



Obstetric Fistula: The Agony of Unsafe Motherhood. A Review of Nigeria Experience

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Authors' contributions

This work was carried out in collaboration between the authors. Author CON designed the study, wrote the first draft of the manuscript, abstract and conclusion. Author ANN wrote the literature review, methodology and results. Both authors read and approved the final manuscript.

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ABSTRACT

Obstetric fistula is a dehumanizing complication of childbirth that has severe psychosocial impact; though almost non-existing in developed nations, it is still a public health problem in Nigeria and other countries in sub-Saharan Africa. In Nigeria, about 100,000–1,000,000 women are living with obstetric fistula and estimated 50,000-100,000 new cases occur annually.

To review the relevant literature on obstetric fistula in Nigeria, literature search was carried on epidemiology, prevalence, risk factors, causes, reasons for delay in intervention, complications and preventions using Google search. Additional information was obtained from text and journal in medical library of University of Calabar library.

The main cause of obstetric fistula in Nigeria is prolonged obstructed labour, which most often occur due to delay in seeking medical attention because of social and financial reasons. Other causes include inadequate facilities for emergency obstetric services, especially caesarean section, poor access to existing ones, and delay in intervention on reaching the health facilities as a result of limited number of skilled obstetric personnel and/or equipments.

There is need to increase collaboration and education of local communities on the cultural and social factors that influence and increase risk of obstetric fistula as well as improving the health-system's response to emergency obstetric care.

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1. INTRODUCTION

Obstetric fistula, a dehumanizing condition associated with severe psychosocial consequences, has been eliminated in developed countries, but remains highly prevalent in sub-Saharan Africa [1]. The World Health Organisation defined an obstetric fistula as an abnormal opening between a woman's vagina and bladder and/or rectum through which her urine and/or faeces continually leak, resulting from complications of delivery [1]. Classifications of fistula vary, but they generally include fistulae from obstetric causes including vesicovaginal fistula (VVF) and rectovaginal fistula (RVF). Delivery is a life-changing event which brings happiness to mothers and families; however, it is regrettable for others, particularly, when it is accompanied by serious complications and death of the baby, mother or both. About half a million women die annually from pregnancy complications and delivery, and for each maternal death approximately 10–15 others sustain serious morbidities, including obstetric fistula [2-5].

Obstetric fistula has been in existence since ancient history with the oldest evidence seen in the remains of an Egyptian queen's mummy from around 1550 BC [6]. The Persian physician Avenica proposed that there is a link between obstructed labour and vesico-vaginal fistula in the 11th century [6]. Dr Marion Sims encountered his first case of obstetric fistula in 1849 and had a successful fistula closure on his 30th attempt on the same patient [7].

In the developed countries, fistulae are mostly due to iatrogenic causes like radiation therapy and surgical procedures [8]. In developing countries, like Nigeria, where access to skilled intrapartum care is poor, fistulae are mainly caused by obstructed labour. In this condition the fetal head is impacted in the mother's pelvis, cutting off blood flow to the surrounding tissues and leading to tissue necrosis and fistula formation [9]. Obstetric fistula can also be due direct trauma to tissues such as in unrepaired third and fourth degree perineal tears, caesarean section, forceps delivery, and destructive vaginal deliveries [10].

The incidence of vesicovaginal fistula varies in different populations; globally over two million women are estimated to be living with

vesicovaginal fistula and majority is in Sub-Saharan Africa and South Asia [11]. The incidence of vesicovaginal fistula in West Africa range between 1–4 per 1,000 deliveries [12-14], with annual obstetric fistula incidence of about 2.11 per 1000 births [15] About 100,000–1,000,000 Nigerians women are living with obstetric fistula [16].

Women with obstetric fistulae often face difficult conditions as a result of either the fistulae itself or the prolonged obstructed labour, and the most disturbing consequence is incontinence, either urinary, faecal or both [17]. Because of the continuous leakage of urine and faeces, women with fistulae are, usually, ostracized and marginalized, socially [18,19]. Other problems women with fistulae face include: vulva dermatitis [9], high rates of divorce or separation [20,21], absence of sexual intercourse [19,20], loss of fertility and amenorrhea [22,23] and depression [21,24].

This review article thus provides an overview of the epidemiology of obstetric fistula in developing countries with emphasis on the experience in Nigeria. This will shed light on the plight of women and the magnitude of the problem, and hopefully inspire professionals, decision makers, and interested donor organizations to take steps to help.

2. MATERIALS AND METHODS

We reviewed all accessible relevant published studies on obstetric fistula in Nigeria. Papers that did not address the issues examined in this review were excluded; however, because of the uniqueness of the topic, literatures were not systematically selected for review. The health facilities where the studies were done were spread across the country. Information was obtained on Pubmed (medline), WHO website, Bioline international and Google scholar. The key words used included vesicovaginal fistula; obstetric fistula; fistula; urogenital fistula; vesicovaginal fistula epidemiology; obstetric fistula prevalence; obstetric fistula causes; obstetric fistula preventions; obstetric fistula in Nigeria; developing countries; low resource countries. The profile analyzed included patients age, age at marriage, level of education, occupation, antenatal booking status and place of delivery. Other information included reasons for delay in seeking care, aetiology of obstetric

fistula, perinatal outcome, complications associated with obstetric fistula.

3. EPIDEMIOLOGY

Obstetric fistula is a preventable condition, which is prevalent in Nigeria and most poor resource countries of the world [25-27]. The true incidence and prevalence of this condition in the communities are unknown and difficult to obtain because some women with this condition hide due to stigmatization, and also there are scanty community-based studies on obstetric fistula in Nigeria and other developing countries [25]. In West Africa, the estimated incidence rate of obstetric fistula is 1–4 per 1000 births [13,14]. The annual obstetric fistula incidence for Nigeria has been estimated at 2.11 per 1,000 deliveries [15]. Between 100,000 – 1,000,000 Nigerian women are estimated to be living with vesicovaginal fistula [28]. It is generally perceived among Nigerians that obstetric fistula is a disease of the northern Nigeria because of high prevalence of teenage pregnancy and obstructed labour; however, studies from the southern Nigeria have shown that this problem does exist in the south but is more prevalent in the northern part of the country [4,20,29-36]. An estimated 50,000- 100,000 new cases occur annually in Nigeria, thus it is a major public health problem [27]. In contrast, an estimated yearly incidence of 250 cases of vesicovaginal fistula occur in England and Wales, which are of non-obstetric causes [5]. Obstetric fistula has been eradicated in developed countries of the world due to their improved and wide coverage obstetric care [28,31,37].

4. AETIOLOGY/ RISK FACTORS

The main cause of obstetric fistula in the developing world is pressure necrosis from prolonged obstructed labour, which most times occur beyond the reach of medical help [28-35]. Access to a health institution is a major problem for pregnant women in Nigeria, chiefly because of the long distances to reach care, poor transportation networks, delay in seeking medical intervention, lack of money, and because parturition is regarded as something that can be managed at home [26-29]. In Nigeria, prolonged obstructed labour accounts for 65.9% - 96.5% of cases of vesicovaginal fistula in Jos, Port Harcourt, Maiduguri and Ilorin [20,30,32,34]. As many of the obstetric fistula patients from northern Nigeria are teenagers [20,30], early marriage and teenage pregnancy are important

social factors that contribute to development of obstetric fistula [29-31]. Kabir et al in Kano, Nigeria reported a minimum age of obstetric vesicovaginal fistula at 10 years old [29]. Other studies from northern Nigeria reported average age of obstetric fistula at 13 years for Sokoto [31] and 17.5 years for Maiduguri [30] while in southern Nigeria like Port Harcourt, Ilorin, and Uyo patients mean ages are 26.8 years [34], 29.3 years [32] and 25.8 years [33], respectively. As marked difference in the age at marriage in the regions of Nigeria exists, early marriage is commonly practiced in the northern part of Nigeria, and sometimes girls are given out in marriage before or shortly after attaining menarche as reported by Lewis et al in Jos, where 39.1% of the patients with obstetric fistula were married before attaining menarche.²⁰ In addition, most of these young patients had no knowledge of contraception.²⁰ Generally, contraceptive prevalence rate in Nigeria is low at 10% [38]. Early marriage without contraception is invariably followed by early pregnancy at a time the pelvis is not developed enough for easy passage of the fetus, leading to cephalopelvic disproportion and obstructed labour.

Other less common causes of urogenital fistula include caesarean section, forceps delivery, destructive vaginal deliveries, uterine rupture, difficult gynaecological surgeries, radiation therapy, sexual abuse, penetrating vaginal injuries and advanced cervical cancer [29-32].

In northern Nigeria, harmful traditional practices such as Gishiri cut is responsible for some urogenital fistulae [29,30,31]. Gishiri cut is a series of random cuts through the anterior vagina, involving urethra and the bladder neck, used as a traditional remedy for a variety of gynaecological complaints such as dyspareunia, infertility, genital prolapse, and obstructed labour. It accounted for 6.2% of cases in Maiduguri and 2.3% of cases in Jos [20,30]. However, no case of Gishiri cut was recorded from studies in southern Nigeria [32,34]. Female genital cutting, which has a high prevalence in Nigeria, has also been reported as a cause urogenital fistula [29-32].

5. REASONS FOR DELAY

Majority of Nigerian obstetric fistula patients delivered at home with unskilled birth attendance or attempted to deliver at home and eventually presented late at a health facility with prolonged obstructed labour [4,20,31]. This could be as a result of several factors which could be explained

by the three delay model such as a delay in deciding to seek care due to community or socio-cultural factors, being unaware of the warning signs of difficult labour, difficulties in accessing health facilities, unaffordability of hospital fee for vaginal or abdominal delivery and use of health facility as last resort. Unskilled birth attendant service such as traditional birth attendant service is widely patronized because it is more affordable and allows payment in installments; hence, it is financially convenient for the poor patients. It is also the only option for people living in areas remote from health facilities that can provide skill obstetrics services. In northern Nigeria, a woman cannot take decision to go to health facility if her husband is not at home. There is a strong belief that women's movement must be under strict male control, and permission from the husband or a suitable male surrogate must be obtained before money can be spent on health care. This is the commonest cause of delay in seeking care during labour in obstetric fistula patients [20].

Delay in transporting patients to the health facility is the next common cause of delay, which could be due to long distance, non availability of vehicle, or bad road [30]. Health facilities are not available in some communities and the available ones are very far. Other contributory factor is delay in receiving prompt treatment. Unfriendly attitude of healthcare providers to patients discourages patients from seeking care at the health facilities. Many health facilities in Nigeria, especially in the rural area, that provide basic and comprehensive emergency obstetric care are understaffed, without partograph for monitoring labour or proper referral backup. In many health facilities, drugs are out of stock, as a result, patients are given list of drugs and materials for caesarean section to procure outside the health facility. Also there is incessant power outage that delays sterilization of instruments and surgery, which may delay time of relieving obstruction, thereby worsening complications.

6. COMPLICATIONS

Most of the vesicovaginal fistula patients suffer from psychosocial complications such as loss of self esteem, divorce/separation and depression, because they cannot work or attend social gathering due to smell of urine [18-21]. Their husbands, and sometimes their families, desert the patients, accusing them of bringing shame to their families. They are shunned by the society and eventually become social outcast [18,19].

Those who remain with their husband are deprived of sex [19,20,29]. Other complications of obstetric fistula include amenorrhoea and gynaetresia [22,23]. Despite successful repair of the fistula, some of the patients could not enjoy happy marital life because of dyspareunia from vaginal stenosis or infertility [29]. Thus, obstetric fistula could be regarded as one of dehumanizing conditions to afflict women [25,28,32]. One of the tragic events associated with obstructed labour-fistula complex in Nigeria is adverse fetal outcome. Among women who had obstructed labour complicated by obstetric fistula, 75%–92% of their deliveries were complicated by birth stillbirth [4,20,31].

7. RECOMMENDATIONS

Due to the misconceptions about the aetiology and risk factors of obstetric fistula, involving and educating local communities about the cultural, social and physiological factors that influence and increase risk of fistula formation is an important preventive strategy [39,40]. Community-based social education programs, such as the Tostan program in West Africa, have been used to prevent fistula by using a non-formal educational program to improve ownership and sustainability of such interventions [41,42]. In addition, previous patients who have been treated, have also acted as community advocates for fistula prevention in Nigeria, Kenya, Ghana, Côte d'Ivoire and Liberia, sharing their experiences and helping to debunk cultural myths [43].

Promoting education of the girl child is an effective way of preventing fistula in the long run [44]. A study in North-Eastern Nigeria showed that 96.3% of cases of obstetric fistula had no formal education [27]. Evidence supports that knowledge and awareness on fistula amongst young women who had attained post-primary education is better in term of prevention, than women who have no education or only primary education [45]. Because of some misconceptions about the cause of fistula, it is particularly important to educate women about risks associated with early marriage and early pregnancy, including fistula, as has been implemented in Ethiopia [46]. Educational materials can be useful in enlightening women about fistula as shown by a pilot study in Nigeria [47].

Measures for improvement of health-system's response to emergency obstetric care by

improving access, and providing safe and timely intervention for women presenting with obstructed labour have been suggested in the literature. Ensuring that the care provided by health workers is affordable, safe and timely for women in need of care is important, especially for women in the most deprived settings [47-49]. Previous studies showed that while 83% of women in urban areas delivered their babies in health facilities, 80% of rural women gave birth at home [50]. Non-governmental organisations have worked with Niger Republic to offer free caesareans in order to prevent obstructed labour induced fistula; however, coverage of facilities that provide such emergency obstetric care is limited and well below the recommended minimum coverage levels of one comprehensive emergency obstetric care and four basic emergency obstetric care facilities per 500,000 population [40,51].

8. CONCLUSION

This review has presented essential information to aid policy formulation and program design in order to prevent obstetric fistula. This calls for collaborative support to eradicate obstetric fistula. Eradication of obstetric fistula is not only a human rights issue, but also a question of equity, which the poorest and uneducated women living in rural communities are most disadvantaged. It is our responsibility to provide an environment for girls to develop and express their full potentials.

CONSENT AND ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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