Case Report

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Perirenal Urinary Extravasation Complicating Burch Colposuspension

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Key Words

Urinary extravasation
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Abstract

We report an unusual case of unilateral ureteral obstruction with secondary urinary extravasation by forniceal rupture as a complication of the Burch colposuspension procedure. Surprisingly, this complication has never been described before.

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Operative complications of the Burch colposuspension are infrequent and mostly include bladder trauma and venous bleeding. Ureteral injuries can also occur but seem to be extremely rare. As far as we know only 2 cases of intraoperative damage to the ureter resulting in obstructive uropathy have been published [1,2]. Moreover, perirenal urinary extravasation due to ureteral blockage as a complication of retropubic surgery for genuine stress incontinence has not been described previously. We now present such a case.

Case Report

A 46-year-old woman presented with a history of stress urinary incontinence of 2 years. She had undergone neither urological nor gynecological surgery before. Physical examination revealed no cys-tocele. Urodynamic investigation showed a stable bladder function and urethral sphincter incompetence. The patient was admitted to the Department of Obstetrics and Gynecology and a retropubic colposuspension was performed by Burch's method [3]. Postoperatively she developed fever and increasing pain in the right loin. Urinary drainage through the bladder catheter was normal. An excretory urogram (intravenous pyelogram) (IVP) was performed on the second postoperative day (fig. 1). Strongly marked extravasation of contrast material from the right renal pelvis and calyces was seen and there was no opacification of the corresponding ureter. It was assumed that the vaginal sutures on the right side had been placed too close to the ureterovesical junction. Under general anesthesia ureteral catheterization was attempted but without success. Reexploration was performed and the sutures from the right side were removed. A repeat IVP after 7 days disclosed a normally functioning right kidney with a thin ureter. At 6 months' follow-up the patient had no more complaints of incontinence and voiding was normal.

Fig. 1. IVP shows perirenal urinary extravasation from the right collecting system.

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Discussion

References

Obstruction of a ureter due to Burch colposuspension is extremely rare, as the case presented seems to be only the third in the literature. We are convinced that surgical damage to the ureters can be avoided when the vaginal sutures are placed as far laterally in the anterior vaginal wall as possible, and at the level of the bladder neck [4]. If however, the sutures are placed at a higher more proximal level, one risks injuring and obstructing the uretero-vesical junction directly. On the other hand, when the sutures are placed too close to that junction, kinking of the distal ureters may occur on pulling the sutures to Cooper's ligament straight upwards. A kinked ureter can lead to hydronephrosis.

Extravasation of contrast material from the collecting system during intravenous urography in patients with ureteral obstruction is rather an exception [5]. It is assumed that high intrapelvic pressure causes a rupture of the fornix of a calyx with subsequent extravasation of contrast material and urine. Urinary extravasation may be encountered more frequently when excretory urograms are performed immediately on all patients with renal colic-type symptoms [5].

The retropubic approach for correction of genuine stress incontinence is accepted worldwide. It is a simple and safe procedure with excellent results, but a number of special rules and precautions have to be kept in mind [4].

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