

An unusual cause of bladder rupture in a paraplegic

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Summary

Over distention of the bladder, or a bladder substitute may lead to rupture. The chances of rupture are more in a previously scarred bladder, particularly in a patient with poor sense of bladder fullness such as paraplegic.

Résumé

Un très grand élargissement de la vessie ou du substitue de las vessie puet causer sa rupture. Les chances de rupture se retouvent plus dans les vessies cicatrise, et plus particulierement chez le patients ayant la paraplegie qui se caracterise par une faible sensation du remplissage de la vessie.

Introduction

Supra-pubic catheterisation with or without urethral closure has been used to manage troublesome incontinence in women with neuropathic bladders [1]. However, there is a risk of bladder rupture in a scarred bladder should the suprapubic catheter become blocked if the urethra has been closed.

Case Report

A 71 year old paraplegic lady was admitted electively for excision of a pressure ulcer. Five years earlier, she had suprapubic cystostomy and urethral closure done for uncontrollable bypassing of urethral catheter. She had suffered iatrogenic perforation of the dome of the bladder during cystoscopy about 4 years before presentation. Four days after admission, she vomited and complained of abdominal pain. Examination revealed a blocked suprapubic catheter and tenderness over the suprapubic area. The suprapubic catheter was changed and a residual volume of 700ml of clear urine was obtained. The two way Foley catheter was blocked by phosphatic debris and some egg-shell calculi. However, she gradually became unwell, developed a tachycardia, progressive abdominal distension and tenderness. The white cell count became elevated and the serum urea was 52mg/dl. Plain abdominal x-ray revealed dilated bowel loops and multiple bladder calculi. A clinical diagnosis of bladder rupture was made and a laparotomy was performed. This revealed free turbid intraperitoneal fluid, a rent in the bladder at the junction of the suprapubic tract and vault measuring about 3cm as well as multiple bladder calculi.

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The claculi were removed and the bladder was repaired in two layers over two suprapubic catheters. Adequate peritoneal toileting was then performed before the abdomen was closed in layers. She made an uneventful recovery.

Discussion

A significant number of women with neuropathic bladders are treated by indwelling catheters. However, long term urethral catheters are associated with multiple complications [2,3,4]. The use of suprapubic catheterisation with or without urethral closure has been found to be beneficial in the long-term management of these patients, particularly where the urethral has been rendered patulous from long-term use of a urethral catheter [1].

Where the urethra has been closed as in our case, or in any of the other continent cystoplasties, there is a risk of rupture should the catheter become blocked or the continent mechanism difficult to catheterise. Perhaps the previous scar in our patient's bladder which arose from the iatrogenic perforation she suffered earlier contributed to the rupture. In such a closed system only a high index of suspicion and prompt relief of the urinary retention is likely to prevent a disaster, particularly in this group of patients because of poor sensation of bladder fullness.

This report particularly emphasizes the possibility of spontaneous rupture in a scarred but unaugmented bladder which were the subject of previous reports [5,6]. In the event of a difficulty such as this, a suprapubic aspiration should be performed without delay to relieve the retention while the patient awaits a definitive management.

References

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