



Glans penis necrosis following paraphimosis: A rare case with brief literature review



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1. Introduction

Paraphimosis occurs when the foreskin of the penis is retracted over the glans and cannot be replaced in its normal position. The tight ring of preputial skin constricts the distal penis causing vascular occlusion and, if not dealt with quickly, can lead to tissue necrosis and partial amputation. We present a rare case of glans penis necrosis following paraphimosis with brief literature review.

2. Case presentation

A 83-year-old man presented to the urology department with a painful swelling of the glans penis. The patient was admitted from the emergency department for pneumonia and urinary tract infection two days before, and a urethral catheter was placed. Physical examination showed preputial edema and a swollen glans penis associated with an ischemia-related hemorrhagic mucosal suffusion (Fig. 1). A diagnosis of glans penis necrosis caused by paraphimosis was made.

Topical anesthetic gel was placed on the inner surface of the foreskin and the paraphimosis was manually reduced tractioning the foreskin back on the glans. In addition to broad-spectrum antibiotics, the patient received topical antiseptics and hyaluronic acid ointment. After 6 weeks, the glans penis mucosa was almost completely re-epithelialized (Fig. 2). Eventually, 4 months later he underwent circumcision in elective surgery without complications.

3. Discussion

Paraphimosis is a urologic emergency that affects uncircumcised male children and adults whose complications, like necrosis



Fig. 1. Paraphimosis, the foreskin constricting the penis at the coronal sulcus. The distal glans is necrotic and the area is dry and well-demarcated.

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Fig. 2. Six weeks after manual reduction of paraphimosis: the glans penis mucosa is almost completely re-epithelialized.

and gangrene, are time related; it occurs when the narrow tip of the prepuce is withdrawn behind the glans and constricts the penile shaft, which results in the painful vascular engorgement of the glans and in edema of the distal penis.¹

The most common cause of paraphimosis is the clinician's having forgotten to retract the prepuce after the placement of a Foley catheter in uncircumcised patients.²

While diagnosis is obvious to physical examination, different conservative treatments are reported to reduce paraphimosis in order to avoid distal ischemia and necrosis of the penis such as manual reduction methods, osmotic methods and puncture and aspiration methods.³ Moreover irreducible paraphimosis is treated by dorsal slit procedure and subsequent circumcision.¹

Raman et al. first described a penile necrosis caused by paraphimosis reduced with gentle pressure⁴; since then only one case has been reported in literature in which a circumcision was performed.¹

Complication of a not reduced paraphimosis requiring partial

amputation was mentioned in a single case report described by Hollowood et al. where a chronic paraphimosis without gangrene caused a near complete transection of the urethra.⁵

In the present case, urethral catheter undoubtedly played a role increasing the ischemic damage of tissues; in addition to this, reduction of paraphimosis was mandatory to treat the necrosis and to prevent any further injury extension. Ancillary treatments, such as antibiotics and hyaluronic acid ointment, were aimed to avoid bacterial impetiginization and accelerate the complete healing.

Since recurrences are common, circumcision should always be performed in a patient who has suffered from paraphimosis.¹

4. Conclusions

Glans penis necrosis caused by paraphimosis is a rare complication of a urologic emergency. Few cases are reported in the literature. Complications are time related most commonly due to misdiagnosis. Simple reduction usually can be achieved with adequate analgesia. Circumcision is strongly suggested in patients who have suffered from paraphimosis because this condition tends to recur.

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Conflicts of interest

None.

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