

## Genitourinary Emergencies at University Hospital in Cotonou: About 437 Patients

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### Abstract

**Purpose:** To describe genitourinary emergencies at the university hospital in Cotonou

**Material and Methods:** This was retrospective descriptive study covering a period of 6 years running January 1, 2011 to January 1, 2017. All patients aged at least 15 years regardless of the sex were involved. We did not involve in this study, patients under aged 15 years old who have supported by the Pediatric surgery department. All departments were concerned by the study: Emergency department, surgery, traumatology, medicine cardiology, nephrology, internal medicine, haematology, rheumatology, neurology, reanimation and gynecology departments. The following items were studied: age, sex, complaints, etiologies and emergencies kinds.

**Results:** The average age of patients was 51.4 years old (15 years' old-100 years old). Genitourinary emergencies were accounted for 5.4%. A male predominance was noted in 88.6% against 11.4% women. The sex ratio was 7.7. The 55% patients were referred against 45% were admitted. Over 6 year's period on the study, 46 cases of genitourinary emergencies opinion were done in eleven departments Anesthesia-reanimation department predominance was noted in 32.61%. In emergency department we were seen 391 patients for genitourinary emergencies. The discovery circumstances were urine complete retention in 45.49% with 43.40% of non-traumatic urine complete retention against 2.09% urine complete retention for traumatic urinary tract following up by genitourinary trauma in 19.8%.

**Conclusion:** Genitourinary emergencies are different group of pathologies or symptoms.

**Keywords** Genitourinary; Emergencies; Urological Opinon

### Introduction

Genitourinary emergencies may be traumatic or no-traumatic, infectious or tumor and can reach any part of the genitourinary tract. They can occur at any age of life. Most of the data reply on studies was related high frequent [1,2]. However, their management may be surgery or monitoring. This study aims were to describe and precise the main genitourinary emergencies in one of the university hospital of Cotonou.

### Materials and Methods

This was retrospective descriptive study covering a period of 6 years running January 1, 2011 to January 1, 2017. All patients aged at least 15 years regardless of the sex and admitted for genitourinary emergencies were involved. We did not involve in this study, patients under aged 15 years old who have supported by the Pediatric surgery department or admitted to no genitourinary emergencies or who were died after admitted to genitourinary emergencies.

The patients referred were patients who came to district hospital in town and the patients admitted were patients who hospitalized at university hospital. We randomly sampled the size of the population in

this study. All departments were concerned by the study: Emergency department, others departments (surgery, traumatology, cardiology, nephrology, internal medicine, haematology, rheumatology, neurology, and reanimation and gynecology-obstetric) departments. The following items were studied: age, sex, the complaints, genitourinary emergencies etiologies, and genitourinary emergencies types and the discovery circumstances.

Before we insert urethral catheter we need to: urethral gel, urethral catheter, urine bag collector, gloves, syringe with liquid, antiseptic and compress. We wear gloves and take compress with antiseptic for clean urethral meatus. We put inside urethral the gel before we insert urethral catheter with urine bag collector. We swell catheter balloon with liquid into syringe. But in this study the failure in most cases could be explained by the no knowledge of the catheterism by the nurses who were often the first to do so. Secondly they did not put in urethra the gel.

Data analysis was treated by EPI INFO Software 3.5.1.

### Results

#### Epidemiological

The Average age of patients was 51.4 years old (15years old-100 years old). Genitourinary emergencies were accounted for 5.4%. A

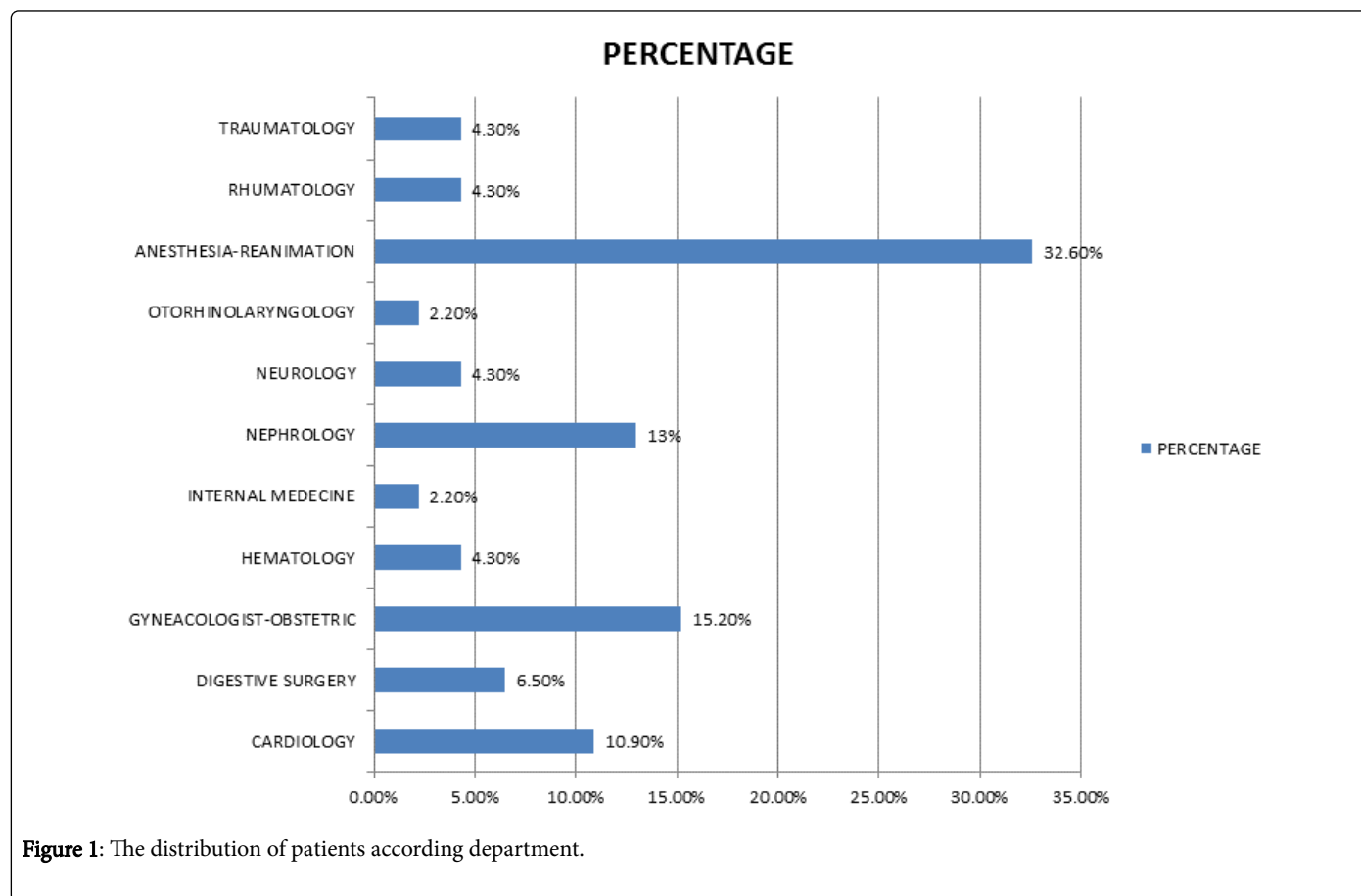
male predominance was noted in 88.6% against 11.4% women. The sex ratio was 7.7. The 55% patients were referred against 45% were admitted.

**Genitourinary Emergencies in other departments**

Over 6 year’s period, 46 cases of viewpoint on genitourinary emergencies were done in eleven departments. But for four patients

were sent and admitted to urology department after we were lifted genitourinary emergencies.

Anesthesia-reanimation was the main department of viewpoint of on genitourinary emergencies in 32.61% of cases (Figure 1).



The main complaints were urine complete retention (UCR) and difficulty to insert urethral catheter respectively in 32.6% and 21.74%. Other symptoms or emergencies such as hematuria 10.87%, priapism 4.35%, genitourinary infections 10.87%, blocking ureteral meatus by tumor 8.7% and genitourinary trauma injuries 10.87% were discovered too. Genitourinary trauma injuries were occurred by bladder rupture or bladder wound in 6.5% and ureter section in 2.5%.

complete retention in 45.49% with 43.40% of no traumatic urine complete retention against 2.09% urine complete retention for traumatic urinary tract following up by genitourinary traumatic in 19.8%. Others discovery circumstances or emergencies were found (Table 1).

**Genitourinary emergencies in emergency department**

In emergency department we were seen 391 patients for genitourinary emergencies. The discovery circumstances were urine

GENITOURINARY EMERGENCIES	Number of cases	Percentage
Urine complete retention	171	43.4
Acute renal colic	23	5.84
Hematuria	38	9.6

Pyelonephritis	9	2.3
Non-traumatic excretory anuria	1	0.25
Genitourinary trauma	78	19.8
Fournier's Gangrene	20	5.1
Acute orchitis	13	3.3
Spermatic cord torsion	21	5.3
Priapism	14	3.5
Acute prostatitis	2	0.51
External genital tract abscess	4	1
Total	*394	100

\*3 of patients had had two genitourinary emergencies at once.

**Table 1:** The distribution of patients according genitourinary emergencies type.

The most common etiologies of urine complete retention were BPH, urethral stenosis and prostate cancer in respectively 67.3%; 16.4% and 11.1%.

Etiologies of genitourinary trauma were penile injuries in sex practices 14.1%, public road accident 48.7% and iatrogenic injuries after pelvic surgery. The most common genitourinary injuries were ureter section or ureter ligature in 18%, urethral rupture in 23.1% following up by scrotal trauma and testes in 16.7% (Table 2).

Genitourinary traumatic	Number of cases	Percentage
Urethral rupture	18	23.1
Ureter section or ureter ligature	14	18
Scrotal trauma and testes	13	16.7
Penile trauma	12	15.38
Bladder trauma	16	20.51
Kidney trauma	7	9
TOTAL	*80	100

\*Two injuries: ureteral section and bladder injury have been seen in 2 patients. One of them had in iatrogenic circumstance after pelvic surgery but the second had after gun injury.

**Table 2:** The distribution of patients according genitourinary trauma.

Urethral rupture was marked by road public accident in 83.3% and by sex practice in 11% of cases. While bladder trauma (bladder rupture or bladder bruise) was marked by road public accident in 56% of cases and iatrogenic accident (bladder wound or bladder-skin fistula) after pelvis surgery in 44% of cases. Penile trauma were occurred by penile broken in sex practice in 75% of cases following by self-amputation of penile and wound penile respectively in 16.7% and 8.3% of cases. Finally, kidney trauma was occurred by kidney bruise in 9% of cases.

The most common etiology of urine complete retention was Benign Prostate Hypertrophy (BPH) in 67.30%. Prostate cancer and urethral strictures were followed respectively in 11.1% and 16.4%. Other illness

such as urethral stone, sclerosis of bladder neck, neurologic bladder, uretero hydronephrosis, posterior urethral valve, bladder cancer were found in low frequency.

Acute renal colic was dominated by lumbar pain in 43.5% of cases.

No traumatic hematuria etiologies were BPH in 50% following up by prostate cancer and bladder cancer respectively in 17.9% and 6 cases 21.4% of cases. Bladder stones in 10.7% of cases. Past history of the patients was revealed BPH disease in 56% cases following up by prostatic prostate cancer in 20% of cases.

## Discussion

In this study, the main department of viewpoint on genitourinary emergencies was anesthesia-reanimation in 32.61% of cases. Koutlidis et al. [3] in France were found same thing but in 35.4%. This result is higher to ours. The main complaints were urine complete retention (UCR) and difficulty to insert urethral catheter respectively in 32.6% and 21.74% of cases. These results were similar to those of Koutlidis et al. [3].

Anesthesia-Reanimation is department of great physical injuries emergencies. The patients hospitalized are often very aged or it can be young patients who admitted to in physical harm but in both of cases genitourinary emergencies are neglected in the first, but in face of abdominal trauma and brain trauma. Then, it can be woman patients who are hospitalized in front of vital emergencies emergency (for example it may be. ureter section after pelvic surgery).

Traumatology department account to less than 5% in this study. But genitourinary emergencies could be also frequently in this department because of frequency broken pelvis after road public accident.

Urine complete retention is most common non-traumatic emergency in 43.4%. This result is higher to those of 24% who were found by Martin et al. [4]. But it lower to those of Diallo et al. [5] in Guinea, Fall et al. [1] in Senegal, Tfeil, et al. [6] in Mauritania and Yenli et al. [7] in Ghana who were found respectively 73.9%, 53%, 53% and 83.5% of cases. Hematuria is a symptom of prostate tumors. We were found it in past history to 59% of patients who were admitted to urine complete retention. This result is similar to those of Martin et al. [4]

who have found 70%. The most common etiologies of urine complete retention were BPH, urethral stenosis and prostate cancer respectively in 67.3%; 16.4% and 11.1% of cases. Ikuerowo et al. [8] in Nigeria have found BPH and stenosis ureteral respectively in 64% and 28.4% of cases.

Acute renal colic was accounted 5.84% in this study. This rate is similar those of other studies [1,7,9,10]. Etiologies of acute renal colic were stones in 80% of cases. This emergency can lead to anuria which is another emergency.

Our rate of no-traumatic hematuria emergency is similar those of other studies [1,5,7,11]. Etiologies of hematuria in this study were BPH, prostate cancer and bladder cancer respectively in 50%, 21.42% and 17.86% of cases. Pare, et al. [11] have found more than 60% for prostate.

Mondet, et al. [10] and Martin, et al. [4] were found respectively 22.11% and 52% of cases for pyelonephritis and acute prostatitis. In this study the both account 5.8%. This result can be explained by low frequency of use of endoscopy in emergencies. About the Fournier's gangrene we were found 5.1%. This result is higher to those of Kabore, et al. [12] who have found 3.25%. It can be explain by diagnosis lateness. The past history of 10% patients in this study was revealed Human Immunodeficiency Virus (HIV) and diabetes. Rimtebaye, et al. [13] also found HIV in 25% of cases.

Most of studies were reported a lower frequency for priapism [1,14,15]. But in study it was 3.5% which is higher to the other studies. This rate can be explained by sickle-cell anemia disease which is most common etiology of priapism in Africa.

In emergencies department, a genitourinary emergency trauma was found in 19.8%. It has come to second line. This result is higher to those of 0.46% in France and 9.2 cases per year in Emirates [16,17]. Dekou, et al. [18] in Ivory Coast and Kambou, et al. [19] in burkina-Faso have found 0.2% which is very lower.

Penile trauma was found in 15.39% of cases. But 75% of cases were penile broken in sex practices. Kpatcha, et al. [20] in Togo were reported 6 cases on 5 years. About Ndiaye et al. [21] in senegal were found 30 cases in 6 years. Sow et al. [22] said that incidence of penile broken is lower in Africa because sex is a taboo. The most common etiology of penile broken was penile injuries in sex practices [20,23]. However, other authors [21,24] have found penile self-abuse in 33% and 52% of cases. About bladder trauma accounted 20.5% in this study. Other authors [18,19] have found respectively 13% and 23.7% of cases. But Bariol, et al. [25] in Scotland were found 18%.

The discovery circumstances were road accident public in 62.5% of cases, iatrogenic accident for pelvic surgery in 37.5% of cases. Bouya, et al. [26] were found vesico-vaginal fistula and vesico-uterine fistula. Oitichayomi, et al. [27] advised to do voiding cystogram and urethrogram for any macroscopic hematuria and pelvis broken. Ureteral trauma was account 17.9% with 92.85% of iatrogenic ureteral trauma. The most common etiology was gynecologic surgery. Most of studies were reported the same results [25,28-30].

Finally, urethral trauma was accounted 23.1% and occurs the first line of genitourinary trauma in this study. Most of studies were reported the same results [18,19]. However one study and our study were reported cases of urethral trauma with penile broken fracture [21].

## Conclusion

Genitourinary emergencies are different types, all department were concerned. But anesthesia-reanimation was the first department in this study. These genitourinary emergencies were occurred by urine complete retention and genitourinary trauma. In the most of cases surgery was improved the complaints of patients.

## Conflict of Interest

The authors declared they have no conflict interest.

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