Case Report
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TRAUMATIC DEGLOVING LESION OF PENILE AND SCROTAL SKIN

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ABSTRACT

Avulsions of penile and scrotal skin are uncommon events and are caused mainly by accidents with industrial machines and agricultural machine belts.

We report the case of a 30-year old patient with avulsion and traumatic degloving of the penile and scrotal skin, with exposure of the cavernous bodies, spongy body, and testes due to an industrial machine accident. Reconstruction was performed in steps, achieving a satisfactory esthetic result, normal voiding and reestablished sexual function.

Key words: penis; scrotum; wounds and injuries; reconstructive surgical procedures
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INTRODUCTION

Skin avulsions of male genitals are a rare urological emergency (1). Although not life-threatening, such lesions are incapacitating and psychologically devastating (2) and occur mainly because of accidents with industrial machines or agricultural machine belts (2,3). Avulsions vary from simple lacerations to virtual emasculations (1). Generally, lesions reach only the skin, causing minimal bleeding without producing damage to cavernous bodies, the spongy body or testes (1,2).

CASE REPORT

A 30-year old metallurgist was seen at one municipal hospital in June 2003 suffering from trauma to the external genitalia because of a work accident involving industrial machinery. At the emergency room, a total avulsion of penile and scrotal skin was detected. The skin presenting avulsion had remained fixed to the penis through a pedicle formed by a flap in the coronal sulcus, and the skin at the scrotal base had been preserved (Figure-1).

The patient was taken to the surgery room approximately 2 hours after the accident. Following peridural anesthesia, the medical staff performed a careful cleaning, an inventory of lesions and a debridement of devitalized tissues. The penis was covered again with the skin attached to the coronal sulcus assuming its viability due to the pedicle with apparently good vascularization. The left testis was recovered with remaining skin from the scrotum, and the right testis was buried in the inguinal region. A small area at the dorsum penis was left uncovered and the staff preferred to wait for healing by second intention. Dressings and debridement of devitalized tissues were performed under anesthesia. After 40 days, the patient underwent re-sectioning of the cicatricial area at the dorsum penis and a free epidermal graft using skin from the anterosuperior area of the iliac spine.

Three months after the last procedure, the patient recovered regular sexual activity. However, he reported painful erections due to tension and cicatricial retraction of the grafted skin.

Seven months after the accident, the patient underwent re-sectioning of the free graft scars. The bleeding area of the penis was covered by rotating

Figure 1 – *Traumatic degloving lesion of penile and scrotal skin.*

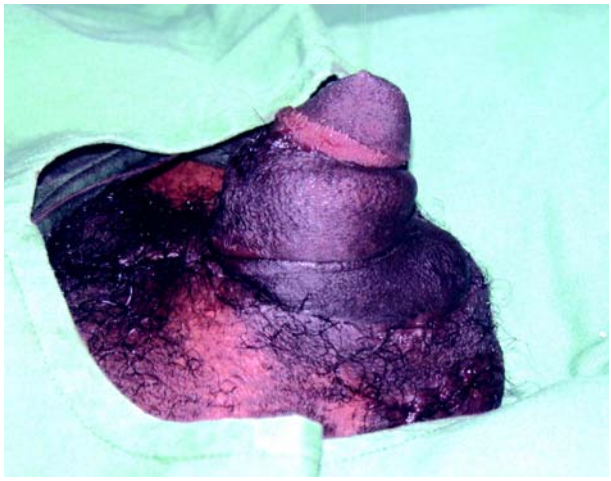

Figure 2 – *Surgical repair. Final postoperative aspect.*

the well-vascularized skin from the penis and scrotum with good esthetic and functional results. On the same procedure, a right orchiopexy was performed. The remaining scrotal skin was well vascularized and elastic, and the testis could be properly housed inside the scrotum (Figure-2).

COMMENTS

Industrial machine pulleys, chains and rotary discs were responsible for the injury when they grasped the operator's clothes and pulled out the skin of the genital region. The skin was torn at the scrotum, dragging the skin overlay from the base of the penis while the connection with the coronal sulcus remaining intact. Part of the scrotal skin was included in the loose segment. There was no significant blood loss.

After cleaning and debridement of devitalized tissues, the exposed tissues were covered with viable flaps from the remaining skin.

When there is no available skin, penile burial in the scrotum or in the suprapubic region is performed (1). In the reported case, the posterior portion of the scrotal skin was available for suture and this tissue was used to cover the left testis and the base of the penis. At a subsequent stage, we opted for using a free graft to cover the dorsal bleeding area of the penis. Other techniques, such as testicular burial in the inguinal region or the inner thigh or expansion of the scrotal tissue can be employed as well (3).

Among the post-operative complications that have been reported in the literature are edema, infection, hemorrhage and cicatricial retraction (2). The treatment of these complications must be the most conservative possible in order to bring benefits to the patient (3).

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