

# Uro Genital Fistula Iatrogen at Sylvanus Olympio Teaching Hospital of Lome

Akila Bassowa<sup>1\*</sup>, Ayoko Ketevi<sup>1</sup>, Bernard Douaguibe<sup>2</sup>, Kodjo Fiagnon<sup>1</sup>, Samadou Aboubakari<sup>3</sup>, Koffi Akpadza<sup>1</sup>

<sup>1</sup>Departement of Gynecology and Obstetrique, Sylvanus Olympio Teaching Hospital, University of Lomé, Lomé Togo

<sup>2</sup>Departement of Gynecology and Obstetrique, Caampus Teaching Hospital, University of Lomé, Lomé Togo

<sup>3</sup>Departement of Gynecology and Obstetrique, Kara Teaching Hospital, University of Kara, Kara Togo

\*Corresponding author: [akilabassowa@gmail.com](mailto:akilabassowa@gmail.com)

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**Abstract Introduction:** In Togo, the prevalence of FUGI (uro genital fistula iatrogen) as well as the responsibility of the medical staff caring for the patients are unknown because there are very few studies on the subject or the interest to evaluate the share operators in the genesis of this category of fistulas. **Purpose:** To sensitize the medical opinion on the reality of these medical errors and to improve the care of the patients. **Patients and method:** This was a retrospective study of 41 cases of iatrogenic fistula collected over 5 years at gynecology service of Sylvanus olympio teaching hospital and Urology departments. The variables studied were the age, the circumstances of the uro genital fistula (FUG), the type of operator, the pathway of the causal intervention of the fistula, the time of diagnosis, the treatment and the correlation between these different parameters. Data processing was done on the IBM® SPSS Statistics software. Values were significant if  $p < 0.05$ . **Results:** Caesarean section and hysterectomies were the main causes of uro genital fistula iatrogen. Hysterectomy was the largest provider of fistule uretero vaginal (FUV) with more than half of cases, or 68.29% (28 cases). She was involved in 53.66% of vesico vaginal fistula (FVV) and 9.75% of uretero vaginal fistula (FUV). On the other hand, considering the types of fistulas, FVV were therefore more frequent with caesareans. This category of fistulas was the prerogative of all cadres of obstetric surgeons and gynecologists, both trained operators and established surgeons. Previous pelvic surgery was a significant risk factor. The mean age associated with these lesions was 39.85 years. **Conclusion:** These results show, like those of other authors, that iatrogenic causes contribute significantly to increasing the number of FUG in Togo. Given the avoidability and severity of fistula, these data on FUGI indicate the urgency of improving surgical training, supervising operators in training especially in low-income countries. FUGI is therefore witnessing a failure of the surgical security system.

**Keywords:** Urogenital fistulas, iatrogenic fistulas, fistulas, Lomé (Togo)

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## 1. Introduction

Iatrogenic urogenital fistula (FUGI) is then a fistula occurring between the bladder or ureter, or the urethra and the uterus or vagina secondary to pelvic surgery. The occurrence of a FUG can transform the joy of some patients to get rid of a health problem or give birth (childbirth) into a nightmare because excluded from home, family and even society [1]. Daily reality lived in our countries, the FUG remains today a public health problem in spite of an improvement of maternal health. It constitutes a tragedy for the physical, social, moral and psychological health of the young woman victim of this affection [2,3]. FUG has been the subject of several studies in Togo and in the sub-region [4,5]; and attention is too often focused on vesico-vaginal fistula, its obstetric causes, its treatment, and its socio-economic

consequences [6,7]. But there have been very few studies that have focused on iatrogenic fistulas. In addition to obstetric causes, the medical staff is one of the providers of FUG during the management of certain gynecological conditions. In Togo, the prevalence of FUGI as well as the responsibility of the medical staff caring for the patients are unknown because few studies have been devoted to the subject. By addressing the iatrogenic aspect of the problem, our work will sensitize medical opinion on the reality of these medical errors and improve the management of these patients to hope to reduce the number of fistuleuses in the general population.

## 2. Patients and Study Framework

Our study was conducted by the Department of Gynecology and Obstetrics and the Urology Department

at the SylvanusOlympio University Hospital in Lomé (CHUSO). This was a five-year retrospective study from January 2013 to December 2017. The study population consisted of all the records of patients operated for FUGI in the urology and GO departments during the period. of the study were included. The Technique and Collection Tool Our study was based on the search for records in these two services. We used a questionnaire created with the software epi info version 3.4.7. The questionnaire was completed as the file was reviewed. The purpose was to collect information on: age, circumstances of FUGI occurrence, type of operator, route of intervention causing fistula, time to diagnose fistula, fistula treatment, operative follow-up and correlation between these different parameters The collected data were processed statistically by IBM SPSS Statistics software (International Business Machines Corporation, Armonk, North Castle, New York, United States). The Chi-square test and the Fisher Exact Test were used for the analysis of proportions. Values were significant if  $p < 0.05$ .

### 3. Results

#### 3.1. Frequency

In 5 years, 1,8304 patients had undergone surgery in the department of the SylvanusOlympio CHU. During this period, 41 cases of FUGI had been diagnosed and treated with a hospital frequency of 0.22%.

#### 3.2. Age

Twenty-six patients were between 30 and 50 years of age as shown in Figure 4.

Squad (n: 41)

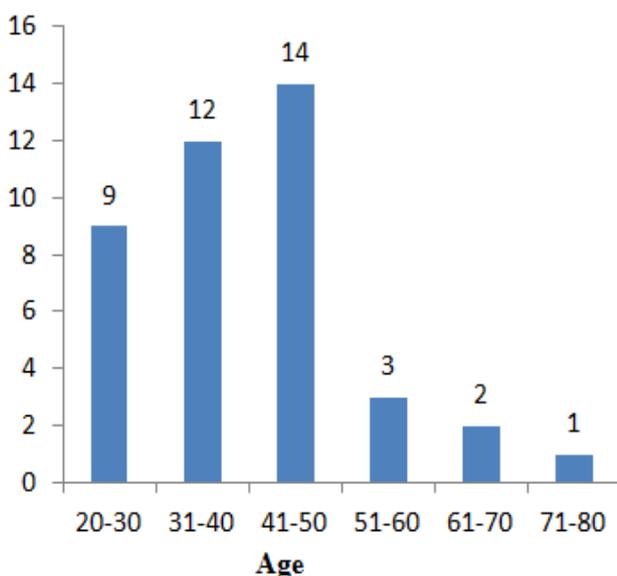


Figure 1. Distribution of patients by age group

Figure 5 shows that 51.2% of patients had at least 3 live children.

#### 3.3. Parity

Number (n:41)

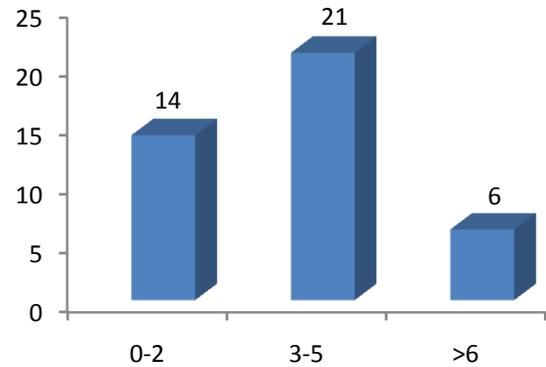


Figure 2. Distribution of patients by parity

#### 3.4. Distribution of Patients According to the Causal Intervention of Fistula and the Type of Fistula

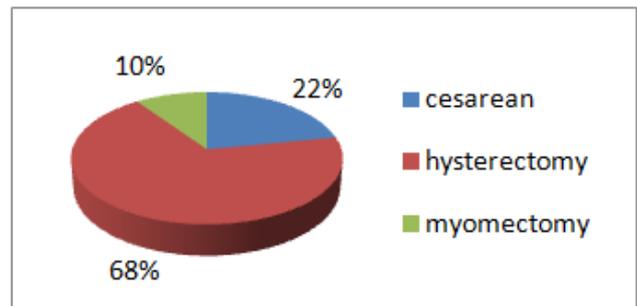


Figure 3. Distribution of patients according to the causal intervention of fistula

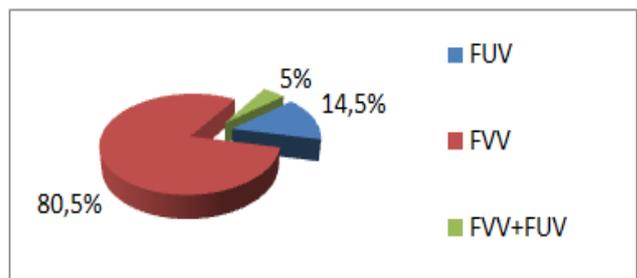
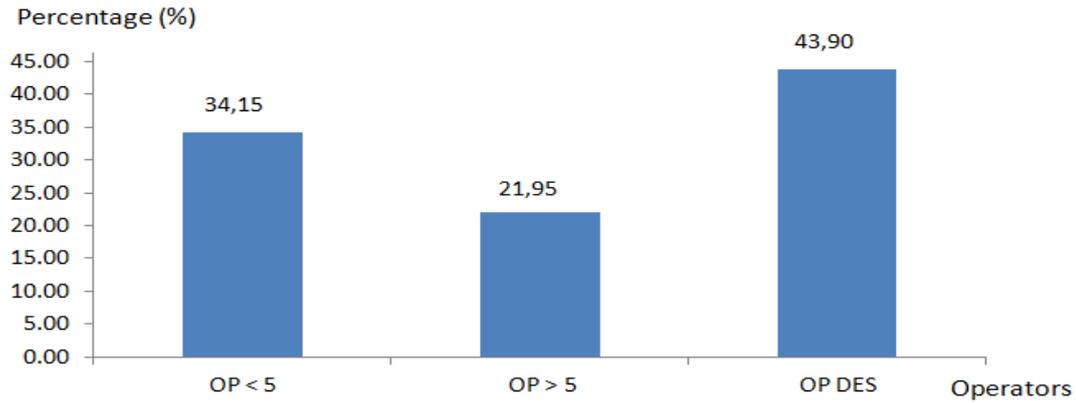


Figure 4. Distribution of patients according the type of fistula

#### 3.5. Qualification of Operator (OP)

Most fistulas (43.9%) had developed as a result of surgeries performed by surgeons and obstetrician gynecologists in training. The result is significant with  $p = 0.00$ .



OP <5: Surgeon, gynecologist with less than 5 years of experience  
 OP > 5: Surgeon, gynecologist with more than 5 years of experience  
 OP DES: Surgeon, gynecologist in training.

Figure 5. Distribution of patients by qualification of operators

### 3.6. Diagnostic Time of Fistule

The diagnosis is made within 30 days for 75.61% of patients.

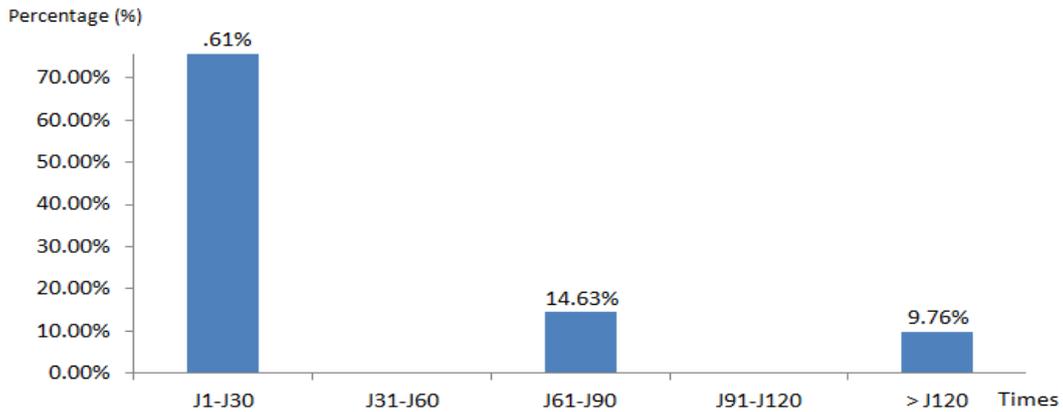


Figure 6. Distribution of patients by fistula diagnosis time

### 3.7. Relationship between the Type of Causal Surgery and the Surgery of FUGI

Fistulas detected after cesarean section were 9 against 28 after hysterectomies.

Table 1. Report of interventions resulting in fistula

Types of intervention	Fistulas		
	(n : 18304)	(n : 41)	%
Caesarean sections	17485	9	0,05
Myomectomy	272	4	1,47
Hysterectomy	47	28	5,12

### 3.8 Distribution of Patients by Caesarean Section Count and Type of Fistula and relationship between types of FUGI and type of causal surgery

FVV in patients who had at least one caesarean section was 13 cases or 31.7%. Hysterectomy is associated with 22 cases of FVV as shown in Table 3. These values are very significant because p = 0.00, Hysterectomy is associated to 22 cases of FVV shown by Table 3. These values are very significant because p= 0.00.

Table 2. Distribution of Patients by Caesarean Section Count and Type of Fistula and relationship between types of FUGI and type of causal surgery

	*FUV	**FVV	FVV + FUV	Total
<b>Distribution of Patients by Caesarean Section Count and Type of Fistula</b>				
	Numbers			
0	4	20	2	26
1	1	12	0	13
2	1	1	0	2
Total	6	33	2	41
<b>Relationship between types of FUGI and type of causal surgery</b>				
	Numbers			
Caesarean	1	8	0	9
Hystérectomy	4	22	2	28
Myomectomy	1	3	0	4
Total	6	33	2	41

\*FUV :Fistule uretero vaginal \*\* FVV :Fistule vesico vaginal.

### 3.9. Type of Fistule and Qualification of Operator Types of Fistula and the First Path

The surgeries performed by surgeons and gynecologists in training were responsible for 26 cases of Laparotomy is most at risk for FVV with 37 cases. p being equal to 0.09, this result can not be generalized because it is not significant.

**Table 3. Distribution of patients by operator and type of fistula**

	*FUV	**FVV	FVV + FUV	TOTAL
<b>Qualification</b>				
*OP DES	4	20	2	26
**OP < 5ans	1	13	0	14
***OP > 5 ans	1	0	0	1
Total	6	33	2	41
<b>Pathway first</b>				
High	3	33	1	37
low	3	0	1	4
Total	6	33	2	41

\*FUV :Fistule uro genital \*\* FVV :Fistule vesico vaginal

\*OP DES: Surgeon, gynecologist in training

\*\*OP <5: Surgeon, gynecologist with less than 5 years of experience.

## 4. Discussion

### 4.1. Difficulties Encontoured

A number of difficulties have somewhat hindered the optimal flow of data collection. They are mainly due to the poor documentation of the phenomenon at the country level, the absence or lack of some important information in the files. We were unable to classify fistulas prior to treatment because the necessary information was missing from the records.

### 4.2. Frequency

The frequency in our series was 0.22%. The current incidence of vesico-vaginal fistula is unknown. However, according to the WHO, the incidence of VVFs resulting from hysterectomies is estimated at less than 1% [2]. In the USA more than half of FVV and FUV occur after hysterectomy for benign conditions such as uterine myomas, uterine prolapse [8]. Of 624 hospitalized patients in Algeria for urogenital fistula, 62 (9.9%) are iatrogenic. In addition to multiple publications on the extent of obstetric fistula in developing countries, the incidence of iatrogenic fistula is increasing [8,9]. In developing countries, obstetric complications are often the cause (emergency hysterectomy).

### 4.3. Age

The mean age of our patients was 39.85 years  $\pm$  11.61 with extremes of 20 and 70. Our result is similar to that of B. BENZERDJEB[1] in Algeria, Bentaleb and G Sanda al in Niger found respectively 41 years and 40 years [10]. On the other hand, for Ranssen [11] et al, the mean age of the patients in their series is 27 years  $\pm$  6 years with extremes

ranging from 23-56 years as well as Kazadi Buanga et al. who reported younger patients [12]. However, it is to be note the difference in average age according to whether it is gynecological or obstetric intervention. Raassen and al. had made similar findings [11].

### 4.4. Parity

Half of our patients are multiparous with 3 children per household. We did not find a correlation with VV or UV fistulas in the literature but we think that this contributed to FVV and or FUV found in our series. These women had delivered by caesareans and the repetition of the surgical procedure certainly created in these women adhesions that certainly made the intervention generating the laborious fistula either by reducing access to the operative field or by reducing the good visualization of structures in place because of poorly controlled bleeding.

### 4.5. Generator Intervention of Urogenital Fistula

Hysterectomy is the largest provider of urogenital fistulas in our series with more than half of cases or 68.29% (28 cases). She was involved in 53.66% FVV and 9.75% FUV. Our results are very similar to those found in the USA or 50% of FVV and FUV occur after hysterectomy for benign conditions such as uterine myomas, uterine prolapse [10,12]. By against in our tropics, hysterectomies are performed in emergencies for uterine rupture during laborious and poorly managed childbirth or haemostasis disorders secondary to preeclampsia. In addition, of the 9 fistulas found after cesarean section, 8 were FVV and 1 FUV. The proportion of FVV caused during caesareans was not negligible either.

### 4.6. Reason for Intervention and the Type of Fistules

Our study shows that patients who had undergone at most one caesarean section were victims of FVV in 29.27%. On the other hand, FUV found in 2.43% of the patients having benefited from at least 2 cesareans. We can extrapolate by saying that Caesarean section plays a big role in the genesis of FUG. Women with a history of cesarean section have a fairly high risk of urogenital fistula. Raassen et al also pointed out in their studies with a rate of 11.6% [11]. However, it should be noted that 48.78% of the patients without a history of pelvic intervention suffered from FUV after an operation and 9.75% had a FUV as a complication in the postoperative period. We can explain this by the fact that the operations in the patients carrying a uterus cicatricial are considered difficult and suddenly are taken care by the seniors of the discipline and the operators in formation take care much more of the "new uterus".

### 4.7. Type of Fistule

In our series the FVV are the most frequent. These fistulas often follow poorly or not repaired bladder wounds in the trigonal area. In the literature, vesico-uterine and uretero-vaginal fistulas are the most

common [13]. The following fistulas were associated with caesarean section: (42.5%) vesico uterine, 27.6% uretero-vaginal fistulas. Vesico-utero-cervico-vaginal fistulas are consecutive to cesarean section and hysterectomy for uterine rupture or fibroma. FUGs occur in the same circumstances. The high pathway is associated with approximately 90% FVV in our series, whereas the FUV is more common in the lower pathways (75%). The narrowness of the operative field and the reduction of visibility are the main factors. Vaginal and abdominal interventions are all involved in the genesis of FUGI. However, the upper route seems more responsible for FVV (33 cases) whereas the lower pathway caused more ureteral lesions, source of FUV or mixed (FVV + FUV). In our series, caesarean section is the largest provider of vesico-vaginal fistulas in almost 90% of cases followed by hysterectomy (78.57%) and myomectomy (75%).

#### 4.8. Qualification of the Operators

We found that in our series, surgeons and gynecologists in training are the most numerous and represent 43.9% of operators. The latter operate under the supervision of the young trainer, who is himself under the orders of a more informed superior. But very often the emergencies are done at night where the staff is reduced and the material of work inappropriate, thus diminishing the concentration of the main actors of the care of these women who arrive often in critical states. Scheduled surgeries are managed during the day with more staff available who can carry strong hands when needed. Only one case of FUV was found among operators over 5 years old. Such a situation must be taken into account in the development of training and retraining curricula in surgery and surgical specialties. It is also essential to train surgeons and other health personnel in obstetric care and other surgical skills to prevent new cases of iatrogenic fistula [8]

### 5. Conclusion

Iatrogenic fistula is therefore a witness of a failure of the surgical safety system. It is then necessary to review

the surgical equipment supply system, the framework and periodically recycle gynecologists obstetricians and surgeons in the management and monitoring of pelvic pathologies.

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