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## Original Article

# The continuing challenge of female genital mutilation in Sudan

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### KEYWORDS

Female;  
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Mutilation;  
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Re-infibulation;  
Cutting

### Abstract

**Objectives:** To evaluate the frequency of female genital mutilation (FGM) among Sudanese women in comparison to other African countries. To review the immediate and the late complications of FGM. To suggest possible ways of its prevention and eradication.

**Subjects and methods:** This is a retrospective cross sectional study involving two groups of Sudanese women. The first group which comprises 1200 women was university students and this group represents nearly all parts of the Sudan as University students come from different ethnic and cultural groups. The second group which included 800 women was selected as a sample of women coming to the outpatient Urology clinic of Soba University Hospital in Khartoum, which is a tertiary referral hospital, seeking medical advice for different urological problems. All the two groups signed consent to be part of this study. All patients in group A were given a written questionnaire including all the information's about their experience with FGM to answer.

**Results:** Out of the 2000 women who were included in this study, 1468 were victims of FGM. Their ages ranged between 20 and 62 with a mean age of 46 years. The FGM was performed below the age of six year in 1423 (96.9%). It was performed by a midwife at home set up in 1416 (94.5%). There were 267 immediate complications and 618 late complications. The most serious complications were bleeding, sepsis and vesico-vaginal fistula. Other complications are discussed.

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## Introduction

Female genital mutilation (FGM), also known as female genital cutting and female circumcision is defined by the World Health Organization (WHO) as “all procedures that involve partial or total removal of the external female genitalia or other injury to the female genital organs for non-medical reasons [1]”. According to the WHO, it is practiced in 28 countries in Western, Eastern, and North eastern Africa, in parts of the Middle East and within some immigrant communities in Europe, North America and Austrasia [2]. The WHO estimates that 100–140 million women and girls around the world have experienced the procedure including 92 million in Africa [1]. The practice is carried out by some communities who believe that it reduces a women’s libido [3]. The WHO classified FGM into four types according to the extent of the injury: type I includes removal of the Clitoral hood, type II, includes removal of the Clitoris and inner labia, type III is removal of all or part of the inner and outer labia and usually the clitoris and fusion of the wound leaving a small hole for the passage of urine and menstrual blood. The fused wound is opened for intercourse and childbirth [4]. Type III is the most common procedure in several countries including Sudan, Somalia and Djibouti [5]. Type IV includes several miscellaneous acts as piercing of the clitoris or labia, cauterization of the labia. There are many cultural and political aspects to the practices continuation that makes opposition to it a complex issue [6].

The Sudan which occupies the central part of Africa has got a population of 30 million. They include different ethnic groups living in different parts of the country side. They travel to Khartoum –the Capital seeking medical advice because most of the tertiary referral hospitals are based in Khartoum. Female genital mutilation (FGM) is still practiced in many parts of Sudan. Twelve million females were found to have FGM performed at some age making nearly 9.0% of the whole world. The prevalence rates ranged between 50% and 90%. Sixty three percent of these had type III FGM [1,20].

## Subjects and methods

This is a retrospective study. It was performed in the urology department at Soba University Hospital, which is a tertiary referral hospital, in the period from Jan 2007 to Jan 2012.

Two groups of Sudanese women were interviewed using a structured questionnaire on demographic, socioeconomic, area from which they descend the venue and the set up at which the procedure took place as well as the immediate and the late complications which took place. Additional information’s were obtained from their mothers or grandmothers. The sequel of female genital mutilation in their current lives, the experiences they passed through with the onset of their menses, during marriage and childbirth.

The first group included 1200 university students who agreed to be part of this study. The second group included 800 women who were attending the Urology outpatient clinic in Soba University Hospital in Khartoum, which a tertiary level referral Hospital. All the 2000 women signed a written informed consent.

Group A: All women attending the urology clinic and having FGM performed at some stage of their lives and agreed to be included in this study were interviewed. The history included their socioeconomic status; level of education, age at which FGM was performed,

the setting at which it was performed, the immediate complications and the difficulties which they passed through with the onset of their menses, with marriage, and childbirth. Additional information was obtained from the mother, the grandmother or the midwives who performed the FGM. All underwent local clinical examination to assess the type of the FGM. All had urinalysis, abdominal Ultrasonography to detect any urinary bladder or kidney pathology. Any female with suspected lesion in the abdominal Ultrasound underwent cystoscopy examination by a urologist.

Group B: The university students who agreed to be included in this study and signed consent were given a questionnaire to fill. This was preceded by showing them adequate information about the FMG, its different types according to the WHO classification. The questionnaire included the age at which the FGM was performed, their socioeconomic status, their home setup, the immediate complications which took place, their experience with the onset of menses, and any other complications they can recall. Local clinical examination was performed only to those who were not sure of the type of the FGM. All had similar investigations as group A and cystoscopy was performed to those with suspected bladder pathology as detected on abdominal Ultrasonography.

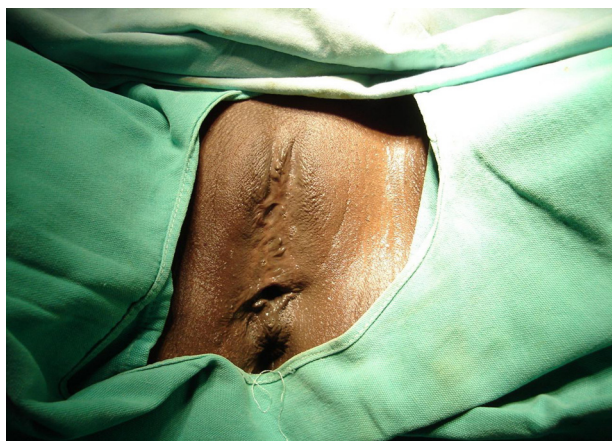
All information was included in special data sheets and analyzed.

## Results

A total of 2000 Sudanese women were included in this study. Their ages ranged between 20 and 62 with a mean of 46 years. Out of these 1200 were University students, while 800 were women attending a urology outpatient clinic in Soba University Hospital in the period from Jan 2007 to Jan 2012 for different urological problems. One thousand four hundred and sixty eight (1468) women had FGM with a prevalence of 73.4%. Of these 924 women (62.9%) had type III FGM. Most of the FGM 96.9% was carried under the age of six years. All except 18 women were unaware of the procedure. Most of the procedures (94.5%) were carried by a midwife under no medical supervision.

There were a total of 267 immediate complications (18.1%). The commonest immediate complications were pain and bleeding. The bleeding was severe requiring hospital admission and blood transfusion in 67 women (25.1%). Septicemia occurred in 57 women (21.3%), acute urine retention in 45 ladies (16.9%), major wound sepsis in 54 women (20.2%), while urethral injury took place in 44 women (16.5%).

Late urological complications took place in 618 women (42.1%). The most serious complication was low vesico-vaginal Fistula (VVF) occurring in 57 women (9.2%). VVF occurred as a result of prolonged obstructed labour. Tight urethral stricture was found in 90 women (14.6%), and the post-void urine was over 200 mls in 41 women (6.6%). Urinary bladder diverticulum was found in 19 ladies (3.1%), and secondary vesical stones were found in 25 women (4.0%). Significant urinary tract infection occurred in 138 women (22.3%). Squamous cell carcinoma of the urinary bladder was detected in 6 patients (1.0%) with very tight urethral stricture. This might be explained by recurrent infection, stasis and irritation leading to squamous metaplasia, or it can be co-existent with Bilharzial manifestations. There was difficulty in performing cystoscopy or urethral catheterization in 242 women (39.2%)

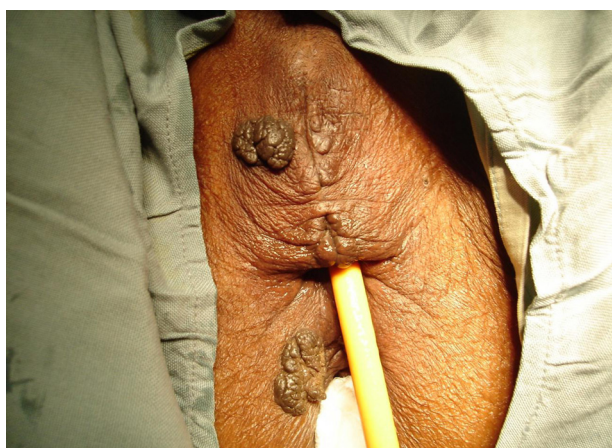


**Fig. 1** A 55-year-old lady who presents with recurrent UTI due to hidden external urethral meatus following type III FGM.

presenting with significant lower urinary tract symptoms. Challenging cases are shown in [Figures 1–3](#).

There were 578 gynecological complications (39.4%). Vulval inclusion cysts of variable sizes occurred in 338 women (58.5%) Tubal factor infertility was reported in 24 ladies (4.1%). The consequences of FGM to others were many, including failure to sexual intercourse leading to Erectile Dysfunction in 230 male partners. Vaginal examination for ante-natal care or for detecting lesions in the cervix or the uterus was too difficult in 189 women (32.7%) and this resulted in delay of diagnosing cervical cancer in 27 women (4.7%). The rate of Divorce and marital discord was up to 16.3% according to Saad Elfadil and this was due to painful sexual intercourse, recurrent infections, vaginal discharge or infertility. Watering-can dispersal of urine due to the skin covering the external urethral meatus occurred in 87 women (5.9%).

Three hundred and six women (306) came seeking advice for possible de-circumcision, 218 of these came seeking advice within three weeks of getting married (during honey moon), while 88 ladies requested to have this done before marriage due to dysmenorrheal, recurrent urinary tract infection or vaginal discharge ([Tables 1–3](#)).



**Fig. 2** Difficult urethral catheterization in a 56-year-old lady following TURBT for TCC of the urinary bladder.



**Fig. 3** TURBT of TCC of the urinary bladder in an old lady, with difficult manipulation of the resectoscope.

### Discussion

In spite of all the efforts made by the WHO, the UNICEF and the other organizations, female genital mutilation continued to be practiced in over 28 African countries. Sudan is one of the leading countries in its practice. In spite of the high rates of complications shown in this study and the other studies shown in NYCity News

**Table 1** the immediate complications in 276 women following FGM.

The complication	Number	Percent
Severe bleeding	67	25.10
Septicemia	57	21.30
Acute urine retention	45	16.90
Major wound sepsis	54	20.20
Urethral injury	44	16.50
Total	267	100.00

**Table 2** The late urological complications in 618 women following FGM.

The complication	Number	Percent
Difficulty to perform cystoscopy	242	39.20
Urinary tract infection	138	22.30
Tight urethral stricture	90	14.60
Vesico-vaginal fistula	57	09.20
Post-void urine more than 200 ml	41	06.60
Secondary vesical stones	25	04.00
Urinary bladder diverticulum	19	03.10
Squamous cell carcinoma of the urinary bladder	06	01.00
Total	618	100.00

**Table 3** the late Gynecological complications in 578 Women following FGM.

The complication	Number	Percent
Vulval inclusion cyst	338	58.50
Difficult vaginal examination	189	32.70
Delay in diagnosing cervical cancer	027	04.70
Tubal factor infertility	024	04.10
Total	578	100.00

Service upon “Sudans Female Genital Mutilation” [6]. It continued to be practiced in many parts of Sudan, especially in the country side. Most of the FGM which took place in Sudan is of type III which is usually governed by high rates of complications. It is usually practiced by midwives under no medical supervision. Female genital mutilation is considered by its practitioners to be an essential part of raising a girl properly. They think that it ensures pre-marital virginity and inhibits extra-marital sex, because it reduces women’s libido [1]. The term “Pharonic circumcision (type III) stems from its practice in Ancient Egypt under the Pharaohs [7–9].

Asim Zeki – a Sudanese Gynecologist – argues that the common attribution of the procedure to Islam is unfair because it is much older phenomenon [9]. Islamic scholars have said that while male circumcision is a Sunna or religious obligation, female genital mutilation is not required and several have issued a “Fetwa” against type III FGM [10].

Although many complications were reported following FGM, but still it is very difficult to know the exact numbers and magnitudes of the complications because there are no records of the fatal complications. Fatalities caused by FGM are rarely reported as such. Momoh reported the short term mortality rate of around 10% due to complications such as bleeding, infection and hypovolaemic shock [11].

The rate of immediate complications increases when FGM is performed in traditional ways and without access to medical resources. In Sudan, FGM is typically carried out by traditional midwives without anaesthesia using unsterile cutting devices such as razors, cut glass and sometimes sharpened piece of rock. Late complications vary depending on the type of FGM performed [12]. Complete obliteration of the vagina results in hematocolpos and hematometra [12]. There were many obstetrical complications among pregnant Sudanese women with type III FGM. The most serious complication was VVF following prolonged obstructed labour. This is in agreement with reports of Abdul Cadir et al. [12]. The rate of emergency caesarean section is higher in FGM than in controls [13]. Neonatal mortality is increased in women with FGM. The WHO estimated that an additional 10–20 babies die per 1000 deliveries as a result of FGM [13].

Women with FGM typically report sexual dysfunction and dyspareunia (painful sexual intercourse) and this becomes higher with type III FGM [14]. Although we could not report any case of AIDS in this study, it has been suggested that FGM is related to a high incidence of AIDS in some parts of Africa, since sexual intercourse with a circumcised female is conducive to an exchange of blood [14].

Many women in this study requested reinfibulation (restoration of the infibulations) after giving birth. In Sudan, this is known as “El-Adel” (re-circumcision) [15,16]. Vanja Berggren writes that this is in effect mimics virginity [17,18]. On the contrary many young ladies came seeking advice for possible defibulation, which is a surgical technique to reverse the closure of the vaginal opening after type III FGM. Pierre Foldes and Marci Bowers used intact clitoral tissue from inside women’s bodies to form a new clitoris [19].

Sudan has tried to eradicate female genital mutilation since 1946 to little avail. But now women’s health group has taken the crusade in their hand in an effort to subvert the practice. Nongovernmental organizations (NGOS) are training midwives to counsel mothers

about the dangers of FGM. In the year 2006 Sudan Household Survey, the most extensive population measurement to date reflects FGM in 75–80% of females in the Northern part of Sudan. In poorer areas like Darfur, the survey showed that 40–60% are afflicted [20].

Many work shops were held in Sudan to end the practice of FGM. The Sudan Medical Council banned this practice by any medical profession, and the issue was discussed in the Parliament and the consensus was to ban it altogether. Several African countries have enacted legislation against it. In Mauritania, where almost all the girls in minority communities undergo FGM, 34 Islamic Scholars signed a Fetwa in Jan 2010 banning the practice [21]. In Egypt the health ministry banned FGM in 2007 despite pressure from some Islamic groups. Al-Azhar Supreme Council of Islamic Research, the highest religious authority in Egypt, issued a statement that FGM had no basis in core Islamic Law [22,23]. AS of July 2011, 6236 communities in seven countries abandoned FGM [24].

All the organizations working to end FGM should work hard through simple media that can be accessed by the small minorities. The major role should be played by medical professionals, especially nurses, midwives and the other paramedical staff, the religious scholars to teach mothers about the grave complications that can follow FGM [25,26].

## Conclusions

Female genital mutilation is a health and social hazard and stigma, the effects of which do not only affect its victims, but its repercussion reaches the other partner, the family and the community at large. It has to be condemned by all, and there must be a target in the coming few years to ban it at the level of all the African health authorities as well as the African governments.

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