



## Anatomic, Clinical and Therapeutic Aspects of Circumcision Accidents in Yaounde, Cameroon

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### Abstract

**Background:** Complications arising from local circumcision methods and practice in our environment need to be taken seriously, as they pose major therapeutic difficulties such as the functional outcome, as well as cosmesis. These complications could, in certain cases, be life threatening.

**Objective:** The aim of this study was to describe the anatomic-clinical and therapeutic aspects of circumcision mishaps at the Yaoundé Gynaeco-Obstetric and Pediatric Hospital (HGOPY).

**Methodology:** It was a retrospective and descriptive study including all patients aged 0-15 years that were managed for complications related to circumcision over a period of 10 years at the pediatric surgery service of the Yaoundé Gynaeco-Obstetric and Pediatric Hospital (HGOPY).

**Results:** We recorded 15 treated cases. The average age of the patients was 5.57 years ranging from 7 months to 14 years. The mean interval between circumcision and occurrence of the complication(s) was 10 months 3 hours to 2 years. The reason of the circumcision in all cases was ritual.

The complications were predominantly urethral fistulas (53.3%), followed by total amputation of the glans (13.4%) and/or the penis (6.7%). Surgical procedures performed were: repair of urethral fistula (46.7%), meatoplasty (13.4%), wet dressing (6.7%), buccal mucosal graft urethroplasty (6.7%), refashioning on account of buried penis (6.7%), vesicostomy (6.7%) and hemostasis (6.7%).

**Conclusion:** Complications arising from the practice of circumcision in our local setup are severe, and major surgical procedures are usually required for their correction in order to remedy to these complications.

### Keywords

Circumcision accidents, Anatomic-clinical, Treatment, HGOPY, Yaoundé, Cameroon

of our African communities, circumcision is carried out as a ritual, and is often performed by traditional healers and paramedical staff who lack adequate knowledge of anatomy and safe asepsis [1,2]. Although this procedure is considered simple, the complications that can occur are varied and include functional outcome and cosmetic appearance and even life threatening lesions in some occasions [3]. So in the light of the analysis of 15 circumcision accidents treated in the pediatric surgery service of the Yaoundé Gynaeco-Obstetric and Pediatric Hospital HGOPY, we wanted to report our experience in the management of these injuries.

The aim of this study was to describe the anatomic, clinical and therapeutic aspects of circumcision accidents at reference hospital in Yaoundé, Cameroon.

### Patients and Methods

This was a retrospective and descriptive study, of all children who presented with complications related to circumcision over a period of 10 years, dating from (September 2005 to September 2015) at the pediatric surgery service of the Yaoundé Gynaeco-obstetric and Pediatric hospital. Included in this study were all male children patients aged between 0 to 15 years managed for a circumcision accidents in our center. Excluded from the study were; circumcision accidents that occurred in patients without any indication of circumcision. The parameters retrieved for data collection included age, time to consultation, indication of circumcision, level of qualification of the staff, place of circumcision, HIV serology, lesions observed, surgical treatment and outcome. An anesthetist review was done for each patient. Surgery was performed in an operating theatre under general anesthesia and a psychological support for children and parents was systematic.

### Results

We recorded fifteen cases. The annual frequency was 1.5 cases per year. The average age of patients was 5.5 years, ranging from 7 months to 14 years. The average time to consultation was 41 weeks, ranging from three hours to two years after the circumcision. The indication of the circumcision was ritual for all our patients.

### Introduction

Circumcision accidents refer to any complications that occur during the surgical removal of the prepuce. These complications are quite common in our daily pediatric surgical practice [1]. In most

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Figure 1: Urethral fistula in a 4 years old.



Figure 2: Vesicostomy in a 10 years old boy with penile shaft amputation.

Table 1: Distribution according to the observed lesions.

Lesions	n	%
Urethral fistulas	8	53.3
Glans/penile shaft amputation	3	20.1
Hemorrhage	1	6.7
Meatal stenosis	1	6.7
Burried penis	1	6.7
Wound suppuration	1	6.7
Total	15	100

Circumcision was performed by a nurse in all cases who happened to be a family relative in 3 patients (20%). The parental home was the most frequent place of circumcision (n = 8), corresponding to 53.3% of our cases, followed by peripheral hospitals in 4 patients (26.7%). In 3 patients (20%) the facility where circumcision was performed could not be retrieved. HIV serology testing was done in only 3 patients and results came back negative. The complications observed are listed in table 1. They were largely dominated by urethral fistulas (Figure 1), which accounted for 53.3% (n = 8) of our cases. Table 2 represents the surgical procedures performed. The treatment offered varied, from simple wet dressing, vesicostomy (Figure 2) to buccal mucosa flap



Figure 3: (A) Penile shaft amputation in a 10 years old boy AP view; (B) penile shaft amputation in a 10 years old boy Lateral view.

urethroplasty. Morbidity in our series was associated to recurrence of urethral fistulas (n = 2) and poor aesthetic results. No deaths were recorded.

## Discussion

The hospital frequency of 1.5 cases of circumcision accidents per year reported in our study does not reflect the reality in our setting since many of these accidents occur outside of hospitals and are not registered. The mean age patient in our series was 5.5 years (7 months to 14 years). In 2006, Okeke *et al.* [4] in Nigeria reported 9.3% of circumcision accidents in children aged from 8 days to 13 months. The lesions were dominated by fistulas in our study, which accounted for more than half of the cases. This finding is consistent with the findings of other African authors [2,5,6]. Total or partial amputations of the glans and/or the penile shaft (Figure 3) were not uncommon in our study (n = 3) and can be explained by the lack of knowledge of anatomy and the use of inadequate anesthesia during the procedure. In addition, the circumcision was usually carried out at home. These amputations affect the functional outcome of the penis and urethra. They are an indication of phalloplasty. It is challenging procedure and we lack this experience in our center. On the other hand, post-circumcision bleeding might sometimes requires blood transfusion. Ahmed A *et al.* [7] in Nigeria reported 3 cases of post-circumcision penile hemorrhage requiring blood transfusion. Meatal stenosis is a late complication which can occur at any time from the circumcision procedure and might be difficult to be linked to it. Urethral obstruction will result in subsequent distension of the upper urinary tract. Surgical management by meatoplasty is thus urgent in these cases [1,2,5].

Major surgeries are required to correct circumcision accidents, so circumcision should not be considered as an otherwise simple procedure. Hospital circumcisions carried out in an operating room under general anesthesia to ensure healing without sequelae should be encouraged. Further, the negative psychological impact of these

**Table 2:** Distribution according to the surgical treatment and indications.

Surgical treatment	Indications	n	%
Uretroplasty	Urethrocutaneous fistula	6	40
Meatoplasty	Glans amputation	2	13.4
	Meatal stenosis	1	6.7
Vesicostomy	Penile shaft amputation	1	6.7
Buccal mucosal urethroplasty	Urethrocutaneous fistula	1	6.7
Internal uretrotomy and closure of double fistula	Double urethrocutaneous fistulas	1	6.7
Frenulum artery hemostasis	Hemorrhage	1	6.7
Wet dressing and adapted antibiotherapy	Wound suppuration	1	6.7
Correction of buried penis	buried penis	1	6.7
Total		15	100

complications on children and their families is quite important. Psychological support for the patients and their parents should therefore be part of the management.

## Conclusion

Accidents arising from the routine practice of circumcision in our setting are common and could be life threatening on certain occasions. For these reasons, circumcision should be considered as a major surgical procedure. Moreover, these complications are challenging to manage, hence emphasis should be placed on the need for hospital circumcision to be performed by experts, as well as regular supervision of traditional healers and/or paramedical staff who carry out this procedure.

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## Ethical Statement

Ethical clearance was obtained from the ethics committee of the Yaoundé Gynaeco-Obstetric and Pediatric Hospital and an informed consent was signed by all the parents or legal tutors of the children.

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