

Contributing factors of vesico-vaginal fistula (VVF) among fistula patients in Dr.Abbo's National Fistula & Urogynecology Centre - Khartoum 2008

Elsadiq Yousif Mohamed¹, Maha Fouad Abdalla Boctor², Hyder Abu Ahmed³, Hatim Seedahmed⁴, Mohamed Ahmed Abdelgadir⁵, Sawsan Mustafa Abdalla⁶.

1. Department of Community Medicine, Faculty of Medicine, University of Khartoum, Sudan. 2. Faculty of Medicine, University of Khartoum, Sudan. 3. Department of Community Medicine, Faculty of Medicine, University of Khartoum, Sudan. 4. Department of Community Medicine, Faculty of Medicine, University of Khartoum, Sudan. 5. Department of Obstetrics and Gynecology, Faculty of Medicine, National Ribat University Khartoum, Sudan.

Abstract

Background:

Vesico-vaginal Fistula (VVF) is defined as an abnormal communicating tract extending between the bladder (vesico-) and the vagina resulting in continuous involuntary discharge of urine into the vaginal vault. Vesico-vaginal fistula is still a persisting scourge in the developing countries, including Sudan in which 5000 new cases of obstetric fistula were estimated to occur every year. The objectives of this work were to study the contributing factors of vesico-vaginal fistula in Sudanese patients.

Methods:

The design was descriptive, cross-sectional, community-based study. A total of 52 patients with vesico-vaginal fistula presented to the Fistula Centre in Khartoum Teaching Hospital from July to August 2008, were investigated using an administrated, semi-structured questionnaire.

Results:

The study revealed that 44.2% of patients were 18-24 years old, 58.8% were teenagers when married (<18 yrs old). While 75% of the patients were illiterates, 62.8% were married to illiterate husbands. (80.8%) were poor, (40.4%) were from western regions of Sudan.

The study showed that labor was responsible for 90.4% of VVF of whom 59.6% were primiparous, 42.6% delivered at home. It was found that 40.4% of the total deliveries were by forceps as long as 27.7% were emergency caesarian sections. (53.2%) of the deliveries were attended by traditional birth attendants and 55.3% of cases stayed in labor for more than 24 hours, as long as 53.2% were not in regular antenatal care.

Conclusion:

The vesico-vaginal fistula in Sudan resulted mainly from obstructed labor. The victim was mostly a young woman, a primigravida, who was poor, illiterate, not on regular antenatal care & being in labor more than 24 hours. Most deliveries were carried at home, attended by Traditional Birth Attendants in most cases. The deliveries were mostly assisted by forceps, or conducted as emergency caesarian sections.

To prevent VVF, the study suggested raising awareness of women at bearing age; improve transportation, besides inclusion of the issue in the curricula of schools and universities.

Correspondence:

elsadigoo@gmail.com, Tel: 00249912328928)

Introduction

The term "fistula" means an abnormal duct or passage resulting from injury, disease or a

congenital disorder that connects an abscess, cavity, or hollow organ to the body surface or to another hollow organ [1]. Vesico-vaginal fistula is a health condition caused by the interplay of numerous physical, social, cultural, political factors as long as economic situation of women. This interplay determines the status of women, their health, nutrition, fertility, behavior, and susceptibility to VVF [2].

More than 2 million women worldwide are living with the problem of fistula, mostly in Africa and Asia, with an addition of 50,000 – 100,000 new cases every year. In Africa alone, a recent estimates suggested that at least 33,000 new cases occur each year in sub-Saharan Africa including Sudan, Ethiopia, Chad, Ghana, and Nigeria [3]. UNFPA estimated that 5000 new cases of obstetric fistula occur every year in Sudan alone [4]. In Sudan more than 700 cases have been operated on in the period between 1994 – 2000 at the fistula center, of whom 45% were from the Western region [5].

This devastating and humiliating condition results mainly from obstruction of labor. In most of fistula cases, delivery usually had occurred at home, was attended by family members, unskilled birth attendants, or traditional midwives. In some occasions the attendants delay making a referral to an emergency obstetric facility [6]. Delay can also occur at the treatment facility itself. Many hospitals and clinics do not have enough skilled personnel to offer prompt surgical treatment for emergency obstetric cases. Emergency care may be delayed because supplies are lacking, diagnoses are late or wrong, or actions are incorrect [7].

Vesico-vaginal Fistula develops when prompt intervention does not occur in cases of obstructed labor, but labor is more likely to become obstructed in parts of the world where girls receive inadequate nutrition during childhood and enter their reproductive years circumcised, anemic and malnourished, where they were married as adolescents and became pregnant before they had achieved their full pelvic growth. The decision to seek care when labor becomes obstructed is often delayed by a poor understanding of the nature of the problem, lack of transport and inadequate or incompetent care once the laboring woman has finally reached a health care facility [8,9].

Millions of women in the developing countries suffer from the condition because of the low level of intra natal care and the improperly conduct

deliveries [10]. In Africa, where the problem appears to be most prevalent, studies have shown that at least 70% of women with fistulae are aged 30 years and under. A study conducted by Tahzib involving 1443 VVF patients at the Ahmadu Bello University Teaching Hospital, Zaria showed that 1209 (83.8%) of VVF resulted from prolonged labor, 188 (13.0%) from Gishiri cuts. Another a study done in 309 patients treated in Addis Ababa fistula hospital showed that (65%) of cases were <25yrs old, (97.4%) had fistula due to obstructed labor; in (62.7%) of them it was patients first labor, the outcome was a stillbirth in (92.7%) [11].

For instance, the Gishiri cut which is very popular in the Northern part of Nigeria involves the incision of parts of the vagina with a razor blade or a large curved knife. The cut is made against the pubic bone endangering both the bladder and the urethra. The cuts are often handled by traditional healers or traditional birth attendants to prevent or treat numerous conditions including prolonged obstructed labor and to prevent promiscuity and premarital pregnancy, to guarantee marriage with subsequent economic and social security for a daughter's future [12].

A study carried out by Mustafa and Rushwan in Khartoum confirmed that the major cause of VVF was prolonged obstructed labor which was always followed by instrumental delivery (mainly forceps) and gynecological operations. (74.8%) of the women studied demonstrated VVF resulting from obstructed labour, (20.5%) instrumental delivery and (4.7%) from gynecological operations [42]. About 10% of fistula seen at a particular hospital in Zaria region of Nigeria was directly attributed to the traditional practice of female circumcision, with a further 30% following a combination of genital cutting with obstructed labor. While 80 % of VVF patients in a study that was carried out in two rural hospitals of West Pokot, Kenya were due to severe female genital mutilation FGM [13].

Poverty, malnutrition; poor health services and early marriage are root causes of obstetric fistula. Poverty is the main social risk factor because it is associated with early marriage and malnutrition and because poverty reduces a woman's chances of getting timely obstetric care. Because of their low status in many communities, women often lack the power to choose when to start bearing children and give birth. Childbearing before the pelvis is fully developed, as well as malnutrition, small stature and general poor health, are contributing physiological factors to obstructed labor [14].

The objective was to study the contributing factors of vesico vaginal fistula among Sudanese fistula patients.

Patients and Methods

STUDY DESIGN:

Contributing factors of vesico-vaginal fistula among fistula patients was conducted as a descriptive, cross-sectional, hospital-based study.

STUDY AREA:

The study was done in Dr. Abbo's National Fistula & Urogynecology Centre, the only well equipped fistula center in Sudan, located in Khartoum Teaching Hospital.

This centre ranks the second in Africa and the Middle East after Addis Ababa Centre. It was established in 1993 by Dr. Abbo Hassan Abbo, a senior consultant obstetrician, who is considered the God Father of fistula surgery in Sudan.

Now the centre is a referral teaching centre for the fistula treatment all over Sudan. The total number of operations done since the establishment of the centre was 1587 operations, of which 75-80% were successful.

STUDY POPULATION:

Inclusion Criteria:

All patients in the Fistula Centre with continuous urine leakage after obstetrical or gynecological procedure were included in the study.

Exclusion Criteria:

Patients with a fistula not communicating the bladder to the vagina were excluded from the sample (E.g. recto vaginal fistula).

SAMPLING:

The type was convenience sampling. There were 30 patients available in the centre from whom data was collected; besides those who were referred during the 2 months period of the study. The sample size included in the study was 52 patients.

Data were collected using a semi-structured, pre-tested, pre-coded and administered questionnaire. Data were analyzed by Statistical Package for Social Sciences (SPSS) v.16.

ETHICAL CONCERNS:

All the participants in the study were politely asked to give verbal consent before participation. All information was collected confidentially with complete respect to the patient wish and without any force or pressure.

Results

Table (1): Contributing factors of vesico-vaginal fistula

Social	
Poor socio- economic status	80.8%
Circumcised	76.9%
Patient illiteracy	75.0%
Husband illiteracy	62.8%
House wives	69.2%
Age below 18 yrs when married	58.8%
Age/yrs 18-24	42.0%
From west Sudan	40.4 %
Obstetric	
Labor-related	90.4%
Primiparous	59.6%
Prolonged labor	55.3%
Delivery attended by TBA	53.2%
Poor antenatal care	53.2%

Discussion

This study showed that, more than two third of patients (80.8%) being of low-socioeconomic status. This may explain why girls are married early, why illiteracy is high, and why there was no ability to attend regular antenatal follow-up [14]. The majority of cases (75%) were illiterate, with the rest of the cases being distributed in a descending manner through the educational levels. This finding is consistent with a study done in Nigeria in which (94.1%) were illiterates [6]. The results were higher than the findings of another study done in Kenya in which (61%) of the cases were illiterates [6]. This justifies the link between the level of education and the health problems a woman might face. Illiterate women have a little concern of antenatal benefit that reduces obstetric complications like fistula, and they practice harmful traditions like FGM. Besides, in many instances, a

lack of health education hinders VVF presentation and hence prevention.

There is Controversies surrounding the role of circumcision in the formation of VVF. The results of this study that (76.9%) were circumcised may be because actually more than two thirds of Sudanese women and even the majority of African women are circumcised. But the fact that (70.7%) of them being of the Pharonic (infibulations type) can explain the role of circumcision in fistula formation because when the girl has undergone Pharonic circumcision with severe healing and fibrosis, there is delay in the second stage of labor where the presenting part is stuck in the perineum for a long time (obstructed labor) and this could lead to the development of the fistula [11].

More than one third of cases (44.2%) were at the age group of 18-24 yrs. Those women being affected most by the fistula, reflects the devastating effect of fistula on the community. This finding agrees with a study done on 309 patients in Ethiopia, where (65%) of cases were below 25 years of age [11]. Tahzib in his study showed striking findings that 5.5% of VVF sufferers were less than 13 years of age [7]. This may show s that African women share similar traditions as regards early marriage.

The majority (58.8%) married before reaching 18 yrs, and according to the WHO, those under 18 yrs children may subsequently get pregnant soon after marriage at a time when they are not adequately physically developed to permit the passage of a baby and so they are trapped in obstructed labor and hence VVF [15]

Having (69.2%) of cases were housewives tells that fistula does not affect the economy of most families; but still it hindered working in (15.4%) of cases most of whom were laborers. The fact that (62.8%) of patients' husbands were illiterate is adverse the situation; because most of those illiterate husbands showed sympathy with their affected wives, may be because they take life easy. This can go with the fact that most of the patients were divorced and maltreated had their husbands being illiterate, which means they do not know about the nature of this curable disease besides they do not have the concept of appreciation of marriage. This situation was the opposite in those whose husbands were educated, as most of them were neither divorced nor maltreated.

The study revealed that (90.4%) of patients had fistula because of labor related causes and only (9.6%) because of surgery. The results showed that more than half of the cases (55.3%) waited for more than 24 hours in labor (obstructed labor) which reflects the relationship between obstructed labor and fistula formation [6]. This finding is higher than the findings of Al-Imam et al who found that obstructed labor constituted (28%) of the Sudanese patients who were presented to surgery after vesico vaginal fistula [16].

(89.4%) of the delivery outcome were stillbirths is because obstructed labor (labor for more than 24 hrs) results in prolonged impact of the fetus and so hypoxia leading to its death. This further may complicate the life of fistula women; because most of them were primiparous it gives them bad experience with labor besides the sorrow of losing their babies.

The findings that the majority of patients (59.6%) were primigravidae is in line with the study done in 309 patients treated in Addis Ababa fistula centre where (62.7%) of cases were in their first labor[11]. This is because in primigravidae, the pelvis is not tried before; so there is a great risk of cephalopelvic disproportion and malpresentation which leads to obstructed labor (labor lasting for more than 24 hours) and then fistula formation. Having only (46.8%) of cases were booked for regular antenatal care can further explains that even those on high risk of getting the disease did not have the chance to be detected. Having more than half of the patients (53.2%) not booking for antenatal follow-up is a contributory factor in the formation of fistula because the follow-up can prevent going through obstructed labor. This result can be explained by the fact that the obstetric care in Sudan is sometimes inaccessible, underutilized or of low quality, on the other hand, lack of transportation and low awareness may explain the result too. In fact if low awareness is not corrected, it may worsen the picture because many of those who had fistula but were on regular follow-up thinks that it was useless to go to antenatal care regularly when comparing themselves with other fellow women who although didn't book for the follow up, now having their children and without fistulas.

The study showed that (42.6%) of fistula cases delivered at home. This indicate that pregnant

women in Sudan prefer to deliver at home by the assistance of midwives because they think that going to the hospital means that there is something wrong with her. At home, where there is no emergency facility, when those women face problem during labor, most of them tend to wait thinking that the baby will come out if they push harder, the thing that may result in obstructed labor and fistula formation later.

Although those who delivered at hospital were (57.4%), only (10.6%) were booked for elective caesarian section. (40.4%) were delivered by forceps which means that most fistulas in those patients were a result of traumatic instrumental delivery (27.7%) were delivered by emergency caesarian because of failure of progression of labor and so failure of delivery at home. This indicates that one third of patients were referred to hospital due to failure of progression of labor at home, but unfortunately the refer was late due to delay in decision making by the midwives and/ or lack of transportation so that when emergency section was done, it only delivers the dead baby and couldn't prevent the obstruction of labor and fistula formation [9]. Having (42.6%) of cases delivered by doctors, in co-relation of the above results means that they were needed to perform emergency caesarian sections or forceps in those suffering from obstructed labor and who seek medical care at late stage [7].

According to this study, (40.4%) of cases came from the western region of the Sudan. The distribution of fistula patient is in agreement with the reports of the National Fistula Center in which 45% of patients were from the western regions [5].

Conclusion

Vesico-vaginal fistula in Sudan results from obstructed labor, mostly in a first pregnancy, a young woman who is poor and illiterate, not on regular antenatal care & being in labor for more than 24 hours.

Most deliveries were carried at home by midwives, and those at the hospital were mostly by forceps or emergency caesarian sections, and the baby in case of VVF was rarely survived.

Recommendations

Obstetric fistula is a preventable tragedy. In Sudan the most important preventive measures seems to

be the prevention of obstructed labor and improve socio -economical status in the first place, which can be achieved by raising awareness of the community through disclosing problems following teenage marriage and pregnancy, the importance of having a regular antenatal care for the pregnant women, the importance of giving birth under the supervision of trained personnel, prohibition of all types of circumcision and empowering women through education and insure women rights.

Ministries of health should address the issue of training the midwives & raising their Knowledge and skills, especially in the rural areas, with especial consideration to the western regions and special emphases on how to diagnose high risk patients and when to refer to higher levels. it is important to emphasize that doctors should measure the risks when thinking of delivering a patient with forceps, because delivery with a caesarian section will decrease the susceptibility of getting a fistula. Strengthening the Primary Health Care PHC, building other qualified fistula centers, and provide psychological care for women with VVF to go side by side with the surgical treatment.

The government should improve the socio economic conditions by raising the income of the individuals and families through simple community-based initiatives, availing education especially to females and improving transport.

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