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The relationship between urogenital fistula and female genital mutilation

Kadın genital mutilasyon ile ürogenital fistül arasindaki ilişki

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Abstract

Aim: This study investigates the relationship between vesicovaginal fistulas and types of female genital mutilation FGM.

Material and Methods: The participants of this study were 78 patients, who had taken part in "the Fistula Campaign" that was carried out in Sudan in December 2014 to raise awareness about the development of vesicovaginal fistula. First, the patients were examined and their fistula and mutilation types were determined. Then, the patients were compared in terms of the type of genital mutilation they had undergone. The average length of urinary incontinence, surgery type, development of complications and recurrence of fistula were investigated according to the type of FGM.

Results: The average age of the participants was 25.3±6.7 (16-42) years. The average number of births was 3.3±2.2. Forty-one patients had undergone Type 2 mutilation and 37 had undergone Type 3 genital cutting. When patients from the Type II and Type III FGM groups were compared in relation to their surgery type, the latter group patients were found to need further transvesical attempt at a significant rate. (p=0.014) The rate of success for the Type II FGM group was found to be 73.2% and 78.4% for the Type III patient group. The overall rate was calculated as 75.8%(p=0.405).

Conclusion: FGM is a significant risk factor for female reproductive health. FGM-related fistulas can cause physical, social and psychological traumas in women, which arises as a serious concern for public health. Therefore, it is important to organize campaigns to raise awareness about fistulas in FGM-practiced regions.

Keywords: Female Genital Mutilation; Urogenital Fistula; Women's Health.

Öz

Amaç: Bu çalışmada kadın genital mutilasyon (KGM) ile vezikovajinal fistül arasındaki ilişki incelenmiştir.

Gereç ve Yöntem: Çalışmaya Nyala, Sudan'da vezikovajinal fistül nedeni ile Aralık 2014'te yapılan ''Fistül kampanyası'' na başvuran toplam 78 hasta dahil edildi. Öncelikle hastaların fistül ve genital mutilasyon tipleri belirlendi. Uygulanan KGM tiplerine göre hastalar, ortalama inkontinans süreleri, operasyon tipleri, komplikasyon gelişimi, fistül nüksü açısından karşılaştırıldı.

Bulgular: Çalışmaya dahil edilen hastaların ortalama yaşları 25.3±6.7 (16-42) yıl idi. Hastaların ortalama doğum sayısı 3.3±2.2 idi. Kadın sünnetine göre değerlendirildiğinde hastaların 41'inin tip 2 ve 37'sinin tip 3 sünnetli olduğu saptandı. Tip 2 ve tip 3 KGM hastaları operasyon tiplerine göre karşılaştırıldığında Tip 3 KGM olguların anlamlı oranda daha fazla transvezikal girişime ihtiyaç duyduğu saptanmıştır (p=0.014). Başarı oranı tip 2 KGM hasta grubu için %73.2, Tip 3 KGM hasta grubu için %78.4 ve tüm hastalar için %75.8 olarak saptandı (p=0.405)

Sonuç: KGM kadın üreme sağlığı için önemli bir risk faktörüdür.Fistülün yaratmış olduğu fiziksel, sosyal ve psikolojik travmalar nedeni ile KGM çok ciddi bir halk sağlığı problemidir. KGM'nin sık uygulandığı bölgelerde KGM'nin önlenmesi açısından uyarıcı ve bilgilendirici çalışmalar yapılması önemlidir.

Anahtar Kelimeler: Kadın Genital Mutilasyon; Ürogenital Fsitül; Kadın Sağlığı.

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INTRODUCTION

Genital fistula is defined as the abnormal passage or opening that forms between the genital system and urinary or intestinal system (1). Vesicovaginal fistula (VVF) developing between the vagina and the bladder is rarely seen in developed countries while it is more frequent in developing regions such as sub-Saharan African countries, the Arabian Peninsula and Asia (2). In developing countries, prolonged labor or traumatic birth is the main reason for fistula development while in developed countries, VVFs mostly occur secondary to radiotherapy practices and genital cancer types as well as gynecological surgery (3). During prolonged or unprogressing labor, the constant pressure applied by the baby's head on the vaginal wall and bladder leads to necrosis, and consecutively, to fistula formation (4).

Some of the primary reasons for difficult and long labors in developing countries include; women being married and thus engaging in sexual activity before their pelvises are wide enough for healthy child-bearings; not having access to capable doctors and health care professionals who can provide basic medical care; and vaginal adhesion or the narrowing of the birth canal due to the practice of female genital mutilation (FGM) (4,5).

FGM and VVF are prevalent in sub-Saharan African countries, including Sudan. This shows a probable relationship between the two cases. Therefore, this study aims to reveal the relationship between VVF and types of FGM.

MATERIAL and METHODS

The participants of this study were 78 patients who had applied for "the Fistula Campaign" carried out in in two health centers in Sudan in December 2014 to raise awareness against VVF development. The patients were asked to give demographic information which included; age, city/town, education, number of time having given birth, age at first birth, places of birth and types of birth. The data was written down. The patients were physically examined to determine their fistula and mutilation types. There is no any approval because of this study design is retrospectivelly.

The World Health Organization classifies fistula-cutting procedures into four main groups;

Type I: Genital cutting consisting of partial or total removal of the clitoris and/or the prepuce (clitoridectomy).

Type II: The partial or total removal of the clitoris and the labia minora, with or without excision of the labia majora (excision).

Type III: Narrowing the vaginal orifice and creating a covering seal by cutting and appositioning the labia minora and/or the labia majora, often accompanied by the excision of the clitoris. (infibulations)

Type IV: Other miscellaneous harmful genital procedures carried out for non-medical purposes, such as pricking, piercing, incising, scraping and cauterization (6).

In the current study, the patients were compared with each other according to the type of genital mutilation they had undergone. In each FGC group, the average length of urinary incontinence, surgery type, development of complications and fistula recurrences were investigated.

RESULTS

The average age of the participants was 25.3±6.7 (16-42) years. 73.1% of the patients lived in rural areas while those living in cities constituted 26.9% of all patients. In terms of education, 67 patients were illiterate; 10 were primary school graduates and one patient had completed secondary school. Fifty-three participants were housewives, and 25 were employed outside the home. The average number of births was 3.3±2.2;- and the average age at first birth was found to be 16.5±2.6 years.

During their pregnancy, only five patients had received health care. Eleven patients delivered their babies in a health institution and 67 at home. Thirty-one patients had undergone normal delivery; 42 interventional labor and five a cesarean section. The mostly seen mutilation type was Type II (41 patients) followed by Type III (37 patients). The mean length of urinary incontinence was found to be 8.7±3.0 months (1-20).

During the physical examination, 60 patients were found to have a VVF while 18 participants had developed a urethrovaginal fistula. Of the 41 Type II patients, 40 had obstetric fistulas while one had an iatrogenic-related fistula. In addition, 30 patients in this group had a VVF. Thirty-six patients in the Type-III group were obstetric and one was iatrogenic. The surgery type was transvaginal in 67 and transvesical in 11 patients.

Age, age at first birth, duration of complaint and number of deliveries were compared in a subgroup analysis of patients in Type II and III groups. Table 1 presents the data collected from both groups. The age and age at first birth were found to be lower in the Type II FGC group, however, no difference was observed between the groups with respect to the duration of complaints and number of deliveries. When the surgery type was compared, a significant number of patients in the Type III group were found to need a further transvesical operation. (p=0.014) In the Type II FGC group, 6 patients had post-operatively developed an infection, and another 3 had hemorrhage, while in the Type III FGC group, hemorrhage or infection was seen in 4 patients. None of the hemorrhage cases in either groups required a blood transfusion. During the monthly examinations, 11 patients from the Type II group and 8 patients from the Type III group had recurrence.

The rate of success for the Type II FGC group was calculated as 73.2% while it was 78.4% for the Type III FGC group. The overall rate was found to be 75.8% (p=0.405) (Table 2).

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Table 1. Relationship between types of genital mutilation and operations

	Type 2 (n=41)	Type 3 (n=37)	*p value*
Age (year)	22.2±3.7(17-36)	28.8±7.8(16-42)	*p<0.001*
Age at first birth (year)	16±1.4(14-21)	17.1±3.5(14-29)	*p=0.030*
Length of complaint (month)	8.9±2.9(4-20)	8.7±3.0(1-20)	*p=0.070*
Number of births	2.7±1.5(1-9)	3.4±2.2(1-10)	*p=0.650*
Vesicovaginal fistula	30 (%73.1)	30 (%81.1)	*P=0.824*
Urethrovaginal fistula	11(%26.9)	7 (%18.9)	*p=0.408*
Transvesical surgery	2 (%4.9)	9 (%24.3)	*p=0.014*
Transvaginal surgery	39 (%95.1)	28 (%75.7)	*p=0.08*

Table 2. Development of complications and success rates of operations according to the mutilation types performed

	Type 2	Type 3	Total	*p value*
General complication rate	9 (%21.9)	8 (%21.6)	17 %21.7)	*p=0.486*
Success rate %	73.2	78.4	75.8	*p=0.405*

DISCUSSION

A genital fistula is defined as an abnormal passage or opening that forms between the genital system and urinary or intestinal system (1,7). VVF developing between vagina and the bladder is rarely seen in developed countries while it is more frequent in developing countries (2). Genital fistulas are associated with gynecological surgeries, radiotherapy practices and genital cancer types in developed countries; however, in Africa, the cause of these fistulas is mostly difficult labors (3,4,8). Though there is no current knowledge of the incidence of fistulas in women, it is estimated that more than two million women develop fistulas and 130.000 incidents emerge every year, particularly in Africa, Asia and poor Arabian countries (9).

Female genital cutting (also commonly known as "female circumcision" or "female genital mutilation") refers to "all procedures involving partial or total removal of the external female genitalia or other injury to the female genital organs for non-medical reasons" (6). Such practices are common in traditional cultures throughout much of sub-Saharan Africa. The current study clearly shows that VVF and FGM procedures have a significant effect on trauma being experienced by a patient during delivery. All patients in this study had been circumcised. In addition, patients who had undergone type 3 further needed a transvesical operation which is considered to be a more invasive procedure.

Over years of research, all types of FGM particularly infibulation, have been found to be associated with reproductive health morbidities, increased risk of childbirth complications and significantly higher risks of tearing and stillbirths, and more likely to be complicated by caesarean section, postpartum hemorrhage by lead, and episiotomy (6,10). This is also in agreement with the findings of the current study in that it was the most important cause of the higher number of obstetric fistula incidents. Data from African countries estimate the incidence of obstetric fistula between 1-3 per 1000 deliveries for West Africa and 5-10 per 1000 deliveries in some rural areas of Africa (8). Obstetric fistula is found in all developing countries including Sudan. Obstetric fistula due to obstructed labor is by far the most common form of genital fistula, constituting an estimated 80-90% of all global genital fistula cases. Obstetric fistula is usually caused by several days of obstructed labor, without timely medical intervention or cesarean section. During this time, the soft tissues of the pelvis are compressed between the baby's head and the mother's pelvic bones. The lack of blood flow during the labor causes tissue death, creating a hole between the mother's vagina and bladder. In our study, obstetric fistula has been found responsible for fistula formation in 40% of women with Type II circumcision and 36% with Type III circumcision. This demonstrates that adhesion and strictures from FGM cause further damage to the genitourinary system during childbearing. The organization of campaigns to raise awareness against fistulas in FGM-practiced regions is a clear indicator that VVFs are prevalent here and FGM poses a grave danger to the female reproductive health.

Left with chronic leaking, women with obstetric fistula are often abandoned or neglected by their husbands and families, unable to work, and ostracized by their communities. Women who develop obstetric fistula usually have had a stillbirth, so they must also deal with the loss of a baby. Women with fistula are often among the most impoverished and vulnerable members of society (11).

Once commonly seen throughout the world, obstetric fistula has been eliminated in wealthy countries with the improvement of obstetric care and the Cesarean section becoming widely available (4, 12-14). However, obstetric fistula continues to affect women throughout the developing world. Pregnant women in some parts of Africa and Asia, among other areas, undergo both prolonged labor and injury with little or no access to basic healthcare. In nearly all instances, a woman suffering from this kind of injury is subjected to physical, social, and psychological outcomes, having to go through extreme pain with no medical support. These injuries can also result in infertility, recurring infections, loss of sexual function, paralysis and eventually death (15).

In conclusion, FGM is a significant risk factor for female reproductive health. FGM-related fistulas cause physical, social and psychological traumas in women, thus arise as a very serious concern for public health. In developing regions such as Sub-Saharan African countries,

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informative studies should be carried out to raise the awareness of the public, and this issue should remain to be on the agenda. The researchers of this study suggest that campaigns with education at the forefront be organized to prevent FGM practices.

REFERENCES

1. Stamatakos M, Sargedi C, Stasinou T, Kontzoglou K. Vesicovaginal fistula: diagnosis and management. Indian J Surg 2014;76(2):131-6.
2. De RidderGhoniem GM, Warda HA. The management of genitourinary fistula in the third millennium. Arab J Urol 2014;12(2):97-105.
3. Tebeu PM, Fomulu JN, Khaddaj S, de Bernis L, Delvaux T, Rochat CH. Risk factors for obstetric fistula: a clinical review. Int Urogynecol J 2012;23(4):387-94.
4. Obstetric Needs Assessment Report: Findings from Nine African Countries. UNFPA/Engender Health. UNFPA, 2004 New York. Avialible at: http://www.unfpa.org/sites/default/files/pub-pdf/fistula-needs-assessment.pdf)
5. Adler AJ, Ronsmans C, Calvert C, Filippi V. Estimating the prevalence of obstetric fistula: a systematic review and meta-analysis. BMC Pregnancy Childbirth 2013;30(13):246.
6. WHO study group on female genital mutilation and obstetric outcome. Banks E, Meirik O, Farley T, Akande O, Bathija H, Ali M. Female genital mutilation and obstetric outcome, WHO collaborative prospective study in six African countries. Lancet 2006;367(9525):1835–41.
7. Tenggardjaja CF, Goldman HB. Advances in minimally invasive repair of vesicovaginal fistulas. Curr Urol Rep 2013;14(3):253-61.
8. Cron, J. Lessons from the developing world: obstructed labor and the vesico-vaginal fistula. Med Gen Med 2003;14;5(3):24.
9. Stanton C, Holtz SA, Ahmed S. Challenges in measuring obstetric fistula. Int J Gynaecol Obstet 2007;99(Suppl 1): S4-S9.
10. Almroth L, Elmusharaf S, El Hadi N, Obeid A, El Sheikh MA, Elfadil SM, Bergström S. Primary infertility after genital mutilation in girlhood in Sudan: a case control study. Lancet 2005;366(9483):385–91.
11. Mellano EM, Tarnay CM. Management of genitourinary fistula. Curr Opin Obstet Gynecol 2014;26(5):415-23.
12. Arrowsmith SD, Barone MA, Ruminjo J. Outcomes in obstetric fistula care: a literature review. Curr Opin Obstet Gynecol 2013;25(5):399-403.
13. Wong MJ, Wong K, Rezvan A, Tate A, Bhatia NN, Yazdany T. Urogenital fistula. Female Pelvic Med Reconstr Surg 2012;18(2):71-8;quiz 78.
14. De Ridder D. An update on surgery for vesicovaginal and urethrovaginal fistulae. Curr Opin Urol 2011;21(4):297-300.
15. WFF Headquarters Worldwide Fistula Fund. 2014 Avialible at: http://worldwidefistulafund.org/about-wff/.