

Clitoral reconstruction after female genital mutilation/cutting: a review of surgical techniques and ethical debate

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Clitoral reconstruction after FGM/C.

A review of surgical techniques and ethical debate

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Abstract

Background: Clitoral reconstruction is a controversial surgical procedure done for women who have undergone medically unnecessary, often ritualistic genital cutting involving the clitoris. Such cutting is known by several terms; we will use Female Genital Mutilation/Cutting (FGM/C). Treatments offered to women affected by complications of FGM/C include defibulation (releasing the scar of infibulation to allow penetrative intercourse, urinary flow, physiological delivery, and menstruation) and clitoral reconstruction to decrease pain, improve sexual response, and create a pre-FGM/C genital appearance.

Aim: In this paper, our aim is to summarize the medical literature regarding clitoral reconstruction and stimulate ethical discussion surrounding potential adverse impacts on women who undergo the procedure.

Methods: A broad literature review was done to search any previous publications regarding the techniques and ethical considerations for clitoral reconstruction. **Results:** While we discuss the limited evidence regarding the efficacy of clitoral reconstruction, we did not find any reports discussing ethical implications to date. **Conclusion:** We present a preliminary ethical analysis of the procedure and its potential impact on women with FGM/C.

Keywords: ethical analysis, clitoral reconstruction, female genital mutilation, female genital cutting, defibulation, medical synthesis, cutting, excision

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Background

Clitoral reconstruction is an intervention within the area of genital surgery that is rapidly gaining popularity. It is a relatively recent surgical technique for women affected by forms of medically unnecessary ritual cutting of the external clitoris [1, 2]. Performed on women and girls, such interventions are described as female genital ‘mutilation’ (FGM) by the World Health Organization (WHO) and as female genital ‘cutting’ (FGC) by scholars who advocate more neutral language [3]; we will use the term FGM/C to acknowledge this debate. As of writing, there has been hardly any discussion of what is ethically at stake in clitoral reconstruction as a response to FGM/C, or whether the procedure is acceptable on medical-ethical grounds. This paper represents the first exploration of such questions, with the hope of stimulating further debate and research on this matter.

According to 2016 UNICEF data on prevalence, FGM/C of various kinds affects an estimated 200 million girls throughout 30 countries across Sub-Saharan, regions of Southeast Asia, and the Middle East. In some countries such as Somalia, Djibouti, and Guinea, FGM/C is nearly ubiquitous, affecting more than 90% of the women in the country [4, 5]. Some, but not all, forms of FGM/C involve cutting or modification of the external clitoris; these are the forms with which we concern ourselves here. Altogether, there are four main types of FGM/C as defined by the World Health Organization (WHO) (Box 1).

Box 1. Types of FGM/C

Type 1	Cutting of the clitoral hood and/or the clitoris: partial or total removal of the external portion of the clitoris (which may include part or all of the glans, and part of the clitoral body) or partial or total removal of the clitoral hood only.
Type 2	Excision: partial or total removal of external part of the clitoris (with the same qualification) and/or part or all of the labia minora and/or majora.
Type 3	Infibulation: creating a partial seal over the vaginal opening, typically by cutting and appositioning the labia minora or majora with or without excision of external parts of the clitoris, thereby leaving a small hole for passage of urine and menses.
Type 4	Other: includes all other harmful procedures on the female genitalia such as pricking, piercing, incising, scraping, or cauterizing.

Much effort has been expended in the last 2-3 decades to improve the lives of women who have been negatively affected by FGM/C. Clitoral reconstruction (CR) is but one manifestation of this effort. As its name suggests, CR is supposed to restore or rebuild the clitoris—a form of redress/repair after FGM/C. In line with this, it has been reported that CR—also known as “clitoral transposition” [6] or “clitoral re-exposition” [7]—improves sexual function, restores genital appearance, and treats or decreases clitoral pain. However, recent systematic reviews of studies reporting on safety and clinical outcomes associated with CR illustrate that high-quality evidence to support these claims is largely lacking [8, 9].

Demand for the procedure nevertheless grows. Due to the limited number of specialists trained to perform CR, women often travel to have the procedure done. In 2015, the Ottawa Citizen published a story regarding a woman who traveled from Canada to the United States to undergo CR [10]. Among other factors, such traveling and the possibility that women may pay privately for the procedure makes it hard to know whether patients receive appropriate preoperative and postoperative health education, counseling and psychosexual care. This is because there are no universally recognized standards for interventions, monitoring or evaluation and different countries may take different approaches.

To frame our discussion of these issues, in this paper we will begin by briefly describing the available surgical techniques for CR, touching on how the procedure is handled within different healthcare systems. We then identify and evaluate the risks and benefits of CR as they are known, considering the various ways the procedure can impact the lives of women and laying the foundation for our ethical analysis. As a part of this analysis, we carefully weigh the intended benefits of CR against its potential risks or other drawbacks (harms), factoring in both medical and non-medical aspects of the procedure. In this context, we emphasize that neither the perceived problem (FGM/C) nor the proposed solution (CR) take place in a cultural vacuum, and we ask what respect for patient autonomy looks like under particular sociopolitical conditions. Toward the end of the paper we discuss potential wider social implications of CR and call for more in-depth scrutiny of its varied ethical dimensions.

The surgical techniques of CR

On a purely technical level, CR is not a difficult procedure. As first described by Thabet in Egypt and by Foldes in France, CR involves removal and dissection of the scarred tissue covering the clitoral body that remains after FGM/C (hereafter, clitoris) [1, 11]. This technique has subsequently been modified (see Table 1) by two gynecologists in Burkina Faso and adopted by surgeons in Belgium [12, 13]. Three other surgical techniques have been reported by plastic surgeons: O'Dey (2017) in Germany, Chang and colleagues (2017) in the US, and Mañero and Lablanca (2018) in Spain [14-18]. Data on access to and outcomes of CR in high-prevalence countries are limited to the team in Burkina Faso [12, 18], Senegal [19], and two authors in Egypt: Thabet [11] and Seifeldin [20]. To our knowledge, then, there are five techniques currently performed by three kinds of specialists (urologists, gynecologists and plastic surgeons) summarized in Table 1.

Table 1: Current techniques of clitoral reconstruction

Thabet (Egypt), Foldes (France)	Dissection of scar tissue at the clitoral stump followed by mobilization of the remaining clitoris by transecting the suspensory ligaments, the ‘neo-clitoris’ is then anchored to bulbocavernosus muscle at a lower, more visible location
Ouedraogo (Burkina Faso)	Modified Thabet and Foldes technique that does not involve anchoring sutures to the bulbocavernosus muscle
Odey (Germany)	A more complex technique including an anterior obturator artery perforator flap (aOAP flap) for vulvar reconstruction; an omega domed flap (OD flap) for clitoral prepuce reconstruction, and a microsurgical procedure called neurotising and moulding of the clitoral stump (NMCS procedure) for the clitoral tip.
Chang and colleagues (United States)	Wide circumferential release of the superficial scar between the labia followed by deep dissection to release the palpable clitoris to the pubic bone. The labia majora is then rolled and sutured to the periosteum. The clitoris is left to re-mucosalize and sutured nonstick dressing applied to prevent re-adherence of raw clitoris to surrounding tissue
Manera and LaBlanca (Spain)	Similar to Foldes technique, involves removal of scar tissue, transection of the suspensory ligaments and fixing clitoris to lower position. The clitoris is grafted with vaginal mucosal tissue from posterior vaginal wall

CR is increasingly requested and is being performed in many European countries such as France, Belgium, Switzerland, and to a lesser extent, The Netherlands, Sweden, England, and in some African countries such as Burkina Faso, Egypt, and Senegal [4, 8-9, 19].¹ The surgery is currently performed by multiple specialists including gynecologists, urologists, and plastic surgeons with little interdisciplinary communication between such different areas of expertise. Not only do different techniques exist as detailed above, but there are also different care pathways and candidacy criteria. Doctors in France, Belgium and Switzerland perform the

¹ In the United States, it seems CR has not caught as much attention from either providers or patients. A number of factors might contribute to this situation including a lack of coverage by health insurance: the procedure is not covered for what are considered purely “cosmetic” purposes (e.g., body image issues) as opposed to more clearly “medical” issues such as clitoral pain. There is also a lack of trained providers who perform this procedure and an almost non-existent published literature examining the effects of CR on women in the United States [2, 8-9].

surgery after multidisciplinary care involving education on sexual anatomy and function, care of other traumas (e.g., war, rape, forced marriage) or psychological or psychiatric comorbidities, and sex-therapy [2, 13]. In other countries, only some of these steps may be followed prior to surgery. The surgery is reimbursed by health insurance plans in many but not all European countries, such as France (since 2004), Belgium (since 2014) and Switzerland (as of 2015) [1, 2].

Adding to this confusion are outside organizations, funders, and media campaigns oriented around drumming up support for the surgery. One such organization is known as Clitoraid. Clitoraid has been active since 2005, sponsoring CR surgery for African women with an aim to build a hospital in Burkina Faso. According to their website, the Clitoraid mission is to empower women with FGM/C by “*helping them reach their first orgasm*” [21]. This mission of empowerment, and the implied promise of sexual healing it contains, is largely representative of the wider discourse surrounding CR. Within this discourse, CR is presented as something akin to a “miracle cure,” a way to reverse a presumed sexual disability that was caused by a grave injustice. As we will discuss, however, such a characterization rests in part upon questionable empirical assumptions,² and raises challenging ethical questions about the optimal way to care for women who may have been harmed by FGM/C.

Ethical considerations

Some of these ethical questions concern the degree of evidence needed to justify empirical claims about CR safety and efficacy, given that neither has been adequately studied. Indeed,

² The relationship between orgasm capacity and modification of the external part of the clitoris through FGM/C, for example, is not well-established: most of the clitoris, including its erectile tissues and primary structures relevant to orgasm, lies underneath the surface of the skin and is therefore not removed by any recognized form of FGM/C. In addition, orgasm capacity has to do with psychosexual and emotional factors and not only with the status of the external clitoris [22-24]. We discuss these matters in more detail later in the essay and attempt to evaluate their ethical implications.

there are no official guidelines to help clinicians approach CR. The Royal College of Obstetricians and Gynecologists currently recommends against CR as there is not enough evidence to support its benefit. Similarly, the WHO does not make a recommendation in favor of CR due to a lack of supporting evidence, suggesting that before performing surgery, less invasive treatments should be explored [25-26].

But even if the safety and efficacy of CR were more firmly established, the ethical appropriateness of offering CR would still be an open question. Among other relevant factors, clinicians and policymakers must consider the nature of the intended benefits of CR and how they stand in relation to the potential harm(s) originally done by FGM/C; the efficacy of CR in bringing about these benefits in relation to alternative, less risky options; the level of autonomy (consent capacity) of women requesting CR, given background cultural considerations and what is currently known about the procedure; and the wider social implications of offering CR. As a first approach to addressing these issues in a more systematic way, therefore, we will discuss the following specific questions:

- a) What are the intended benefits of CR?
- b) Does CR lead to the intended benefits, whether physical, sexual, or psychosocial?
- c) Have the surgical and non-surgical (e.g., emotional, sexual) risks of CR been sufficiently minimized and do they stand in an appropriate relation to its potential benefits given alternative options?
- d) What is the role of autonomy and informed consent in the ethical justification of CR?
- e) How do wider social and structural dimensions bear on the answer to these questions?

As will be seen, empirical facts pertaining to CR are tightly interwoven with sociocultural, professional and value-laden attitudes and beliefs towards FGM/C, female

anatomy, body functions, sexuality and more generally the role of women in society. The ethical assessment of CR thus becomes a highly complex matter requiring sustained deliberation among multiple stakeholders. With this in mind, we turn to our preliminary analysis.

a.) *What are the intended benefits of the procedure?*

Reasons for requesting CR or indications for CR vary from chronic clitoral pain or superficial dyspareunia; a desire to ‘have back’ what was removed without permission; improving sexual function, genital, or body image; repairing gendered aspects of identity (feeling ‘whole’ or ‘complete’ in terms of femininity); rehabilitation; and “physical and psychological reconstruction” [27]. A qualitative Swedish research report including 17 women requesting CR identified five recurrent themes: symbolic restitution (undoing the harm of FGM/C); repairing the visible stigma of FGM/C; improving sex and intimacy through physical, aesthetic and symbolic recovery; eliminating physical pain (the least frequent); and CR as a personal project rooted in the notion of hope [28].

b.) *Does CR lead to the intended benefits, whether physical, sexual or psychosocial?*

Intended benefit #1: Reduction of pain

In some cases of FGM/C, a peri-clitoral scar containing potentially painful post-traumatic clitoral neuromas may form. What little evidence there is suggests that removing this scar tissue, which is the first step of the CR procedure, might therefore treat or at least reduce chronic clitoral pain or superficial dyspareunia at the clitoral region for some women [9, 27, 29].

Assuming that clitoral pain has not responded to more conservative treatments, then, we can preliminarily conclude that at least some form or portion of the CR procedure aimed at removing the relevant scar tissue may be medically indicated. It should be cautioned, however, that the

evidence base for this indication is still very limited, coming from just one systematic review and a handful of case reports. To date, no study has investigated eventual risks and rates of recurrence or worsening of the pain [9, 27, 29].

Intended benefit #2: Restoration of the clitoris

How, or in what sense, does CR “restore” a woman’s clitoris, if indeed it can? To answer this question, a potential confusion needs to be addressed at the outset. According to the official 2007 classification of FGM/C from the WHO, some forms of medically unnecessary, ritualistic genital cutting involve the “*total removal of the clitoris*” [5]. However, this is not in fact the case as we will discuss. Contrary to the claim of the WHO classification, no form of FGM/C removes the entire clitoris. Only the external, more superficial portions of the organ, consisting of the clitoral glans and sometimes part of the body, are potentially affected by ritual FGM/C [22-23]. Yet because of the false belief—perpetuated within academic and popular discourses alike—that FGM/C at least sometimes involves the “total” removal of the clitoris, non-practicing communities tend to think of FGM/C as necessarily and irremediably compromising women’s sexual function (i.e., by destroying the organ most strongly associated with orgasm and sexual pleasure) [30].

To a lesser extent, this misconception is shared by many practicing communities. Although typically aware that FGM/C does not necessarily eliminate sexual desire or enjoyment altogether, many women from cultures that practice FGM/C do still seem to presume that FGM/C can help prevent women from being ‘hypersexual’, promiscuous, and unfaithful. Indeed, this belief is one of the leading cultural reasons for the persistence of FGM/C in some communities [28, 22] (however, see references 31-32 for qualifications and exceptions).

The relevance of these observations to CR is this: According to the available research, most women who have undergone FGM/C and subsequently ask for CR are *not aware that they still have a clitoris* [7, 23, 33]. Many have never or rarely touched this organ before, nor know the physiological appearance of the uncut clitoris/genitalia [1, 2]. Consequently, they may mistake whatever portion was cut or removed for the entire clitoris, and as such, do not seem to appreciate that CR involves the re-exposition of an extant organ (Figure 1) [23]. Yet, as discussed in the past by Nour in 2006, [33] Catania in 2007 [22], Pauls in 2015 [34], and then confirmed by a pelvic MRI study in 2016 [23], only a part or all of the glans of the clitoris and sometimes a portion of the body (the external part of the organ) is excised in some forms of FGM/C; while in other forms, no part of the clitoral organ is cut or removed. The majority of the clitoris, made up of the body and the crura, together with other female tumescent structures, the bulbs, and the corpus spongiosum of the urethra, remain intact after FGM/C and can be functional (Figure 2) [23].

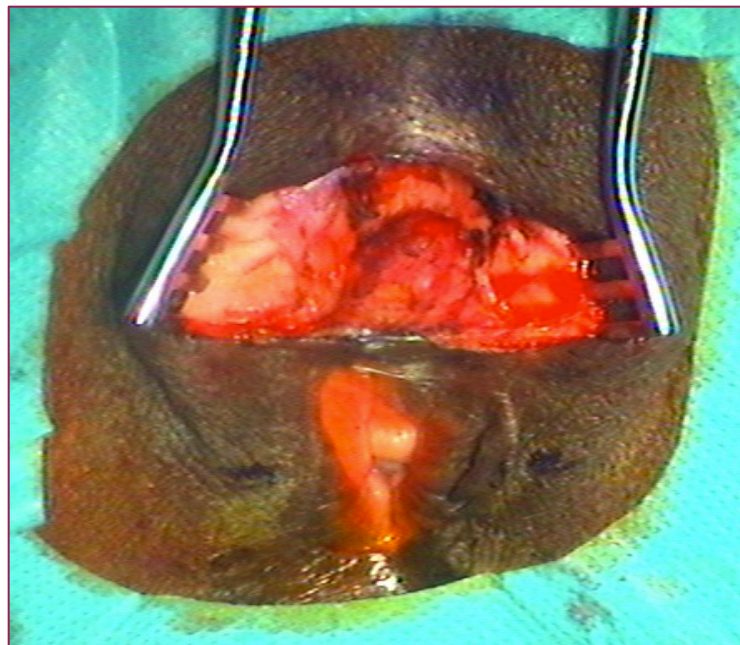


Figure 1: Dissection of FGM/C scar to expose the clitoris

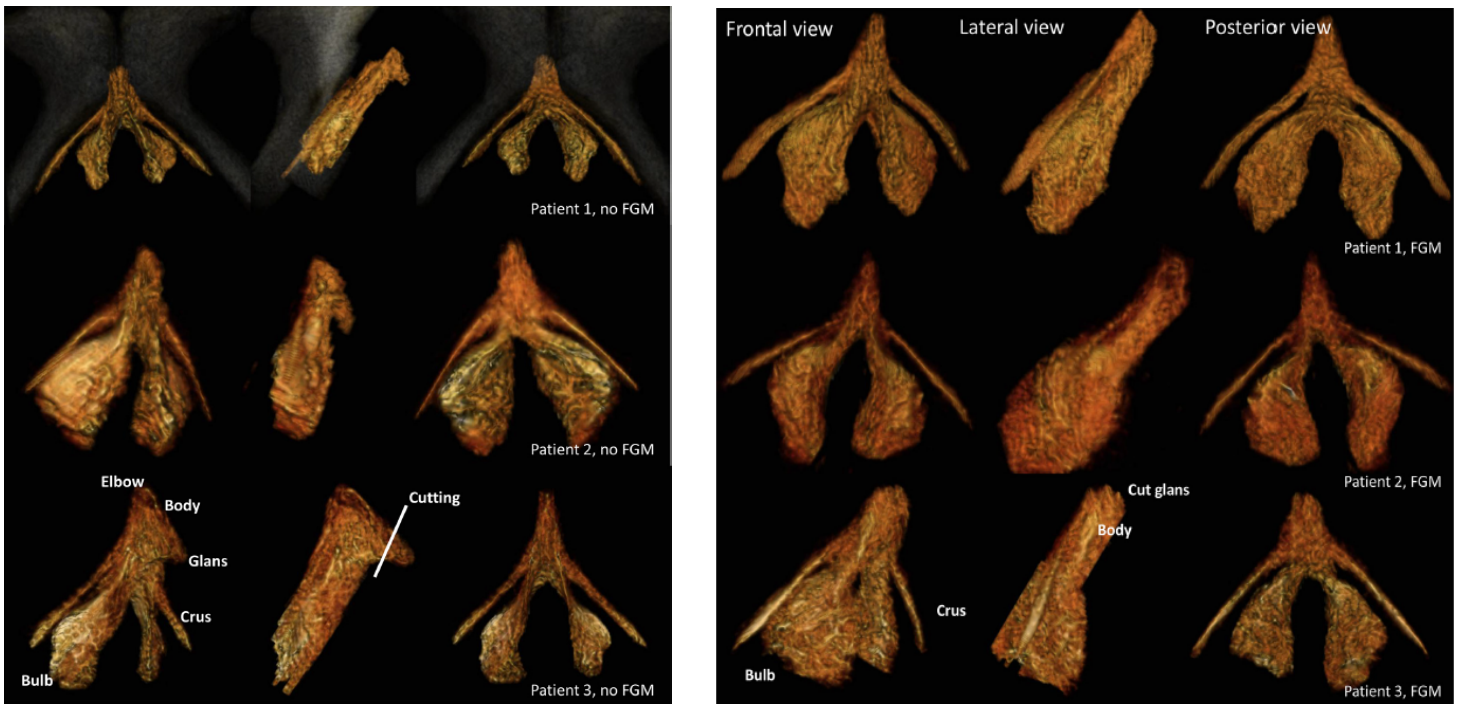


Figure 2: 3D MRI comparing intact clitoris and clitoris of patient with FGM.

As the majority of the clitoris is still intact after FGM/C, affected women with no other relevant long-term complications can experience normal-range sexual function in terms of desire, arousal, orgasm, and overall satisfaction [22-23, 33, 35]. Clearly, the extent to which, and ways in which, one enjoys a sexual experience depends on more than such low-level anatomical factors alone (Figure 3) [7]. By considering the numerous other physical, psychological, and interpersonal factors that influence sexual experience, this fact may explain why otherwise healthy women who have undergone FGM/C of various kinds can feel sexual pleasure and achieve orgasm on a regular basis [22].

This does not mean that a woman's first-person experience of a sexual encounter would not be any different, qualitatively speaking, if she had not undergone FGM/C; nor does it entail that the *risk* of physiological dysfunction is not increased, by some amount, by FGM/C depending on what exactly is done [36-37]. It is simply to explain that FGM/C is not necessarily, or even typically, sexually disabling—a myth that can threaten the psychosexual well-being of women who have undergone FGM/C and even, in some cases, become a self-fulfilling prophesy (see discussion below).

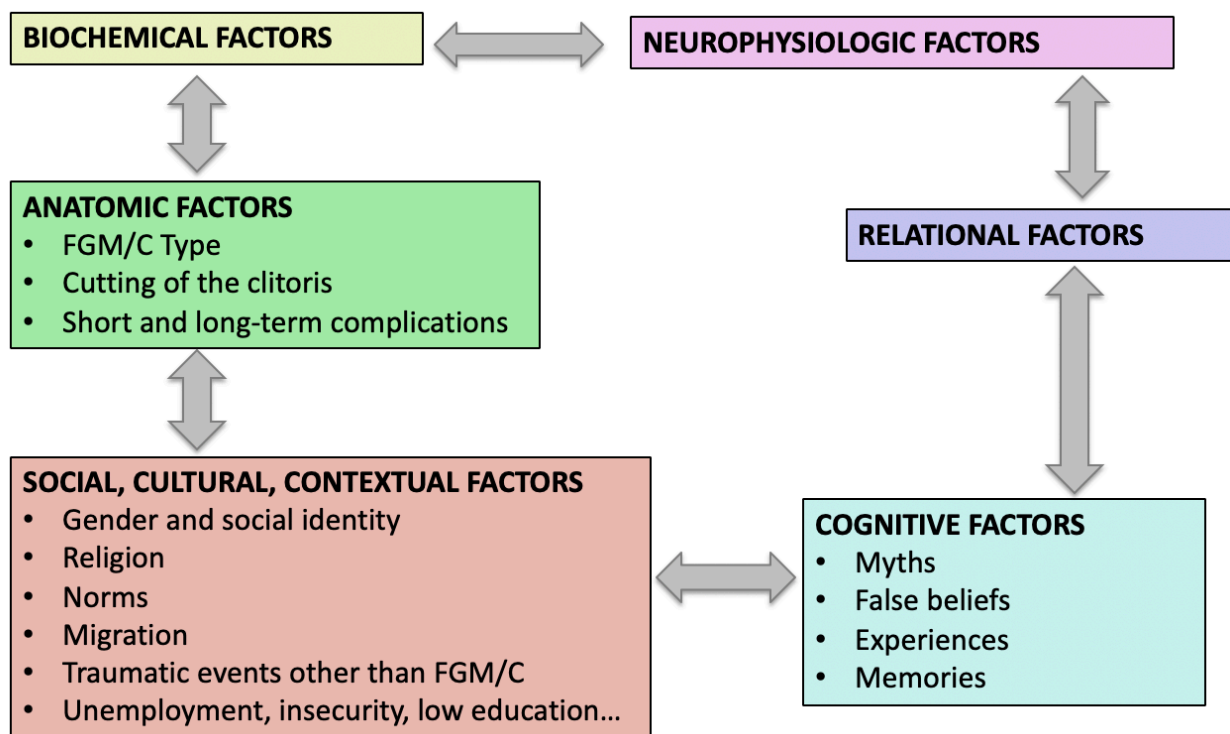


Figure 2: Psychosexual response after FGM/C.

In terms of whether a visible clitoris will result from CR, this is not always possible to achieve from surgery as the re-exposed clitoris may retract from scarring. As Foldes et al. report, only 24% of women in their study had a visible clitoral projection after one year follow up [1].

One implication of these facts is that if CR promises to restore a missing body part, this is simply false advertising. Any tissue that was actually removed (e.g., part or all of the clitoral glans and potentially some portion of the body) cannot in fact be restored by CR. At the same time, the portions of the clitoris that are ‘restored’ through surgery were never lost, but rather, covered by a scar; and even these parts may not be reliably made visible through CR over the long-term. Thus, if a woman seeks CR for the purpose of ‘getting back what was taken from her’—or ‘undoing what was done without consent’—a surgeon offering CR as a potential solution must be very clear about these anatomical particulars.

Now, it may be the case that the woman’s needs are not literal in terms of restoration of the excised (portions of the) clitoris, but rather more psychological or symbolic [38]. Even then, however, she would need to be fully informed of the risks of CR—including the risks of nerve damage or compromised sexual function—and decide whether these risks are justified by the psychological or symbolic gain she anticipates receiving from a figurative ‘undoing’ of prior cutting [39]. We will take this point up in a later section detailing the known risks of CR. To reiterate, however, insofar as *restoration* of the clitoris is characterized as an intended benefit of CR, physicians are ethically obligated to inform women that the surgery does *not* actually do this.

Intended benefit #3: Improving overall sexual function

As the previous section makes clear, the relationship between FGM/C and sexual desire, function, and pleasure, is far more complex than is often imagined. What little evidence there is

indicates that women having undergone FGM/C of various types can suffer from dyspareunia and diminished sexual desire, orgasm, and satisfaction [8-9]. Such information is routinely presented out of context or without appropriate qualification in prevention campaigns, and thus likely adds to the cultural belief that FGM/C makes girls more sexually tranquil. As a consequence, many girls and women may believe that they are, or will be, unable to experience sexual pleasure, desire, or orgasm, simply by virtue of their “mutilation,” and may seek CR as a form of redress. In addition, popular beliefs about the relationship between genital cutting and sexuality—for example, that there is a constant high sexual desire among women who are not cut [3, 9, 28]—may motivate some women who regard such a sexual disposition as desirable to request the surgery. We will now explore whether CR can achieve such aims, and what ethical implications arise.

The sexual dysfunction rate (a term used to describe various problems including diminished arousal or desire, difficulties with orgasm, and dyspareunia) in women who have *not* experienced FGM/C is roughly 43% [39-41]. This ‘baseline’ needs to be kept in mind in light of the widespread, seemingly automatic attribution of sexual dysfunction among women with FGM/C to the cutting itself as opposed to various other factors. Certainly, the available evidence does not support the conclusion that FGM/C *per se* destroys sexual function or precludes enjoyment of sexual relations [35, 39, 41, 42]. At the same time, studies on sexual (dys-)function after FGM/C are few and far between, and the evidence that does exist comes primarily from studies with serious methodological limitations (for example, surveys in which all types of FGM/C, with or without cutting the clitoris, are investigated together without distinguishing specific types; use of questionnaires that were not validated in the language of the population included, or did not cover all of the relevant factors that bear on sexual function and experience;

failure to measure and account for potential confounding factors, such as sexual assault, cultural scripts regarding ‘appropriate’ sexual behavior, and so on) [43-44].

Some studies have explored sexual problems in young women with FGM/C growing up in diaspora settings and in Burkina Faso, who were exposed to negative messages about FGM/C aimed at preventing the practice. These women reported more sexual problems (such as achieving pleasure or orgasm) in comparison with older women who were not exposed to such negative messages [3, 22, 45-46, 49]. This could be interpreted in at least two ways (and this is but one example of how sexual experiences and self-understandings may be influenced by the socio-cultural context, as we hinted at above). It could be that the educational materials “gave the women the idea” that they were sexually damaged, when otherwise they may have not interpreted their own experiences in that way. On the other hand, it could be that the materials enabled the women to make sense of a disadvantage they really were experiencing, or helped them feel more comfortable reporting their problems, as they now had the language or a framework for understanding an aspect of their experience that was previously obscured. Or it could be some combination of both.

In a retrospective study focused on women who previously experienced FGM/C, 82 out of 110 women sampled had experienced other past traumas besides FGM/C, such as rape, forced marriage, or war violence [45], all of which can negatively impact sexual response and bodily self-image [13, 48, 50-51]. The independent contribution of FGM/C to those negative outcomes, if any, is therefore not easy to determine. As noticed, many Western studies on sexual function of women affected by FGM/C focused on the genital cutting only [46], rather than looking holistically and considering the full range of potentially relevant factors.

One ethical lesson here, with implications for CR, is that it is critical to acknowledge and discuss the potential sexual risks of FGM/C, without stigmatizing girls and women who have had

FGM/C by focusing so narrowly on their (altered) genitals, or by jumping to the conclusion that they must all have been sexually disabled by the genital cutting as such. Of course, campaigns and discourses should acknowledge and take seriously the feelings of those women who have been harmed, sexually or otherwise, by FGM/C. But it should not simply be assumed that those harms will be experienced by all women who have undergone FGM/C. Not only is such an assumption on shaky grounds empirically, but it may lead to inappropriate stereotyping of women and girls with FGM/C, thereby potentially increasing the risk of those very harms through psychological mechanisms (e.g., body-shame, expectancy effects, etc.).³

As Sara Johnsdotter writes, there is no ‘pure’ sexual experience unmediated by context, culture, and our relations to our bodies [49]. The question of whether CR restores sexual functioning therefore cannot be answered as such, as it is not clear whether and how the functioning was impaired through FGM/C (as opposed to other factors) in the first place, and how much socio-cultural influences and misconceptions shape the assessment of sexual functioning in general.

Intended benefit #4: Symbolic restitution. Repair of the harm and stigma caused by non-consensual genital cutting.

There are no studies that have directly investigated the outcomes of CR in terms of “symbolic restitution” among women. Such an outcome would be considerably difficult to assess in a controlled, scientific matter, as well as interpreted. It is possible that some women may feel

³ Those who seek to prevent medically unnecessary genital cutting of children in future generations may believe it is necessary to emphasize potential sexual or other harms that can sometimes follow from FGM/C. Since FGM/C is wrongful, the thinking goes, it must by its nature be seriously harmful. But such an approach to anti-FGM/C campaigning can encourage unsubstantiated, exaggerated, or over-generalized claims of harm, which, we suggest, may itself be harmful to women and girls if it leads to stereotyping, stigmatization, or body-shaming of those who have experienced various forms of FGM/C. As an alternative, some authors argue that FGM/C can be wrongful (e.g., by violating consent) without the need to prove severe harm [47].

psychologically repaired or “made more whole” after CR. Some may also view CR as a means to improving self-esteem or as an antidote to stigma. But CR may also be seen or experienced as a new, invasive act of cutting on top of the old ritualistic cutting and one that may be equally medically unnecessary while introducing further risk. Moreover, it may be done to conform a woman to a different standard of ‘normality’ than the one with which she was raised (and to which she may have adapted), based on an acquired set of socio-cultural norms that stigmatize her genitally altered body. Whether CR is the most appropriate or effective way to relieve such stigma—as opposed to psychosocial counseling or other attempts to neutralize negative interpretations of the body—is far from clear.

c) Have the surgical and non-surgical (e.g., emotional, sexual) risks of CR been sufficiently minimized and do they stand in an appropriate relation to its potential benefits given alternative options?

Table 2 summarizes the known medical risks and benefits based on available evidence; the largest data set with the longest-term follow-up comes from the study done by Foldes et. al [1]. Based upon the foregoing discussion and the available data, a meaningful risk-benefit assessment is not possible at this point. It is not clear, a) whether there is physical dysfunction of a kind that could be resolved by CR among those patients that do not suffer from clitoral pain, b) whether there is any reliable beneficial effect of the surgery that could justify the known risks (bleeding, scarring, post-op pain, anesthesia, etc.), or c) what weights would be appropriate to assign to particular benefits or risks, even if more about them, such as their likelihood under various conditions, were known.

As noted, the Royal College of Obstetricians and Gynecologists currently recommends against CR as there is not enough evidence to support its benefit. Similarly, the WHO does not make a recommendation in favor of CR due to the lack of supporting evidence [5, 26].

Table 2. Risks and benefits of clitoral reconstruction

Risks	Potential Benefits
<p>Risks associated with undergoing anesthesia</p> <p>Postoperative complications 5-15%⁺</p> <p>Wound dehiscence, hematoma, infection</p> <p>Hospital re-admission 3.7 %¹</p> <p>Revision surgery 4.2%¹⁸</p> <p>If vaginal graft: partial necrosis of the graft (2/32 patients)²¹</p> <p>Chronic pain that was not present preoperative-rates not reported</p> <p>Hyperesthesia of the clitoris¹⁸</p> <p>Dysfunctional orgasm in women who were previously able to achieve orgasm¹</p> <p>Keloid</p> <p>Recurrence of Post-traumatic Stress Disorder due to post-op pain⁴⁶</p> <p>No change in sexual response, body image and aesthetic appearance^{1, 18, 25}</p>	<p>More visible and accessible clitoris 3%-42%¹</p> <p>Improved sexual function 43-51%^{1, 25*+}</p> <p>Decreased pain^{1, 24}</p> <p>Improved gender identity</p> <p>Improved body image</p>

*No validated scale was used to compare preoperative and postoperative expectation

⁺Rates varied based on review of different studies as referenced

Part of the difficulty inherent in making any general recommendation, even as better evidence accumulates, is that the loss or harm experienced by a girl or a woman asking for surgery is not necessarily commensurate to the type or anatomic degree of FGM/C and its physical complications. For example, a woman who underwent a less invasive form of FGM/C under sterile conditions, without physical complications, might nevertheless greatly resent that this was done without her consent when she was a child and consequently experience psychological distress, negative effects on sexual enjoyment, an impaired sense of self or bodily integrity, and so on. Such resentment and negative sexual impact has been seen in studies of men, for example, who were circumcised without their consent as babies or small children, as compared to those who were circumcised with their consent as adults [52-53]. In other words, the sheer lack of consent—or a sense of personal violation from having had one's 'private parts' interfered with when one could not resist—can be psychosexually damaging to some individuals, quite apart from the specific physiological effects of the cutting [54].

Yet not all women will experience such negative outcomes after FGM/C. A woman who was cut in a relatively extensive manner, but who endorses the cultural and aesthetic norms of her community by virtue of which the cutting was done, may form an adaptive preference for her modified genital appearance which can have a neutral or positive impact, all else being equal, on her self-esteem and sexual enjoyment. As has been argued elsewhere, “the actual effects of a given act of genital cutting on the mental health and sexual well-being of a particular individual will depend upon numerous factors, both internal and external to the individual ... which interact with each other in complex ways” [54].

For now, the available evidence on CR has covered only short-term follow-up of up to one year post-operatively [8, 11]. Long-term potential benefits such as achieving a sense of holistic identity or bodily integrity have not been adequately evaluated. There are also potential

confounds in assessing the causal origin of any positive effects that may occur. When CR is performed in tertiary care centers, for example, some women receive pre- and post-operative sexual therapy. It may be that this ongoing therapy is primarily responsible for any improvements in their sense of identity, through the removal of psychological barriers to achieving long-term sexual pleasure and an enjoyable sex life, rather than CR in-and-of-itself. Thus, we do not know whether CR helps to improve a sense of identity and bodily integrity.

In sum, apart from limited evidence of benefit in the case of clitoral pain, CR surgery might not serve its expected positive functions through direct anatomical change. In some cases, it may represent a psychosocial way of recovering from the felt loss of an anatomical structure or from an impaired sense of sexual well-being, and it may help some women experience their gender identity in a more positive way or increase their acceptance by current or future sexual partners in a given sociocultural context. However, there is no strong evidence to date, beyond isolated anecdotes, to support such speculation. Whether or when potential psychosocial benefits might—in general—justify the risks of an otherwise medically unnecessary surgery is a matter of ongoing ethical debate. This can be seen, for example, in discussions of so-called hymen ‘reconstruction’ interventions intended to restore a presumed marker of virginity, ostensibly as a way of avoiding predicted psychosocial harms [57]. This example, too, shows that medically unnecessary genital cutting practices are rarely if ever ethically analyzable in ‘purely’ medical terms. Cultural context, prevailing social forces, and their complex effects on patient autonomy must also be factored into the equation.

d) What is the role of autonomy and informed consent in the ethical justification of CR?

When there is uncertainty about the nature, likelihood, or magnitude of potential benefits and harms, or about how to weigh them, justification for a medical procedure will often lie in the

autonomy and informed consent of the (adult) patient. Respect for autonomy is one of the most important principles in—especially Western—biomedical ethics [55-56]. In this framework, autonomy involves the capacity to understand the likely or potential long-term implications of an action or intervention, and to think about and decide for oneself how to act on the basis of such information in pursuit of one's goals and values (within the relevant social and relational contexts) [55]. In the medical domain, respect for autonomy is often operationalized by informed consent procedures. In order to be ethically valid, a person's consent must be based on sufficient information—of the right kind—to support a meaningfully autonomous decision. To determine whether consent for CR is valid in this sense and appropriately respectful of the autonomy of those women who may request it, it is necessary to know what information is used to make the decision, why the decision is made, and how the woman's decision-making may be influenced.

Based upon these considerations, it is an open question whether the consent obtained for many CR procedures in fact qualifies as 'adequately informed'. Despite the almost total lack of high-quality evidence that CR—as opposed to attendant psychosocial support—is effective at fulfilling its most widely touted aims (e.g., that a woman's sense of dignity, sexual pleasure, or ability to orgasm can be restored), such promised outcomes are major factors in the success of media campaigns in recruiting women for the operation [21, 57-58]. Needless to say, consent based on false, misleading, or inadequately supported claims of benefit is not usually 'informed' in the way required for it to be ethically valid.

Evidence also points to a central role for the counselling physician in shaping women's decisions. These decisions can differ considerably depending on the surgeon's attitudes about female sexuality or about what constitutes 'normal' genital appearance or function, their cultural background, the information presented, the physician's willingness to offer alternative,

nonsurgical treatments, the time made available for reflection, pre-operative psychosexual therapy, and education on clitoral anatomy and potential outcomes of the surgery.

For example, a surgeon who characterizes women who have undergone FGM/C as “abnormal, mutilated and sexually deprived” is likely to have a different influence on the decisions of a potential client compared to a surgeon who emphasizes the capacity of genital structures that remain intact to facilitate sexual pleasure. This latter approach might be taken in the context of sexual education and therapy. Indeed, research suggests that when sex therapy is made available, a significant number of women who request CR for reasons that are not related to clitoral pain do not finally opt for surgery, as their needs appear to be met by the therapy [2,25, 45]. Such therapy may include education about clitoral function and anatomy and the correction of common misconceptions—such as the belief that the clitoris has been totally removed by FGM/C, or the two-part notion promoted by Clitoraid that (1) FGM/C is causally sufficient to prevent orgasm, while (2) CR is causally sufficient to enable orgasm [2, 21].

Accordingly, most experts agree that women’s needs will often be better met by education to dispel misconceptions about sexual function, and psychosexual therapy to help them build a more positive relationship to their bodies, as well as physical and psychosexual therapy in cases of dyspareunia, than by additional cutting into their intimate anatomy. Thus, even when CR is medically indicated, for example, as a treatment for pain, it should be performed in association with psychosexual therapy [26, 46].

What if a woman has been appropriately educated, in a non-judgmental manner, and has had access to psychosexual care, but still desires to go through with CR? For example, she may believe that her genitals will have an appearance that she or her partners will find more aesthetically pleasing as a result of CR. Or she may feel that bringing the remaining part of her clitoris forward under conditions of informed consent will symbolically ‘undo’ the earlier, non-

consensual cutting she experienced through FGM/C (even though she understands that the clitoris may not remain in that position over the long-term, as current evidence suggests). In such a case, CR might be seen as a tool of empowerment, allowing the woman to relate to her embodied sexuality in a way that more closely aligns with her preferences and values.

Yet even then, the power of cultural forces and social norms to promote a narrow vision of genital aesthetics or sexual function must not be discounted: these pressures, and the desire to conform to them, may lead some women to take on risks and harms they would otherwise wish to avoid. Such factors are undoubtedly at play in upholding a range of risky practices including FGM/C, cosmetic genital surgeries, requests for “re-infibulation” after delivery, hymen reconstruction, and so forth. As recent scholarship suggests, some women with FGM/C who migrate to Western countries undergo a polarized flip in how they view the practice: from seeing FGM/C as normal, beautifying, or symbolically meaningful, to seeing it as abnormal, mutilating, and oppressive [40, 59-61]. Accordingly, they may experience distress about their genital appearance or function, believing that they cannot experience normal-range sexual pleasure, and attribute this real or perceived dysfunction to FGM/C only.

When CR is not medically indicated as a treatment for pain, it may be characterized as a “psychosocial surgery” intended to promote the woman’s overall well-being. If the status of CR as a well-being promoter rests on norms that are themselves ethically suspect—because they are based on myths or represent a narrow aesthetic standard that can only be achieved by exposing oneself to surgical risk—then physicians and possibly even patients who choose CR for such reasons may be complicit in reinforcing such norms [62-63]. Nevertheless, it is arguably not the responsibility of any individual woman to sacrifice her own conception of the good on the altar of changing wider social norms. On a case by case basis, then, if there is a strong reason to believe that CR would promote a woman’s well-being (all things considered) despite not being

medically necessary, it may be permissible to perform with her informed consent. However, non-surgical options should first be emphasized and fully explored before agreeing to expose a woman to surgical risk.

To summarize, respect for women's autonomy is essential. However, easy appeals to such autonomy must be treated with caution in light of powerful cultural forces and social norms concerning the female body and sexuality, and also when such appeals are used to justify CR through coercive, inaccurate, or misleading media advertisements or in working with vulnerable populations such as those who have language or financial barriers. If a woman has been disabused of any myths surrounding her sexual anatomy and function, has been fully informed of the risks and benefits of CR (which includes a frank discussion of the lack of adequate research into these questions), has been offered psychosexual treatments for other potential causes of distress or dysfunction, and nevertheless believes, with good reason, that the surgery will improve her overall well-being in a given social context (in terms of body-image, feelings of self-worth, and so on), then CR may be justified on these grounds. This does not mean that surgeons are ethically *obliged* to perform CR in such cases if they judge it to be medically unnecessary; rather, we suggest that in these (admittedly rather theoretically constructed) cases it could be ethically *permissible* for a surgeon to perform the surgery under such conditions.

e) How do wider social and structural dimensions bear on the answer to these questions?

Our analysis so far has shown that the risks, benefits and 'informed choices' in relation to CR are intricately interwoven with broader social and structural dimensions in relation to FGM/C, gender roles, the body, and sexuality. We are all influenced by wider social standards, gender role expectations, and sexual and aesthetic norms, and there is a range of responses to such influence from total resistance to total conformity. However, if the standards and norms are

unjust, leading to power imbalances, or require an unreasonable amount of risk to achieve, then they should ideally be challenged and changed.

Future ethical analysis should therefore focus on these broader issues incorporating insights from public health ethics, sociology, feminist theory, and other disciplines. For example: does the availability of CR contribute to the stigmatization of women with FGM/C, by reinforcing the notion that they are incomplete, mutilated, or sexually impaired, or otherwise ‘less than’ other women—such that they need to be ‘fixed’ through surgery? Are women replacing one invasive, medically unnecessary form of cutting (i.e., the original FGM/C) with another (i.e., CR), when truly informed consent may be difficult or rare in either case? How can the myriad factors that may influence the decision for CR—such as religiosity, gender role expectations, educational status, relationship with the partner, history of exposure to gender-based violence, war trauma, or sexual abuse, gender injustices, media advertisement, unrealistic norms about bodies and sexuality, and so on—be adequately accounted for in ethical analyses of CR (if indeed they can be)? How are decisions influenced by one’s sexual partner—including such factors as whether the partner shares the woman’s cultural or ethnic identity or background? How are such decisions influenced by one’s own sexual identity or level of maturity? How or in what way(s) should men in general be involved in sexual and anatomical education and decisions about women’s bodies? To what extent does a provider’s worldview (which may involve “iatrogenic pathologizing”) shape the nature of the counseling and intervention: are women led to feel ashamed or embarrassed about their modified genitalia, and are there nuances of power and respect for authority that implicitly bias the patient-provider relationship? How should reimbursement and access to CR work? Should, for example, CR be free, while women seeking other cosmetic surgeries without direct physiologic benefit be responsible for shouldering the cost?

Conclusion and open questions

Based on our first ethical assessment, which included a survey of the available evidence, it appears that CR cannot be medically indicated on physical or anatomical grounds, except in certain cases as a treatment for pain and potential improvement of associated sexual dysfunction when these have not responded to more conservative measures. As our analysis suggests, if the surgery can be justified at all, it will only be in those (rather theoretically constructed) cases when women have been appropriately informed about the clear risks introduced by CR and the lack of strong evidence regarding potential benefits (sexual, psychological, or symbolic); when they have been educated about their genital anatomy and disabused of any myths surrounding female sexual function; when they have been treated compassionately and in a non-judgmental manner; when they have been exposed to and fully considered potential alternatives; and when they have received high-quality psychosexual education, care and/or therapy. Of course, women who are experiencing psychosexual dysfunction, whether or not they have undergone FGM/C, should be assessed and treated in accordance with the current scientific evidence and best clinical practices.

All of that being said, the ethical discussion of CR has only just begun. To encourage further critical thinking on this issue, we have pointed towards broader social and structural dimensions of CR in relation to FGM/C, gender roles, the body, and sexuality that are highly relevant to risk-benefit assessments and overall ethical evaluation of the surgery. With this publication, we call on our colleagues, affected women, and other stakeholders, to join this important conversation.

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