

Multicentric Study of 148 New Cases of Female Genital Fistula Niger

N. Idi^{1*}, N. A. Harouna Malam Brah¹, A. Idrissa², L. Djangnikpo², Z. Assoumana³

¹Faculte des Sciences de la Sante, Universite A Moumouni, Niamey, Niger

²Centre National de Référence pour la Fistule Obstétricale (CNRFO), Niamey, Niger

³UNFPA, Niamey, Niger

Email: *idinafi@yahoo.fr

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Abstract

Introduction: Obstetric fistula is a public health problem but its prevalence remains unknown in Niger. We report epidemiological and anatomopathological status of new cases of female genital fistula. **Method:** Multicentre prospective study over 15 months (January 1st, 2016 to March 31st, 2017) in 5 national centers for the therapeutic management of female genital fistula. Data were collected from focus groups, observations and pre-established individual survey form and hospital records. **Results:** During the 15-month survey period, 148 new cases of female genital fistula of obstetric origin were recorded. Patients aged 15 to 19 accounted for 40% of cases. They were married before the age of 16 (55.4%), out of school in 89.2% and 77.2% lived outside the matrimonial home. The patients came from rural areas (96%) of the cases, the labor of delivery lasted more than 24 hours in 71.6% and in 95.3% of the cases the delivery was initiated at home and then finished in a health facility, 33.8% had assisted vaginal delivery (forceps/suction cup), 23% by caesarean section and 10.81% by laparotomy for uterine rupture. Fistula occurred during first delivery (47.3%) and recurrence accounted for 5.4% of cases. Perinatal death accounted for 85.1%. **Conclusion:** Female genital fistula of obstetric origin remains a major public health problem in Niger despite the efforts made.

Keywords

Feminine Genital Fistula, Niger

1. Introduction

The female genital fistula represents a major public health problem, with a very negative impact in the area of reproductive health.

This is the case of countries in sub-Saharan Africa, South Asia and some Arab States [1].

The World Health Organization estimates that 2,000,000 women live with obstetric fistula worldwide with 50,000 to 100,000 new cases each year, or 100 cases per day [2] [3].

To respond to the global campaign to eliminate the TF launched by the United Nations Fund for Population (UNFPA) in 2003, Niger has created a national network for fistula elimination (réseau d'éradication de fistule, REF), with the aim of contributing to improving the health status of the population [4].

Objective is to contribute to a better knowledge of this disease, by looking at the epidemiological, anatomical of female genital fistula of obstetric origin.

2. Methodology and Patients

This is a prospective multicenter descriptive study that has been used to collect patients in 5 centers for the treatment of female genital fistula (CNRFO) in Niamey National Reference Center for Obstetric Fistula (CNRFO), Dosso regional centers, Tahoua, Zinder and the Danja fistula center (Maradi region). from January 1, 2016 to March 31, 2017 for a period of 15 months.

They were included in our study all cases of female genital fistula of obstetric origin registered in the relevant departments during the study period and were not included cases of fistula occurring outside the period selected for the study or patients cases of female genital fistula of non-obstetrical cause.

Data were collected from focus groups (after informed and accepted consent), observations, pre-established individual survey form, any observed ethical rule.

3. Results

1) General appearance

During our study, 148 cases of female genital fistula of obstetric origin were recorded in treatment centers.

2) Epidemiological aspects

The average age of the patients was 24 years old with extremes 15 and 46 years. All age years old groups of women were affected. The 15 - 19 years old age group was the most exposed with 40% of cases (**Table 1, Table 2**). Patients aged 15 - 19 years old, were more numerous in the Tahoua and Maradi regions with 15 and 12 cases, respectively. All major ethnic groups in the country were concerned, Haoussa (52%), Zerma (21%), Touareg (16.2%) and Fulani (7.4%), respecting the proportions of the country's ethnic groups (**Figure 1**). Niamey was the most represented with 42 cases (28.4%), followed by that of Zinder 32 cases (21.6%). The patients were from rural areas 96% and 89.2% and out-of-school 97.97% and 117. The patients hight (79%) were upper 150 cm and 76 patients (51.4%) had a weight over 50 Kg. The primiparous represented 40% and the multiparas 39.9% (**Table 3**).

All patients were married, had any occupation 95%, and in 84.5% of cases,

Table 1. Patents by years old at 1st marriage.

Age (years old)	N	%
12 ans	4	2.70
13 ans	10	6.75
14 ans	29	19.60
15 ans	39	26.35
16 ans	21	14.18
17 ans	21	14.18
18 ans	8	5.40
19 ans	11	7.43
20 ans	4	2.70
23 ans	1	0.67
Total	148	100

Table 2. Patients years old at 1st delivery.

Age (years old)	N	%
15 ans	37	25
16 ans	29	19.60
17 ans	27	18.24
18 ans	23	15.54
19 ans	6	4
20 ans	13	8.78
21 ans	6	4
22 ans	5	3.37
23 ans	1	0.67
25 ans	1	0.67
Total	148	100

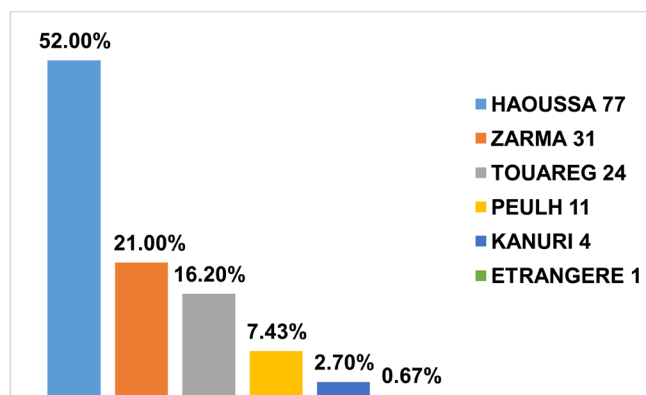
**Figure 1.** Patients by ethnic group.

Table 3. Patients by parity.

Parity	N	%
I	70	47,32
2-3	19	12,83
4-5	24	16,21
>5	35	23,64
Total	148	100

husbands were farmers or ranchers. Only one case of divorce was noted.

3) Monitoring pregnancy and childbirth

Prenatal follow-up was 58.10% with at least 3 prenatal visits. In 106 patients (71.6%), delivery labor had lasted more than 48 hours. They delivered by caesarean section (33.8%), or laparotomy for uterine rupture (33.8%) and assisted vaginal delivery (forceps, vacuum extractor) 48 cases or 32.4%. All patients had given birth only one child, for a total of 148 newborns, 85.14% of them were stillborn.

4) Clinical aspects

Urogenital fistula was the most common (94.6%) with only one fistula diagnosed in 96.6%. Vesico-vaginal fistula was the most common type of anatomy found in 66 cases (47.2%) followed by urethro-vaginal fistula 36 cases (25.7%), and Recto-Vaginal Fistula (RVF) cases were recorded. therefore 2 cases (66.7%) sit at the lower 1/3 of the rectum and 1 case (33.3%) at the top 1/3 of the rectum.

5 cases of association of urogenital fistula (FUG) and FRV were recorded: the same anatomical type of urogenital fistula was found in 3 cases namely, the urethrovaginal fistula associated respectively with cases of FRV upper third of the rectum a in the middle third of the rectum and one lower third case of the rectum, a juxta-cervical fistula associated with a rectovaginal fistula of the upper third of the rectum, a vesico-vaginal fistula associated with a rectovaginal fistula of the upper third of the rectum.

Fistula was associated with vaginal fibrosis in 8.8% of patients. 46.6% fistulas deemed simple by surgeons. 44 patients (29.7%) had complex fistulas and 35 patients (23.6%) had fistulas of intermediate complexity.

4. Discussions and Comments

1) Epidemiological aspects

a) Age

All age groups of women of childbearing age were affected, with a prevalence of the 15 to 19 age group (40%). 82.5% of the patients of this survey were between 15 and 35 years old as in some studies in 2005 in Niger [1], 2011 in Nantes [4], Sanda [5] in Niger in 2001, who found respectively an average age of 26.42, 24, and 26 years old.

b) Age at first marriage

The average age at first marriage of the patients was 15.6 years old, with extremes of 12 and 20 years, 89.16% of them were married before the age of 19 years old, 55.40% before the age of 16 years old. Patients married before the age of 16 in the regions of Zinder and Tahoua with respectively 28.2% and 24.4%.

In this study, 92.68% of patients whose age of less than 16 years old at first marriage had any scholarship. Non-enrollment exposed to early marriage, non-completion of prenatal consultations; too ignorant of the risks of no skilled home delivery assistance or in decision-making to go to a health facility for delivery. The out-of-school population (not early marriage) would therefore be a population with high-risk pregnancy with complicated delivery. These remarks were made Nafiou [1] in Niger in 2005 and Mariko [6] in 2006 in Mali, Ouattara K [7] in 2010 in Mali.

c) Ethnic group

The main ethnic groups of Niger were concerned, more than half in Haoussa (52%), zerma (21%). The frequency of FGF respected the proportion of different ethnic groups in the country.

d) Marital status

This study reports that 97.97% of the patients were married, one divorce case. Only 20.7% lived with their husbands so married status does not guarantee the couple's life; indeed 77.24% of the married patients lived at their parents home as 89.47% reported by Hadiza [8] in 2012 in Niger, however lower rates are noted by Nafiou. [1] in 2005 in Niger, Mariko [6] in 2006 in Mali and Djadda [9] in 2006 in Senegal respectively: 52%, 73.5% and 75%.

e) Women's level of education and socio-economic status

Since education is an indirect reflection of occupation and socio-economic status, most FGFs occur in poor women living in settings where women's status and self-esteem depend almost entirely on their ability to work, marriage or their ability to have children; whereas the direct causes of fistula are dystocia and lack of emergency skilled obstetric care; extreme poverty is an important underlying cause. Women with FGF are poor, malnourished, lack basic education and live in very remote rural areas [8]-[14].

f) Area of life

The patients came from rural 96%. Such a distribution is in perfect accordance with the data of the literature. In fact, rural women, far from health centers without means of emergency medical evacuation, with less access to obstetric care, are more generally exposed to the obstetrical complications of dystocia, particularly fistula [15].

2) Rank of the causal childbirth

In this series, 47.3% of our patients had fistula after the first delivery. The regions of Tahoua and Maradi predominated with respectively a rate of 27.14% and 21.42% of primipares as in that of Nafiou. [1] in Niger in 2005, Dekou [3] in 1999 in Côte d'Ivoire, and Wall [15] in Nigeria in 2004 with respectively 43%, 44.29% and 45% of primiparous patients. Multiparas are also involved with

39.85% of cases, against Sanda [5] in Niger in 2001 and Ouattara [9] in Mali in 2010, which found respectively 21% and 21.4% of cases of large multiparous.

If primiparous and large multiparous are exposed to fistula and incontinence, the causes are different. For primiparous women it is generally due to the resistance of the uterus myoma, which is rarely broken, but for large multiparas, the cause is generally dynamic with uterus and the pelvic floor having been too often used get tired. and there is often a cessation of childbirth with often rupture of the uterus lesion of neighboring organs.

Women do not have access to care, because of ignorance, the existence of alternative solutions (traditional practices?), the unfavorable status of women, inadequate health facilities and awareness.

3) Place of delivery

We noted 95.28% of patients had delivered in a health facility, of which 29.05% in a maternity hospital. However, 4.05% had delivered at home and 0.67% while on the move.

Our results are superior to those reported by Nafiou [1] in Niger in 2005, Hillary [16] in 2004 in Kenya and Diakite [17] in 2008 in Mali, which found respectively 59.5%, 79% and 87.5% of cases. Unlike our findings other authors had noted rates home delivery fairly high. Sanda [5] in Niger reported that about 64.8% of fistula patients had delivered at home.

The low relative rate of home birth in our series (4.05%) can be explained by the fact that most of our patients during delivery had started their delivery work at home and when the dystocia with the impossibility of giving birth, the patients were directed to a health center where the delivery had finally ended. In fact delivery was practiced in the health structures by instrumental extraction, caesarean or uterine rupture cure In this study, 31.03% of patients had given birth in a the first health facility level and all had a delivery time between 24 h to 48 h (**Table 4**).

Childbirth in Niger rural areas is traditionally provided by a matron. The matron capacity for management is sometimes a delay factor in the evacuation of patients to the skilled health centers. The economic vulnerability of the population is another barrier to access to the health center. Fistula can occur in a maternity ward if patients are not admitted on time or when they have not received skilled obstetric care they need, or because the provision of basic obstetric care is non-existent, that is, for various reasons, due to lack of access to local health services. The long delay in accessing emergency obstetric care is a risk factor.

3) Clinical aspects

a) Anatomic type of fistula (**Table 5 & Table 6**)

The study revealed that 47.15% of urogenital fistulas were vesico-vaginal and 25.71% urethro-vaginal, 3 cases of rectovaginal fistula had been recorded, including 2 cases in the lower third of the rectum and one case in the upper third.

Table 4. Duration of delivery.

Duration of delivery	N	%
<12 H	1	0.67
12 - 24 H	41	27.70
24 - 48 H	87	58.80
≥72 H	19	12.83
Total	148	100

Table 5. Anatomic pathological findings by years old group.

Type of FGF	Age(years old)						Total
	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	≥40	
recto-vaginal	1	1	0	1	0	0	3
uro-genital	56	26	18	14	19	7	140
Mixte	1	1	1	1	1	0	5
Total	58	28	19	16	20	7	148

Table 6. FGF by Region.

Country/region	N	%
Diffa	5	3.38
Dosso	22	14.86
Maradi	30	20.28
Niamey	4	2.70
Sokoto (Nigeria)	1	0.67
Tahoua	32	21.63
Tillabéry	28	18.91
Zinder	26	17.57
Total	148	100

The association of a rectovaginal fistula and a urogenital fistula was found in (five) 5 patients including 3 cases the same anatomical type recto-vaginal fistula of the upper third of the rectum, one of the middle third of the rectum and one of the lower third of the rectum. For the two other cases, there was a rectovaginal fistula of the upper third of the rectum associating respectively a juxta-cervical fistula and a vesico-vaginal fistula.

Our results are comparable to those of Nafiou. [1] in Niger in 2005 who found in 53.2% of cases fistulas were vesico-vaginal siege, and those of Daouda [18] in Mali in 2013 which reported 5 cases of association of uro-genital fistula and rectal fistula -vaginale.

b) Vaginal fibrosis:

In our study, vaginal flexibility was noted in 91.22% of cases against 8.78% of

vaginal fibrosis. This rate is higher than those reported by Berthe H [19] and Mariko [6] who found respectively 50% and 57.8% of flexible vagina. Vaginal flexibility is a prerequisite for the success of the operative procedure.

5. Conclusion

Female genital fistula of obstetric origin remains a major public health problem in Niger. This study reveals that it occurs in very young women, primiparous as well as multiparous, generally poor, very often illiterate, with limited access to health services, especially to reproductive health care.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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