



Penile Erosion on Bladder Catheter and Penile Strangulation for Urinary Incontinence

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Abstract

We report a case of the complications of a spinal cord injury (SCI) in a 21-year old paraplegic young man alternating between indwelling urethral catheter and a condom drainage. This young man used to remove the urinary catheter and tighten a compress on his penis that acquired ventral penile erosion.

Keywords: Paraplegia; Indwelling Urinary Catheter; Strangulation; Penile Erosion

Introduction

Penile erosion is one of the complications in patients with neurogenic bladder. Complications of urinary catheterization include catheter toxicity and hypersensitivity, symptomatic bacterial infections, mechanical trauma, and anaphylaxis. (1) In men, the resulting partial or full thickness wound may involve a small area of the glans penis or split the glans, in cases there may be total erosion of the ventral wall of the penis requiring a reconstructive surgery or urinary diversion. (2) These complications are often observed in elderly patients with neurological bladder; we report the case of a young man followed for urinary incontinence.

Case Report

A 21-year old Moroccan young man was the victim of a motorcycle accident a year ago with a spinal injury and a fractured left leg. The patient was hospitalized in intensive care for day for hemodynamic instability for complex fracture of the spleen, he had a splenectomy for hemostasis and his open leg fracture was urgently treated with surgical paring and antibiotic therapy, then he was treated with an external orthopedic fixator. The patient had a history of marijuana abuse and associated psychological problems.

Clinical examination revealed a 4\3 cm² area of erosion on the ventral aspect of the medial penile shaft, which corresponded to the site of compress stricture attachment. The ventral wall of the urethra was completely destroyed with evidence of the urethral mucosa, without exudation or bleeding, there was no pus. The glans and urethral meatus were respected. He was not reporting pain. A bladder catheter was in place with a compress around the penis (Figure 1). A suprapubic catheter was inserted into the bladder and the patient was scheduled for elective urethral reconstruction. A penile skin flap urethroplasty was successfully performed.

Discussion

Our patient had a persistent indwelling urinary catheter that created an erosion, he removed from time to time for a few days the urinary catheter on his own initiative and he strangulated his penis with a compress for continence. Urethral erosion is a long-term complication of indwelling catheter use that can be prevented by educating those privileged to take care of spinal cord injury patients [1].



The use of condom drainage system can render a male SCI patient effectively dry, but can lead to penile or urethral complications in 15-30% of patients. Other commonly reported problems range from allergic reactions and local defects in the skin, to gangrene and partial amputation of the penis. Additionally, it is well established that chronic urethral catheterisation can lead to penile cleavage [3].

Our patient was educated for intermittent catheterization, but he did not use it in a clean way, so he used to use a Foley Charriere 16 or 18 catheter lubricating it with Chlorhexidine. This bladder catheter has been used several times and picked up in an area that is not clean.

Clean intermittent catheterization should be considered in patients with vesico-urinary dysfunction due to spinal cord injuries, which consists of inserting a lubricated catheter into the bladder via the urethra at pre-determined daily intervals and removing it after urinary voiding [1].

Education is key to recognizing the risk of indwelling catheters on pressure ulcer development in vulnerable populations [2].

In our context, the cost of intermittent clean urinary self-catheterization remains high, and this type of catheter is not

available in all cities. The patient may be made to use unsuitable catheters with a large gauge or by using the wrong lubricant.

Patients with urethral damage related to prolonged catheter present a formidable challenge in surgical reconstruction. Many techniques are described for repair. This kind of surgery must be done by an expert surgeon, in a referral center. Most patients have serious comorbidities and a single operation does not usually solve all the problems [4].

For younger patients, urethral reconstruction is an option, although Secret., *et al.* have found a lower success rate for patients with spinal cord injury than for those with intact spinal cord. In this study, 11 with spinal cord injury required reoperation and all eventually required urinary diversion. The authors recommended that early urinary diversion may be the best option for men with severe urethral pathology and spinal cord injury. However Casey., *et al.* retrospective study reported a 70% success rate with urethral construction [2].

Our case highlights the need for the follow-up in periodic urological consultation of patients with SCI, it can make possible to detect this type of complication and intervene when necessary. Careful evaluation of catheter materials before selecting them for patient use is mandatory. Patient education is essential for the prevention of this pathology.

Conclusion

Urethral injury secondary to chronic indwelling urinary catheter is a preventable complication. the installation of an indwelling urethral catheter must be done by a qualified health professional, especially in patients with a spinal cord injury, the follow-up is important. Clean intermitent bladder self-catheterization is recommended.

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Conflict of Interest

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Patient Permission

We had the patient's consent for the publication of his case.

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