

Evaluation of Ambulatory Treatment of Simple Vesico-Vaginal Fistulas

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Abstract

Introduction: Obstetric vesico-vaginal fistula is an abnormal communication between the bladder and the vagina as a complication of obstructed labour. The aim of this work is to show the role of ambulatory surgery in the treatment of VVF.

Patients and Methods: This is a prospective study over a period of 4 years from 01 January 2011 to 31 December 2014, with 21 cases of VVF patients with simple obstetric outpatient treatment. The average age of patients was 24 years, ranging from 15 to 45 years. The technique used was that of Bracquehaye modified. All patients were kept for a day in hospital without an indwelling urinary catheter.

Results: Out of a total of 115 fistula patients, 38 of them had simple VVF representing 33%. Among the simple cases, 21 patients underwent surgical treatment as outpatients, accounting for 55.26%. The average time before surgery was 5 years, with a range ranging of 2 months to 20 years. Of all the simple VVF patients operated on outpatient's basis, we recorded a 90.5% rate of good outcome (n=19). Patients were followed over a period of 1 to 5 years.

Conclusion: Obstetric VVF is a public health problem. Ambulatory surgery has advantages in that it reduces the indwelling and hospital stay.

Keywords: Simple Obstetric Ambulatory Surgery; Vesico-Vaginal Fistula

Introduction

Vesico-Vaginal Fistula (VVF) of obstetric origin is defined as abnormal communication between the bladder and the vagina following a dystocic delivery. The surgical techniques used and the postoperative follow-up procedures are not subject to any consensus [1]. They depend on several factors: the fistula site, the associated lesions, the surgical history and the surgeon's experience [2]. In the particular case of single VHF in the bulkhead, sealing after treatment does not seem to be related to the duration of the sounding. Indeed, good results have been observed, even after early re-

moval of the probe. The purpose of this work is to evaluate the results of outpatient treatment for single-walled VVF.

Patients and Methods

This was a prospective, descriptive and analytical study of 21 patients with simple VVF of obstetric origin. The average age of the patients was 24 years old with extremes of 15 to 45 years. Patients with simple VVF of obstetric origin were recruited over a 4-year period from 01 January 2011 to 31 December 2014. The anatomo-clinical type of the fistula was studied thanks to the classification of Camey [3] which proposed 3 groups taking into account at the same time the seat of the fistula and the operating problems (Table 1).

Type	Anatomic lesions
Simple FVV	Simple FVV They sit on the posterior aspect of the bladder (in retro-trigonal position), at a distance from the bladder neck and in soft tissue, their size is moderate (less than 3 cm in diameter)
Complex FVV	This group includes all fistulas larger than 3 cm, close to the cervix and ureteral or trigono-cervico-urethral openings, but respect the anterior or retro-pubic wall of the urinary tract. Sclerosis and loss of substance can be important. Residual or recurrent fistulas are also part of this group.
Serious FVV with transection	There is total destruction of one stage of the urinary tract, affecting the anterior and posterior wall of the bladder and cervix in a circumferential lesion called transection. The urethra is sometimes cut just flush with the neck, usually one-eyed, but its destruction can also be total. Associated sclerosis is usually major, making it difficult to approach the fistula.

Table 1: Classification of VVF according to Camey.

The inclusion criteria were any patient with simple VVF of obstetric origin who was not operated on. The interventions were carried out episodically during the FVV management campaigns organized in the Kolda region.

The choice of patients was made on the basis of a randomization dictated by the limited number of hospital beds. As a result, 2 groups were obtained: those who had undergone an early removal and those who had kept the catheter at home for at least 3 days.

The fistula was closed using the Bracquehay modified technique. It is performed after performing loco-regional anesthesia. The patient is in the prone position with a Trendelenburg of 30 degrees, the buttocks protruding from the rim of the operating table, the thighs in flexion, abduction and external rotation and the legs in abduction and flexed by about 120 degrees compared to thighs. This position has two advantages: first, it allows to expose the fistula even before the introduction of vaginal valves; on the other hand, it offers enough space between the legs of the patient, for the main operator and his two helpers. A Foley catheter is inserted through the fistula and the balloon is inflated to attach it to the bladder. The traction on the probe allows a better exposure of the fistula by reducing the depth of the operative field. The doubling begins with the realization of a perifistular colorette with the cold blade. The depth of the incision exclusively concerns the thickness of the vaginal wall. This doubling performed on the entire periphery of the fistula must be wide (balloon diameter) to allow closure

of the bladder plane by inverting points to vicryl 3/0 starting with the angles. After the last point on the bladder, the probe is removed and it is clear that the traction on the suture tightens the closure even before the nodes are made. The leak test is then performed and shows the absence of leakage. The closure of the vagina is done by separate points with semi absorbable 0. The urethral probe is removed at the end of the procedure.

The evaluation of the treatment focused on the quality of the urination and the tightness of the suture. The results have been classified in:

- success: urination was normal with no leakage of urine;
- failure: the urine leak was permanent

Results

A total of 115 fistulous patients were treated over a 4-year period and 38 of them presented with a single VVF (33%). Among the single VVFs, 21 patients received outpatient surgical treatment, or 55.26%. More than 65% of single fistulous patients are under 25 years of age (Table 2).

Age of patients	Number	Percentage (%)
[15-25]	26	68.5
[25-35]	8	21
[35-45]	4	10.5
Total	38	100

Table 2: Distribution of patients by age.

The mean parity at the time of the single VVF was 3 with extremes of 1 to 12. Primipares accounted for 39.5% of our sample. More than half of the patients, 52.3% of them had not done prenatal consultations. Clinically, all patients noted an involuntary loss of urine in the days following delivery. The mean time to onset of urine leakage after delivery was 2.7 days with extremes of 1 and 7 days.

We collected 48% of simple FVV in full septum and 52% of simple FVV cervical juxta. The associated lesions found were essentially cutaneous, i.e. 85% (n=32) with lesions like papules containing calcareous deposits, localized on the level of the labia majora or lesions like lichenification at the level of the inner thighs.

Para clinically, renal function was normal in all our patients. Eleven patients had anemia that were corrected before the procedure. The average time was 5 years with extremes of 2 months to 20 years. Two patients underwent surgery less than 3 months after fistula onset and half of the sample had fistula for more than 2 years (Table 3). The urinary catheter was kept for 4 to 6 hours in 4 patients who had urinary bladder retention in the postoperative period.

Delay(month)	Number	Percentage%
<3 months	2	9.52
[3-6]	1	4.76
[6-12]	3	14.28
[12-24]	4	19
> 24 months	11	52.38
Total	21	100

Table 3: Deadline for taking charge.

Out of all the simple VVFs operated on an outpatient basis, we recorded a 90.50% rate of good results (n=19). Three patients experienced permanent leakage of urine within days (1-5 days) after the procedure. The average follow-up is 2 years (range 1 to 5 years). We did not notice any cases of stress incontinence during the follow-up period.

Discussion

VEGFs of obstetric origin are common in developing countries, unlike in industrialized countries where post-surgical or neoplastic causes predominate [4]. They seem to be an excellent indicator of the quality of obstetric care [5], [6]. VEGF of obstetric origin is a condition of young women [7]. The diagnosis of FVV is clinical, marked by a leak of urine through the vagina (telltale sign) in the days following a delivery often dystocic [2]. There are many classifications that show a lack of consensus [8]. The urinary tract infection is a frequent complication, and so much so that Labarrière [9] evokes it in the circumstances of discovery of obstetric fistula. In simple VVF, the intact continence system could explain the good prognosis of the pathology by the absence or rarity of repercussions on renal function [10]. In our series, none of our patients experienced impaired renal function.

The response time is variously appreciated. Kayondo [1] recommended observing a minimal delay of 3 months to allow the inflammatory process to organize. This would allow repair on stable lesions for better results. Other authors such as Waaldijk [11] advised to repair this fistula as soon as possible because the healing process is faster and this would reduce the impact of psychological disorders related to the evolution of the disease. In our work, a period of at least 3 months was respected. The difficulty of treating VVFs is known and the proposed repair techniques are numerous [12]. The approach is a function of the topography of the fistula [13], but also of the surgeon's experience [1]. We opted for the lower line, which represents the best approach, because it is more anatomical and simpler, offering perfect exposure, thanks to the traction on the balloon of the Foley type probe [2]. If all the surgical techniques proposed aim at closing the fistula and restoring continence [14], the operative success rests on 3 principles: the sealing, the cicatrization [4], the modalities of the postoperative consequences [15].

In postoperative immediate follow-up, the protocols related to the mode of drainage and the duration of hospitalization are very variable in the literature. Some authors, such as Wall [15], proposed following the topography of the fistula either a shunt cystostomy or an indwelling urethral catheter. In addition, SMITH [14] maintained the urinary catheter for 10 to 12 days. However, other authors like Dekou [16] kept this probe 21 day on average. The type I FVV have particular features including an intact continence system with a fistula away ureteral meatus and bladder neck, their closure is relatively easy compared to other types of fistula hence the name of simple fistula [17], [18]. The fact that the continence system is spared in simple VVF could explain a rapid recovery of bladder function (urination and compliance of the bladder wall) even after early removal of the indwelling catheter. The results of our work question the need to leave the catheter in place for several days when it is a simple fistula. We opted for outpatient treatment of VVFs when they were simple, i.e. a day hospitalization with early removal of the indwelling catheter from the operating table just after the leak test. Our results were satisfactory. Indeed, thanks to our support, we have reduced the length of hospitalization of our patients.

The simple FVV seems to heal itself on the operating table. We believe that wearing the urinary catheter during the postoperative period for simple fistulas is not necessary. Outpatient treatment offers a number of advantages, namely: a short hospital stay, a reduction in the costs of the intervention, a reduction in the risk of nosocomial infection, a reduction in the bed occupancy rate which is interesting during mass surgical campaigns. It is recommended to urinate frequently, perform perineal physical therapy or urethral banding in women with stress incontinence. Episodes of immediate postoperative urinary bladder retention and persistent effects of anesthesia are the major limitations of this outpatient surgery.

Conclusion

Vesico-vaginal fistula of obstetric origin remains a public health problem. Outpatient treatment of simple VVF offers benefits in terms of reduced hospital stay and cost, while ensuring an optimal cure rate. In remote areas, where the surgical technical platform is not accessible to the population, this procedure could be proposed to cure simple forms. In this type of surgical cure, the surgeon's experience is decisive for achieving the desired results.

Conflict of Interest

The authors declare that no conflict of interest.

Institutional Ethical Committee

Institutional Ethical Committee approved the study.

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