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■ Original Research Article

Review of Obstetric Fistula Surgical Campaign Conducted at the State Specialist Hospital, Maiduguri, North-Eastern, Nigeria

MB Kawuwa[1], AG Mairiga[1], E Fillibus[2], Bello Hamza[1]

1. Department of Obstetrics and Gynaecology, University of Maiduguri, Maiduguri, Nigeria.
2. Department of Obstetrics and Gynaecology, State Specialist Hospital Maiduguri, Maiduguri, Nigeria

Abstract

Background: Obstetric Fistula occurs as a direct consequence of poor or lack of appropriate obstetric intervention. Surgical campaign is one of the tertiary preventive strategies aimed at reducing the menace. **Objectives:** The objectives of the study were to find out the age-specific and parity-specific prevalence of the condition, duration of the condition, types of fistulas commonly seen during the campaign and number of prior repair attempts, as well as the success rates of the repairs. **Methodology:** This was a retrospective descriptive study of obstetric fistula cases surgically managed during a surgical campaign in the North-Eastern Nigeria. **Results:** A total of 61 patients were surgically managed during the campaign. Their mean age was 32 ± 4 years. The age-specific prevalence was more among aged 30 to 39 years (29.5%), but when adjusted for the duration of the condition, the prevalence became more among the teenagers (37.7%). The parity-specific prevalence of the scourge was more among multiparous women (44.3%) and fifty nine percent of the patients had no prior attempt at repair. Majority of the patients (77.0%) were living with the condition for more than one year. Type I and type II fistulas accounted for 47.5% and 36.1% respectively. The study showed a success rate of 80.3%. **Conclusions:** Obstetric fistula is still prevalent in our communities. More prevalent among the teenagers and multiparous women, majority living with the condition for more than one year, and Type I and type II fistulas were more prevalent. Repairs undertaken during the surgical campaigns had a very good success (> 80%). Hence, Governments and non-governmental Organizations should invest more in similar campaigns to reduce the menace.

Key words: Maiduguri, Northeastern Nigeria, Obstetric Fistula, Surgical campaign, VVF

Correspondence:

Abdulkarim Garba **Mairiga**,
Department of Obstetrics and Gynaecology,
College of Medical Sciences
University of Maiduguri,
Maiduguri, Borno State.
Email: dragmairiga@gmail.com
Phone number:
+2348023726622;
+2348035281887

Introduction

Vesico-vaginal fistula (VVF) is an abnormal communication between the vaginal and the bladder mucosa, whereas in recto-vaginal fistula (RVF) the communication is between the vaginal and the rectal mucosa.[1-4] The prolonged entrapment of the vaginal soft tissues between the fetal skull and the maternal

pelvic bone, in prolonged obstructed labor, results in ischemic necrosis and subsequent sloughing off of the tissues in about three to ten days after delivery leading to fistula formation.[2,4] The consequence is uncontrollable leakage of urine and/or feces through the vagina in the affected patients.[1-5] Such women face a triad of embarrassment from continuous leakage of urine, bereavement from losing a child, and the risk of losing her husband due to the social stigma attached to the condition.[2,3]

The true incidence of obstetric fistula is unknown.[2,4] However, it was estimated that more than 2 million girls and women live with untreated obstetric fistula, with an incidence of 50,000 to 100,000 new cases each year, mostly occurring in Sub-Saharan Africa and Asia.[6] Nigeria with over one million women affected accounts for 40% of fistula cases worldwide.[7, 8] Furthermore, about 13,000 new cases occur every year in Nigeria.[7] FIGO estimated that, globally, only one in fifty cases will ever receive treatment.[9]

Global attention was drawn to the problem of obstetric fistula in Nigeria in 2003 when UNFPA launched the landmark Campaign to End Fistula. [8] In 2005, UNFPA with partners organized a 'Fistula Fortnight' surgical campaign in four Northern Nigerian Hospitals and 564 women were operated. Since then, UNFPA has been conducting similar campaigns in various parts of Nigeria with participants drawn from both national and international fistula surgeons under the auspices of International Society of Obstetric Fistula Surgeons (ISOFS).[8,10,11]

The Federal Government of Nigeria also came up with various policies and programs under the National Strategic Framework for the Elimination of Obstetric Fistula in Nigeria aimed at improving access to prevention, treatments and rehabilitation services. [11, 12]

One of these campaigns was conducted at the Fistula Centre of the State Specialist Hospital Maiduguri, in July 2020. UNFPA in partnership with Korean and Canadian governments sponsored the program; which included the surgical campaign and refurbishing of the operating theaters and wards. We feel there is the need to review such surgical campaigns to see if it has any impact on tackling the scourge of obstetric fistula in the area.

Therefore, our objectives were to review the cases operated during the surgical campaign to find out the age-specific and parity-specific prevalence of the conditions, duration of leakage before the index surgery, types of fistulas commonly seen in the area and number of prior repair attempts as well as the success rates of the repairs undertaken during the campaign.

Methodology

Study design

This was a retrospective descriptive study of obstetric fistula cases surgically managed at the State Specialist Hospital Maiduguri, North-Eastern Nigeria, during an obstetric fistula surgical campaign.

Study Area

The State Specialist Hospital Maiduguri is a 460 bedded tertiary hospital located in the state capital and Maiduguri is the largest city in Borno state, Northeastern Nigeria. The hospital has a 40 bedded ultra-modern fistula Centre equipped with an operating theatre dedicated to the management of obstetric fistulas in the area. The metro population of Maiduguri was 772,000 in 2019, a 1.58% increase from 2018. [10] Borno State has an estimated population of 4,171,104[13, 14] and a population density of 55 people per square kilometer. The inhabitants are predominantly Muslims of Kanuri, Hausa, Shuwa, Bura, Marghi, and Fulani ethnic groups. [14] Available statistics showed that the reproductive health indices in Borno state and the Northeastern region in general are awful when compared to other regions of Nigeria. [14]

Data collection

A group of women with obstetric fistula were invited and reviewed by specialist fistula surgeons. Those that merit surgery were planned and had surgical repairs from 21st July to 1st August 2020. The surgeries were conducted at the fistula center of the State Specialist Hospital Maiduguri, North-Eastern Nigeria, following standard operation protocols. [4] The surgeries were performed by both national and international surgeons that included four Nigerians and two French surgeons. Three months after the conclusion of the campaign, the case folders of all the patients were retrieved and the required data extracted and entered into a pro-forma designed for the study. The information included; age, parity, duration of urine leakage, previous

attempts at repair, type of fistula and the outcome of the surgery among others.

The classification by Kees Waaldijk was used to determine the fistula type.[4, 15] The fistulas were classified according to anatomic and physiologic location as follows;

Type I: Fistulae ≥5 cm from the External Urethral Orifice (EUO), and therefore not involving the closing mechanism.

Type II: Fistulae that involve the closing mechanism (<5cm from the EUO):
A. Without (sub) total involvement of the urethra (<5cm but ≥1.5 cm from the EUO):

(a) Without a circumferential defect
(b) With a circumferential defect

B. With (sub) total involvement of the urethra (< 1.5cm from the EUO):

(a) Without a circumferential defect
(b) With a circumferential defect

Type III: Miscellaneous fistulae, e.g., uretero-vaginal and other exceptional fistulae.

Data analysis
The completed pro-formas were collated and entered into the Statistical Package for Social Sciences (IBM SPSS Statistics, Version 25, 2017) computer software and analyzed using same. The results were presented in numbers and percentages.

Ethical Consideration
Ethical clearance to undertake the study was obtained from the ethics committee of the State Specialist Hospital Maiduguri with reference number SSH/GEN/641/Vol.1.

Results

A total of 61 patients were surgically managed during the study period. All the case files were retrieved, giving a retrieval rate of 100%. All have the necessary information available and were used for the analysis.

The patients' age ranged from 14 to 70 years, with a mean age of 32 ± 4 years. At the time of the campaign, the age-specific prevalence of obstetric fistula was more among those aged 30 to 39 years (29.5%), but when adjusted for the duration of the condition the age-specific prevalence became more among the teenagers (37.7%) as shown in table 1.

Table 1: Age Distribution of Obstetric Fistula Patients at the Time of the Campaign and at the Time of Occurrence of the Fistula

Age group (years)	Number	Percentage
At the time of the campaign;		
<20	07	11.5
20-29	15	24.6
30-39	18	29.5
40-49	12	19.7
≥50	09	14.7
Total	**61**	**100.0**
At the time of occurrence;		
<20	23	37.7
20-29	20	32.8
30-39	12	19.7
40-49	05	08.2
≥50	01	01.6
Total	**61**	**100.0**

Table 2: Parity and Number of Previous Attempts at Repair of the Study Population

Variables	Number	Percentage
Parity;		
1	21	34.4
2	07	11.5
3	06	09.8
≥4	27	44.3
Total	**61**	**100.0**
Previous repair attempts;		
0	36	59.0
1	08	13.1
2	10	16.4
≥3	07	11.5
Total	**61**	**100.0**

Table 3: Duration of Symptoms (leakage) and Type of Fistula Among the Study Population

Variables	Number	Percentage
Duration of symptoms (years);	14	23.0
<1		
1-3	11	18.0
4-6	09	14.7
7-9	05	08.2
> 9	22	36.1
Total	**61**	**100**
Type of fistula;		
Type I	29	47.5
Type IIA		
a	13	21.3
b	09	14.8
Type IIB		
a	01	01.6
b	04	06.6
Type III	05	08.2
Total	**61**	**100.0**

The parity-specific prevalence of the scourge was more among multiparous women who delivered 4 or more times (44.3%) followed by primiparous women (34.4%) as elucidated in table 2. Fifty nine

percent (59.0%) of the patients have never had prior attempt at repair, while 41.0% had one or more repair attempts as shown in table 2.

Only 23.0% had the condition for a period of less than 1 year before the campaign, while the remaining 77.0% were living with the scourge for more than 1 year as outlined in table 3. Thirty six percent (36.0%) were living with leakage of urine for more than 9 years. Most of the Fistulas were type I and II accounting for 47.5% and 36.1% respectively as shown in table 3. At the end of the three months follow up period, 49 of the patients were continent representing a success rate of 80.3%.

Discussion

Obstetric fistula can be considered a psychosocial and medical tragedy that leaves womenfolk in physical, mental and social anarchism.[7,16-18] Unfortunately, even though most of those afflicted and needing relief are poor women, they must undergo expensive surgery to achieve cure which in most cases is beyond their power. [3,17, 18] Therefore, this type of surgical campaign provides the affected women with unconditional relief. [8, 12, 13]

The mean age of the patients in this study was slightly lower than that reported from Ebonyi state, Nigeria, [17] but much higher than from an earlier study in the same facility. [19] This difference may be accounted by whether age at presentation or age of acquisition was considered. It has been said that, in Nigeria, about 83.8% of affected women developed obstetric fistula while they were less than 15 years of age, [7] a finding which was corroborated by this study which showed when adjusted for the duration of leakage, the adolescent age group were more affected. These growing mothers are more prone to labour obstruction because their pelvis may not be well developed at the time of their first birth. Nearly all earlier studies did not consider the real age of acquisition of the fistula and this over-sight gives a wrong impression of age of onset of obstetric fistula.

As at the time of the campaign, multiparous women constituted the majority followed by the primiparous. The high prevalence among the multiparous women was because some of the patients had many deliveries while still having the condition. One of the women had three deliveries while harboring the Obstetric Fistula. In fact, a study in Abakaliki, South-Eastern Nigeria found that about 34% of fistula patients were sexually active. [18]

It was also evident from this study that a good number had one or more repair attempts prior to this campaign. This emphasized the need for training and retraining of doctors on fistula surgery to prevent failed attempts and hence reducing fistulas that are more difficult to repair. These campaigns can serve as an avenue in achieving that. It also brings expert and well experienced fistula surgeons to come together and handle these complex repairs as well as share knowledge and skills.

Although obstetric fistula is often associated with psychosocial and economic difficulties, a very high number of patients in this study had the scourge for more than a decade of their lives before accessing surgical care. This is much higher than the finding in Abakaliki where 27.5% of the fistula patients had it for more than a decade. [17, 18] Such delays could be as a result of poverty, ignorance, and possible fear of stigmatization. Successful surgery surely provides the fistula patients with a new life.

This study also indicated that 23% of the patients had leakage of urine for less than one year and over 40% had the leakage less than 3 years prior to the campaign. This is a clear indication that the scourge is still with us. New cases are still acquired in our communities. This may support the report that about 13,000 new cases occur annually, and as suggested, may take up to 83 years to clear the backlog of the unrepaired cases at the present rate of repairs.[7, 12] Therefore, this emphasizes the need for aggressive strategies in prevention, more surgical campaigns to reduce the increasing pool, and training of more fistula surgeons to handle the increasing cases.

Type I fistulas were more prevalent in this study followed by Type IIAa, in consonance with other studies. [2, 3, 5] In this study, the success rate was higher than that of obstetric fistula surgeries from the same center few years back (59.1%). [19] This high success rate could be explained by the type of fistulas encountered in this campaign as well and the high level of expertise of the surgeons that undertook the current repair surgeries.

Strength and Limitations

The study emphasized the usefulness of obstetric fistula repair campaigns in achieving the target of

obstetrics fistula elimination. However, the study is limited by its small sample size.

Conclusion

In conclusion, obstetric fistula is a prevalent condition affecting our teenage and multiparous women. Many do not seek or access medical care until many years after the onset of the scourge. Type I and type II fistulas were more prevalent. The study showed a very good success rate of repairs undertaken during the surgical campaign. Hence government and non-governmental organizations should invest more in similar campaigns and other preventive strategies in order to reduce the menace of this dehumanizing condition.

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