Concealed penis in a 2-year-old boy: a rare complication of circumcision

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*Accepted for publication:
May 2004*

Ann Saudi Med 2004; 25(1): 56-57

Circumcision is one of the most commonly performed surgical operations worldwide,^{1,2} with about one-third of the world's population circumcised.³ It is also one of the oldest surgical procedures. Circumcised mummies have been found,^{2,4} indicating that ancient Egyptians performed circumcision around 2340 BC. Circumcisions are performed for religious reasons, mainly among Muslims and Jews. Medical indications during early childhood include phimosis, balanitis and condylomata.^{4,10} Circumcision is performed for health protection as it protects against urinary tract infection,⁵ HIV infection,⁶ penile cancer and cervical cancer in the female partner.^{7,8,9}

Case

A 2-year-old boy was brought to our unit because his parents noticed that his penis had become too short. They could not see the glans after trying to uncover it. They also noticed that urine continued dribbling after he finished passing urine. These problems followed circumcision in a private hospital in Amman 6 weeks before presentation.

Local examination revealed a short penile stump with no visible glans penis (Figure 1a, 1b) and a tight, scarred preputial orifice. When erected during manipulation, we could palpate the buried shaft, which was of normal size. There were no adhesions of preputial skin to the buried glans penis. After explaining the situation and operative details to the parents, including the possibility of finding the glans deformed, the child was taken to theater two days later for exploration and reconstruction, according to the findings.

With the child fully anesthetized, the area was sterilized using alcohol, and the sulcus between the buried glans penis and the preputial skin was irrigated with saline followed by alcohol using a syringe and canula. The tip of a small artery forceps was then passed gently along the sulcus between the preputial skin and the buried glans to ensure the absence of any adhesions between the two structures. A vertical cut was then made on the skin edge to widen the tight preputial orifice, with the artery forceps in place to protect the underlying glans, and the trapped glans was released. The raw area was closed by stitching the proximal and distal skin edges as in a routine circumcision (Figures 2a, 2b).

Discussion

Although a common operation, circumcision has few complications. Up to 3% of circumcisions develop complications,¹⁰ with hemorrhage the commonest followed by sepsis, fistula, meatal stenosis, keloid formation, partial or total amputation and concealed penis.^{1,2,11,12} Concealed (buried) penis is a rare complication of circumcision.^{11,13,15} It results from the excision of excess preputial skin while not enough inner preputial epithelium is excised, thus bringing the new preputial orifice distal to the glans, forcing the penile shaft into the suprapubic fat at the level of the mons pubis. In these cases, a skin graft or local flaps are needed to cover the released shaft. Another possible mechanism for the formation of this complication is that, as the penis has a tendency to retract into the mons pubis, it will eventually be trapped subcutaneously by the healed scarred preputial orifice.^{2,14} In these cases, no skin graft or local flaps are needed to cover the released shaft, as in our case. With both mechanisms, there is inadequate excision of the preputial skin, which allows the preputial orifice to be distal to the retracting penis, thus trapping the latter when healing is complete.

Other causes of concealed penis are obesity, when the organ is buried in the prepubic fat,^{14,15} trapping due to scarring following trauma or phimosis, or the penis can be enclosed

Figure 1. The concealed penis, anterior view (A) and lateral view (B).

Figure 2. The concealed penis, after release and circumcision, anterior view (A) and lateral view (B).

in scrotal tissue in penis palmatus,¹⁴ and elephantiasis of the scrotum. Treatment of this condition involves releasing the trapped penis by widening the tight preputial orifice carefully and refining the circumcision,¹¹ with or without skin reconstruction depending on the etiology and mechanism of formation.

In conclusion, concealed penis is a preventable condition, whether it occurs as a complication of circumcision, or as a result of phimosis. Early recognition and treatment will avoid surgery and anesthesia. Proper circumcision is a key factor in preventing this complication of circumcision.

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