

Obstetric Fistula: Epidemiological, Social and Therapeutic Aspects: Prospective Study of 196 Patients Admitted to the ZINDER Mother and Child Health Centre (CSME)

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Abstract

Introduction: Obstetric fistula (OF) is an abnormal communication between the genital and urinary tracts and/or associated with a recto-vaginal communication resulting from prolonged dystocic delivery. It is a frequent pathology in underdeveloped countries. In Zinder no study has been carried out on obstetric fistula. The aim of this study was to evaluate the epidemiological, social impact and therapeutic aspects of obstetric fistula at the CSME of Zinder. **Patient and Method:** This was a descriptive cross-sectional study of obstetric fistula care at CSME during the period of (January 2018 to June 2020). **Results:** A total of 196 cases were collected over 30 months. This represents an annual incidence of 78.4 fistulas. The median age of the patients was 18.63 years, and more than 65% were over 20 years old. One hundred and ninety-one patients (97.45%) did not attend school, and 56.12% (n = 110) lived in polygamous households. One hundred and fifty-one women (n = 151), 77.04% had full assistance from their husband during the first four (4) months of the pathology. Twenty-four (12.24%) had been notified of repudiation. Obstetrical risk of dystocia was found in 39.79% (n = 78) of the patients, of whom 24.49% (n = 48) had a focused antenatal consultation (CPNR). The labour lasted more than 24 hours in 100%. The majority of women are multiparous and 60% had at least 2 pregnancies. vesicovaginal fistula is the main pathological type with 86.23%. Fistulas were closed in 83.16% and 68.87% exited without urine loss. **Conclusion:** Obstetric fistula is a devastating disease affecting girls and young women in Niger, as in other countries in Africa and Asia. It is a major concern worldwide and is a social tragedy because it is disabling and depressing.

Keywords

Obstetric Fistula, Epidemiology, CSME Zinder

1. Introduction

Obstetric fistula (OF) is an abnormal communication between the genital and urinary tracts and/or associated with a recto-vaginal communication resulting from prolonged dystocic delivery [1] [2] [3]; is a frequent pathology in under-developed countries affecting Asia and sub-Saharan Africa. It is generally estimated that more than 2 million women live with untreated FO, and that 50,000 to 100,000 new cases occur each year [2] [3]. In Niger, it remains a public health problem because of its socio-economic and psychological impact.

In Zinder it was the first study on obstetric fistula since the installation of the local team and the establishment of the regional strategy to fight against obstetric fistula.

There are many challenges associated with fistula care in Zinder, including lack of available and motivated surgeons with specialised skills, a lack of equipment to support both surgical interventions, post-operative care, prevention and social reintegration programmes [4].

2. General Objective

To evaluate the epidemiological, social impact and therapeutic aspects of obstetric fistula at the CSME of Zinder at mid-term of fistula repair by the local team.

3. Patient and Method

This was a descriptive cross-sectional study of obstetric fistula care at CSME during the period of (January 2018 to June 2020). The Mother and Child Health Centre in Zinder is the only referral center for obstetric fistula treatment in Zinder area.

New patients admitted for obstetric fistula and whom had undergone a fistula surgery were included in the study. Patients with fistula repair history at the CSME or elsewhere, and non-obstetric urine losses were not included in the study.

Successful treatment was defined as no further urine loss for several months after the fistula surgery, and failure of repair as permanent urine loss even if the fistula was closed.

Data were collected from patients medical files and from operating room reports registers.

The variables studied were sociodemographics, duration of labour, parity, type of fistula and outcome of the treatment (**Figure 1**).

Data were recorded using Excel 2016 and processed using Epi-info 7.2.5.

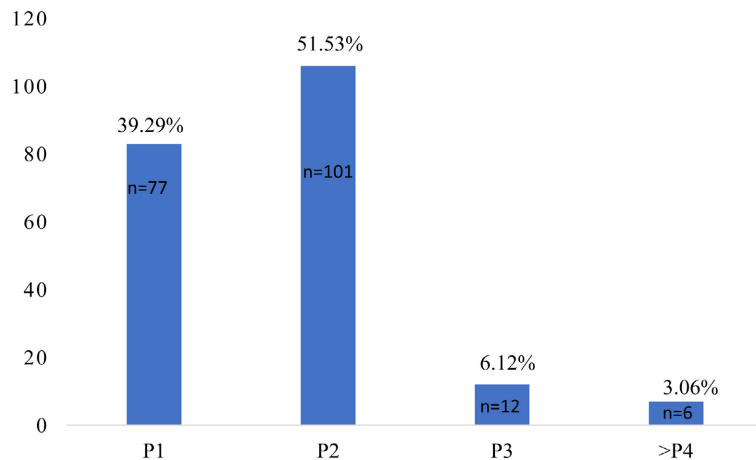


Figure 1. Distribution of patients according to parity. Primipares account for nearly 40%.

4. Results

4.1. Socio-Demographic

A total of 196 files were collected on 30 months.

The median age of the patients was 18.63 years, and more than 35% are under 20 years of age. The age groups are listed in **Table 1**.

One hundred and ninety-one of the 191 patients (97.45%) were illiterate and were housewives. Of these, 56.12% (n = 110) were in polygamous households, among them 15.81% (n = 31) were three for the husband. One hundred and fifty-one women (n = 151), 77.04% had full assistance from their husbands during the first four (4) months of the disease. This assistance was few in polygamous households and among women from other regions. Twenty-four (12.24%), had been notified of repudiation, including 4.59% (n = 9) after failure of the first treatment, 4.08% (n = 8) among complex fistulas awaiting the arrival of experts and 3.57% (n = 7) from distant villages of Zinder.

4.2. Obstetrical Data

The risk of dystocia was found in 39.79% (n = 78) of patients, of whom 24.49% (n = 48) had a special care counselling (CPNR).

The labour lasted more than 24 hours in 100% (**Table 2**).

The majority of women are multiparous and 60% had at least 2 pregnancies.

The success rate was 68.87% and represented the score of women who were continent months after released.

The details of fistula treatment are summarised in **Table 3**.

Unsuccessful treatment added unclosed fistula and incontinent women. They were 31.12%.

5. Discussion

During the study period 196 patients were admitted to the centre for the management of women with obstetric fistula. This represents an annual incidence of

Table 1. Distribution of patients by age group.

| Age group (year) | Number | (%) |
|------------------|------------|---------------|
| <15 | 06 | 03.06 |
| 15 - 19 | 63 | 32.14 |
| 20 - 24 | 41 | 20.92 |
| 25 - 29 | 39 | 19.90 |
| 30 - 34 | 21 | 10.71 |
| 35 - 39 | 17 | 08.67 |
| 40 - 44 | 09 | 04.60 |
| Total | 196 | 100.00 |

More than 75% were under 30 years of age.

Table 2. Distribution of women with fistula according to duration of labour.

| Labour duration (hour) | Number of cases | % |
|------------------------|-----------------|---------------|
| >24 | 86 | 43.88 |
| >48 | 105 | 53.57 |
| >72 | 05 | 02.55 |
| Total | 196 | 100.00 |

The labor lasted more than 48 hours in 55%.

Table 3. Results of fistula treatment.

| Surgical results | | Effectifs | Percentage (%) |
|-------------------------|----------------------|-----------|----------------|
| Closure rate | | 163 | 83.16 |
| Exit without urine loss | | 135 | 68.87 |
| Unsuccessful treatment | Incontinent women 28 | 61 | 31.12 |
| | Unclosed fistula 33 | | |

78.4 fistulas. The global epidemiology of obstetric fistula is estimated at 0.29/1000 births [5], with 0.3% - 1.8% in India [6] and 33,450 new cases per year in sub-Saharan Africa, with great disparity between countries: 23.1/100,000 in Burkina Faso [7], 13,000 cases/year in Nigeria [8], 7.5/year in Senegal [9] and 1.6/1000 in Malawi [10].

Our rate of 78.4 could be explained by the fact that the region of Zinder is the most densely populated in Niger and CSME of Zinder organises two to three fistula treatment campaign a year, inviting sometimes other experts in fistula care.

The exact incidence of fistula in the Zinder region is difficult to assess, as there are many biasing factors. These include the migration of women to other centres which organise fistula care campaign at different times, and often the shame of reporting fistula in their own region [11] [12]. These difficulties were

reported by Sanda and Harouna in Niger, Nyassi in the report on the fistula care campaign in West Africa [11] [12] [13] and by Bello in Nigeria and Browning in Sudan, where it has been impossible to describe the incidence and prevalence in the same conditions [5] [8].

In our series, the mean age of the patients was 18.63 years. This result is lower than those of Aristide and Nsambi [7] [14] who reported an age of between 21 and 27 years. Early marriage is constant in the rural population of Niger, as mentioned by Sanda and Harouna [11] [12] who reported an average age of 13 and 19 respectively. In some cases it is hard to determine the exact age of some patients and the duration of urine loss. This was corroborated by the studies of Aristide, Sih *et al.*, in Malawi and Daniyan in Nigeria [10] [15], where several years elapsed between the remark of fistula and consultation.

In this study, all the women observed had consulted their doctor less than a year after the remark of urine loss.

It is clear physiopathologically that Obstetric fistula results from longer dystocic delivery.

In our series, all the women had been in labour for more than 24 hours. The same situation reported by Traoré and Aristide [7] [16] who had respectively 50 hours and 49.5 hours.

In primiparous women, the main factors favoring the occurrence of fistula are fetomaternal pelvic disproportion and immaturity of the pelvic structures, often in a context of chronic protein-calorie malnutrition [6] [7] [8], illiteracy, residence in a rural environment and lack of medical assistance during childbirth. All these elements have been recognised as risk factors for obstructed labour by many authors [7] [8] [11]. In this study, 98.11% of the women did not attend school. Our rate is similar to Aristide's in Burkina Faso and Traoré in Mali, who had 92.9% and 96.7% respectively.

The majority, 96.83%, came from rural areas. Living in a rural area is a major risk factor because of the lack of adequate health facilities, and often the lack of roads for rapid evacuation [6] [7] [8] [10] [16]. This situation affects nomadic women more severely.

Obstetrically, 60.71% (n = 119) had given birth vaginally at least once. This high frequency of multiparous births was reported by Sarr, Sih and Kpatcha [9] [10] [17], whereas Vadandi in Tchad, Nsambi in the Democratic republic of Congo and Konan in Côte d'Ivoire [14] [18] [19] reported a high prevalence of primiparous. The dystocia of multiparous women has been explained by several studies, which have concluded that there is an increase of 200 to 300 grams by the next foetus in each pregnancy [13]. A woman who has given birth at least once considers herself able for any vaginal delivery. This consideration is the factor that prolongs foetomaternal suffering and leads to obstetric fistula in multiparous women.

In Niger, lot of programmes aimed to prevent fistula are in place, including schooling for young girls and free of cost for caesarean section.

In addition to raising awareness, a number of strategies for eradicating fistula

have been developed, including refocused antenatal consultations (CPNR). This consisted of identifying pregnancies at risk of dystocia, locating them, studying environmental factors and the probable date of delivery in order to provide the best possible assistance to the parturient. In this series 24.49% (n = 48) of women had undergone PCNR, whereas Traoré *et al.*, [16] in Mali reported 53.60% of women without antenatal consultation in their study.

In rural areas, there are two wrong complementary arguments against attending health facilities. One wrong argument is that caesarean sections limit the number of children a woman can have to three. The other argument is that giving birth in a health centre expose to caesarean section. High parity is the goal of rural women living in polygamous households.

In this study 56.12 were living in polygamous households.

Polygamy in our context is a great multiparity factor in the race for inheritance by the woman who has more boys.

On Psycho-Affective aspects: One hundred and ten patients (n = 110) 56.12% were in a polygamous household, of which 15.81% (n = 31) were three in the house.

Belonging to a polygamous household involves the woman in a procreate competition and limits the husband's financial assistance to his wife.

In this study 77.04% (n = 151) had assistance from their husbands during the first four (4) months of the disease. This assistance became fewer in polygamous households after 4 months, and was stopped for women from other villages far from Zinder.

Several studies have reported that women with obstetric fistula are abandoned and psychologically affected [20]. In our context, the woman is generally in permanent distress because abandoned and unassisted. Twenty-six (13.26%) had been notified of repudiation, including 5.61% (n = 11) after failure of the first treatment, 3.57% (n = 7) among complex fistulas awaiting the arrival of an expert, and 4.08% (n = 8) from villages far from Zinder. Our rate is lower than Sanda's, where there were 63.3% separations and 16.9% repudiations, Aristide 32.5%, [7] [11] but higher than Traoré's in Mali with 7.30% divorces [16]. Abandonment and lack of assistance add great distress to the situation of these women, who are often very young to support such psychological situation.

In this series, different anatomopathological types were recorded, including 86.23% of vesico-vaginal fistulas supposed to be potentially curable and 4.08% of complex fistulas damaging the continence system and/or the rectum (**Figure 2**). Vesico-vaginal fistula is the anatomopathological form most frequently reported by authors [7] [10] [19], and its treatment gives good results in the majority of series, ranging from 70% to 90% [17] [19] [21].

The other types of complex fistula most often give partial results; we recorded 31.12% failures, our rate is higher than those of Diallo and Vadandi who had respectively 8.1% and 4.9% [18] [21] but lower than those of Massende 25.8% and Nsambi 14%. This could be explained by the lack of skills of certain technical

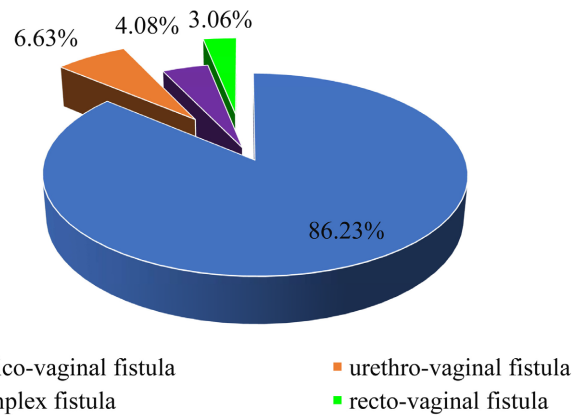


Figure 2. Distribution of patients according to fistula location. Vesicovaginal fistula is the main pathological type.

aspects by some surgeons in our team [14] [22]. Other cases are very complex, with urine incontinence, accounting for 4.08% of the total. Complex situations are increasingly finding solutions adapted to the African socio-economic context, in particular the Maintz II pouch [23].

6. Conclusion

Obstetric fistula is a devastating disease affecting girls and young women in Niger, as in other countries in Africa and Asia. It is a major concern worldwide and is a social tragedy because it is disabling and depressing.

Conflicts of Interest

The authors declare no competing financial or personal interests.

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