

LAPAROSCOPIC RESECTION OF A BLADDER ENDOMETRIOMA - CASE REPORT

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Abstract

Endometriosis is a complex disease which involves the presence of endometrial tissue outside the uterine cavity. The cardinal symptom is dysmenorrhea, but site specific symptoms can also be present. The treatment of deep infiltrating endometriosis represents a big challenge for the gynecologist surgeon. Endometriosis of the urinary tract is a rare occurrence. In case of urinary endometriosis, the bladder is the most frequent location. The objective of this article is to report a case of a 24 year old nullipara with a bladder endometrioma that was successfully resected by laparoscopy.

Rezumat: Rezecția laparoscopică a unui nodul endometrioic vezical – prezentare de caz

Endometrioza este o afecțiune complexă care implică prezența țesutului endometrial în afara cavității uterine. Simptom cardinal este dismenoreea, dar pot fi prezente și simptome specifice organului afectat. Tratatamentul endometriozei profunde reprezintă o mare provocare pentru chirurgul ginecolog. Endometrioza tractului urinar este rareori întâlnită. Vezica urinară este localizarea cea mai frecventă a endometriozei tractului urinar. Obiectivul acestui articol este de a raporta rezecția laparoscopică a unui nodul endometrioic vezical la o nulipară de 24 ani.

Cuvinte cheie: endometrioză vezicală, rezecție, laparoscopie

Introduction

Endometriosis is a complex disease which involves the presence of endometrial tissue outside the uterine cavity [1]. Almost any organ of the human body can represent a possible site for the development of endometriosis implants. Most commonly endometriosis lesions are located in pelvis, but digestive tract, retroperitoneal, diaphragmatic and even thoracic lesions have been reported [2-5].

Endometriosis related symptoms are dysmenorrhea (the cardinal symptom), chronic pelvic pain, dyspareunia, and infertility and affect

approximately 6%–10% of women of reproductive age. Endometriosis lesions react to hormonal stimulation. The blood accumulates locally, causes swelling, and triggers inflammatory responses with the activation of cytokines. Pain can also occur from adhesions (internal scar tissue) binding internal organs to each other, hence causing organ dislocation. Site specific symptoms are also described, such as urinary urgency, frequency, and painful voiding (common in urinary tract endometriosis), dyspareunia (associated with vaginal nodules or uterosacral ligaments

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involvement), diarrhea and rectoragy (associated with bowel endometriosis) [6].

The treatment of deep infiltrating endometriosis represents a big challenge for the gynecologist. Laparoscopic removal of the active disease and the fibrotic tissue and the restoration of normal anatomy represent the gold standard of the surgical management of endometriosis.

Endometriosis expanding and invading the urinary tract is a rare occurrence found in approximately 1–2% of patients suffering from endometriosis [7]. In cases of urinary endometriosis, the bladder is the most frequent location [8, 9].

Case report

We present the case of a 24 year old nullipara presenting a 2 years history of intense dysmenoreea and urinary frequency, starting on the first day of menstruation and lasting until 5 days after the end of her period, sometimes associating hematuria. No history of surgical intervention was reported by the patient.

In order to evaluate the severity of the symptomatology the patient was asked to fill out a urinary diary during the menstruation. That revealed intense urinary frequency, with 20-24 urinations per day. The patient considered this condition to be extremely disabling, with a great impact on her life quality.

The ultrasound examination revealed 2-3cm tumor protruding in the posterior bladder wall. (figure 1). A cystoscopy was performed and a 3 cm tumor at the level of bladder wall was described. The bladder mucosa was involved, but the lesion was at safe distance from the orifices of the ureters. Two double j catheters were placed prior to the surgical procedure.

Laparoscopic removal of the bladder nodule was performed.

Technique description:

A complete inspection of the abdominal cavity was performed in order to exclude other endometriosis implants. No other signs of endometriosis were found. The bladder endometriosis nodule was found to infiltrate the bladder and the vesico-cervical space.



Figure 1: Ultrasound prior to surgery showing the bladder endometrioma protruding in the posterior bladder wall.

The next step was to isolate and dissect the nodule from the surrounding healthy structures. The dissection of the medial aspect of the paravesical fossae was performed bilaterally (figure 2a).

The dissection of the cervico-vesical space was performed (figure 2b) in order to free the bladder and the nodule from the anterior wall of the uterus (figure 2c).

After that, a dissection plane between the bladder and the parietal peritoneum was developed in order to completely mobilize the bladder. We considered that a complete mobilization of the bladder creates the best setting for nodule resection and most importantly allows the adequate suture placement on bladder wall defect after resection. At this point the extent of the endometriosis nodule was reevaluated and we found it to be larger than anticipated, probably due to the surrounding fibrosis. The resection of the nodule was performed using the monopolar cautery. Small lesions containing brown liquid, typical for endometriosis, were encountered. The bladder cavity was opened and the penetration of the disease in bladder mucosa was evaluated (figure 2d).

The nodule was completely excised and removed using an endobag. The entire bladder cavity was evaluated to exclude other signs of disease. The location of the two previously placed ureteral double J catheters was evaluated in order to assess the safety of suture placement, and they were found to be at a safe distance from the defect. The bladder wall was sutured in 2 layers with 3/0 PDO running stitches. After the suture was completed, the bladder

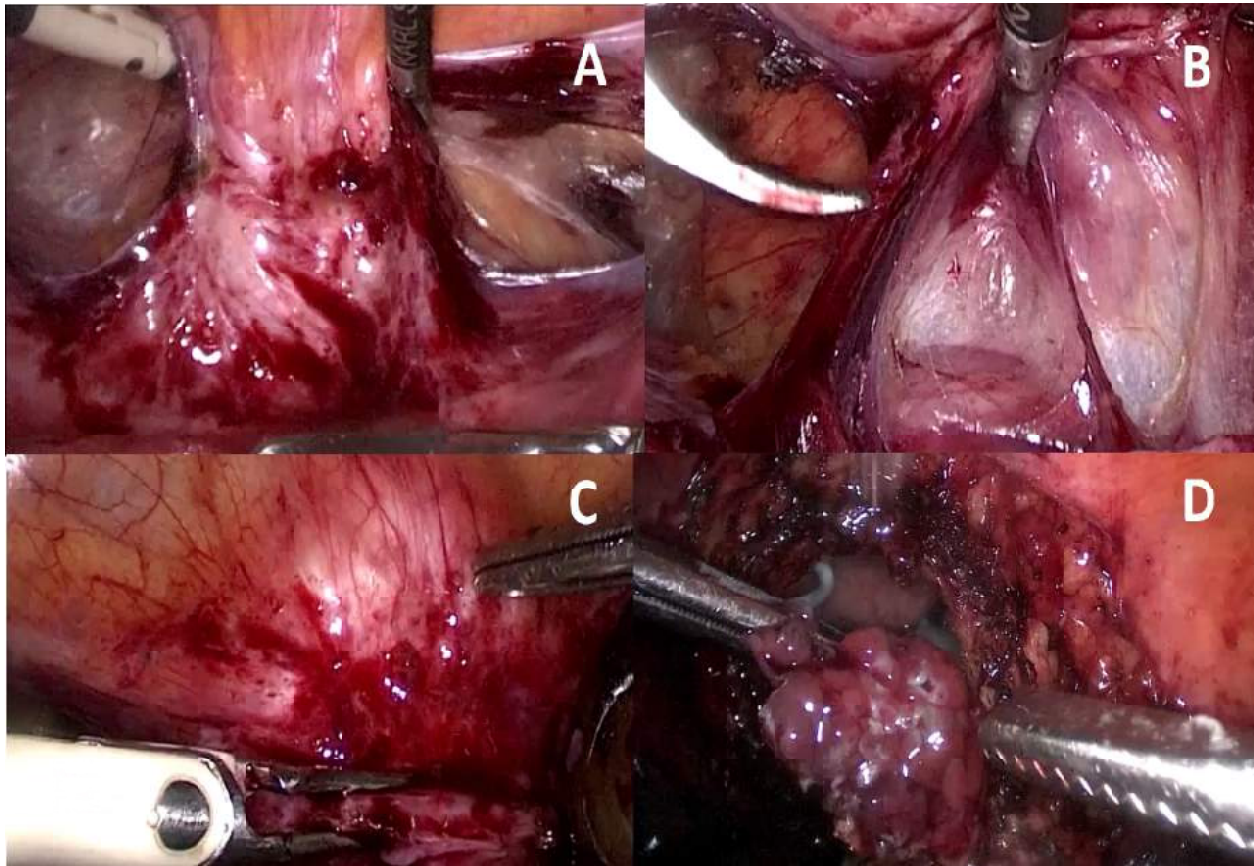


Figure 2: Surgical procedure: **a**-dissection of the medial aspect of the paravesical fossae; **b** - dissection of the cervico-vesical space; **c** – the endometrioma; **d** – aspect of bladder mucosa penetrated by endometriosis

was filled with 250 ml of metilen blue dye in order to evaluate any possible leakage.

The double J stents were removed by cystoscopy on the third day after surgery and the inspection of the suture line from inside the bladder was performed (figure 3). The patient was discharged with the bladder catheter in place. The bladder catheter was removed at 2 weeks after the procedure.



Figure 3: Cystoscopy - the inspection of the suture line from inside the bladder on the 3rd day after surgery

The patient was asked to fill in the urinary diary during menstruation for the following three months. The urinary diary was absolutely normal. The patient also reported the disappearance of dysmenorrhea.

The ultrasound exam performed at follow-up after surgery revealed a normal urinary bladder and the disappearance of the endometriosis nodule.

Discussion

Endometriosis is a complex disease affecting women at childbearing age [1]. The gold standard for diagnosis and surgical treatment is laparoscopy [10-14].

The administration of GnRH analogues is recommended by some authors [12, 15, 16] prior surgery. The aim is to reduce the extension of the disease. Other authors claim that GnRH analogues administration prior to surgery causes further fibrosis that generates difficulties in finding the cleavage planes during surgery [17-19].

Imagistic is very important prior surgery. This type of surgery can generate serious postoperative complications, so the patient must be accurately informed about the extent of disease and the treatment plan. The MRI is a very useful tool in order to assess the extent of the endometriosis lesions. Recently, ultrasonography gains more and more importance in the assessment of deep infiltrating endometriosis. Recent data suggest that the accuracy of ultrasound and MRI are comparable [20-23]. From our own experience in order to evaluate accurately an MRI the radiologist must be trained in the recognition of endometriosis lesions. Otherwise his report will not be accurate and useful for the treatment plan.

Conclusions

Endometriosis expanding and invading the urinary tract is a rare occurrence found in approximately 1–2% of patients suffering from endometriosis. In case of urinary endometriosis, the bladder is the most frequent location.

The gold standard for diagnosis and surgical treatment of endometriosis is laparoscopy.

The administration of GnRH agonists prior to laparoscopic surgery remains controversial.

Imagistic is very important prior to surgery for endometriosis, with a comparable accuracy between MRI and ultrasound.

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