

Reconstruction of penile shaft amputation: is microvascular re-anastomosis mandatory?

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CASE REPORTS

CASE 1

An 8-year-old boy presented 2 h after circumcision that resulted in a guillotine-type penile amputation 3 mm proximal to the coronal sulcus. Under general anaesthesia the cut surfaces were rinsed in saline and the urethra stented with an 8 F catheter. Under magnification, the tunica albuginea of the proximal and distal cavernosal tissues were approximated with interrupted 6/0 chromic catgut sutures. Thereafter, the urethra was anastomosed using the same material and an inelastic gauze dressing applied. An arterial anastomosis was not possible because the diameters of the dorsal arteries were <1 mm. After removing the urethral catheter after 13 days, voiding was normal and the cosmetic result satisfactory at 2 months (Fig. 1).

CASE 2

A second boy, 10 years old, presented 6 h after circumcision with a similar but more severe

penile amputation 12 mm proximal to the coronal sulcus. The same repair was used, again with no arterial anastomosis. At 12 days after surgery a partial necrosis that developed over the glans was debrided with the necrotic preputial tissue. The urethral catheter was removed after 16 days and the patient voided uneventfully. The glans healed completely by 6 weeks with minimal contraction; the cosmetic result was acceptable at 2 months (Fig. 2).

COMMENT

Penile amputation is specifically seen in guillotine-type circumcisions, which are still commonly undertaken by other than medical professionals in Turkey [1–4]. In this technique the foreskin is pulled and clamped distal to glans, and excised between the glans and clamp. If the operator inadvertently clamps the glans in the instrument, amputation is inevitable.

The first successful microsurgical re-plantation of an amputated penis was in 1977

in an adult [5], and similar reports on adults followed, with different techniques [6,7]. However, successful microsurgical anastomosis of the penis at a prepubertal age is extremely difficult, if not impossible, as reflected by the paucity of reports. In a recent report of a child with penile amputation after circumcision, the authors described a dorsal penile artery-corpora spongiosum attachment to maintain vascular integrity [1]. However, this could not prevent partial necrosis over the glans at 4 days after surgery, although the ultimate result was successful. This was similar to the present observations in the second case, but with a less sophisticated re-approximation technique with no arterial anastomosis. This has been a frequent finding in many of the previously reported cases who had been treated with primary reattachment techniques [2–4]. In the first of the present patients there was no necrosis.

The penis shows remarkable resistance to ischaemia compared with other tissues [5,6]. The antegrade and retrograde dual blood supply to the glans penis and corpora spongiosum, supplied by the dorsal and urethral arteries, provide excellent vascularity for an imposed graft or flap [2,5–7]. From the current and previous results, if standard principles of reconstructive surgery are followed, the outcome can be satisfactory in patients presenting soon after penile amputation [1–4,8]. Primary repair should be offered to children whenever microsurgical anastomosis is not feasible.

FIG. 1. Patient 1: **a**, a preoperative view of the amputated parts; **b**, the penis immediately after reattachment; **c**, The 2-month follow-up showing good cosmesis and function.



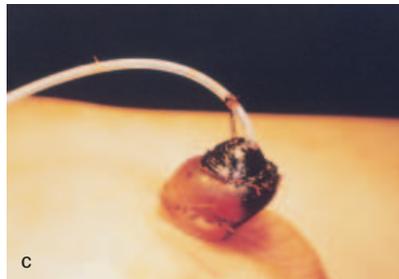
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FIG. 2. Patients 2: **a**, the preoperative view of the amputation; **b**, the penis immediately after reattachment; **c**, the necrosis over the glans penis at 12 days; **d**, the appearance of the glans penis after debriding the necrosis; and **e**, the 2-month follow-up, with good cosmesis and function.



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