



Bladder Endometriosis: A Case Report with Literature Review

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Abstract

Introduction : In case of UTE (Urinary Tract Endometriosis), the bladder is the most commonly affected site.. Till to date about 350 cases have been described in the literature. Of them, 36% of cases the endometriosis is localized only in the bladder.

Most of the time, this condition is diagnosed during gynecologic follow up procedures for Deep infiltrating pelvic endometriosis (DIE).

Case report : A lady of 38 years, presented with occasional lower abdominal pain for last 03 months. She was investigated and US (Ultrasound Sound) Scan; revealed a bladder mass. She was underwent cystoscopic examination and TURBT. Our primary impression was broad based sessile transitional cell carcinoma. Her post-operative status was unremarkable. The histopathological report was "Bladder muscle Endometriosis.

Discussion : DIE is defined as implantation of the stroma and/or endometrial glandular epithelium outside the endometrial cavity and the uterine musculature. Locations of DIE include: the torus uteri, posterior fornix, uterosacral ligaments, rectum, vagina, and urinary tract.

Similar to conventional US; the result of TV US (Trans vaginal ultrasound) is almost same; that is sensitivity is 100% and specificity 25%. Pelvic magnetic resonance (MR) has diagnostic accuracy is about 98%.

Conventional TUR (Trans Urethral Resection) with or without HT (Hormone therapy), is a good option. But a subset of patient may be managed only by HT alone. Partial cystectomy is a bladder- preserving and is relatively simple and safe procedure.

Conclusions : Bladder involvement may be documented in the context of DIE. It rarely represents the only manifestation of endometriosis; may be associated with severe urinary symptoms. Adequate diagnosis and successful treatment should be completed at reference centres where a close collaboration between a dedicated gynaecologist and urologist is available. Only hormone therapy still remains an option in a subset of patients, while TUR with or without HT leads to satisfactory long-term outcome. In extensive case Partial cystectomy is a bladder preserving good procedure.

Keywords: Endometriosis,
Bladder Endometriosis,
Histopathological Diagnosis

Introduction :

In case of UTE (Urinary Tract Endometriosis), the bladder is the most commonly affected site. Nowadays, 350 cases have been described in the literature. In 36% of cases the endometriosis is localized only in the bladder. A detrusor nodule per se does not represent a risk factor for additional urologic lesions. However,

different locations of UTE may coexist, especially bladder and ureters¹.

The incidence of UTE has increased during the last few years and, nowadays, it ranges from 0.3 up to 12%, considering all women affected by endometriosis².

Most of the time, this condition is diagnosed because of the complaint of urinary symptoms during

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gynecologic follow-up procedures for Deep infiltrating pelvic endometriosis (DIE). Thus, a close collaboration between the gynecologist and the urologist is necessary in order to establish both the correct diagnostic procedure and the most adequate treatments³.

Case report :

A lady of 38 years, Banker by profession; was referred by a gynaecologist who presented with occasional lower abdominal pain for last 03 months. She was investigated and US (Ultrasound Sound) Scan of whole abdomen revealed a bladder mass. But she has no urinary symptoms. Routine examination of urine revealed no micro haematuria and culture was also negative. Other investigations, needs for operative fitness were also normal. We decided for cystoscopic examination with possible Biopsy / TURBT.

Cystoscopy revealed there was a broad base sessile mass 3X3 cm in the LT. postero - inferior aspect of bladder, the surface is smooth covered by urothelium. Other areas of bladder were within normal limit. We started TURBT. After resection of superficial tissues; dirty materials were seen. During resection of base of the tumour, the detrusor; there were few threadlike chocolate materials seen to come out. However, we instil mitomycin C peri-operatively 40 mg/ 40 ml normal saline Considering it as a case TCC. Her post-operative status was unremarkable. Catheter was removed in 2nd post-operative day. The histopathological report was "Bladder muscle Endometriosis." We then referred her to Gynaecologist to treat her for endometriosis as she is in reproductive age. She is also in our follow up. In last 06 months, there was complaints, no recurrence.

Pathogenesis

Pathogenesis of BE (Bladder Endometriosis) is still being debated, however probable possibilities may be postulated as :-

Embryonal Theory: BE might originate from the Müllerian remnants, located especially in the vesicouterine/vesicovaginal septum. Donnez et al. were the first to propose this theory, but the histological evidence of Müllerian remnants in the urothelium of the bladder has been doubted by some authors⁴.

Migratory or Metastatic Theory: This theory, supported by the findings of Vercellini et al. postulates that products of menstruation are regurgitated into the pelvis through the fallopian tubes in a retrograde fashion and then implant on the bladder wall. After implantation, regurgitated endometrial cells 'sandwiched' between the bladder dome and the anterior uterine wall trigger an inflammatory process

of the peritoneum, leading to adhesion of the two organs⁵.

Transplantation Theory: As an extension of adenomyotic lesions and transport through via lymphogenous or hematogenous embolization, or by direct extension of adenomyotic nodules through the uterine wall⁶.

Iatrogenic Theory: It may be caused by intraoperative dissemination of endometrial cells or by a suboptimal surgical technique during closure of the uterine incision after a caesarean section⁷.

Our patient has history of two caesarean section delivery. So iatrogenic spillage of endometrial tissue and its subsequent implantation to posterior bladder wall may be the probable cause. But her last Caesarean section was done 10 years back and the vague lower abdominal pain for the last 03 months: may not applicable in this patient

Discussion :

DIE is defined as implantation of the stroma and/or endometrial glandular epithelium outside the endometrial cavity and the uterine musculature, penetrating into the retroperitoneal space or the wall of the pelvic organs to a depth of at least 5 mm. Locations of DIE include: the torus uteri, posterior fornix, uterosacral ligaments, rectum, vagina, and urinary tract⁸.

Most of the time, this condition is diagnosed because of the complaint of urinary symptoms during gynaecologic follow-up procedures for DIE. Thus, a close collaboration between the gynaecologist and the urologist is necessary in order to establish both the correct diagnostic procedure and the most adequate treatments⁹.

In our case; she has no specific urinary symptoms and her history was short (03 months) that is presented as vague lower abdominal pain. Her last LUCS (lower uterine caesarean section) was 10 years back.

The TV US (Trans vaginal ultrasound) approach, using a 5- to 9-MHz transducer for visualization of the bladder, both adnexa, the uterus, the vagina and rectovaginal space, the uterosacral ligaments and the recto-sigmoid. in suspected any pelvic lesion, specially DIE.

Grasso et al. have evaluated the sensitivity and specificity of three-dimensional TV US for the diagnosis of DIE. Similar to conventional US; the specificity of TV US is about 100% and sensitivity still remains low, i.e. about 25%¹⁰.

In our case only abdominal US was done, revealed bladder mass, referred to Urologist and TV US not done by gynaecologist.

Pelvic magnetic resonance (MR) reaches sensitivity up to 88% and specificity up to 99% for the diagnosis of BE; the diagnostic accuracy is about 98%. These considerations justified the employment of MR as a complementary examination in complex cases of endometriosis with extensive adhesions and as gold standard for the diagnosis of BE¹¹.

Transurethral Surgery. Radical TUR might include both the bladder lesion and a 0.5- to 1-cm deep portion of the adjacent myometrium in order to reduce the recurrence. However, it should also be kept in mind that an extensive TUR may induce a bladder perforation. In our case we did TUR including superficial layer of detrusor, considering it is a case of bladder tumour. However we did not do re-TUR after getting histopathological report; rather we choose other option of its management that is TUR combined with GH-RH hormone therapy. The combination of management that is TUR and HT (Hormone Therapy) has good outcome and disappearance of clinical symptoms in most of the patients. In women approaching menopause, because the lesions usually regress spontaneously when menopause takes place¹².

Partial cystectomy either by open or laparoscopy with concomitant Cystoscopy to define the margin of BE, is a bladder-preserving and is relatively simple and safe procedure¹³.

Conclusions

Bladder involvement may be documented in the context of DIE; it rarely represents the only manifestation of endometriosis. BE is may not be associated with severe urinary symptoms, as in our case. Both adequate diagnosis and successful treatment should be completed at reference centres where a close collaboration between a dedicated gynaecologist and urologist is available. Only hormone therapy still remains an option in a subset of patients, while surgical treatment with or without HT leads to satisfactory long-term outcome. It should be followed up to post manupause results in terms of patient compliance and prognosis.

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