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Obstetric Fistulas: Epidemioclinical Aspects and Management at the Maroua Regional Hospital Summary

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ABSTRACT

Obstetrical fistula is an abnormal communication between the vagina and the urinary tract or between the vagina and the rectum, or both, leading to urinary incontinence. The cameroonian government with its developmental partners have set up centers to deal with these fistula among which, the one of the Maroua Regional Hospital. After two years of active operation, it was judicious for us to evaluate the functioning of the said center. Hence, the interest of this study led to the general objective of the evaluation of the management of obstetric fistula at the Maroua Regional Hospital Center. We conducted a cross-sectional descriptive study with retrospective data collection based on 118 records of patients managed during the study period. Results obtained showed that, the age group of [20-25] years were mainly represented in the sample. The vesico-vaginal form was the most common fistula with 72.90%. The surgical approach by the lower route with fistulorraphy was practiced in 84.70% of the overall cases. The success rate was 96.62% against 3.38% failure at hospital discharge. Long-term follow-up gave us a cure rate of 77.23% against 22.77% cases of recurrence. Concludingly, the results obtained are encouraging, however, more efforts are needed in terms of awareness and early detection of cases in the communities in ordre to eradicate this pathology.

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Introduction

Obstetric fistula is an abnormal communication between the vagina and the urinary tract and/or rectum through which urine and/or faeces constantly leak [1]. Literally,it is an opening between the vagina and the bladder or rectum or both, which causes chronic urinary and/or faecal incontinence with adverse effects on the woman's social life and health [2]. The world health organisation (WHO) estimates that there are 2 million obstetric fistulas worldwide with an annual incidence of 100 000 new cases [3]. It is estimated that between 2 and 2.5 million women in developing countries suffer permanently from obstetric fistula-related problems. In sub-saharan africa, 20 to 30 women suffer from short or long term illness or disability, including genital damage, infertility or serious postpartum disability such as obstetric fistula [4]. Approximately 5 065 new cases per year in French Speaking African countires, either an annual incidence rate of 2% [5]. In cameroun, the prevalence is 4 cases per 1000 women, nevertheless, an incidence rate of 500 to 1000 new cases per year was reported by [1].

The impacts related to obstetric fistula are several. Firstly we have an anatomical and functional consequences (recurrent infections, sterility, sexual disability, urinary and/or faecal incontinence). Secondly,we have social consequences such as social exclusion, stigmatisationn discrimination and iatrogenic poverty following catastrophic expenses. The cameroonian government has embarked on a campaign of obstetric fistula surgery through various activities supported by its technical and financial partners. These activities include prevention and surgical management. After two years of operation at the Maroua Regional Hospital Center,it is appropriate for us to question ourselves about how often and the quality of care received by the women who were suffering of obstetric fistula and treated in the premices of this specialized Center.

General Objective

Evaluate the epidemiological and therapeutic aspects of obstetric fistula in the care center of the Maroua Regional Hospital

Specific Objectives

Describe the sociodemographic characteristics of the patients;
Identify the differents types of fistulas and their management;
Describe the postoperative follow-up.

Methodology

Type of Study

We carried out a cross-sectional descriptive study with a retrospective data collection.

Study Period

Study period went from september 14th 2020 to july 24th 2022 with data analysis as from july 27th 2022, to november 30th of the same year 2022.

Setting

The study was carried out in the Far North region, at the Maroua Regional Hospital and more specifically at the gynaecological and obstetric department of the same hospital.

Study Population
All records of women admitted for vaginal delivery at the Maroua Regional Hospital

Target Population
All records of women admitted and managed for obstetric fistula at the Maroua Regional Hospital

Type of Sampling
Non probabilistic consecutive sampling

Inclusion Criteria
All records of women managed for obstetric fistula at the Maroua Regional Hospital center during the study period and those who consented to the study for follow-up.

Non-Inclusion Criteria
All incomplete and unsuable patients records;
All patients who refused to participate to the postoperative follow-up process;
All records of patients previously treated at another center for obstetric fistula before admission

Data collection tools and technics
Hospitalisation files
Registration files
Surgical report register
To carry out this study, we established a data collection tool in the form of a questionnaire. Data collection was based on the census and exploitation of the files of fistulas recorded in the center during the study period. The files were analysed progressively according to the inclusion criteria and the data were recorded on the data collection form.

Ethical considerations
The identities of the patients and the therapeutic results were kept anonymous after informed consent from the participants

Statistical analysis
The data collected were processed and analysed using microsoft excel 2016 and sphinx V5

Contraints
The main limitation of this study was the retrospective nature making it difficult to access patients files.

Results
Frequency of Obstetric Fistulas
Out of a total of 1 895 cases of gynaeco-obstetric surgery, we collected 130 records of fistula cases either a frequency of 6.86%.

Sociodemographic Characteristics
Distribution of Patients According to age

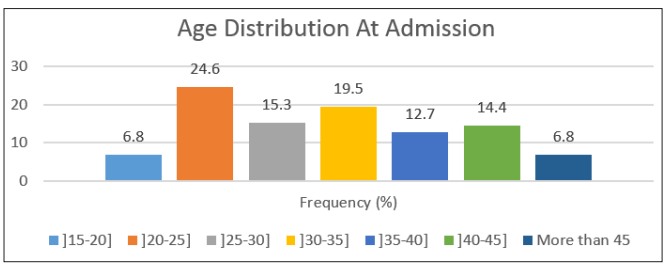

Figure 1: Distribution of Patients According to age at Admission

The figure above shows that, the majority of women with fistula either 24.60% were between the ages of 20 and 25 years old.

Distribution of Patients According to Height (Meters)
Table 1 below shows the distribution of fistula patients according to height. It reveals that, 48.30% of the women with fistula were between the heights of 1.50 meters and 1.55 meters tall.

Table 1: Distribution of Women Following Their Different Heights in Meter

Height (Meter)	Number (n)	Frequency (%)
[1.45-1.50]	10	8.47
[1.50-1.55]	57	48.30
[1.55-1.60]	45	38.13
[1.60-1.65]	2	1.69
[1.65-1.70]	3	2.54
[1.70-1.75]	1	0.88
Total	118	100

Distribution of Patients According to Their Level of Education
The table below demonstrate a predominance rate of women without any formal education with 71.20% against 4.24% of those with higher educational level attendance.

Table 2: Sample Distribution Following Educatonal Level

Educational Level	Number (n)	Frequency (%)
Never attended school	84	71.20
Primary	17	14.40
Secondary	12	10.16
Univeristy	5	4.24
Total	118	100

Distribution of Patients According to type of Fistula
Below is a table of the different types of fistula presented during study period. The most represented form (vesico-vaginal) recorded a frequency of 72.90%.

Table 3: Distribution of Patients According to the type of Fistula

Type of fistula	Number (n)	Frequency (%)
Vesico-vaginal	86	72.9
Recto-vaginal	26	22
Mixed or combined fistula	6	5.1
Total	118	100

3-Care
Distribution of Patients According to the type of Anaesthesia used During Surgery

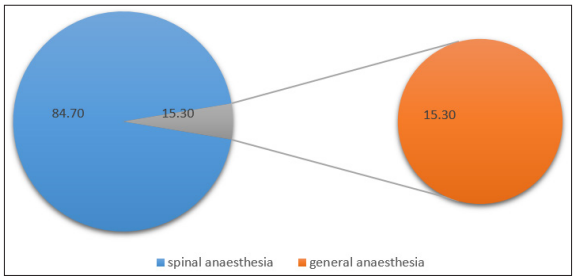

Figure 2: Distribution of Women by the type of Anaesthesia

Spinal anaesthesia was the most practiced anesthetic technic during this study period with 84.70%.

Distribution of Women According to the Surgical Approach
The vaginal approach predominated in this study with a rate of 84.70%.

Table 4: Distribution of Women According to Surgical Approach

Surgical Approach	Number (n)	Frequency (%)
Low	112	94.92
High	5	4.25
Mixed	1	0.84
Total	118	100

Repair Technics
Concerning the management of obstetric fistula at the Maroua Regional Hospital Center, the most practiced technic for fistula repair was fistulorraphy

Distribution of Patients According to the Results of the Methylene Blue Test
The methylene blue test was performed to confirm the tightness of the fistulorraphy. In this study, 94.07% of women were tested negative and 5.93% tested positive.

Distribution of Women According to Continence after Surgery
The majority of the sample record, either 94.10% of the fistula patients had complete continence after surgery.

Immediate Follow-Up
Going from the first day of surgery to hospital discharge, 83.89% of the patients got complete recovery continence, whereas, 12.71% of the sample record got healed but without continence after surgery. A faillure rate of 3.38% was recorded.

Table 5: Distributionof Cases Following Immediate Folow-Up

Immediate follow-up	Number (n)	Frequency (%)
Healed continent	99	83.89
Healed incontinent	15	12.71
Faillure	4	3.38
Total	118	100

Long Term Follow-Up and Recurrence Rate
The success rate was 77.23% against 22.77% recurrences for this study period.

Discussion

Frequency of Obstetric Fistulas
We collected 130 cases of fistula records out of a total of 1 895 gynaecological operations during study period with a frequency of 6.86%. This result corroborates with that of in mali who found in his study 5% of fistula cure. On the other hand, in Bamako-Mali found a higher frequency of 15% of fistula cure which is far ahead of the one we obtained in this retrospective study [6, 7].

Sociodemographic Characteristics
Sample Age
The most reresented age group of this sample study was that of [20-25] years that with a frequency of 24.6%. Ontained results corroborates several studies amongst which, those of in Mali who found that the age group most concerned was between that of the range of 15 to 25 years [8]. More over, found that 52% of patients were under 20 years old [9, 10]. The predominance of this age group can be explained by the phenomenon of early pregnancy, low educational level of young girls and certains religious practices in this region (Fa-North Cameroon) of the country.

Heights
Short women of 1.50 to 1.55 meters tall are the most represented in this study sample with 48.30%. Similar observations were made by in Mali who found 43.20% of women of this height. In addition to Haroua, similar result were equally obtained by in their series with a greater percentage of 55.88% of short women [2, 9]. Thus it is kown that being short as a woman can be incriminated and considered as a predisposing risk factor to this pathology.

Educational Level of Women With Obstetric Fistula
71.20% of the women record files concerned in this study were not educated. Such an observation was equally made by in Ngaoundere-Cameroon and in Chad with respectively 70.2% and 91.60% [2, 11]. This can be explained by the fact that young girls drop out of school, are for the most unaware and as such do no benefit of the advantages of family planning systems.

Therapeutic Management
Type of Fistula
Vesico-vaginal fistula was the main presented form with a frequency of 72.90%. In Senegal, in Cameroon and in Congo, found in their respective studies 84%, 79.40% and 96% [2, 12]. This predominance rate of vesico-vaginal fistula is justified by the intimate anatomical relationship between the bladder and the vaginal and its functional importance during birth.

Type of Anaesthesia
Spinal anaesthesia was the most practiced anaesthetic technic during surgery with 84.70% frequency. This result is almost similar to those obtained by in Mali and in Cameroon with 80% and 70.40% respectively [2]. The predominance of spinal anaesthesia could be explained by the fact that it is suitable for most pelvic surgeries.

Surgical Approach
The lower approach was performed at a rate of 94.92% during surgery. Similarly in a design study carried out by in Gabon, a frequency rate for lower approach surgery of 93.6% was obtained and the same finding was also made by with a percentage of 93% [2, 13]. also found in his stuidy a predominance of vaginal route that is 79.41% [6]. This can be explained by the fact that, the vaginal route is the most preferred route which guarantees to patients a better confort during postoperative period recovery.

Surgical Technic
Fistulorraphy was the main surgical technic performed for most vesicovaginal splitting and excision of sclerotic edges. The same practices were observed by in Guinea Conakry, Kati-Mali and in Mali; all practiced respectively this surgical technic at different frequencies of 85.30%, 93.30%, and 41.18%. This technic was practiced at 100% in this center due to the surgeons mastery of the technic [6, 14, 15].

Methylene Blue Test Result
The result of the methylene blue test revealed a negative test of 94.07% of the cases. This result is greater than the ones obtained by which gave just 62.50% of negative result cases. This high rate could be explained by a very good mastery of the fistula care

technic and the management experience of the team members of the Maroua Regional Hospital Center.

Follow-Up

Immediate Follow Up

In this study,the overall success rate of fistula closures was 83.89% and the failure rate was 3.38%. The results abtained are almost similar to those of in Guinea and in Mali who obtained respectively 86.00%, 87.58% and 79.00% [16]. This can be explained by the fact that the fistula were repaired by professionals trained in this field [6].

Long-Term Follow-Up and Recurrences

The success rate during this study period was 77.23% versus 22.77% of recurrences. Our results corroborate with those of in Ngaoundéré-Cameroon who obtained 80% of success rate and 20% of recurrences. This can be explained by the good follow-up of the patients and the respect of the instructions by the patients decreed by the care staff [2].

Conclusion

At the end of this study, it appears that obstetric fistula remains a frequent pathology with 6.86% frequency rate in this part of the country (Far-North Cameroon). We obtained a low failure rate of 3.38% linked to the mastery of fistulorraphy surgical technic. The center is working to eradicate obstetric fistulas various forms. As such efforts must still be made regarding prevention through early awareness raising in order to achieve the objectives set when the center was created,which had as main goal the eradication of obstetric fistula in the Far-North region of Cameroon [17-39].

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