



Inflammation and infection

## Bladder endometriosis: A serious disease

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## ARTICLE INFO

## Keywords:

Urinary tract endometriosis  
Obstruction  
Nephro ureterectomy

## ABSTRACT

Urinary tract endometriosis (UTE) is a very rare but serious form of infiltrating endometriosis because of the risk of urinary tract obstruction and loss of renal function. We report the case of a 42-year-old female patient admitted for intense right back pain with lower urinary tract disorders. An abdomino-pelvic ultrasound was done showing right uretero-hydronephrosis. Ureteroscopy showed an inflammatory-like stenosis of the right pelvic ureter. Given the young age of the patient, the poor quality of the right kidney, we opted for a right total nephro ureterectomy. The anatomopathological examination showed a bladder endometriosis.

## 1. Introduction

Urinary tract endometriosis (UTE) is a very rare but serious form of infiltrating endometriosis because of the risk of urinary tract obstruction and loss of renal function. Recently, occurrence of urinary tract endometriosis (UTE) is more frequently diagnosed. According to literature, it refers to approximately 7% of all women with endometriosis [1]. Although not always possible, the clinical and radiologic assessment may help in obtaining a preoperative diagnosis. We reported an unusual clinical presentation of a bladder endometriosis with an impact on the upper urinary tract leading to nephrectomy.

## 2. Case presentation

A 42-year-old female patient admitted for intense right back pain with lower urinary tract disorders dating back to few hours but without notion of fever. She is a sheep breeder, with a history of a resection of a uterine myoma since 2014.

The examination objectified a sensitivity of the right lumbar and vitals were stable. An abdomino-pelvic ultrasound was done showing right uretero-hydronephrosis without detectable obstacle with renal cortical thinning associated with a 55mm uterine fibroid.

A Computed Tomography (CT) scan was carried out to show the same findings. The patient was put on analgesics at different levels without result. To relieve the patient and to advance in the diagnosis, we decided to do a diagnostic ureteroscopy with the placement of a ureteral

catheter who showed an inflammatory-like stenosis of the right pelvic ureter which allowed the guide to pass but not the rigid ureteroscope and even the charrière 5 ureteral probe passed with great difficulty.

The cystoscopy was normal and a biopsy of this lesion and an in situ urinary cytology was performed which only showed the presence of inflammatory cells.

One week later, the ureteral probe dropped and the symptomatology recurred. The CT scan was redone, which showed a dilation of the right excretory cavities upstream of 2 pelvic and iliac ureteral foreign bodies of 20 and 25 mm in diameter (Fig. 1).

This time we did a ureteroscopy with extraction of these fragments of ureteral probe, and the endoscopic aspect shows the same aspect aroused with a stenosis of 2 cm that we managed to overcome. No other lesions detectable in the rest of the excretory route.

An in situ urine sample was sent for research of urinary tuberculosis and tumor cells. No urinary tuberculosis was detected but in situ urinary cytology was positive for low-grade neoplastic urothelial cells.

Given the young age of the patient, the poor quality of the right kidney, the result of the urinary cytology and after discussion with the patient, we opted for a right total nephro ureterectomy by laparotomy with double incision: lombotomy + iliac incision with excision of a bladder collar.

The postoperative course was simple, and the patient was discharged after 3 days with normal kidney function.

The anatomopathological examination showed a kidney with chronic pyelonephritis, ureter without abnormality and bladder

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<https://doi.org/10.1016/j.eucr.2023.102400>

Received 28 February 2023; Accepted 10 April 2023

Available online 11 April 2023

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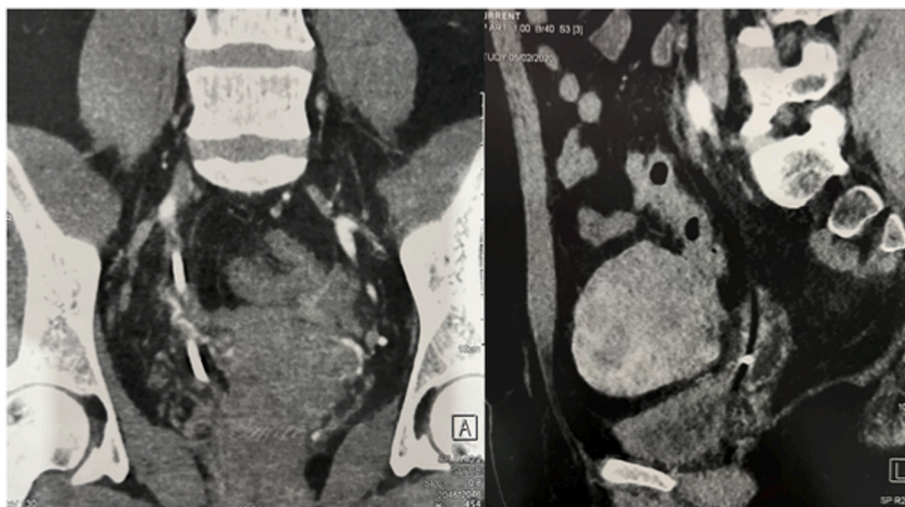


Fig. 1. CT coronal sections showed dilation of the right excretory cavities upstream of 2 pelvic and iliac ureteral foreign bodies of 20 and 25 mm in diameter.

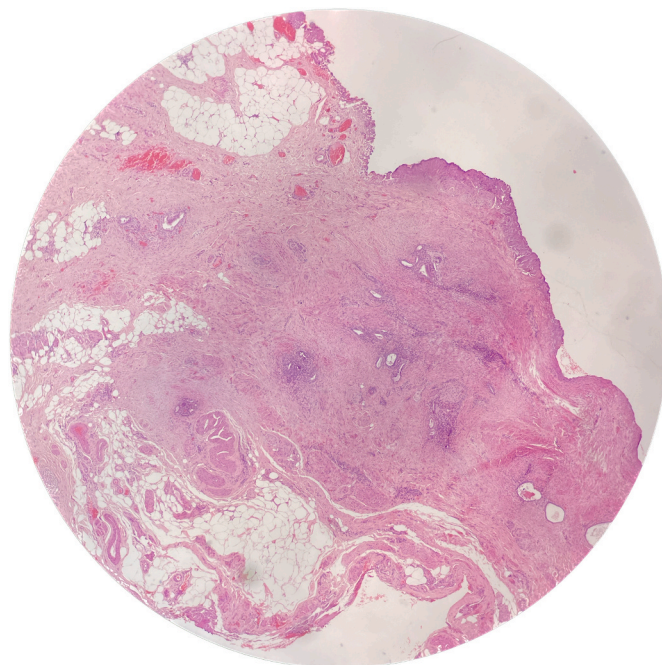
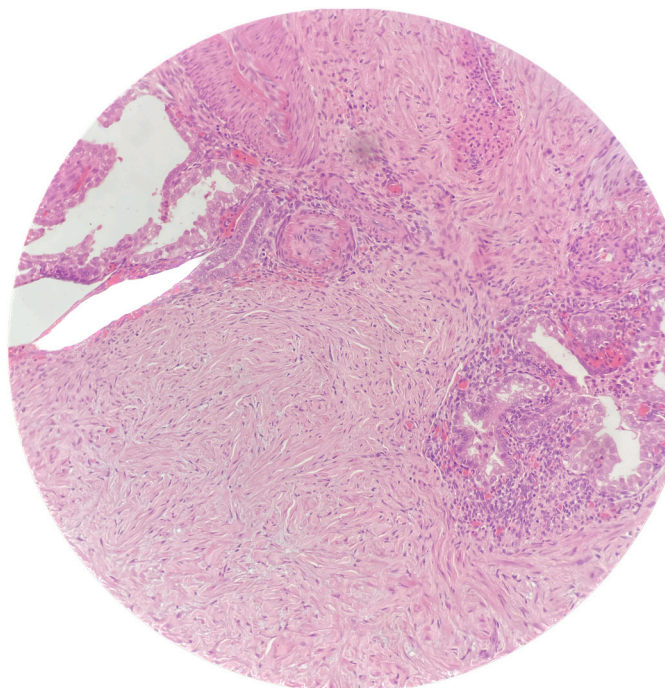


Fig. 2. Endometrial glands without atypia surrounded by a cytogenic chorion.

Fig. 3. Presence of glandular structures surrounded by a cytogenic chorion within the bladder wall reaching the muscularis and the subserosa.

endometriosis (Fig. 2), (Fig. 3) which is the origin of disorders. The patient was referred to a gynecologist where progestogen treatment was started.

### 3. Discussion

Endometriosis is a chronic and benign condition thought to affect up to 10% of female-born individuals. Bladder endometriosis is a specific form of endometriosis characterized by the presence of endometrial glands and stroma in the detrusor muscle. Such disease may involve different sites of the bladder, most frequently the base and the dome, with various grade of infiltration.<sup>1</sup> It was historically considered a gynecologic condition, managed by obstetrician-gynecologists. However, it is increasingly recognized that endometriosis is a multiorgan and systemic inflammatory disease that necessitates interdisciplinary care.<sup>2</sup> In most classic teachings, it causes cyclic pelvic pain and infertility. As in

our case, bladder endometriosis can only appear at the complication stage: obstruction of the ureteral meatus leading to renal obstructive syndrome. Both abdominal ultrasonography and transvaginal ultrasonography (TVS) may be used to detect vesical endometriotic lesions but TVS is the preferred technique. In a literature review Nisenblat V et al. compared abdominal ultrasonography, transvaginal ultrasonography (TVS), and MRI in the preoperative evaluation of bladder endometriosis. All the techniques identified bladder lesions; however, TVS was the most accurate in defining the size of the lesions, infiltration of the detrusor muscle, and continuity with extravesical lesions.<sup>3</sup> When a bladder endometriosis lesion is present, the cystoscopic findings are more commonly normal owing to the intraperitoneal origin of the nodule. The differential diagnosis includes urachal remnants, cystitis glandularis (intestinal type), primary adenocarcinoma, and metastatic adenocarcinoma.<sup>4</sup> as in our case all radiological and endoscopic explorations may be normal and the diagnosis can only be established by pathological

examination. As rightly assessed by the authors, transurethral resection surgery is ineffective. Proper completion of partial cystectomy need to consider uterine involvement by external endometriosis. Endometriosis surgery represents a risk to the uterus and adnexa, and complications of surgery are also a cause of infertility.<sup>5</sup> Thus, the benefit-to-risk ratio for surgery versus medical treatment should be carefully considered. One of the main characteristics of symptoms related to endometriosis lesions is that they dramatically respond to therapeutic amenorrhea.

#### 4. Conclusion

Urinary tract endometriosis (UTE) is a very rare but serious form of infiltrating endometriosis because of the risk of urinary tract obstruction and loss of renal function. We reported the case of a endometriosis of the bladder complicated by hydronephrosis and leading to nephrectomy.

The diagnostic can only be established by pathological examination. Surgical treatment is not mandatory and hormonal treatment alone may be sufficient.

#### Declaration of competing interest

No conflict of interest to be noted.

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