

Bladder endometriosis treated by laparoscopic partial cystectomy: our approach.

Z Sidiropoulou, A Setúbal, M Costa, D Vilarinho, C Acosta, E Roberto

Citation

Z Sidiropoulou, A Setúbal, M Costa, D Vilarinho, C Acosta, E Roberto. *Bladder endometriosis treated by laparoscopic partial cystectomy: our approach.* The Internet Journal of Surgery. 2008 Volume 20 Number 2.

Abstract

The urinary tract constitutes one of the rare localizations of endometriosis, accounting for 1-2%, even rarer when it is the unique localization of the disease. In the present paper the authors present two cases of bladder endometriosis, the second one being the more peculiar, as the classic intra-abdominal foci were absent. The treatment is still controversial; exact diagnosis, patient age, desire for reproduction, severity of symptoms, location and extent of the disease should be taken into consideration in order to determine the appropriate therapy. In our opinion, laparoscopic segmental cystectomy will be the first option to be considered.

INTRODUCTION

Endometriosis involving the urinary tract is a rare condition, occurring in about 1-2% of cases (1). Ninety percent of these cases involve the urinary bladder (2) and this condition is being reported in the literature with increasing frequency. In more than 70% of cases the presenting symptoms of bladder endometriosis are identical to those of interstitial cystitis (3) and therefore this condition should always be sought in the female patient in absence of documented infection. The lesions are usually located posterior to the trigone or on the dome, they can be large and multiple, but are often single, averaging about 1cm in diameter and most of them are transmural (3, 4). Treatment options include a medical or surgical approach. Medical treatment includes GnRH agonists, progestagens or oral contraceptives (3), is usually paliative and symptoms generally recur upon discontinuation of therapy. Surgical approach includes oophorectomy, hysterectomy, shaving of the bladder lesion, cystoscopic electrocoagulation and segmental cystectomy. The first 2 surgical options are out of question when the patient wishes to preserve fertility and transurethral resection involves a great risk of bladder perforation. The last option seems to be the only curative treatment and done laparoscopically, it provides a better visualization of the extent of bladder resection required to completely excise the lesion (4, 5, 6).

Until now, only cases of bladder endometriosis have been reported, which probably does not reflect the real magnitude of the problem.

CASE 1

RIDF, a 23-years-old, navy officer, nulligest, menarche at the age of 14 years, regular cycles, complained of deep cyclic mictalgia during menses without hematuria, no dismenorrhoea or dyspareunia. She had a previous history of CIN I submitted to electrocoagulation of the cervix, otherwise she was healthy. Urine analysis was normal.

It was decided to submit the patient to a trial of continuous oral contraceptives during 3 months and this improved the symptoms considerably.

She was then submitted to further investigations: pelvic and renal ultrasound, cystoscopy and laparoscopy. The first 2 revealed no abnormality. Cystoscopy showed an oedematous reddish area on the bladder dome. A biopsy was performed and bladder endometriosis was diagnosed. On laparoscopy, endometriotic lesions were found on the bladder serosa and anterior surface of the uterus; but no noduli and no lesions were detected on the more typical locations like the uterosacral ligaments or the posterior cul de sac.

Because of pain and cyclic incapacity for her profession (navy officer with many days at sea) it was decided to perform a laparoscopic segmental bladder resection at the bladder dome where the lesions were observed and a double-layer 2-0 Vicryl Rapide bladder closure was performed. At the end of the procedure, a cystoscopy was performed to assess the integrity of the repair and to re-evaluate the ureters. A Foley catheter was left in place for 6 days post-

operatively and the patient was given prophylactic antibiotics.

Histology showed endometriosis involving the bladder muscularis. The patient has been asymptomatic since surgery. At the moment she is not planning a pregnancy and a second-look laparoscopy will be performed if there is any recurrence of symptoms or if there is any difficulty in conception, integrated in the workup for infertility investigation.

CASE 2

GMSRA, a 31-year-old nurse, menarche at 13 years, nulligest, regular cycles, complained of deep dysmenorrhoea, dysuria during menses with no hematuria, dyspareunia and occasional pelvic pain. She was healthy otherwise.

On clinical examination there was painful mobilization of the uterus and there were no abnormal masses. Pelvic ultrasound showed a uterus of 70x43x36mm and a right adnexal cyst. A vesical polyp with 30x26mm was seen too.

CA-125 level was 45.7.

It was decided to perform a laparoscopy and a cystoscopy. On laparoscopy, there was a deep nodule with obliteration of the vesico-uterine septum; adhesions of the right ovary to the ovarian fosse, with an endometriotic cyst of 20mm; and some superficial endometriotic lesions on the peritoneum of the right ovarian fosse and utero-sacral ligament. On cystoscopy, there was a 30mm bluish irregular nodule on the bladder dome which was partially removed by trans-urethral resection (TUR-Bladder). The cyst was removed laparoscopically and at the same time adhesiolysis of the right ovary and cystectomy were performed.

Histology showed endometriosis involving the bladder muscularis and, again because of pain and low quality of life, it was decided to perform a laparoscopic segmental bladder resection at the bladder dome.

By laparoscopy we went on the vesico-uterine septum by blunt dissection, close to the uterus, then opened the bladder and performed the segmental resection with “cold” scissors. A double layer 2-0 Vicryl Rapide suture was performed. At the end of the procedure a cystoscopy was performed to assess the integrity of the repair and re-evaluate the ureters. A Foley catheter was left in place for 6 days post-operatively and the patient was given prophylactic antibiotics.

The patient has been asymptomatic since surgery.

DISCUSSION

Bladder endometriosis is probably misdiagnosed in a great number of cases since the symptoms are often identical to those of cystitis. Therefore, in patients complaining of recurrent urinary symptoms in the absence of proven infection, a cystoscopy should be performed to establish the presence of suspicious lesions, either of endometriosis or other pathologies such as interstitial cystitis, varices, papillomas, focal inflammation, angiomas or carcinoma. Cold cut biopsy should be performed even knowing that, because of the submucosal location of the disease, some false negative results can occur. During menses not only cystoscopic findings are more typical, but also histological aspects are easier to get on a biopsy. Laparoscopy is another key for diagnosis. Endometriosis, with or without nodules or obliteration of the vesico-uterine septum, will also be found.

Treatment of endometriosis of the urinary tract is controversial and patient age, desire for reproduction, severity of symptoms, location and extent of the disease should be taken into consideration in order to determine the appropriate therapy.

In our opinion, laparoscopic segmental cystectomy (photos 1 and 2) will be the first to be considered if there is a single well-demarcated bladder lesion that does not involve the ureters. Laparoscopic approach allows complete visualization of the pelvic cavity (photo 3) determining the exact location and extent of the lesions, and a better evaluation of the size of resection needed to completely excise the bladder lesion. Sometimes, delimitation of the edges of the tumour can be performed by cystoscopy but in the majority of cases this is of no need to be done.

Figure 1

Figure 1: Laparoscopic segmental cystectomy

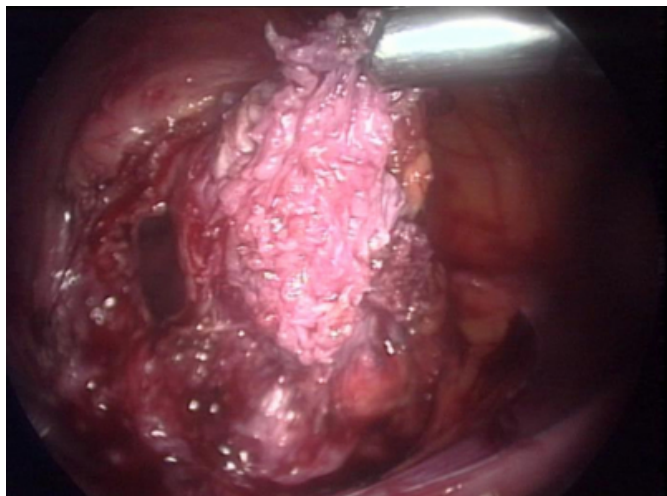


Figure 2

Figure 2: Laparoscopic segmental cystectomy

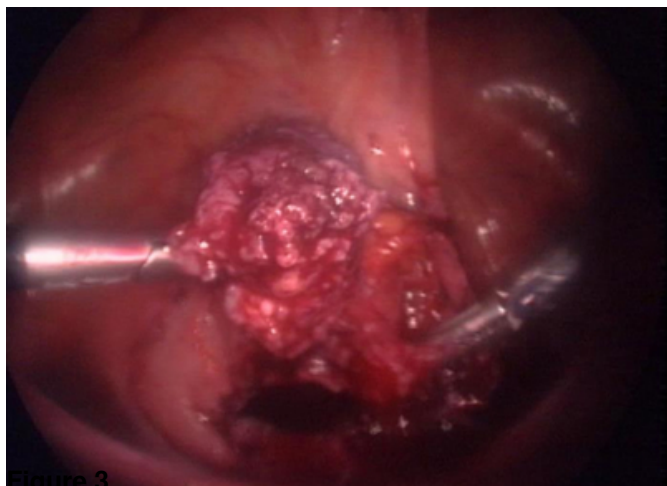
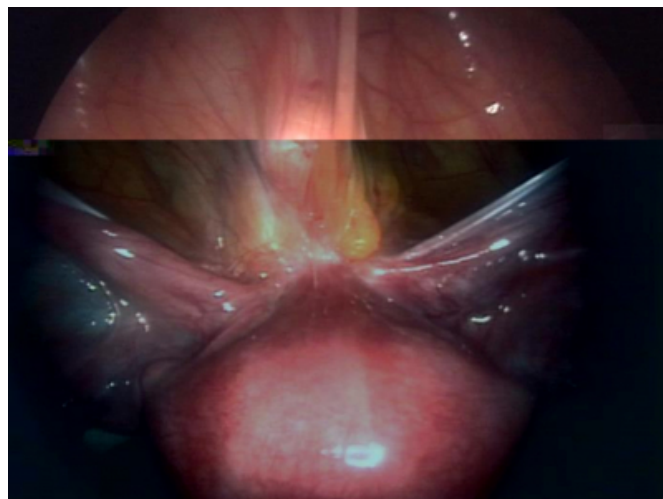


Figure 3

Figure 3: Full visualization of the pelvis



References

1. Abeshouse BS, Abeshouse G. Endometriosis of the urinary tract. *J Int Coll Surg* 1960; 34: 43-63.
2. Denes FT, Pompeo AC, Montelatto ND, Lopes RN. Ureteral endometriosis. *Int Urol Nephrol* 1980; 12: 205.
3. Westney OL, Amundsen CL, McGuire EJ. Bladder endometriosis: conservative management. *J Urol* June 2000; 163: 1814-7.
4. Nezhat CH, Malik S, Osias J, Nezhat F, Nezhat C. Laparoscopic management of 15 patients with infiltrating endometriosis of the bladder and a case of primary intravesical endometrioid adenocarcinoma. *Fertility and Sterility* 2002; 78: 872-875.
5. Chapron C, Dubuisson JB, Jacob S, Fauconnier A, Da Costa Vieira M. Coelioscopie et endométriose vésicale. *Gynécol. Obstét Fertil* 2000; 28: 232-7.
6. Chapron C, Dubuisson JB. Laparoscopic management of bladder endometriosis. *Acta Obstetrica et Gynecologica Scandinavica* 1999; 78: 887-890.

Author Information

Zacharoula Sidiropoulou

Gynecology Department, Hospital da Luz, Lisbon, Portugal

António G. Setúbal

Gynecology Department, Hospital da Luz, Lisbon, Portugal

Manuela Costa

Gynecology Department, Hospital da Luz, Lisbon, Portugal

Duarte Vilarinho

Gynecology Department, Hospital da Luz, Lisbon, Portugal

Cátia Acosta

Gynecology Department, Hospital da Luz, Lisbon, Portugal

Eduardo Roberto

Gynecology Department, Hospital da Luz, Lisbon, Portugal