

RESEARCH ARTICLE

Epidemiological, Clinical and Therapeutic Aspects of Vesico-Vaginal Fistulas at Gabriel Touré University Hospital

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Abstract

Purpose: To evaluate the epidemiological, clinical and therapeutic aspects of vesico-vaginal fistulas in the urology department of CHU Gabriel TOURE.

Patients and Methods: This was a retrospective study of the epidemiological, clinical and therapeutic aspects of vesico-vaginal fistulas admitted and treated from January 2016 to December 31, 2021. The variables studied were: Age, gender, ethnicity, profession, clinical appearance, treatment and evolution.

Results: During our study, we recorded 100 cases of vesico-vaginal fistulas. The 21-30 age group was the most represented, with 57% of cases. The mean age of our study was 27.30±8.378 years. Some 29% of patients had undergone 2 fistula cures. In our series, 61% of patients stated that urine loss was permanent. Nearly 33% of our patients were primiparous. Almost all our patients had given birth in a maternity hospital. More than half of our patients had given birth naturally. In our series, 59% of infants were stillborn. In 39% of patients, labor lasted 01 day. In 88% of cases, patients lived in the marital home. The vaginal route accounted for 91% of cases in our sample. Some 53% of patients were dry at the end of treatment.

Conclusion: Our analysis of the situation shows that obstetric fistula is little-known in the community and very poorly perceived by patients. Thus, women with fistula are perceived negatively in the community.

Keywords: Fistula, Bladder, Vagina.

1. Introduction

A fistula is defined as a congenital or accidental passageway for physiological or pathological fluid, which is maintained by this flow [1]. In the case of vesico-vaginal fistula (VVF), this is an acquired communication between the bladder and vagina, resulting in the permanent loss of urine through the vagina [2]. It can occur between the bladder and vagina, or the urethra and vagina [3]. In the majority of cases, it occurs after a laborious, dystocic delivery, hence the term "obstetric vesico-vaginal fistula".

Obstetric fistula is both a public health problem and a human and social tragedy. The occurrence of this

obstetric complication in women is a major factor in social and family exclusion, as the majority of victims are expelled from the family home or even excluded from all group activities [4].

Worldwide, an estimated 2 million women and girls live with vesico-vaginal fistula, with 50,000 to 100,000 new cases each year. Vesico-vaginal fistulas are almost non-existent in Europe and North America, and the few cases observed are the result of cancer, radiotherapy, pelvic surgery, infection or trauma.

In Africa, the prevalence remains worryingly high, with the WHO reporting 5,000 new cases per year [5]. In Mali, figures suggest 3-4 obstetric fistulas for

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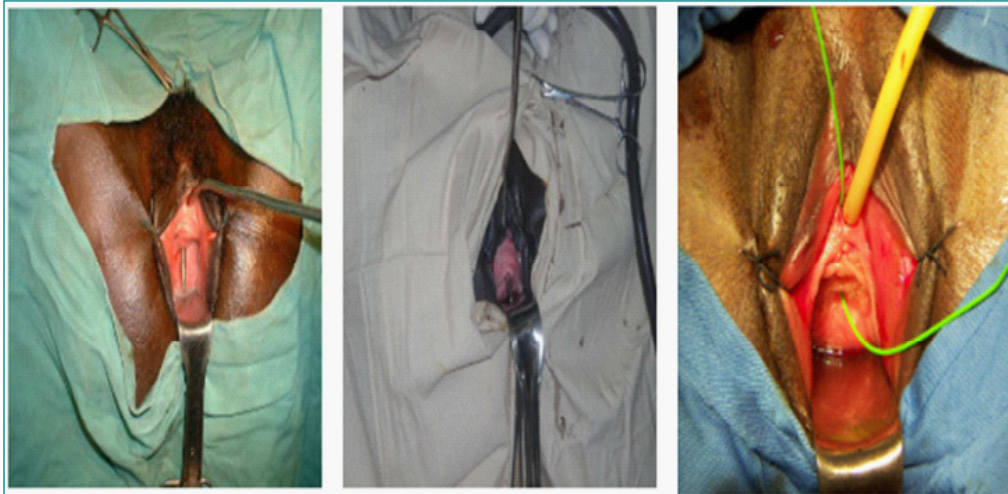


Figure 1. *Fistula of the vesicovaginal septum*



Figure 2. *Urethral fistula*



Figure 3. *Partial cervico-urethral disinsertion*

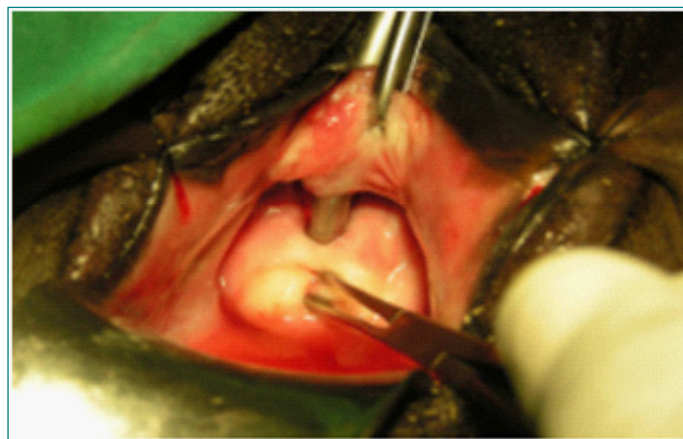


Figure 4. *Total cervico-urethral disinsertion*

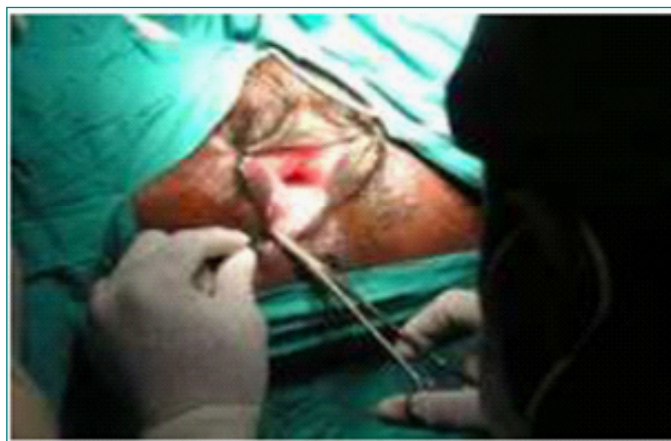


Figure 5. Destruction of the urethra

every 1,000 deliveries. Some confusion is generated by the disparity of figures referring to the incidence and prevalence of the pathology according to different sources and different regions, but starting from these incidence rates (3 to 4 for every 1,000 deliveries), we estimate that the number of women at risk of suffering from fistula in Mali is between 1,804 and 2,405 cases if nothing is done [6].

Most cases of fistula are the result of tissue damage caused by prolonged pressure on the fetal head or presentation during dystocic labor. Dystocic labor complicates more than 6 million deliveries worldwide each year, and more than 90% of cases occur in the world's poorest countries with limited access to emergency obstetric care and services skilled in the management of obstetric fistula [7]. Every year, many women die as a result of inadequate or untreated dystocic labor. Other obstetric causes of fistula include embryotomy, Caesarean section with or without hysterectomy, and symphysiotomy.

Social, cultural and health factors contribute to the high prevalence of obstetric fistula in low-income countries. These factors are context-dependent and include: lack of emergency obstetric care, child marriage with early childbearing, severe forms of female genital mutilation, gender discrimination, poverty, malnutrition and poor quality health services. These factors are important in developing countries, where some women delay seeking care and therefore do not benefit from timely obstetric care [7].

In an attempt to raise the profile of obstetric fistula activities, we initiated this study in the urology department of CHU Gabriel Toure.

2. Patients and Methods

Our study was carried out in the Urology Department of CHU Gabriel Touré. We conducted a retrospective study of the data over a 5-year period from January

1, 2016 to December 31, 2021. The study population consisted of women with vesico-vaginal fistula admitted and treated during the study period.

2.1 Our Study Included

Patients with operated VVF, RVF, cervico-vaginal fistula, urethrovaginal fistula.

2.1.1 Not Included in the Study

- Sphincter insufficiency incontinence
- Stress incontinence
- Post-operative incontinence after closure of a VVF

Data were collected on pre-established survey forms.

The variables studied were: Age, gender, ethnicity, profession, clinical appearance, treatment and course.

The classification of K. Ouattara et al. It describes the anatomic-topographic type of fistula; its clinical features; its environment (presence or absence of vaginal sclerosis; association with a rectal fistula; involvement of the vesico-urethral segment).

Depending on the Environment, Three Situations are Possible

- A. Fistula in soft vagina.
- B. Fistula on vaginal sclerosis (bridles, stenosis or vaginal atresia).
- C. Vesico-vaginal fistula + (1st, 2nd, 3rd degree perineal tear, FRV).

Depending on Location

- A. Typical vesico-vaginal septal fistula.

The fistula is located in the middle of the vesico-vaginal septum, sparing both the vesical and uterine cervix. The fistula may be small, medium, large or wide.

3. Results

During our study, we recorded 100 cases of vesico-vaginal fistulas out of a total of 1,850 urinary pathologies, representing a frequency of 5.40%. The 21-30 age group was the most represented, with 57% of cases. The mean age of our study was 27.30 ± 8.378 years, with extremes of 13 and 50 years. Bambara was the most common ethnic group, accounting for 29% of cases. The study revealed that 29% of patients had undergone 2 fistula cures. On the other hand, 23% did not provide any information on the number of treatments. Some 61% of our patients stated that urine loss was permanent.

Nearly 33% of our patients were primiparous. Almost all our patients had given birth in a maternity hospital, compared with 5% who had given birth at home. More than half of our patients had given birth naturally. In our series, 59% of infants were stillborn. In 39% of patients, labor lasted 01 day. Some 21% of patients had achieved 01 pregnancy. In 88% of cases, patients lived in the marital home.

In 54% of cases, VVF on flexible vagina. Type III was the most common, found in 21% of cases. Fistuloraphy, neourethra was used in 50% of cases. The vaginal route accounted for 91% of cases in our sample. Around 53% of patients were dry at the end of treatment. In 31% of cases, the husband was in charge.

4. Discussions

4.1 Frequency

During our study, we recorded 100 cases of vesico-vaginal fistulas out of a total of 950 urinary pathologies, representing a frequency of 10.52%.

4.2 Socio-Demographic Characteristics

➤ Age

During our study, the 21-30 age group was the most represented, with 57% of cases. The mean age in our study was 27.30 ± 8.378 years, with extremes of 13 and 50 years. These results are similar to those of Landouré D [7], who reported a mean age of 27 years, with extremes of 14 and 49 years. In a study by Komanda E et al [8], the majority of fistula patients were aged between 20 and 34 years (45.61%), with extremes of 15 and 75 years.

These results could be explained by the fact that young adults are of childbearing age, given that early marriage and young age at delivery (immature pelvis) favor the occurrence of VVF.

➤ Ethnicity

Bambaras were the most common ethnic group encountered, accounting for 29% of cases; this could be explained by the fact that Bambaras are the majority ethnic group in Bamako.

According to Landouré D [7], the majority ethnic group was Sarakolés in 64% of cases, followed by Bambaras in 15.9% of cases. This difference could be explained by sample size and study location.

➤ Profession

Housewives represented 86% of our sample. These results are similar to those of Landouré D [7], who stated that “the majority of women surveyed (950 out of 957), declared that they devoted themselves to “housework”, without specifying any other type of activity.

Apart from its symptomatology, VVF causes discomfort that prevents any normal activity. The leakage and odour of urine prevent women from carrying out income-generating activities, confining them to field work, giving them a low level of participation in the local economy. The majority of these women live in the countryside, and either farm or raise livestock. If not, they stay at home.

It appears that low socio-economic and educational levels characterize VVF in this context. This case illustrates the difficulties these patients have had in meeting the costs of their treatment.

Improving the socio-economic level can help prevent this condition by creating activities for these women.

4.3 Obstetrical Factors

➤ Parity In our study, nearly 33% of our patients were primiparous, followed by 12% who were pauciparous. There is indeed a correlation between parity and the occurrence of VVF. These results differ from those of Moulaye L [10] and Diakité M [9], who found 60% and 42.8% primiparous patients respectively. In the case of primiparous women, the cause is generally gynaecological-obstetrical immaturity.

This difference could be explained by the lack of information about parity in almost 41% of patients.

➤ Mode of Delivery

In our study, more than half of our patients (55%) had given birth naturally, while 45% had undergone Caesarean section. Caesarean section is performed in the context of obstetric emergencies following dystocia. The fact that low-lying fistulas were found

in some patients who had undergone Caesarean section, shows that Caesarean section was not the cause of these low-lying fistulas. Our results are similar to those of Moulaye L [10], who found that 76% of deliveries were natural versus only 23.3% Caesarean sections. According to Landouré L [7], 83% of patients reported having given birth by the vaginal route, compared with 6% by Caesarean section, which could be a cause of obstetric fistula.

➤ Place of Delivery

Almost all our patients had given birth in a maternity hospital, i.e. 85%, compared with 5% who had given birth at home. These results are similar to those of Diakite M [9], in whom the majority of patients (87.5%) had given birth in a health facility, compared with 12.5% who had given birth at home without any medical assistance. A study carried out in Madagascar [11] showed that 66.25% of patients with VVF had given birth in a health center, compared with 33.75% who had given birth at home.

As confirmed by Diallo A et al. during studies in Guinea in 2016, the majority of parturients gave birth at home without medical assistance with a proportion of 37.3% compared with 56.7% of deliveries at the health center [12].

➤ Duration of Labor

In 39% of our patients, labor lasted 01 day, followed by 32% lasting more than 24 hours. Women who gave birth after 36 hours were at risk of inducing FO at the time of delivery, in addition to the likelihood of neonatal mortality and post-delivery sequelae. At the end of the study, 61% of patients stated that urine loss was permanent.

4.4 History of Fistula

➤ Age of Fistula

During our study, 19% of our patients had had a fistula for almost 03 years. Because of the shame involved, VVF is a hidden disease. The study by RAKOTORAVO. R [3411] found that 87.34% of patients had lived with fistula for more than twelve months before treatment.

According to Palluku J et al. in 2015, patients who had lived more than 8 years «in the urine» were the most represented, with a prevalence of 51.8% [13]. However, Diallo et al. in 2016 and Joseph B et al. in 2018 found that more than half the patients studied lived with their fistula for more than 4 years [14, 12]. This long waiting period is due to a lack of resources and information on the severity of the disease and the management of VVF.

Indeed, those in charge at the Ministry of Public Health's Department for the Control of Non-Communicable Diseases should use the media to raise public awareness, stressing the existence of free VVF treatment campaigns. In all cases, doctors working particularly in rural areas should always carry out post-partum gynecological examinations, looking for any symptoms of VVF, and refer and treat victims in good time to combat the psychological effects of the disease.

➤ Number of Treatments

Fortunately, the prevention and treatment of obstetric fistula was one of UNFPA's priority issues. It currently leads the global campaign to eliminate fistula in over 50 countries, with the support of more than 80 partners. Its aim is to make this condition as rare as possible in Africa (including Mali), Asia and the Arab States.

The therapeutic management of VVF is crucial because of the impact it has on the lives of its victims. According to this study, many Malian women with fistula came for surgery (77%), of whom around 29% had undergone 2 fistula cures, compared with 23% who did not provide information on the number of cures they had undergone.

In 2018 Joseph B stated that surgery is often repeated in women with VVF, with a rate of 14% of patients. They have undergone at least one surgical operation [12].

For surgeons, it is essential to ensure that every operation is as successful as possible, to avoid the risk of relapse. Success depends on the initial condition of the fistula, the skill of the surgeon and the quality of post-operative care. The success of the treatment suggests that an exchange of experience and transfer of skills between senior and junior urological surgeons should continue in order to preserve what has been learned.

➤ Fistula Type and Classification

Some 62% of patients had obstetric fistulas, and in 54% of cases, we have soft vaginal VVF, while sclerotic vaginal VVF accounted for 11% of cases. Type III fistula was the most common in 21% of cases, followed by type II fistula c. These results could be explained by the fact that patients return for treatment at an advanced stage of their fistula, having made the rounds of traditional practitioners. According to Komanda E et al [8], the majority of women (57.9%) had simple vesico-vaginal fistulas.

4.5 Management of VVF

➤ Approach

The low route accounted for 91% of cases in our sample, compared with 9% for the high route. According to the literature, this route is recommended by the majority of authors, with Tembely A et al [15] and Diakite M [9] finding 80.87% and 91.2% use of the vaginal route respectively. Tembely A et al found that 17.39% of patients also used the upper route.

➤ Surgical Treatment

In our study, fistulorraphy was used in 50% of cases. It is the technique of choice for the treatment of VVF. The majority of authors used this technique, namely Steg A [15], Tembely A et al [16] and Diakité M [9] in 68.9%, 69% and 67% of cases respectively.

During the study, we also used, albeit at low rates, techniques such as : Partial, total and incontinence cervical-urethral anastomosis (Classic TVT, TOT) in 4% of cases respectively. Tembely A et al had also recorded cervicourethral anastomosis to repair partial and total cervicourethral disinsertions in 17.4% of cases.

5. Conclusion

The woman with fistula is perceived negatively in the community, as a spendthrift and a woman to be discarded like a “torn tam-tam” to be taken home.

The patient herself experiences fistula as a paralyzing, incapacitating disease, followed by improper discharges (urine, stools), making people refuse to buy what she sells; rendering the woman infertile, destroying the person’s life and reducing the chance of starting a new home.

These perceptions of obstetric fistula bring their own set of consequences such as marginalization and isolation, gradual abandonment of the patient in favor of another woman, resulting in divorce or repudiation; reduction of the patient’s working time by washing to make herself clean; reduction of her purchasing power due to the limitation of her social relations; psychological trauma caused by the hope and/or obsession of being cured.

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