

CASE SERIES

Complications arising from circumcisions performed by untrained providers: 5 cases managed at a tertiary paediatric surgery unit in Addis, Ababa, Ethiopia

Samuel Negash, Miliard Derbew

Department of Surgery, School of Medicine, College of Health Sciences, Addis Ababa University, Addis Ababa, Ethiopia

Correspondence: Dr Samuel Negash (negashsamie@gmail.com)

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Abstract

Complications of circumcision are usually minor. Major complications with prolonged morbidity are rarely reported in well-resourced settings. However, unsafe circumcision is a problem in low-income countries. In this article, we share our recent experiences with this issue.

We illustrate the problem with 5 cases encountered at our institution in 2019. The patients in this series ranged from 2 months to 9 years of age, and 4 of the 5 patients were at least 5 years old. Four of the circumcisions were performed by traditional healers, and 1 was performed by an inadequately trained doctor. Phimosis is the most frequent complication. As described in the first case, phimosis presenting after traditional circumcision is often severe, with repair requiring general anaesthesia. The second child had an unusual presentation: incontinence due to severe meatal stenosis, which resulted in urinary obstruction and urethral calculi. The third child presented with the rare complication of a urethrocutaneous fistula arising from suture ligation obliterating the urethral lumen. Finally, 2 additional rare cases of complete glanular amputation are described.

A variety of complications occurred after circumcisions performed as part of traditional practice as well as by inexperienced providers. The scenario is worsened by late presentations to medical institutions. In our experiences, the delays further complicated management, as phimosis was not amenable to topical steroids, amputated glans could not be primarily reattached, and simple meatal stenosis progressed to severe obstruction. Extensive work is required to train traditional healers in rural parts of the country.

Keywords: male circumcision, ritual circumcision, traditional circumcision, penis, complications, glans, phimosis, urethrocutaneous fistula, glanular amputation, Ethiopia

Introduction

Circumcision is the most common procedure performed on children worldwide.^[1] Most African countries have relatively high circumcision rates.^[2] In this part of the world, traditional circumcision is widely performed as part of cultural or religious ceremonies.^[3] Circumcision is generally considered a safe procedure,^[4] but unconventional techniques and nonmedical circumcision are associated with higher complication rates than medical circumcision.^{[5],[6]} In our practice, we encounter children referred to us after complications arising from circumcisions performed by untrained or inadequately trained personnel. We would like to generate awareness by highlighting some of our recent cases.

Case presentations

Patient 1

The first patient was a 2-month-old boy who presented 2 weeks after a home circumcision. He had difficulty passing urine with straining. On presentation, the child had urinary retention with a distended bladder. Examination revealed foreskin distended with urine. There was severe scarring that could not be retracted and completely obliterated the urethral meatus ([Figure 1](#)). Attempts at passing a catheter were unsuccessful. The child was taken to the operating theatre on an emergency basis. The circumcision was revised under general anaesthesia as a case of phimosis.

Patient 2

The second patient was a 9-year-old boy who was also circumcised at home. He presented to our hospital 2 years after



Figure 1. A 2-month-old boy (Patient 1) with severe foreskin scarring that completely obliterated the urethral meatus 2 weeks after undergoing a circumcision performed at home



Figure 2. A 9-year-old boy (Patient 2) with a stenotic urethral meatus and ventral curvature of the penis due to adhesion formation 2 years after undergoing a circumcision performed at home

he was circumcised. He complained of episodes of urinary retention with a poor stream, straining, and pain. He also had incontinence causing him to wet his pants daily. On examination, there was adhesion of the penile skin to the glans (skin bridges), causing chordee (Figure 2). He also had severe meatal stenosis. We assumed that he had overflow incontinence secondary to the prolonged urinary retention. Ultrasonography revealed no renal or urocytic changes. We proceeded to perform meatoplasty. Surprisingly, we also encountered and removed multiple stones in the urethra during the procedure.



Figure 3. Infected circumcision wound on a 5-year-old boy (Patient 3) after a circumcision performed by an inexperienced physician

Patient 3

The third patient was a 5-year-old boy circumcised by a physician under local anaesthesia. During the initial circumcision, the child was agitated and moving around, and there was excessive intraoperative bleeding. The urethra was inadvertently ligated with a suture while the surgeon was attempting haemostasis around the frenulum. Thereafter, the child passed a narrow stream of urine with straining. The penis became swollen and infected (Figure 3). On the fifth postoperative day, the child developed a urethrocutaneous fistula, with a second stream of urine around the corona. He was given local and topical antibiotics until the infection resolved. The urethrocutaneous fistula was repaired 6 months later.

Patient 4

The fourth boy was an 8-year-old from the countryside circumcised by a local healer. As described by the patient, the prepuce was pulled and cut, but the circumcision included the glans. One year later, the child presented with severe phimosis and stricture formation (Figure 4). He was unable to pass urine. Meatoplasty was performed by suturing the urethral edge around the amputated glans. A catheter was left in place for a week, after which he was discharged with an appointment to undergo a buccal graft procedure.

Patient 5

A 6-year-old boy presented 2 weeks after undergoing a traditional circumcision. The family reported significant bleeding immediately after the procedure. Subsequently, he had difficulty passing urine. There was significant scarring, and the foreskin could not be retracted. We took him to the operating room for circumcision revision surgery, but following the release of adhesions, the whole glans was amputated (Figure 5). The urethra was catheterized, and future glans reconstruction was planned.

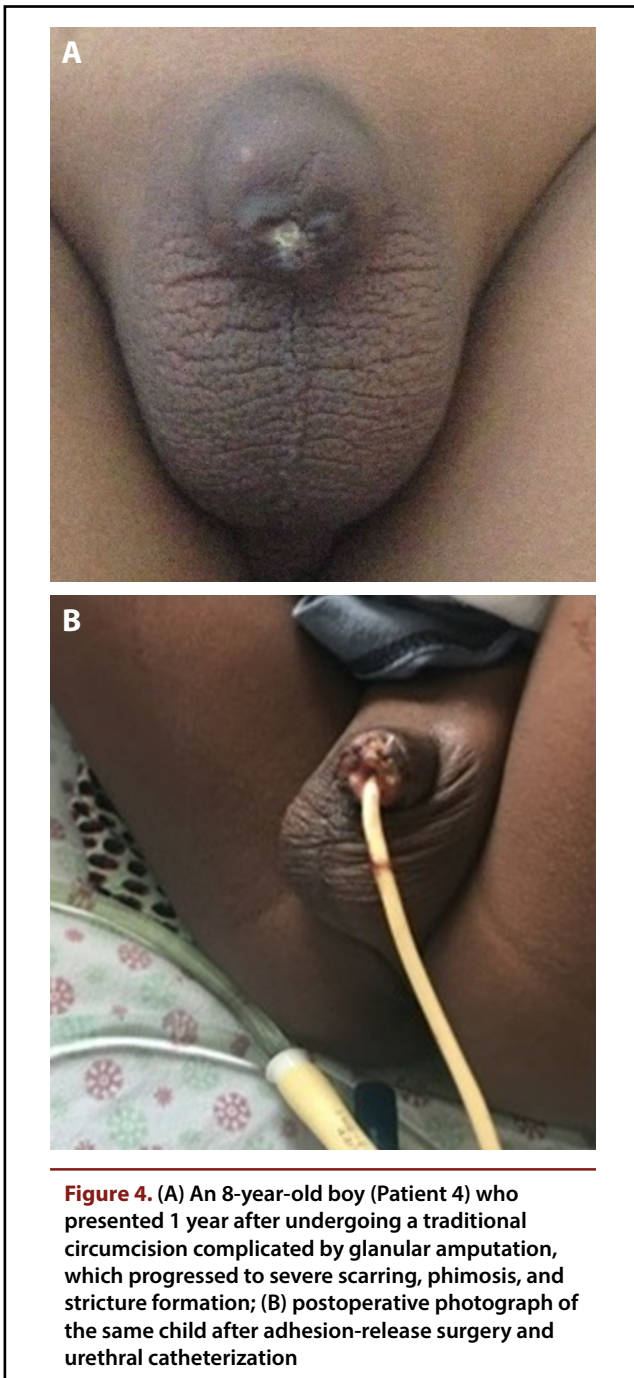


Figure 4. (A) An 8-year-old boy (Patient 4) who presented 1 year after undergoing a traditional circumcision complicated by glanular amputation, which progressed to severe scarring, phimosis, and stricture formation; (B) postoperative photograph of the same child after adhesion-release surgery and urethral catheterization

Discussion

In Ethiopia, male circumcision is a cultural and religious rite. Coptic Christian and Islamic doctrines advise neonatal circumcision,[2] and these religions represent more than 85% of the population. Ritual circumcisions are, therefore, commonly performed in the country. Potentially serious complications can result from traditional circumcisions when the practitioner has little to no knowledge of anatomy, aseptic technique, or haemostasis strategies.[7] The complications can generally be categorized as minor and major. Minor complications, such as meatal stenosis and minor adhesions, can be treated easily. Major complications, such as urethrocutaneous fistula formation, penile amputation, and gangrene, are difficult to treat and potentially catastrophic.[8]

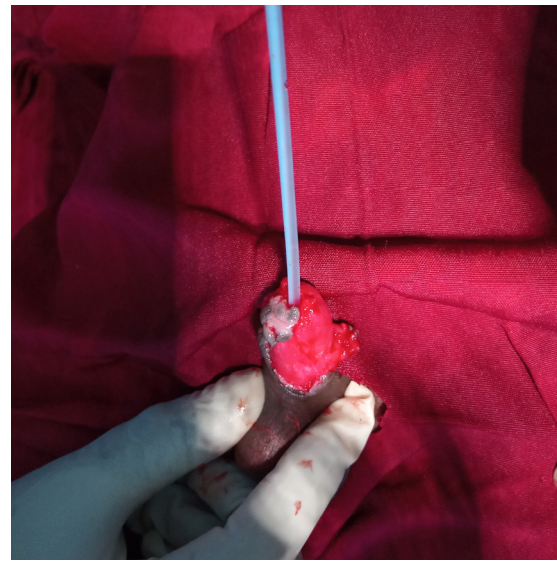


Figure 5. A 6-year-old boy (Patient 5) presented 2 weeks after undergoing a traditional circumcision associated with significant postoperative bleeding; intraoperatively, following the release of adhesions, it was noted that the glans was amputated.

The urethra was catheterized, and future glans reconstruction was planned.

Our first patient developed phimosis, which is usually a relatively benign complication. This occurs when foreskin removal is inadequate, and it can usually be managed easily with topical steroids.[9] However, in our setting, almost all patients with phimosis present late with severe scarring, which requires circumcision revision.

Meatal stenosis, which commonly results from injury to the urethral meatus during circumcision,[10] was encountered in our second patient. In this case, delayed surgical consultation resulted in significant morbidity. The associated obstruction became severe enough to cause urinary calculi and overflow incontinence.

The most serious complication of circumcision is penile amputation.[11] This is an uncommon complication, prevented by following standard precautions. Glanular amputation can be precipitated by inadequate foreskin removal and the formation of adhesions between the foreskin and glans.[9] Primary reattachment is possible if the patient presents soon after the procedure—typically within 8 hours.[12],[13] However, in one of the cases described herein, it seems that the traditional circumciser was unaware of this complication, only for it to be diagnosed later when the patient presented with sequelae.

Another serious error was committed by an inadequately trained physician circumciser who tried to achieve haemostasis by attempting to suture a child who was not adequately anaesthetized. This caused near-complete obstruction of the urethra, resulting in fistula formation and infection. Such complications are rare and have been associated with serious consequences, such as bladder rupture and even death.[4]

Conclusions

Avoidable complications of circumcision are prevalent in Ethiopia, even in the modern era of medicine. While some of these are mild, we have observed severe consequences, begging the question: should we still allow traditional circumcisions to be performed by inadequately trained practitioners?

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