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Original Research Article

Management of Iatrogenic Obstetric Fistulas in the Urology Department of CHU Point G, Apropos of 62 Cases

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Abstract: ***Objective:*** Analyze the epidemiological, anatomo -clinical, therapeutic and evolutionary aspects of iatrogenic obstetric fistulas linked to a gynecological/obstetric procedure (caesarean section, hysterectomy, myomectomy, use of forceps, treatment of uterine prolapse, or vaginal surgery). ***Patients and Methods***: This was a descriptive prospective study, concerning 62 patients hospitalized in the Urology department of the Point-G University Hospital from January 5, 2010 to June 30, 2014 for iatrogenic obstetric fistulas. The epidemiological, anatomo -clinical, therapeutic and evolutionary aspects were analyzed. ***Results*:** Iatrogenic obstetric fistulas were found in 19% of patients out of 321 cases of urogenital fistulas hospitalized in urology. The average age was 32 years with extremes of 15 and 52 years. The revealing clinical signs were: permanent loss of urine (87.10%), loss of urine while standing (9.70%), loss of urine while lying down (3.20%)**.** Gynecological/obstetric procedures: caesarean section n= 39, hysterectomy n= 15, myomectomy n= 1, use of forceps n= 5, cure of uterine prolapse, vaginal surgery n= 1) were the most common causes. Type V fistulas were the most encountered with 74.20% and among these V fistulas, retro-trigonal fistulas were the most represented with 37.80% of cases followed by uretero-vaginal fistulas (31.10%) and vesico-uterine fistulas (15.60%). The upper route was used in 41 cases; followed by the low way in 18 cases and the mixed way in 3 cases. Trigono -cervico-uterine duplication was performed in 23 cases followed by uretero -vesical reimplantation in 19 cases. The treatment was satisfactory in 55 cases, i.e. 88.70% (no leakage) and poor in 7 cases.

Keywords: Anatomy of the pelvis, Obstetric fistulas, urological surgery, gynecological surgery, urine leakage.

INTRODUCTION

Obstetric fistula is a public health problem in developing countries which have in common insufficient access to basic obstetric care, emergency obstetric and neonatal care; consequence of very high maternal mortality. Iatrogenic obstetric fistulas (IOF) are fistulas occurring during a caesarean section, a hysterectomy by high or low route, laparoscopic, a cure of cystocele or by use of gynecological instruments and without notion of prolonged labor. They do not pose a major diagnostic problem, on the other hand uretero -utero-vaginal fistulas require paraclinical examinations to support the diagnosis, such as UIV.

Many studies have generally focused on urological complications of gynecological surgery or on vesico-uterine or uretero -vaginal fistulas [5, 9, 57].

FOIs suffer from the absence of global studies, our study gives a more specific approach to FOIs.

PATIENTS AND METHODS

Our study took place in the Urology Department and the VVF management unit of the CHU du point G. This Department is nowadays one of the references for the management of urinary pathologies of generally and in particular uro-genital fistulas.

This is a prospective and descriptive study from January 5, 2010 to June 30, 2014, i.e. 42 months,

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including all patients suffering from urogenital fistulas of obstetric origin, linked to a gynecological or obstetrical procedure (cesarean section, hysterectomy, myomectomy , use of forceps, cure of uterine prolapse, cure of cystocele or vaginal surgery) having been covered. The collection of data was carried out from the registers of the operating room, the medical files and the nominative survey sheets that we established for the study. Data processing was done using Microsoft Word, Microsoft Excel and epi-info software version 4.10.

We have adopted as classification that of Pr Ouattara *et al*., used in our service:

❖ Type I: Fistulas of the vesicovaginal septum

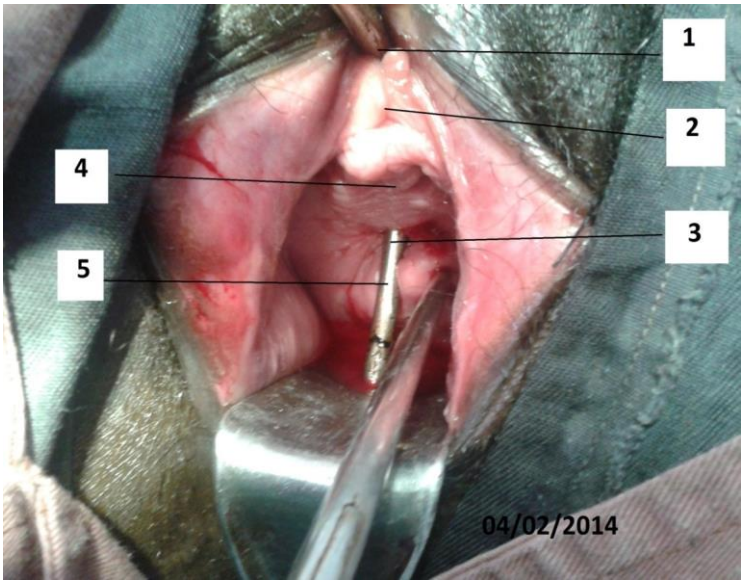


Figure 1: Type I fistula of the vesicovaginal septum occurring during a cystocele treatment

❖ Type II: Vesico-cervico-urethral fistulas.

They include two large groups of fistulas:

- Type II A: without destruction of the urethra
  Type II Aa: cervico- urethro -vaginal fistula
  Type II Ab: Partial urethral disinsertion
  Type II Ac : Total disinsertion of the urethra
- Type II B: with destruction of the urethra
  Type II Ba: permeable urethra
  Type II Bb : blind urethra

Figure 2: Type II Aa Cervico - Urethral - Vaginal fistulas occurring during the use of forceps

Figure 3: Type IIAc Total Urethral Disinsertion

❖ Type III: Trigono -cervico- urethro -vaginal fistulas.

The fistula touches the trigone of the bladder and the cervix, the ureteral meatus is close, sometimes visible, but must be sought and if possible catheterized.

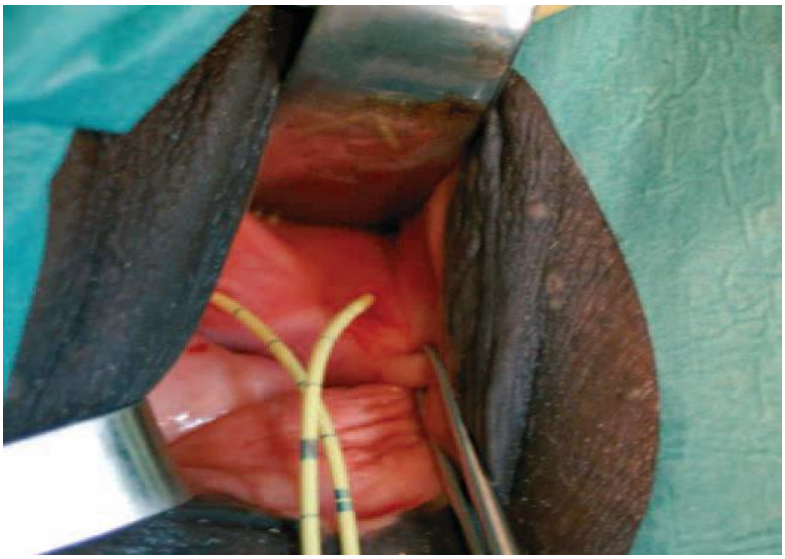


Figure 4: Trigono- cervico-utero-vaginal fistulas with ureteral intubation

❖ Fistula IV: Complex (Mixed) Fistulas.

The fistulas can reach both cervixes with destruction of the urethra, the cervix, on vaginal sclerosis and can be associated with a rectovaginal fistula.

❖ Type V: High fistulas (iatrogenic):

They most often concern the cervix or the uterine isthmus (following obstetric maneuvers).

❖ Vesico-cervico-uterine fistulas

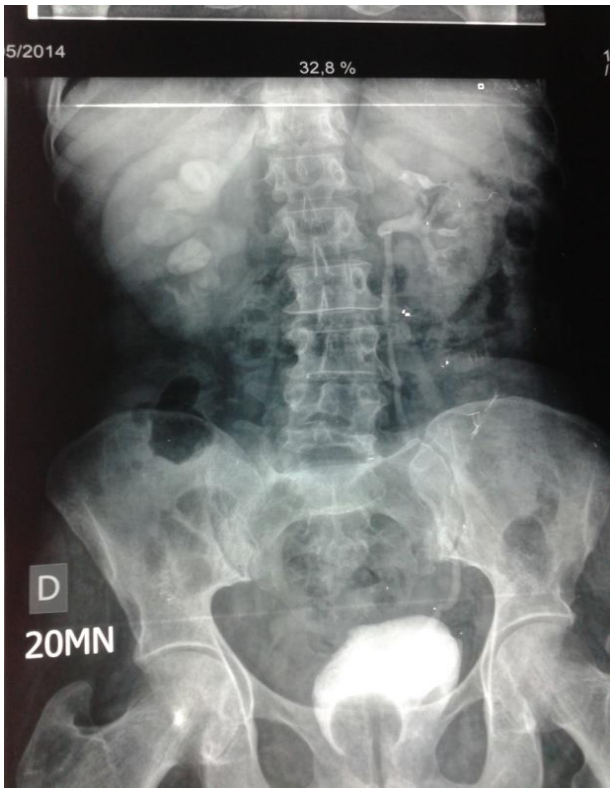
Willingly secondary to forceps on incompletely dilated cervix.

❖ Classic vesico-uterine fistulas: Most often secondary to cesarean section.

RESULTS

In total, 62 patients were identified out of 321 operated on for vesicovaginal fistula, ie 19% of all cases of VVF. The most represented age group was from 20 to 30 years old or 30.6% of cases, the average age was 32 years old with extremes ranging from 15 to 52 years old. Most of our patients were housewives (91.90%), lived in their marital homes (96.80%) and consulted less than 6 months after the start of the fistula (75.80%).

The revealing clinical picture was either permanent loss of urine (54 cases), in standing position (6 cases) and in lying position (2 cases). The diagnosis was confirmed by the test with methylene blue or physiological saline (27 cases) and by UIV (19 cases).



Uretero-pyelo-calicielle dilation, intraoperatively it was a ureteral ligature oozing into the vagina following a cesarean section (figure below)

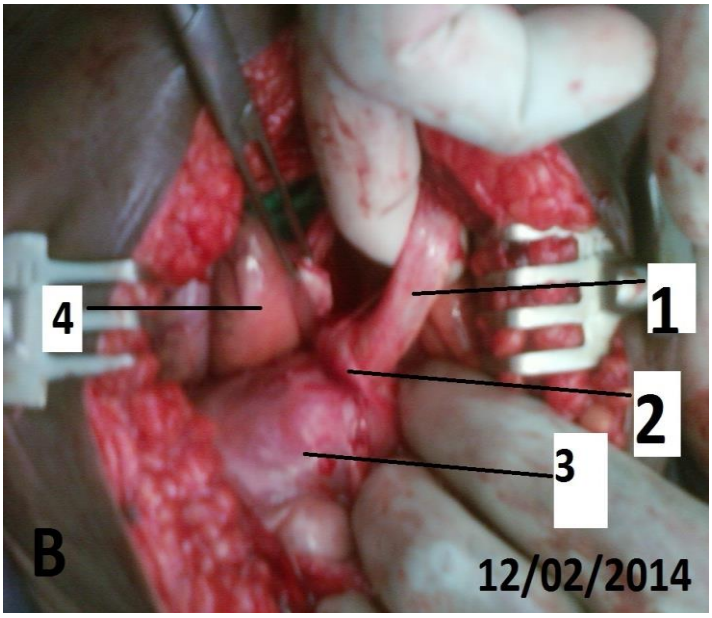


Figure 5: Uretero -vaginal fistula by left ureteral ligature, 1: dilated left ureter, 2: ligature area, 3: bladder, 4: ileal loops

The years 2010 and 2013 were the most represented with 17 cases or 27.90%. Most of our patients had undergone caesarean section (39 cases), hysterectomy (13 cases), use of forceps (5 cases). The different etiologies of iatrogenic fistulas are represented by the grap.

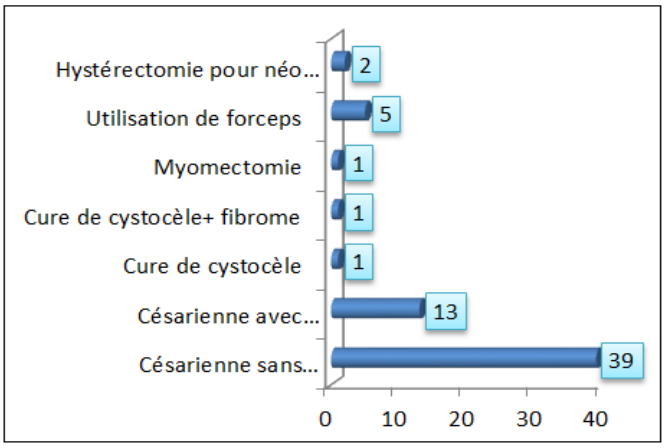


Chart 1: Elements Causing Iatrogenic Fistula

Regarding the environment of the fistula, 80.30% of our patients had a flexible vagina. Type V was the most represented (74.20%) on examination under the valve (table), and among type V, retro-trigonal fistulas were the most represented (37.80%).

The approach used for most of these fistulas was the upper route in 66.10% (41 cases). The treatment consisted either of a cervico-urethral anastomosis, a vesico-vaginal split, a trigono -cervico-vesico-uterine split, a urethroplasty in the vagina, a unilateral or bilateral uretero -vesical reimplantation.

The most used surgical technique was trigono - vesico-uterine duplication in 37% or 23 cases.

The result of the treatment was satisfactory in 55 cases or 88.70% and bad in 7 cases (21.30%).

DISCUSSION

1. Frequency

Obstetric fistulas in general occupy about 17% of the activities of the department's operating room [72]. The frequency of iatrogenic obstetric fistulas varies from country to country.

In our series, out of 321 cases of obstetric fistula treated in the department; iatrogenic obstetric fistulas accounted for 19% or 62 cases. This result is different from that of Sangaré D. who finds 12% of cases of iatrogenic obstetric fistulas [72].

Type V fistulas were the most encountered in 74.20% and among these V fistulas, retro-trigonal fistulas were the most represented in 37.80% of cases followed by uretero-vaginal fistulas 31.10% and fistulas vesico-uterine 15.60%.

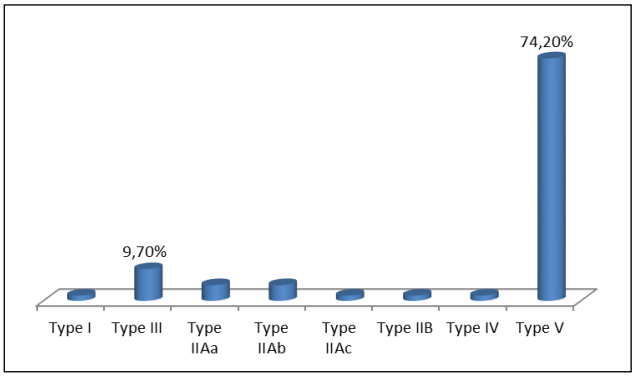
These results are different from those of JM Colas who finds 24% for vesico-uterines and 5% for uretero -vaginal fistulas [30].

PA Bouya *et al*., over a period of 8 years report: vesico-uterine fistulas represented 3.7% and uretero - vaginal 14.8% [5].

Uretero -vaginal fistulas (assessment of 4 campaigns for the management of vesico-uterine fistulas vaginas in Mali) [71].

Karim Tazi *et al*., in 9 years report 10 cases of uretero -vaginal fistulas. Godwin reports 21 cases of uretero -vaginal fistulas in 20 years [49].

Benchekroun A. reports 18 cases of uretero - vaginal fistulas out of 600 vesico-vaginal fistulas [6, 66].



Graph 2: Anatomical type of fistula encountered

2. The age group

The most represented age group during our study period was 20-30 years old; the average age was 32 years with extremes of 15 and 52 years.

This is explained by the early marriage of young girls, especially among the Fulani or the Soninke, the harmful practice of excision and the non-use of family planning.

Our result is different from that of Diagne in Dakar who finds the most affected age group was 30-39 years [20].

3. The age of the fistula

47 patients had a fistula less than six months old. This is explained by the fact that patients are referred after gynecological/obstetric surgery, obstetric maneuvers or any other vaginal surgery for the management of urinary complications.

4. Provenance

During our study series, 25.81% of the patients came from Bamako. This is explained by the fact that the fistula surgery care and training center is located in Bamako and/or where the greatest number of gynecological surgeries are performed and it is the most medicalized city in the country.

5. Ethnicity

The Bambara ethnic group was the majority in 33.90% of cases, followed by the Peulh, this is explained by the fact that the Bambara ethnic group is the majority in Mali and the Peulh due to their early marriage

6. Occupation

The majority of our patients during our study series were housewives in 91.90% of cases and 96.80% of women were still in their marital home, since most had a fistula that occurred less than 6 months ago.

7. History of gynecological surgery or obstetrical maneuvers causing the fistula

During our study, 62.9% had undergone cesarean section, 20% had undergone hysterectomy and 8% use of forceps.

The other cases of iatrogenic obstetric fistulas occurred either during cystocele treatment, myomectomy or any other vaginal surgery.

8. Reason for consultation

The reasons for consultation during our study series are represented by permanent urine leakage through the vagina (54 cases), isolated urine leakage in 6 cases, sometimes associated with cyclic hematuria in 2 cases.

9. The type of fistula

The different types of fistulas most encountered in our study were type V fistulas (74.20% of cases or 46 cases), followed by type III fistula (6 cases).

Among the futile type V; retro-trigonal fistulas accounted for 17 cases or 34.8%. In 80.30% of our women had a flexible and sclerotic vagina in 18 cases.

10. Approach and surgical technique used

The high way was frequently used in 41 cases followed by the low way in 18 cases and the mixed way in 3 cases.

Trigono -cervico-uterine duplication was performed in 23 cases followed by uretero -vesical reimplantation in 19 cases.

11. The result of the treatment

The treatment was satisfactory in 55 cases, i.e. 88.70% (no leakage) and poor in 7 cases.

nd and 3 rd hand fistulas .

In Mali, according to a study in the urology department of the CHU point "G" in 2010 concerning 132 patients identified during four campaigns for the management of vesico-vaginal fistula from January 2007 to December 31, 2007, it was possible to obtain the following results:

1st Campaign: 65.1 **%**

2nd Campaign: 76.2 %

3 rd Campaign: 69.8%

4th – Campaign: 84.0%

5th and 6th hand fistulas [72].

CONCLUSION

Iatrogenic obstetric fistulas represent a complication of pelvic or gynecological surgery or the use of obstetric maneuvers such as forceps.

The diagnosis is most often easy and must be early to avoid repercussions on the adjacent kidney.

Treatment methods vary depending on the site of the fistula and the extent of the lesions.

The time to repair is immediate in cases of bilateral ureteral rupture and discussed at 2-3 months in other cases according to the authors [39].

Prevention is based on the best knowledge of the anatomical relationships and particular attention at the time of the dissections and ligations of the vessels.

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