



A Case of Primary Bladder Endometriosis Who Had Undergone Partial Cystectomy

Süleyman Bulut¹, Binhan Kağan Aktaş¹, Cüneyt Özden¹, Akif Ersoy Erkmen¹, Servet Güreşçi²,
Sezer Kulaçoğlu², Ali Memiş³

¹ Ankara Numune Training and Research Hospital, Urology Clinic, Ankara, Turkey

² Ankara Numune Training and Research Hospital, Pathology Clinic, Ankara, Turkey

³ Kafkas University, Faculty of Medicine, Department of Urology, Kars, Turkey

Abstract

Primary bladder endometriosis is rare. Most cases are secondary to pelvic surgery, such as cesarean section or hysterectomy. In this article, we present a case of primary bladder endometriosis in a 33 year-old female patient who had undergone partial cystectomy. Hematuria which is not related to menstrual cycle, and pelvic pain were initial complaints of the patient. After a transurethral resection at an external center where the patient received definitive diagnosis, complaints of the patient had stood still post-operatively. We have decided to perform an open partial cystectomy after cystoscopic and radiological re-evaluation of the patient in our clinic. A 20 mm diameter solid mass extending out of the bladder was excised at the operation. No endometriotic lesions were detected in pelvic peritoneum or ovaries. At the follow-up, there were no recurrences both at cystoscopy and computerised tomography for 4 months after the surgery.

Key Words: Endometriosis; Hematuria; Urinary Bladder; Cystectomy.

Parsiyel Sistektomi Uygulanmış Bir Primer Mesane Endometriozisi Olgusu

Özet

Primer mesane endometriozisi nadirdir. Vakaların çoğu sezaryenle doğum veya histerektomi gibi pelvik cerrahiye sekonderdir. Bu makalede primer mesane endometriozisi nedeniyle parsiyel sistektomi uygulanmış 33 yaşındaki bir bayan hastayı sunuyoruz. Hastanın başvuru şikâyetleri menstrüel siklusla ilişkili olmayan hematüri ve pelvik ağrıydı. Hasta dış merkezde yapılan transüretral rezeksiyon sonrasında kesin tanı almış ancak operasyondan sonra hastanın şikâyetleri gerilememişti. Kliniğimizde yapılan sistoskopik ve radyolojik yeniden değerlendirme sonrasında hastaya açık parsiyel sistektomi yapılmasına karar verildi. Operasyonda mesane dış kısmına uzanan 20 mm'lik solid kitle eksize edildi. Pelvik periton veya overlerde endometriotik lezyon görülmedi. Hastanın sistoskopi ve bilgisayarlı tomografi ile yapılan post-operatif izleminde 4. aya dek nüks izlenmedi.

Anahtar Kelimeler: Endometriozis; Hematüri; Mesane; Sistektomi.

INTRODUCTION

Endometriosis is the abnormal implantation of functional endometrial tissue outside the uterine cavity. It is observed in 5-15% of women in childbearing ages. It has been defined in three following types: superficial (peritoneal), ovarian, and deep infiltrating endometriosis (DIE) (1). DIE, to be more precise, is defined as endometriotic lesions that have penetrated more than 5 mm in retroperitoneal cavity or on pelvic organ walls. DIE is localised in posterior fornix, uterosacral ligaments, rectum, vagina and urinary system (2). The endometriosis involvement in the urinary tract, however, is rare (1-2%) (3). In this case report, we would like to discuss the diagnosis and treatment processes of a patient with bladder endometriosis with references to the literature.

CASE REPORT

In April 2013, thirty-three year old female patient was admitted to our clinic with complaints of ongoing pelvic pain and intermittent hematuria that had been going on

for 5 months. Hematuria was not associated with the menstrual cycle. With a history of two normal births, the patient's family history was unremarkable. The physical examination was normal. In the laboratory tests, the routine biochemistry and blood count were normal, as well. The ultrasonography performed in another clinic where she was admitted with complaints of hematuria two months ago, a 25×20 mm mass was identified on the bladder right posterolateral wall that protruded into the lumen of the bladder extending over the bladder into the posterior. The cystoscopy at the same center also identified a solid mass 20 mm in diameter on the posterior wall of the bladder; the mass was removed through transurethral resection. The specimen pathology reported the mass to be endometriosis. Having no improvements in her pelvic pain and hematuria in the post-operative period, the patient was admitted to our clinic. The abdominopelvic computerised tomography (CT) captured the mass, 30 mm in length and at times 10mm in thickness, on the right posterior superior bladder wall; the image revealed that the mass extended focally reaching out outer serosa in spicules (Figure 1). The cystoscopy of the superior posterior

bladder showed a 20 mm erythematous area. Apart from this, the bladder was completely natural. It was decided to perform open partial cystectomy and the 20 mm solid nodular mass extending to the exterior of the bladder was removed. No endometriotic lesions were observed in the pelvic peritoneum or the ovaries. Mass pathology reported the mass to be "endometriosis in the form of endometrial glands and stroma within the smooth bladder muscle bundles" (Figure 2). Followed with cystoscopy and CT of the abdomen, the patient had no recurrence in the fourth postoperative month.

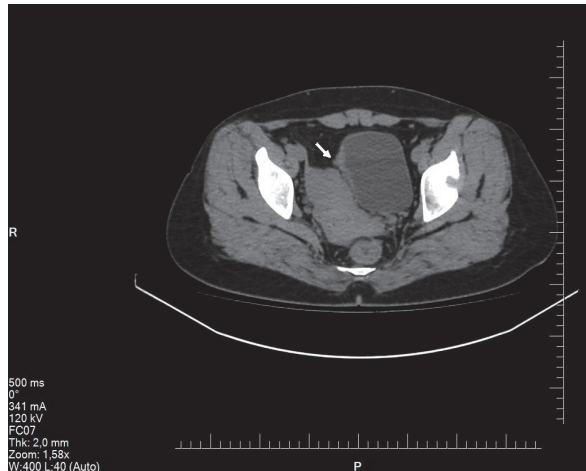


Figure 1. 30 mm mass on the right posterior bladder wall in abdominopelvic CT (indicated by an arrow).

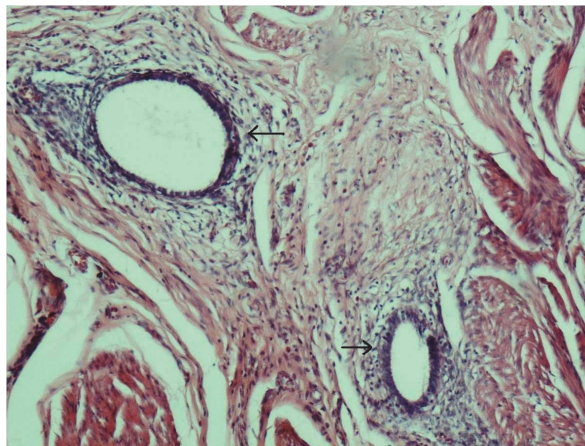


Figure 2. Endometrial glands surrounded by endometrial stromal cells within smooth bladder muscle bundles (indicated by arrows) (Hematoxylin-Eosin dying, $\times 100$ zoom).

DISCUSSION

Urinary tract involvement is rare with endometriosis cases. It is most commonly seen (85%) in the bladder in the urinary tract (4). Bladder endometriosis affects reproductive age group (average 35) the most. Endometriotic tissue grows dependent on the oestrogen and regresses after menopause. Therefore, it is quite

rare in post-menopausal period. It may be primary or secondary. Primary cases are rarer. Secondary cases are iatrogenic lesions following pelvic surgery such as cesarean delivery and hysterectomy. 50% of bladder endometriosis cases share pelvic surgery histories (2). Our patient, however, had no previous pelvic surgery history. Symptoms are often vague in bladder endometriosis cases. Pelvic pain, dysuria, and sometimes hematuria, as in our patient's case, may be among the symptoms. Hematuria manifests itself as a symptom in 20-35% of the bladder endometriosis patients (5). Hematuria is associated with endometriotic lesions that erode the bladder mucosa. In some cases, hematuria may occur only during menstruation (menouria). Physical examination does not provide useful information in most cases. To determine lesion localization, number and its relationship with ureteral orifices, cystoscopy should be definitely performed. Although it cannot be applied to all cases, capturing bluish nodules is typical in cystoscopy (6). Small size endometriotic lesions may be overlooked in cystoscopy. These lesions increase in size and are more congested during menstruation. Therefore performing cystoscopy immediately before or during menstruation is important for the detection of small size endometriotic lesions (2). As it was in our case, nodules that grow from the bladder mucosa towards the serosa are often on the posterior wall and unifocal (1). In the majority of cases, imaging techniques play an important role in determining the extension of bladder endometriosis and its relations with the uterus. In pelvic ultrasonography, this can be viewed as a mass extending outside the bladder. In intravenous pyelography, it can be viewed as filling defects on the posterior wall of the bladder or in the trigone. With magnetic resonance imaging and CT, however, the extension of the mass into the bladder wall and its relations with other structures can be demonstrated more clearly (7).

Treatment options in cases with urinary endometriosis are medical, surgery and combination therapy. The purpose of medical or hormonal therapy is to ensure that endometriotic lesions regress. For this purpose, gonadotropin releasing hormone (GnRH) agonists and antagonists, progestins or combined contraceptives are used. Because hormonal therapy temporarily regresses DIE lesions, the recommended solution is often palliative hormone therapy for young women to preserve their fertility (8). Hormonal therapy is not effective in bladder endometriosis cases. This is because the desmoplastic reaction caused by resorption of menstrual debris and recurrent bleeding in the detrusor reduces hormonal effects (2).

The surgical treatment options for bladder endometriosis are transurethral resection/ablation or partial cystectomy. Transurethral approach is not therapeutic in most cases; it is usually carried out with the aim of taking biopsy. Aggressive resection of endometriotic lesions extending outside the bladder may cause perforation of the bladder. Transurethral resection combined with hormone therapy may provide therapeutic benefits. But the high recurrence rate is the disadvantage of the combined therapy (9). A 25-35% of

recurrence rate is observed in combined treatment method in bladder endometriosis cases (2). The partial cystectomy is the most appropriate surgical option for patients with bladder endometriosis. A recurrence rate as low as 6.7% could be achieved through complete excision of endometriotic lesion (1). Partial cystectomy can be performed with laparoscopic or open techniques. Schonman et al. have reported that laparoscopic surgery is safe and effective in the long term (10).

As a result, the bladder endometriosis is a rare condition. It should be kept in mind in the differential diagnosis of women in the reproductive age group suffering from hematuria. The most appropriate treatment option for bladder endometriosis cases is partial cystectomy.

REFERENCES

1. Chapron C, Bourret A, Chopin N, Dousset B, Leconte M, Amsellem-Ouazana D, et al. Surgery for bladder endometriosis: long-term results and concomitant management of associated posterior deep lesions. *Hum Reprod* 2010;25:884-9.
2. Maccagnano C, Pellucchi F, Rocchini L, Ghezzi M, Scattoni V, Montorsi F, et al. Diagnosis and treatment of bladder endometriosis: state of the art. *Urol Int* 2012;89:249-58.
3. Schneider A, Touloupidis S, Papatsoris AG, Triantafyllidis A, Kollias A, Schweppe KW. Endometriosis of the urinary tract in women of reproductive age. *Int J Urol* 2006;13:902-4.
4. Abrao MS, Dias JA Jr, Bellelis P, Podgaec S, Bautzer CR, Gromatsky C. Endometriosis of the ureter and bladder are not associated diseases. *Fertil Steril* 2009;91:1662-7.
5. Donnez J, Spada F, Squifflet J, Nisolle M. Bladder endometriosis must be considered as bladder adenomyosis. *Fertil Steril* 2000;74:1175-81.
6. Fedele L, Bianchi S, Raffaelli R, Portuese A. Pre-operative assessment of bladder endometriosis. *Hum Reprod* 1997;12:2519-22.
7. Gabriel B, Nassif J, Trompoukis P, Barata S, Wattiez A. Prevalence and management of urinary tract endometriosis: a clinical case series. *Urology* 2011;78:1269-74.
8. Comiter CV. Endometriosis of the urinary tract. *Urol Clin North Am* 2002;29:625-35.
9. Falcone T, Lebovic DI. Clinical management of endometriosis. *Obstet Gynecol* 2011;118:691-705.
10. Schonman R, Dotan Z, Weintraub AY, Bibi G, Eisenberg VH, Seidman DS, et al. Deep endometriosis inflicting the bladder: long-term outcomes of surgical management. *Arch Gynecol Obstet* 2013;288:1323-8.

Received/Başvuru: 24.09.2013, Accepted/Kabul: 19.11.2013

Correspondence/İletişim

Binhan Kağan AKTAŞ
Ankara Numune Training and Research Hospital, Urology
Clinic, ANKARA, TURKEY
E-mail: kaanaktas73@hotmail.com

For citing/Atf için

Bulut S, Aktas BK, Ozden C, Erkmen AE, Guresci S, Kulacoglu S, Memis A. A case of primary bladder endometriosis who had undergone partial cystectomy. *J Turgut Ozal Med Cent* 2014;21:157-9 DOI: 10.7247/jtomc.2013.1359