

Original Article

**TECHNIC AND RESULTS OF CIRCUMCISION
IN SUBJECT CARRYING A DISTAL HYPOSPADIAS**

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Abstract

Circumcision is the most common surgical procedure in men. It presents complications, especially since it is performed on a ground of anatomical malformation, such as hypospadias. The authors report their experiences on the technique and results of circumcision in the subject with distal hypospadias.

Patients and methods

This is a prospective study carried out over 4 months from April 1 to July 31, 2020. The patients were recruited during the fairground circumcision campaigns carried out by the Gabonese Social Emergency Help Medical Service in several localities of the country. Patients with distal hypospadias were included.

The manual clamp technique was therefore used, leaving 0.5 centimeters of mucosa circumferentially and taking care not to encroach on the ventral surface which is the aperture's site of the hypospadiac meatus.

Results

Eight patients were included. The average age was 3.6 years old. The indication of circumcision has been the cultural motive. The manual clamp technique has been used exclusively under local anesthesia (penile block). The mean time to healing was 9.3 days. One case of postoperative voiding burn was identified.

Conclusion

Distal hypospadias is a malformation with few functional problems. The surgical act for aesthetic purposes can be based on circumcision. The manual technique under local anesthesia presents satisfactory results.

Key words: circumcision - hypospadias - culture

**RESUME
Introduction**

La circoncision est l'acte chirurgical le plus fréquent chez l'homme. Il présente des complications d'autant plus qu'il est réalisé sur un terrain de malformation anatomique, comme l'hypospadias. Les auteurs rapportent leurs expériences sur la technique et les résultats de la circoncision chez le sujet porteur d'un hypospadias distal.

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Patients et méthodes

Il s'agit d'une étude prospective menée pendant 4 mois du 01 avril au 31 juillet 2020. Les patients ont été recrutés lors des campagnes de circoncisions foraines réalisées par le Service d'Aide Médicale d'Urgence (SAMU) Social Gabonais dans plusieurs localités du pays. Les patients porteurs d'un hypospadias distal ont été inclus.

La technique manuelle par pince a donc été utilisée en laissant circon

férentiellement 0,5 centimètres de muqueuse et en prenant soin de ne pas empiéter sur la face ventrale où s'abouche le méat hypospade.

Résultats

Huit patients ont été inclus. L'âge moyen était de 3,6 ans. L'indication de la circoncision a été le motif culturel. La technique manuelle par pince a été exclusivement utilisée sous anesthésie locale (bloc pénien). Le délai moyen de cicatrisation a été de 9,3 jours. Un cas de brûlure mictionnelle post-opératoire a été recensé.

Conclusion

L'hypospadias distal est une malformation posant peu de problèmes fonctionnels. L'acte chirurgical à visée esthétique peut reposer sur la circoncision. La technique manuelle sous anesthésie locale présente des résultats satisfaisants.

Mots-clés

circoncision - hypospadias distal - culture

INTRODUCTION

Circumcision is an act deeply rooted in culture in sub-Saharan Africa [1]. This gesture, although frequently performed, presents complications [2], especially since it is carried out on an anatomical malformation field, such as hypospadias. In its distal form [3], hypospadias therefore represents a technical difficulty at the time of circumcision. Several circumcision techniques are known, but the practitioner uses the one he masters best to minimize complications.

The authors propose to describe the circumcision technique used in our context and to determine the prognosis of this surgical gesture in subjects with distal hypospadias.

PATIENTS AND METHODE

This was a 4-month prospective study conducted from April 01 to July 31, 2020. Patients were recruited during the fairground circumcision campaigns carried out by Gabonese Social Emergency Help Medical Service in several localities. Patients with hypospadias were included. Those with proximal hypospadias were excluded. The only dissaving hypospadias were retained. Each case of distal hypospadias encountered was operated by the same team according to the following procedure: the type of hypospadias was identified (Figure 1.A). The subject is lying on a firm plane, held hands and feet joined by 2 aides. Local anesthesia (penile block) was performed using Xylocaine® 2% injectable (Figure 1.B). First, between 2 clamps stretched at the zenith (Figure 1.C), then severed the foreskin at the dorsal part, circumferentially leaving 0.5 centimeters of mucous membrane and taking care not to encroach on the ventral face, site of the hypospadias aperture (Figure 1.D). Excess penile skin may, if necessary, be resected (Figure 2.A). The rigorous hemostasis of the penile sheath was performed at the Vicryl thread® 3/0 before performing skin-mucous sutures in separate points with the same thread (Figure 2.B). At the end of the procedure, the ventral face where the hypospadias aperture is damaged is intact (Figure 2.C). Vaseline and Neomycin were applied daily to the wound until healing. Paracetamol-based analgesia was administered in each patient. Patients were re-evaluated on the 5th, 8th, 10th, 12th and 15th days post-operatively.

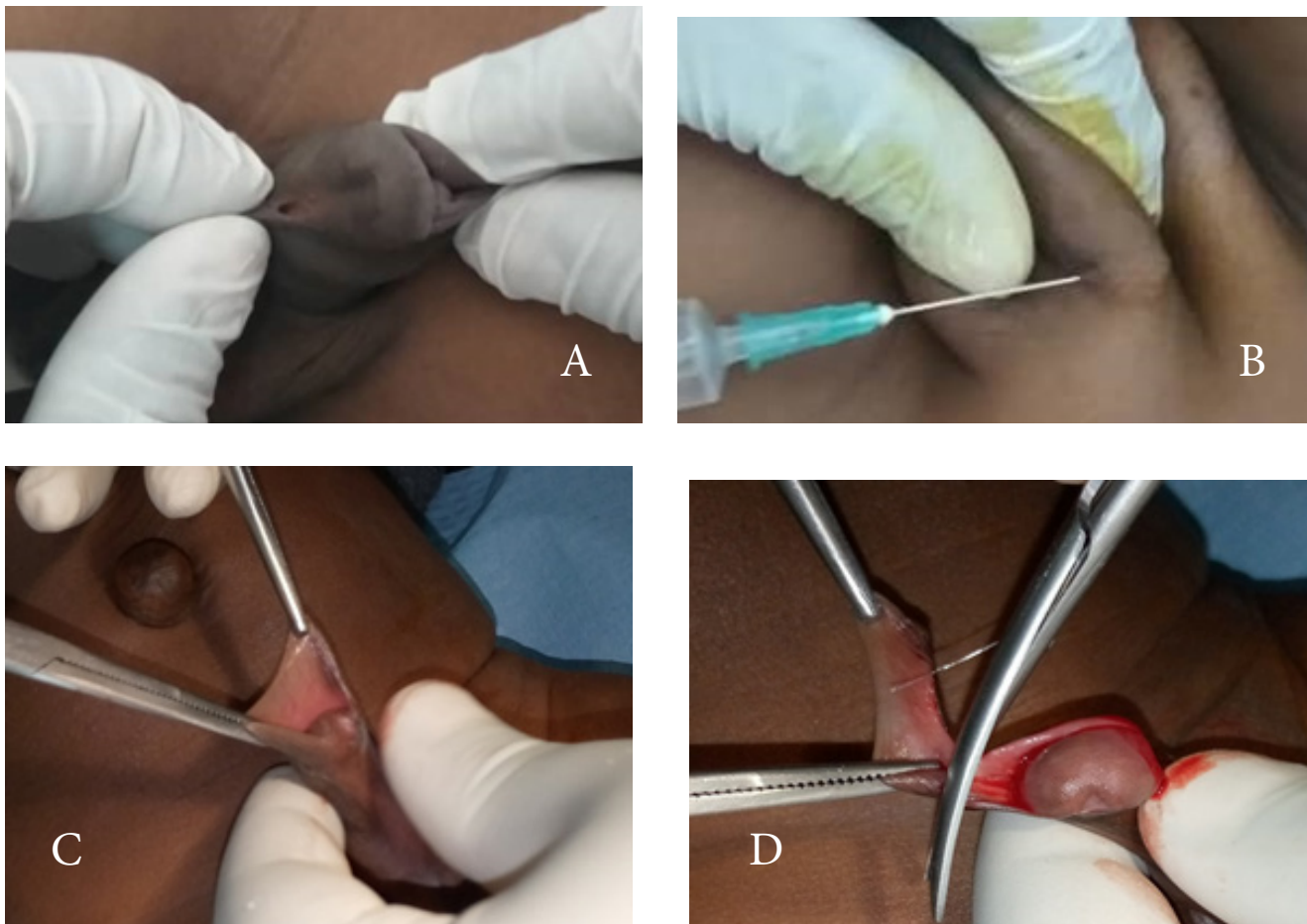


Figure 1. A: Identification of the type of hypospadias. B: Local anesthesia (penile block) using Xylocaine® 2% injectable. C: Exposure between 2 tongs stretched at the zenith of the foreskin. D: Section of the prechop the dorsal part by circumferentially leaving 0.5 centimetres of mucous membrane and taking care not to encroach on the ventral face or aches the hypospade mess.

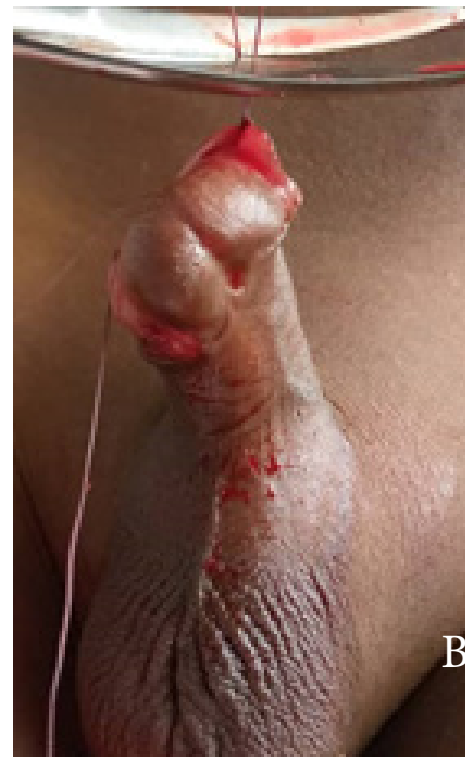


Figure 2. A: Cross-checking excess penile skin. B: Achieving skin-mucous sutures in separate points. C: Surgical view at the end of the procedure, notice that the ventral face or adauche hypospade meatus is intact.

RESULTS

Eight patients were selected for the study of 1,248 children circumcised during the period, representing a frequency of 0.64%. The average age of the patients was 3.6 years with extremes of 2 and 7 years (Table I). The indication of circumcision was the cultural motive in all cases (Table I). The manual clamp technique was used exclusively under local anesthesia (penile block) (Table I). The average healing time was 9.3 days. A case of post-operative urination burn was identified (Table I). No deaths were found.

Table I: Characteristics of patients with hypospadias who have received circumcision

Cases	Age (Years)	Indications	Delay of cicatrisation (days)	Complications
1	6	cultural	8	No
2	2	cultural	10	No
3	4	cultural	10	urination burn
4	5	cultural	12	No
5	3	cultural	10	No
6	3	cultural	15	No
7	4	cultural	12	No
8	4	cultural	10	No

DISCUSSION

Hypospadias is the most common malformation of the penis. Its frequency is estimated at about 20 per 10,000 births or 1 for 250 boys [4]. The distal form is the most commonly encountered [3]. Bah et al [5] found 30 cases in 6 years. Our high frequency of cases compared to Bah could be explained by the fact that our mobile team was moving across the country. The average age of 3.6 years in our series is comparable to the 4 years of average found by Bah et al [5].

The indication of circumcision was the cultural motive in our context. Indeed, the indigenous peoples of Gabon are from the Bantu civilization where circumcision is strongly rooted [6]. Other reasons have been described in the literature to justify circumcision, such as religion, social context and personal hygiene [7]. Medical indications are also encountered such as phimosis and paraphimosis in relation to their infectious complications [8].

There are several circumcision materials such as Mogen clamp, Gomco clamp and Plastibell. The techniques using these materials are safe and give satisfactory results [9]. However, these different materials are not available in our structures. The manual clamp technique was therefore exclusively used. We kept part of the foreskin to have a reserve of skin that could still be used for the reconstruction of the gland during a subsequent surgical treatment of hypospadias [10, 11]. Nevertheless, plastic surgery in distal hypospadias is not a formal surgical indication, it aims more to improve aesthetics [12]. In fact, in case of distal hypospadias, the patient's body pattern is little altered and the reproductive genital function will not

be disturbed [12].

The penile block is a simple and effective technique [13]. Other authors have used a caudal block in addition to general fluothan anesthesia or general fluothan anesthesia alone [14]. General anesthesia allows precise execution of gestures on calm and/or sleepy children [14]. To compensate for a possible disturbance due to the child's agitation, he was kept hands and feet joined by 2 aides.

The average healing time in our study is comparable to that of Gnassingbé et al [15] which was 10 days with extremes of 6 and 15 days.

We encountered 1 case of postoperative urination burn blamed on a low urinary tract infection. Reported complications of circumcision may include hemorrhage, total or partial amputation of the gland, stenosis and/or ligation of the urethral meat, urethral fistula sitting in the balano-preputial furrow, pseudo elephantiasis appearance of the penis, penile denudation, penile infection and septicaemia [16]. In the case of hypospadias, the fear is the total removal of the foreskin and the ligation of the urethral meat which is not the case in our technique.

CONCLUSION

Circumcision is a surgical procedure whose indication is mostly cultural in our context. Distal hypospadias is a malformation that poses a more aesthetic than functional problem. Circumcision helps solve this problem. The manual tong technique under local anesthesia is a reliable procedure with satisfactory results.

INTEREST CONFLICT

The authors of this article do not declare any conflict of interest when writing this manuscript and have all validated the final version.

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