

Experience on the Management of Priapism at the Yaounde Central Hospital

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Abstract

Introduction: Priapism is a urological emergency defined as a prolonged penile erection for more than 6 hours, painful and sustained, occurring without any sexual stimulation. The diagnosis is essentially clinical. However, the management is often late because of the delay in consultation, which is characteristic in our context. The purpose of our study is to describe the clinical and therapeutic aspects of patients who presented with priapism at the Yaoundé Central Hospital as well as to propose a present synthesis concerning the management of priapism. **Methodology:** We conducted a descriptive cross-sectional study with a retrospective recruitment method in the urology department of the YCH. It extended over a period of 6 months from January 2022 to June 2022. We reviewed the files of patients seen within a period spanning 10 years from January 1st, 2011 to January 31st, December 2021. The study population consisted of patients who had been hospitalized and treated for priapism. We carried out consecutive and non-exhaustive sampling. **Results:** During the study, we collected data from the medical files of 13 patients. The median age was 25 years, with extremes of 12 and 82 years. Most of the patients were between 20 and 30 years old (38.5%). Most of the patients were single (69.2%). Sickle cell disease was the main comorbidity encountered during the study (76.9%). The median time from onset of symptoms to consultation was 10 [6 - 20.5] hours, with extremes of 1 and 264 hours. All patients presented with painful penile erection (100%). There was concomitant multifocal pain in 38.5% of cases suggestive of vaso-occlusive crises (VOC). The symptoms occurred in a non-traumatic context in the majority of cases (92.3%). The T-shunt was the most used surgical technique (84.6%). The median duration of surgery was 36 [35 - 40] minutes with extremes of 25 and 60 minutes, the majority

being operated in less than 45 minutes (84.6%). The frequency of postoperative complications was 46.2%, dominated by weak erections/loss of erections (38.5%). The median duration of hospitalisation was 4 [3 - 5.5] days, with extremes 2 and 20 days of hospitalisation. Resumption of sexual activity was reported in 8 patients (61.5%). The time to recovery was mostly greater than 6 weeks (62.5%). **Conclusion:** Priapism remains a urological emergency. The prognosis depends on the patients' promptness in consulting. The T-Shunt is an effective surgical technique in the event of failure of medical treatment.

Keywords

Priapism, Treatment, Experience

1. Introduction

Priapism is defined as a prolonged penile erection lasting more than 6 hours, often painful and sustained, occurring without any sexual stimulation. It is a serious urological emergency. Its diagnosis is essentially clinical, but treatment is often late due to the delay in consultation. A study conducted by Owon'Abessolo *et al.* [1] in 2020 revealed that it represented 1.7% of urological emergencies in urban Cameroon. The objective of this study is to describe the clinical and therapeutic aspects of patients with priapism treated at the Yaoundé central hospital as well as to present a synthesis concerning the management of priapism in our institution.

2. Materials and Method

This was a descriptive cross-sectional study with a retrospective recruitment method carried out within the urology department of the YCH. It extended over a recruitment period of 10 years from January 2011 to December 2021. In our study, incorrectly completed files and patients who refused to participate were excluded. The data of each patient were collected and recorded in a data sheet. There was confidentiality of each patient's information. Subsequently, the data collected was entered and analyzed using SPSS version 23.0 software.

3. Results

3.1. Socio-Demographic Characteristics

The median age was 25 [19.5 - 34] years, with extremes of 12 and 82 years. Most of the patients were between 20 and 30 years old (38.5%). Single people were mostly represented (69.2%) (Table 1).

3.2. Clinical Features

3.2.1. History of Priapism

Figure 1 below shows that the frequency of recurrences of priapism was 46.2%, dominated by cases with three recurrences (23.1%).

Table 1. Distribution of the population according to socio-demographic characteristics.

Variables	Frequency (N = 13)	Percentage (%)
Age (years)		
<20	3	23.1
[20 - 30]	5	38.5
[30 - 40]	3	23.1
≥40	2	15.4
Marital status		
Married	4	30.8
Single	9	69.2

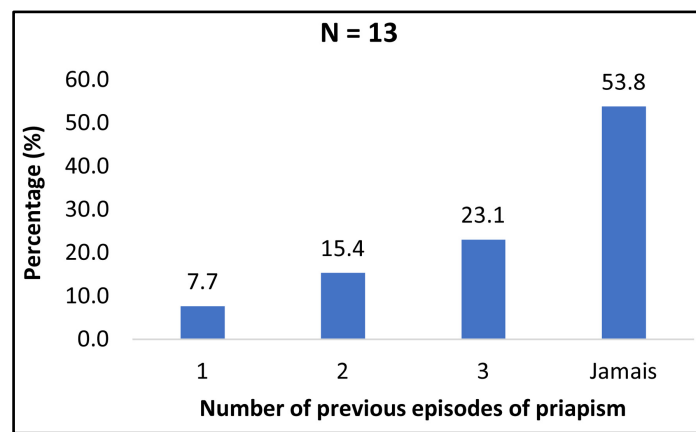


Figure 1. Population distribution by history of priapism.

3.2.2. Surgical History, Comorbidities and Toxicology

A history of penile surgery was found in 2 patients (15.4%). Sickle cell disease was the main comorbidity encountered during the study (76.9%). With regards to toxicology, the consumption of recreational drugs such as narcotics was frequent in 38.5% of cases (Table 2).

3.2.3. Clinical Signs

1) Delay in consultation time

The median time from onset of symptoms to consultation was 10 [6 - 20.5] hours, with extremes of 1 and 264 hours. Most patients came for consultation within 7 to 12 hours (38.5%) as shown in Figure 2 below.

2) Symptoms and mode of onset

All cases complained of painful erection (100.0%). It was associated in 38.5% of cases with multifocal pain suggestive of vaso-occlusive crises (VOC). Symptoms occurred in non-traumatic circumstances in the majority of cases (92.3%) (Table 3).

3.3. Treatment

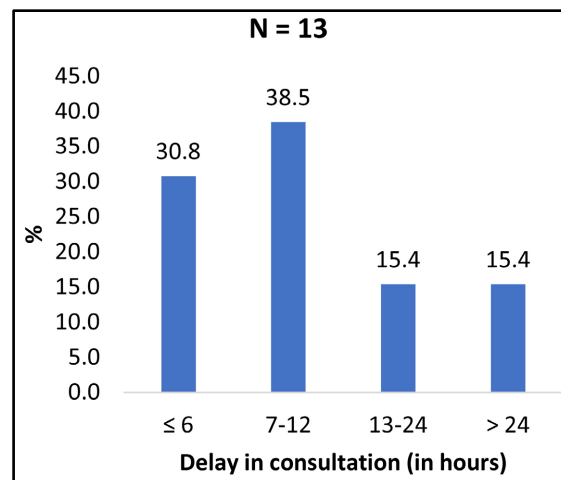
In terms of surgical treatment the, T-shunt was the technique utilised in majority

Table 2. Population distribution according to history of penile surgery, comorbidities and toxicological history.

Variables	Frequency (N = 13)	Percentage (%)
Penile surgery		
Yes	2	15.4
No	11	84.6
Comorbidities		
None	2	15.4
Sickle cell disease	10	76.9
Pelvic tumor	1	7.7
Toxicology		
narcotics	5	38.5

Table 3. Distribution of the population according to symptoms and mode of onset.

Variables	Frequency (N = 13)	Percentage (%)
Symptoms		
Painful erection	13	100.0
Multifocal pain	5	38.5
Symptom trigger		
Non-traumatic	12	92.3
Sexual stimulation	1	7.7

**Figure 2.** Distribution of the population according to the consultation time.

of the cases (84.6%). The median duration of surgery was 36 [35 - 40] minutes with extremes of 25 and 60 minutes, the majority cases being operated in less than 45 minutes (84.6%). The estimated blood loss was less than 100 ml in most cases (53.8%). The median blood loss being 80 [72.5 - 125] ml with extremes of

50 and 250 ml. Intraoperative blood transfusion was given during surgery in 30.8% of cases (**Table 4**).

3.4. Evolution

3.4.1. Complications

Post-operative complications occurred in 46.2% of the patients. Loss of erection/weak erection was the most common post-operative complication encountered (38.5%) of cases (**Table 5**).

3.4.2. Duration of Hospitalisation

The median length of hospitalization was 4 [3 - 5.5] days, with extremes of 2 and 20 days of hospitalization. The hospital stay of most patients was less than or equal to three days (46.2%) (**Figure 3**).

3.4.3. Evaluation of Sexual Activity

1) Time to resumption of sexual activity

Return to sexual activity was documented in 8 patients (61.5%), three had an

Table 4. Distribution of the population according to operative events.

Variables	Frequency (N = 13)	Percentage (%)
Surgical means		
T-shunt	11	84.6
Cavernous puncture	2	15.4
Duration of the intervention (in minutes)		
<45	11	84.6
≥45	2	15.4
Blood loss (in ml)		
<100	7	53.8
≥100	6	46.2
Associated processing		
Surgical means	4	30.8

Table 5. Distribution of the population according to complications.

Variables	Frequency (N = 13)	Percentage (%)
Yes		
No	6	46.2
Type of complication	7	53.8
Loss of erection/weak erection		
Anemia	5	38.5
Surgical site infection	2	15.4
	2	15.4

inability to achieve erection (23.1%) and two were not yet sexually active prior to the pathology (15.4%). Among the patients who had resumed sexual activity, the time to resumption was mostly greater than 6 weeks (62.5%), the median being 8 [6 - 8] weeks, with extremes of 6 and 44 weeks (Table 6).

2) Progress of sexual activity over 2 consecutive years

Sexual activity two years after the management of priapism was favorable in 72.7% of the sexually active patients (Figure 4).

Table 6. Distribution of the population according to postoperative characteristics of sexual activity.

Variables	Frequency	Percentage (%)
Resumption of sexual activity (N = 13)		
Yes	8	61.5
No	3	23.1
Not concerned*	2	15.4
Time to resumption of sexual activity (in weeks) N = 8		
≤6	3	37.5
>6	5	62.5

*Not sexually active.

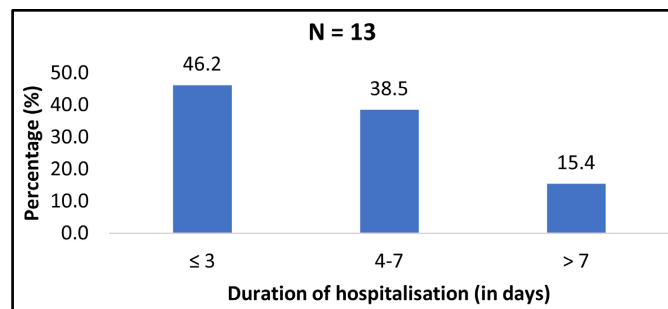


Figure 3. Distribution of the population according to duration of hospitalisation.

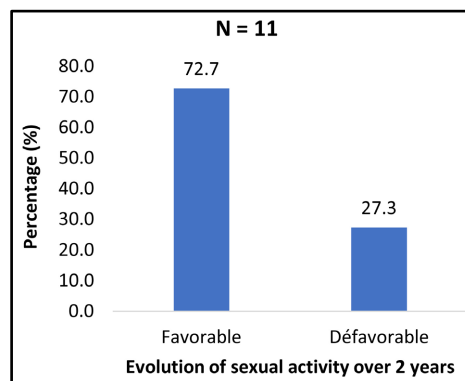


Figure 4. Distribution of the population according to the progress of sexual activity in the 2nd year.

4. Discussion

4.1. Socio-Demographic Characteristics

The median age was 25 [19.5 - 34] years, with extremes of 12 and 82 years. Most of the patients were single (69.2%). This could be explained by the fact that priapism occurs more in young people who are single and sexually active. Our findings are similar to those of P A Fall *et al.* [2] who found an average age of 22.4 years with extremes of 3 and 68 years. In our series all the patients were male, despite the possibility of clitoral priapism as evidenced by a study published by Monllor *et al.* [3]. This explains the rarity of priapism in women and more particularly in our country where the practice of circumcision is common.

4.2. Clinical Characteristics

4.2.1. History of Priapism

Although painful and prolonged erection was the main reason for consultation, the history of repeated episodes of spontaneously resolving prolonged erections was also noted. Following history taking, 5 out of 11 patients (46.3%) had episodes of self-limiting prolonged erections in the past. Adjman *et al.* [4] reported 7 cases of previous episodes for a group of 31 patients (22.5%) and Falandry *et al.* [5] reported 2 cases out of 26 (7.6%). Thus, it appears that it will be necessary to lay emphasis on the monitoring of patients presenting with prolonged self-limiting erections because of the risk of the occurrence of true priapism.

4.2.2. History of Surgery, Comorbidities and Toxicology

Sickle cell disease was the main risk factor encountered during the study (76.9%), followed by the consumption of narcotics in 38.5% of cases. Our findings are similar to those of K. Kamel *et al.* [6] who found sickle cell disease in 28% of cases, and P.A Fall *et al.* [2] who reported 46% of patients having sickle cell disease. We explain this by the circumstances of the sickle cell crisis. The sickle-shaped red blood cells do not or barely cross the capillaries, causing thrombosis and stasis which ends in necrosis and then sexual impotence. Priapism is more common in the homozygous form.

4.2.3. Consultation Period

The timing and promptness of consultation are decisive for the management and for the prognosis. Most patients came for consultation within 7 to 12 hours (38.5%). This is contrary to findings by Bagayoko Oumar *et al.* [7] in Mali where Sixty percent (60%) of patients presented late. This difference is accounted for by the fact that discussing issues pertaining to sexual health remains a taboo in Mali. Furthermore, the lack of experienced health care personnel and the circumstances of the onset of the crisis like the consumption of aphrodisiacs keeps patients from consulting within the critical time.

4.3. Treatment

The different modalities of treatment were analyzed. The outcomes were eva-

luated immediately by the obtention of penile flaccidity, and in the long term by the preservation of erectile function. Complementary surgical treatment was necessary in 11 patients (84.6%) initially treated medically or when consultation was delayed well beyond the 6th hour. The percentage (84.6%) of penile flaccidity obtained immediately after treatment is comparable to Falandry *et al.* [2] and Adjiman *et al.* [4] who obtained success in 80.7% and 80% respectively. Despite the relatively long delay in consultation, 11 sexually active patients (72.7%) regained sexual activity two years after surgical management.

5. Conclusion

Priapism remains a urological emergency. Early consultation and prompt management will inadvertently improve prognosis. Surgical management via the T-shunt technique has proven to be an effective and simple approach, producing commendable results. Medical treatment up to date has not shown any satisfactory results. Surgical treatment seems to be the most logical to avoid tissue damage and reduce the frequency of secondary sexual dysfunction. Despite our small sample size, the analysis of the results obtained in this study permits us to conclude that the effectiveness of the T-shunt, if not the ideal surgical treatment, currently seems to us to be the fastest and most effective technique.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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