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Review

Long term health consequences of Female Genital Mutilation (FGM)

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ABSTRACT

Female Genital Mutilation (FGM) comprises various procedures which remove or damage the external female genital organs for no medical reason. FGM has no health benefits and is recognised to cause severe short and long term damage to both physical and psychological health. Although FGM is primarily performed in Africa, Asia and the Middle East, migration of FGM practising communities means that the health complications of FGM will have a global impact. It is important that health professionals world wide are aware of the damage FGM causes to long term health. In some cases it may be possible to offer interventions that will alleviate or improve symptoms. However whilst there is some high quality research on FGM and pregnancy outcomes, little is known about the effects on gynaecological, psychological and sexual function. Research is hampered by the problems of data collection on such a sensitive topic as well as the practical difficulties of analysis of studies based mainly on retrospect recall. Well planned hospital based studies of the impact of FGM on physical and psychological health are urgently need but are currently absent from the medical literature. Such studies could generate robust evidence to allow clinicians to benchmark clinical effectiveness and high quality medical care for survivors of FGM.

Contents

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1. Introduction

It is a source of continuing concern that the number of women living with the physical and mental scars of Female Genital Mutilation (FGM) is rising worldwide. Of all the factors contributing to this increase in numbers, the one that health professionals of all types can do something about is their own awareness of FGM and their ability to manage it effectively at each life stage. To achieve this, health professionals need to be aware of the adverse impact of FGM on women's long term health and understand how medical interventions may reduce this impact. There is no doubt that FGM can cause serious short and long term damage to the physical and psychological health of women and girls. However there is patchy medical evidence on the magnitude and type of such complications and the efficacy of any medical interventions. The aim of this review is to describe the practice of FGM, review the reported complications and how these may impact upon long term health, identify gaps in available evidence and give suggestions for future research.

2. What is FGM?

FGM is a deeply rooted tradition practiced by specific ethnic groups in Africa, Asia and the Middle East. The World Health Organization (WHO) defines FGM 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]. The WHO divides the main FGM procedures into four categories, Types 1–4 (Table 1). FGM is carried out in a wide range of settings. Practitioners may in many cases have little training in antiseptic, surgical techniques. In these settings, the risk of short-term complications is obvious. What is less obvious are the long-term sequelae of FGM. The effects of FGM are not confined to the procedure itself but have a long and often traumatic fallout on the life course of each survivor.

3. Prevalence

According to the United Nations Children's Fund (UNICEF), there are an estimated 130 million women and girls living with FGM worldwide. Most of these women are located in 29 African countries [2]. Outside of Africa, Yemen, Iraqi Kurdistan, Indonesia and Malaysia are countries with high prevalence in some specific areas. FGM is increasingly identified in the UK amongst migrants from FGM practising countries. Estimates based on the most recent census data suggest that in 2011 approximately 137 000 women and girls in England and Wales had undergone FGM and came from countries where it is traditionally practised [3]. This estimate included 103 000 women aged 15–49 years, 24 000 women aged 50 years or over, and 10 000 girls aged under 15 years. In addition, an estimated 60 000 girls under 15 are born annually to mothers with FGM.

Table 1
WHO classification of FGM.

Type 1: Clitoridectomy; partial or total removal of the clitoris (a small sensitive and erectile part of the female genitals) and in rare cases only the prepuce (the fold of skin surrounding the clitoris)
Type 2: Excision; partial or total removal or the clitoris and labia minora with or without removal or the labia majora (the labia are "the lips" that surround the vagina)
Type 3: Infibulation; narrowing of the vaginal opening through the creation of a covering seal. The seal is formed by cutting and repositioning the labia minora or majora with or without removal of the clitoris
Type 4: Other; all other harmful procedures to the genital for non-medical reasons e.g. pricking, piercing, incision, scraping and cauterising the genital area

4. Difficulties with FGM data collection

Given that FGM affects so many millions of women, there is little accurate data on the short or long term health implications and this is due to a variety of reasons. The majority of large population based studies of FGM rely on retrospective self report. Recall may not be accurate and of course studies exclude girls who do not survive. Some more recent studies have tried to address recall bias by asking mothers about their daughter's FGM related health complications. Women asked about FGM may be unwilling to disclose symptoms due to the sensitive nature of the subject or because of the legal status of the practice. Studies have shown that although women are usually well aware they have had FGM, they are often unaware of what has actually been done. This may be due to local use of terminology to describe FGM and the different types of procedures performed. The WHO definitions in Table 1 are very detailed however women's genital appearance may not fit neatly into one specific category of FGM and even experienced health professionals can sometimes find it difficult to be definitive about type. To overcome this UNICEF uses a different classification for data collection which whilst less anatomically accurate is simpler to understand. UNICEF classifies FGM into four main categories [2]

(1) cut, no flesh removed,
(2) cut, some flesh removed,
(3) sewn closed,
(4) type not determined/not sure/does not know.

These categories do not fully match the WHO classification typology and this can also cause confusion.

UNICEF Type 1 "Cut, no flesh removed" describes a practice known as "nicking" or pricking, which currently is categorised as WHO Type 4.

UNICEF Type 2 "Cut, some flesh removed" corresponds to WHO Types I and 2 (clitoridectomy) and Type II (excision) combined.

UNICEF Type 3 "Sewn closed" corresponds to WHO Type 3, infibulation

Finally, women may not associate certain health issues with FGM and amongst some populations common consequences of FGM may be considered as normal and so may not be reported. Conversely women may attribute some symptoms to their FGM which in fact are due to other pathology. Hospital based studies may provide more accurate information but as yet there are few high quality studies published.

5. Short-term complications

During and immediately following the procedure, the girl or woman is at significant risk of traumatic bleeding and infection including wound infection, septicaemia, gangrene and tetanus.

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Necrotising fasciitis has been reported. Deaths from FGM have been reported but there are no figures for direct deaths due to FGM. Other immediate reported complications include damage to other adjacent organs and incomplete healing. However accurate information on the incidence and nature of these complications is not available for all the many reasons described above.

6. Long term health consequences

It is increasingly recognised that FGM causes complications throughout the life span and these can broadly divided into three main areas:

- Gynaecological,
- Obstetric,
- Psychological (including sexual function).

6.1. Gynaecological

Long term gynaecological concerns that have been linked to FGM include infection, scarring and keloid, menstrual difficulties, urinary symptoms and infertility.

6.1.1. Infection

FGM has been implicated in long term infections including chronic genital abscesses, vaginal infections and blood borne infections such as Hepatitis B and HIV. A systematic review examined infection rates in 22 052 African women with FGM of all main types [4]. Types of infections identified included urinary tract infections, genitourinary tract infections, abscess formation, septicaemia and HIV. Infections were more frequent in who had undergone Type III FGM. Although this study did not include an adequate control group, the fact that more severe forms of FGM correlated with higher frequency of infections, suggested that FGM is a risk factor for infections. Additionally a literature review of articles published between 1966 and 2006 for evidence of FGM practice revealed that FGM is a particular risk factor for genitourinary disorders [5]. A study of complications following FGM in a group of women in a rural part of the Gambia found that 36.8% of the women had complications related to their FGM and in 63.2% of women in that group, those complications were long term and included infections [6]. It has been suggested that FGM increases the risk of transmission of Hepatitis B, C and HIV by the use of unsterile and shared instruments. However although this is plausible there are no epidemiological studies to support this and in many FGM practising countries Hepatitis B is endemic and rates of HIV can be high.

6.1.2. Genital scarring

Genital scarring is common but can be very variable due to the extent of tissue removed and immediate complication such as infection. Painful and unsightly scarring due to keloid has been reported. Inclusion cysts over the clitoral area can obstruct the vagina and cause pain. They can be very large and require surgical excision.

6.1.3. Menstrual difficulties

Painful and prolonged periods have been attributed to FGM but the mechanisms are unknown. It is possible that a very narrow vaginal opening might slow down menstrual flow and case reports of haematocolpos do exist.

6.1.4. Urinary symptoms

Damage to the urethra during FGM may lead to fistula and urethral strictures. Poor urinary flow and recurrent urinary tract infections have been reported in up to 22% of women following FGM [7] and are thought to be due to obstruction of the urethral opening by scar tissue sealing the vagina. It would seem logical to expect that these symptoms are relieved by deinfibulation where the scar tissue is incised but there are no studies to confirm this.

6.1.5. Infertility

It has been suggested that FGM leads to infertility although there is little good data to support this. One study has suggested a link between more extensive FGM and primary infertility has been suggested [8]. Difficult or painful intercourse because the vagina is infibulated has been suggested as a possible mechanism as has ascending pelvic infection at the time of FGM.

6.2. Obstetric complications

The extent to which women with FGM will encounter complications during pregnancy and labour, as well as in the post-partum period, depends greatly on the context. In resource-poor settings, where knowledge and access to appropriate antenatal care is often compromised, there is a greater number of complications [9]. A study of 28 000 women with FGM across 6 African countries found that FGM increased the risks of prolonged labour, postpartum haemorrhage, perineal trauma and Caesarean section [10]. In addition there was an increased risk of neonatal resuscitation, low birthrate, stillbirth and early neonatal death with FGM thought to lead to an extra 1–2 perinatal deaths per 100 deliveries. Yet even in a resource-rich setting the risk of complications is increased. A large systematic review from 2013 involving almost 3 million participants [11] included studies from USA and Europe. Studies were in general of poor quality but meta-analyses showed that women who have undergone FGM suffer more frequently from prolonged, difficult labour, have a higher rate of obstetric lacerations, more often require instrumental delivery, and have increased rates of obstetric haemorrhage. This may be due, in part, to the inelasticity of scar tissue. This conclusion is supported by evidence that more invasive forms of FGM cause increased scarring and more significant delays in the second stage of labour [12]. Other studies have also reported an increased rate of perineal tears [13,14] and high rates of episiotomy [15] particularly with Type III FGM (infibulation). It is likely that deinfibulation of Type 3 FGM reduces perineal trauma but there are no studies to confirm this. Indeed a recent systematic review of key interventions to improve outcomes for pregnant women who have undergone FGM found only observational studies of variable quality and no interventional trials at all [16].

6.3. Psychological effects

Whilst it is very likely that FGM has psychological effects, there is also little high quality evidence to support this [17]. Small studies have identified depression, anxiety and post-traumatic stress disorder (PTSD) [18]. Behrendt and Moritz carried out structured clinical interviews with 47 Senegalese women, assessing their mental health status [19]. Twenty-three of these had undergone undergone FGM as children, most commonly between 4 and 10 years. They found a high prevalence of posttraumatic stress disorder (30.4%) and other psychiatric syndromes, including memory problems (47.9%) in women with FGM. The prevalence of mental health problems in women with FGM was statistically significant compared to the comparison subjects.

6.3.1. Effect on sexual function

There is increasing evidence that FGM damages sexual function and this would seem logical given the removal of sexually sensitive tissue such as the clitoris. However studies on sexual function post-FGM are small and often lack appropriate standardised sexual function questionnaires and appropriate control groups. Alsibiani

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and Rouzi recruited 130 sexually active women with FGM and 130 sexually active women without FGM in Jeddah, Saudi Arabia. Each participant completed a version of the Female Sexual Function Index (FSFI) questionnaire translated into Arabic [20]. The results showed no group difference in mean desire score or pain score. However, there were statistically significant differences between the two groups in their scores for arousal, lubrication, orgasm, and satisfaction, as well as the overall sexual function score. A small study of UK women from 13 African countries with high prevalence of FGM identified a significantly reduced sexual quality of life, based on the Sexual Quality of Life-Female (SQOL-F) questionnaire [21]. Berg and Denison conducted a systematic review and meta-analysis of the sexual consequences of FGM, combining total of 15 studies with 12 671 participants from seven different countries [22]. The authors note both the heterogeneity of the available studies as well as their varying methodological quality. However, their meta-analysis results showed that women who had been subjected to FGM were 52% more likely to report dyspareunia, more than twice as likely to report the absence of sexual desire, and a third of recipients reported reduced sexual satisfaction. Recent surgical reports claim that clitoral reconstruction may restore sexual function [23]. However, available studies are hampered by lack of long term follow-up and psychosexual assessment [24]. At present there is no evidence to support offering such surgery outside of a well planned research study.

7. Future Research

There is a clear need for practical, clinical research into the obstetric management of women with FGM. For example there is little guidance on interventions to reduce risk in pregnancy such as the best timing of deinfibulation and the role of episiotomy. Outside of pregnancy, research into the psychological and psychosexual effects of FGM is also lacking and should also include an assessment of intervention strategies. The role of deinfibulation in the relief of urinary symptoms and dyspareunia has not been evaluated. Available studies on health complications have in general been too small to demonstrate effect, use inappropriate methodologies and lack suitable control groups. This can only be overcome by establishing and funding national multidisciplinary and multicentre studies.

8. Conclusion

Although it is clear that FGM can cause devastating short and long term health complications for girls and women, there is an extraordinary scarcity of high quality research to inform clinical practice. Much research on FGM has been epidemiological and anthropological research into the context and prevalence of FGM. Whilst the difficulties of clinical research into this sensitive area are clear, such difficulties should not be insurmountable. The prevention of FGM is of paramount importance in reducing health sequelae in the very long term, but at present millions of FGM survivors already live with the health effects. With increased longevity, the number of older adult women living with FGM will increase. They will require high quality, sensitive and evidence based care and this will be an unprecedented challenge for General Practitioners, Gynaecologists, Geriatricians and indeed all involved health professionals.

Contributors

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