CLINICAL CASE

Transurethral bladder eversion: a case report

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Abstract
Transurethral bladder eversion is extremely rare and very few cases are described in the literature. The aim of this report was to present the management established for this pathology and to analyze its possible predisposing factors. The case of a 72-year-old, multiparous, postmenopausal woman is presented herein. Her past history included numerous pregnancies resulting in births, uterine prolapse, pessary use, and transurethral bladder eversion. Urethral remodeling, colporrhaphy, and cystopexy were performed. The exact mechanisms by which bladder eversion occurs have yet to be established. Management is heterogeneous due to the lack of reported cases and results tend to be variable.

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Eversión transuretral de la vejiga, reporte de caso

Resumen
La eversión transuretral de la vejiga es extremadamente rara, existen pocos casos descritos en la literatura. El objetivo de este trabajo es presentar el manejo establecido ante esta dolencia y analizar algunos factores que pueden actuar como mecanismos responsables. Se presenta el caso de paciente de 72 años, multipara, posmenopáusica, con antecedente de prolapse uterino y uso de pessario con eversión transuretral de la vejiga. Se realizó remodelación uretral, colporrafia y cystopexia. Los mecanismos exactos por los cuales sucede la eversión vesical aún están por establecerse, el manejo que existe resulta ser heterogéneo por la falta de casos existentes y los resultados suelen ser variables.

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Introduction

Transurethral eversion of the bladder is an extremely rare situation, and the risk factors and pathophysiology of the mechanisms that predispose to it are not fully understood.

Some cases of eversion of the bladder mucosa with concomitant uterine prolapse have been reported, but the description of isolated transurethral eversion of the bladder has not been described.

The aim of the present article was to present the established management of this pathology and to analyze some of the factors that may act as the mechanisms responsible for this type of situation.

Case presentation

A 72-year-old multiparous, postmenopausal woman was evaluated by the Gynecology Service for a mass protruding through the vagina. The patient had a past medical history of stress urinary incontinence of 15-year progression and used a pessary for uterine prolapse. Urology Service evaluation revealed a 4 x 5 cm purplish mass at the level of the vagina that could not be manually reduced and the presence of a Foley urethral catheter (fig. 1).

The patient was taken to the operating room for instrumented bladder reduction. The urethral mucosa prolapse was resected and the balloon of the transurethral catheter was partially visualized through the urethra (figs. 2 and 3).

We proceeded to medially incise the urethra, an 18 Fr transurethral catheter was placed, the incision was longitudinally closed by layers, and anterior colporrhaphy was performed. Afterwards a Burch colposuspension was carried out in the usual manner and the rectal and abdominal fascia were attached to the dome (fig. 4).

The patient had the transurethral catheter for 3 weeks, after which it was removed.

There was no bladder eversion recurrence at the 6th month of follow-up.

Discussion

Transurethral eversion of the bladder is an extremely rare situation. According to Kim et al. there are about 12 reported cases in which the eversion was partial or total, and it some cases it was accompanied by uterine prolapse, requiring hysterectomy.¹

Some of the mechanisms that can be responsible for this condition have been described, including lengthening of the urogenital hiatus, which can result from traction of the base of the bladder and the urethra from the pubic bone, thus explaining the phenomenon. Another mechanism has an obstructive component. Vaginal prolapse can cause an increase in intravesical pressure, which can then be responsible for bladder eversion.²

A neural mechanism and elements of bladder fixation have been speculated on in other cases. Lowe et al. reported a case of transurethral bladder eversion secondary to hemipelvectomy, pointing out that the probable explanation for this phenomenon was a sectioning of the bladder fixation elements after surgery, as well as neuronal damage to the urethral sphincter. It is thought that the sectioning of the arcus tendineus fasciae pelvis and injury to the hypogastric plexus are responsible for the pathophysiology in this group of patients.³

The traumatic component also plays a role in the mechanisms described, such as in the case of Acharya and Mishra, who reported bladder eversion and prolapse after the traumatic removal and traction of the transurethral catheter, in which the presence of uterine prolapse was a concomitant factor.⁴

In the majority of reported cases, patients are multiparous and postmenopausal. Postmenopausal patients present with decreased urethral tone, alterations in the trophism of and blood flow to the urethral submucosal plexus, and reduced...
elastcity of the urethral and vaginal walls. These circumstances are known to be risk factors for uterine prolapse, but not for bladder eversion.

Due to the fact that there are not many reports on this pathology, we decided to carry out a similar approach to those already described, performing urethral remodeling, which ended up not being done, as well as cystopexy to the anterior abdominal wall to prevent recurrence.1

The exact mechanisms causing bladder eversion have yet to be established and the existing management is heterogeneous due to the low number of reported cases and the results tend to be variable. It is important to avoid
short-term complications due to inopportune attention and to make a long-term evaluation of the functional results of this type of procedure.

Ethical responsibilities

Protection of persons and animals. The authors declare that no experiments were performed on humans or animals for this study.

Data confidentiality. The authors declare that no patient data appear in this article.

Right to privacy and informed consent. The authors declare that no patient data appear in this article.

Financial disclosure

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Conflict of interest

The authors declare that there is no conflict of interest.

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