6. Level of education:
  - (i) None.....
  - (ii) Primary.....
  - (iii) Secondary.....
  - (iv) College/University.....
  - (iv) others specify.....

**Morbidity characteristics**

1. Did the patient seek treatment elsewhere prior to admission?
  - (a) Yes.....

- (b) No.....
- (c) Not Started.....
2. Where did she seek treatment?
- (i). Private clinic.....
- (ii). Health centre/dispensary.....
- (iii). Other hospital.....
- (iv). Herbalist.....
- (v). Not started.....
- (vi). Others, specify.....
3. Had the patient been treated in this hospital for the same problem?
- (i). Yes.....
- (ii). No.....
- (iii).Not started.....
4. Where did the patient come from during this admission?
- (i). Home.....
- (ii). Referral from elsewhere.....
- (iii). others, specify.....
5. What was the general condition of the patient on admission?
- (i). Good.....
- (ii). Fair.....
- (iii). Poor.....
- (iv). Not started.....
6. Did she need resuscitation?
- (i). Yes.....
- (ii). No.....

### Management and Outcome

1. Diagnosis on admission:

(i). Abortion.....

- (ii). Ectopic pregnancy.....
- (iii). Pelvic inflammatory disease.....
- (iv). Abnormal uterine bleeding.....
- (v). Bartholins abscess.....
- (vi). Puerperal sepsis.....
- (vii). Torsion of ovarian cyst.....
- (viii). Pelvic abscess.....
- (ix). Imperforate hymen with haematocolpos.....
- (x). Others specify.....

2. What was the management plan on admission?

- (i). Observation only.....
- (ii). Investigation only.....
- (iii). Medical drugs.....
- (iv). Investigation and drugs.....
- (v). immediate surgery.....
- (vi). Others.....

3. Was the course of ailment complicated?

- (i). Yes.....
- (ii). No.....

If "Yes" go to 4. If "No" go to 5.

4. What was the complication?

- (i). Haemorrhagic shock.....

(ii). Septic abortion.....

(iii). Endotoxic shock.....

(iv). Wound sepsis.....

(v). Peritonitis.....

5. What was the duration of hospitalization?

(i). 1-3 days.....

(ii). 4-7 days.....

(iii). More than 7 days.....

6. Reason for prolonged stay:

(i). Doctors not available.....

(ii). Theatre not functional.....

(iii). Anaesthetist not available.....

(iv). Developed sepsis.....

(v). Awaiting blood transfusion.....

(vi). Medical problems e.g hypertension, diabetes.....

(vii). No reason indicated.....

(viii). others.....

7. What was the outcome?

(i). Complete recovery.....

(ii). Recovery with sequel for follow-up.....

(iii). Died.....

## APPENDIX III

### MATERIALS

#### The Safe Motherhood Demonstration Project

##### Background

The Safe Motherhood Initiative in Kenya is a demonstration project on approaches to providing quality maternal care. With support of DFID Eastern Africa under the Safe Motherhood Partnership fund, Population Council is working with the Ministry of Health, partnership with mission Hospitals, The Medical Training College Kakamega, and the University of Nairobi to pilot different approaches to improve Pregnancy outcome in Western Kenya.

The goal of this project is to develop and implement Safe Motherhood Program models that can be applied to the majority of the country to reduce maternal and perinatal morbidity and mortality. At the initial phase of the project a pilot model was developed for two districts, Kakamega and Vihiga, with combination of health service structure and that serves the majority of Kenya's population. Alternative approaches have started in the two districts.

##### Objectives/Outputs

- To arrange effective district based safe motherhood committee and safe motherhood (project) working group to facilitate the development of appropriate program models at the district level.
- To develop appropriate safe motherhood intervention models to improve maternity care at the home and community, dispensary, health centre and hospital levels for four districts, each representing a different but typical combination of health care structures. These models will be developed on the basis of baseline assessments that describes the status and identify the deficiencies of maternity care at the community, health centre/dispensary and hospital levels.

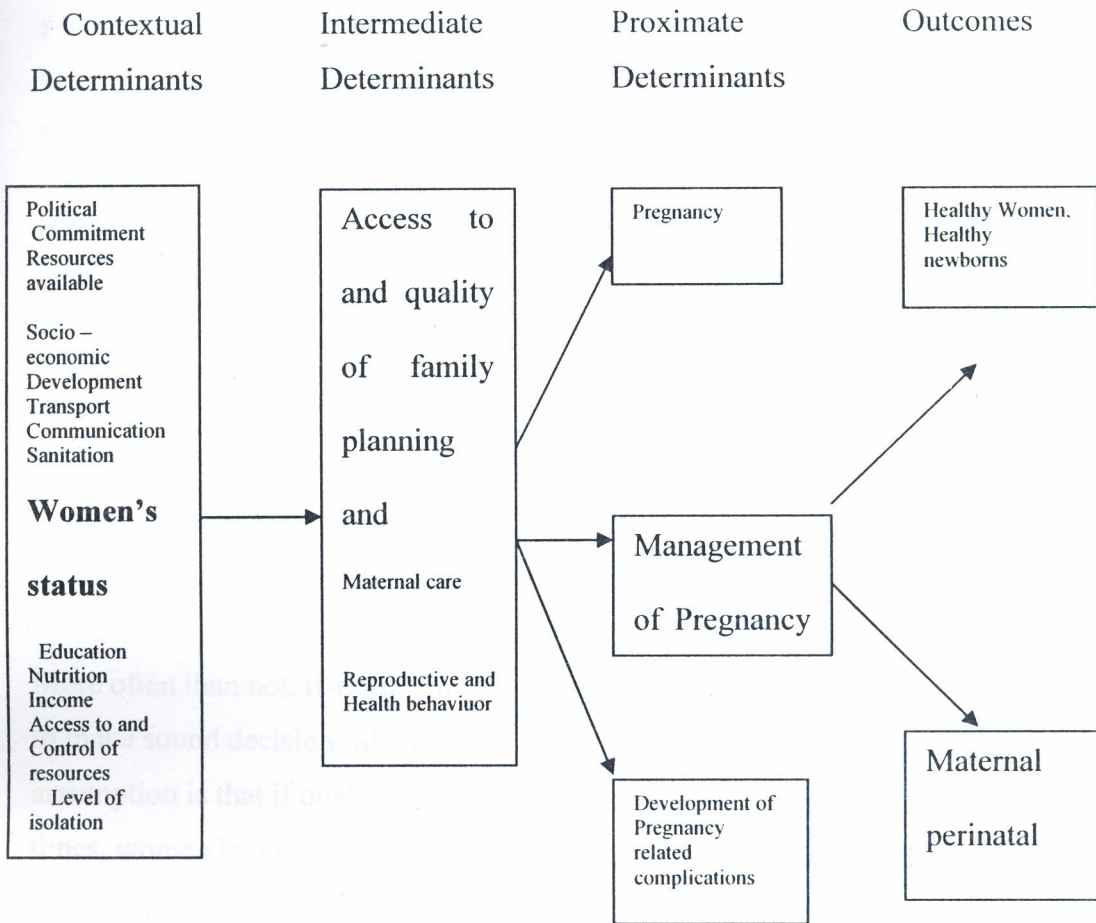


- Under the auspices of the district based and project oversight committees, the project aims to implement the Safe Motherhood Intervention models in each district in phased in manner that permits period review and model improvement.
- To monitor the feasibility accessibility and change in quality of care of the safe motherhood intervention models using indicators recommended by WHO.
- To develop recommendations regarding the models and promote implementation of these recommendations to other districts.
- To hold a follow-up national reproductive health workshop to disseminate the project findings and facilitate expansion of the models to other districts.
- To further disseminate project results in the region, internationally and through publications.

### **Conceptual Framework**

Applying the Safe Motherhood Conceptual Framework Developed by Maine and others, to realize the expected outcomes of pregnancy, namely healthy mothers and healthy newborns, with reduction in maternal and perinatal morbidity and mortality. The proposed project will focus on some of the contextual and intermediate determinants for safe motherhood (see figure below).

**Safe Motherhood Conceptual Framework:**



Source: Adopted from McCarthy and Maine (1992)

In addition, the project will also take into consideration WHO's Conceptual Framework for Safe Motherhood programmes and research, in the context of the four pillars for safe motherhood: 1) family planning, 2) antenatal care, 3) clean and safe delivery, and 4) essential obstetric care (EOC).

The interventions to be tested will focus on antenatal, intrapartum and postpartum care. At the antenatal level emphasis will be on improved management of pregnancy, both at the home and facility level, with emphasis on ensuring comprehensive antenatal care profiles for women seeking services. At the intrapartum level the interventions aim to reduce delays at three levels, a) at home b) during referral and c) at the emergency care centres.

Links with family planning will be documented, but no actual intervention associated with this element will be included, as family planning programmes are currently strong in Kenya. In addition there are other initiatives focusing on family planning in the pilot districts.

More often than not, if women have sufficient information, they are able to make sound decisions about their health. In this project one critical assumption is that if quality services are provided and accessible, at all times, women in and their care givers can call for help and access services when necessary. Second, the safety of motherhood is properly monitored and appropriate action taken as a result of information availed and utilized. This project will therefore, attempt to ensure that adequate information on pregnancy and factors influencing its outcome is available and accessible, at all levels, through various channels, both at home and in health facilities.

In keeping with key elements of improving access to maternal health services and ensuring improved quality of maternal care, a phased approach is proposed for introducing a Safe Motherhood strategy in Kenya.

### **Preparation and design phase:**

At National level ongoing collaboration continues as a tri-partite process with the division of Reproductive Health (previously Division of Primary Health Care) at the University of Nairobi and Population council.

The preparation and design phase has been achieved in Kakamega and Vihiga districts, as well as at the Provincial General Hospital, which is the major centre for the province. Project strategies included the collaboration with various organizations as well as formed committees and working groups at the community and facility levels, conducting baseline community and institutional assessments. Log frames reflecting the project outputs and activities for the project at different levels have been developed for Vihiga and Kakamega Districts. The baseline survey to identify training needs and baseline indicators has been completed. This is a report of the findings from the baseline survey.

### **Intervention phase:**

Project Implementation, monitoring and evaluation based on the log frame and findings from the baseline survey have begun.

#### **Records in the intra partum period**

- Maternity admission book
- Patients case notes
- The partograph
- Delivery book
- Operating theatre register
- Maternity death book

## Maternity Admission Book

This is where all patients are registered in maternity department. It is used to provide information on: -

- Utilization of maternity services
- Bed occupancy level
- Characteristics of women admitted for maternity care.

## Delivery book

The book is used to record all delivery information on mothers and their newborn babies. It gives information on:-

- Mode and time of delivery
- Number of births
- Birth weight patterns
- Maternal and prenatal morbidity and mortality patterns
- Characteristics of women who have delivered

## Operating theatre register

All cases with operative procedures are recorded here. It provides information on:-

- Number of caesarian sections
- Indications for caesarian sections
- Number of destructive operations
- Number of surgical contraception cases
- Number of other gynecological operations
- Outcome of delivery

## **Maternity death book**

Used to record all maternal, still births, neonatal deaths that occur in the maternity unit. It provides information on: -

- Data for calculating maternal and prenatal mortality
- Types, causes and number of still births
- Number and causes of neonatal deaths
- Number and causes of maternal deaths
- Characteristics of maternal and neonatal deaths

## **Patient case notes**

These are patient case files containing information on reasons for admission to a facility as well as type of care given. They provide information on: -

- Morbidity patterns
- Quality of care and common drugs used
- Clinical management and outcomes of care

## **The ministry of health partograph**

There are three components: -

- a) Record of fetal well-being.
- b) Record of progress of labour.
- c) Record of the maternal well-being.

## **Record of fetal well-being**

The fetal condition is monitored by observing fetal heart rate. The fetal heart rate is counted using the pinnards fetoscope at half hourly interval.

The state of membranes is recorded as intact (I) or draining. The state of liquor amnii is recorded as clear (C) Meconum stained (M) blood stained (BS) or absent (A) on the photograph the degree of

moulding as +, ++, +++ representing mild, moderate or severe moulding respectively corresponding to grade I, II or III respectively. Grade I moulding (+) = a position of suture line but still separable cranial bones. Grade II (++) = slightly overlap of the cranial bones but easily separable cranial bones. Grade (III) (+++) = overlap of cranial bones not separable.

### **Record of progress of labour.**

This is monitored by:-

- a) Uterine contractions.
- b) Descent of presenting part.
- c) Cervical dilatation.

### **Uterine contractions:**

The contractions are plotted immediately below the cervicograph. The frequency being recorded half hourly as the number of contractions in the last 10 minutes. The number of blocks is

shaded according to the duration and intensity of the contractions. Contractions are classified as mild, lasting more than 20 seconds, moderate lasting between 20-40 seconds and strong lasting more than 40 seconds.

### **Descent of presenting part:**

The level of head in relation to the brim of the pelvis is defined as the number of "fifths" of the head above the pelvic brim.

The number of "fifths" is then plotted on the cervicograph with an "O" (as opposed to "X" for cervical dilatation).

moulding as +, ++, +++ representing mild, moderate or severe moulding respectively corresponding to grade I, II or III respectively. Grade I moulding (+) = a position of suture line but still separable cranial bones. Grade II (++) = slightly overlap of the cranial bones but easily separable cranial bones. Grade (III) (+++) = overlap of cranial bones not separable.

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The number of "fifths" is then plotted on the cervicograph with an "O" (as opposed to "X" for cervical dilatation).



### **Cervical dilatation:**

Once labour is established, four hourly cervical examinations are done to assess cervical dilatation, which is plotted as " X".

### **Recording of maternal well being:**

The maternal well being is recorded at the bottom of the partograph, temperature pulse and blood pressure. Urine is subjected to evaluation of volume and proteinuria and acetone. Fluids and drugs are also recorded here.

### **Summary:**

This is the last item on the partograph. It consists three parts:-

- 1<sup>st</sup> stage of labour
- 2<sup>nd</sup> stage of labour
- 3<sup>rd</sup> stage of labour

#### **1<sup>st</sup> stage of labour**

Here the mechanism of onset of labour is recorded i.e induced or spontaneous labour. Duration of labour and total number of vaginal examinations is also recorded here.

#### **2<sup>nd</sup> stage of labour**

Mode of delivery, duration of 2<sup>nd</sup> stage of labour and administration of oxytocin are recorded here.

#### **3<sup>rd</sup> stage of labour**

Outcome of labour is recorded here; state of the baby i.e. alive or stillbirth, Apgar score, sex, resuscitation if any and duration of 2<sup>nd</sup> stage of labour are recorded.

State of placenta, membranes, cord and placental weight are noticed.

Blood loss, state of perineum, maternal B/P, pulse temperature and respiration are noted. Also noted is baby length, weight in grams, head circumference in centimeters and drugs given. Lastly name of provider time and date of delivery are noted.

LIST OF ABBREVIATIONS & DEFINITIONS

Abbreviations

KNH	-	Kenyatta national Hospital
PGH	-	Provincial General Hospital
ICPD	-	International Conference on Population and Development.
NRHS	-	National Reproductive Health Strategy
NGO	-	Non-Governmental Organization
WHO	-	World Health Organization
O.R	-	Odds Ratio
PMO	-	Provincial Medical Officer

1.2 Definitions

- i. Complications of a disease:

- a. Unfavourable deviation from normal course of ailment
- b. Poor or adverse response to treatment
- ii. Complete recovery:
  - Full resolution of clinical symptoms and laboratory findings, retaining full function of all body faculties.
- iii. Partial recovery:
  - Incomplete resolution of clinical symptoms and/or laboratory findings requiring medical follow-up.
- Iv. Prolonged hospital stay:
  - Hospital occupation of patients longer than expected in standard medical practice.