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Case report

## URINARY TRACT ENDOMETRIOSIS: A CASE REPORT

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### ABSTRACT

Endometriosis affecting the urinary tract is rare and when involved it predominantly affects the bladder, followed by the ureter. The diagnosis of bladder endometriosis is difficult because of its varied clinical presentation. Here we report a case of bladder endometriosis, which was suspected pre-operatively and was confirmed after the histo pathological examination of the excised tissue.

**Key words:** Extra genital Endometriosis, Bladder Endometriosis, Vesical Endometriosis

### INTRODUCTION

Endometriosis is the presence of functioning endometrial glands and stroma outside the uterine cavity and musculature. It is a well recognised gynaecological condition affecting 5-10% of women of reproductive age and up to 50% of infertile women. Though endometriosis is a disease of the genital tract, literature review shows that endometriosis can be found in almost any tissue in the body<sup>1</sup>. Here we describe a case of bladder endometriosis, its clinical presentation, diagnosis and management.

### CASE REPORT

44 years old, Para 2, presented to the Gynaecological outpatient department with a history of constant lower abdominal pain for 8 years and cyclical heavy periods of six months duration. In detailed questioning, she described the pain to be worse during the premenstrual and

menstrual period. She also complained of urinary symptoms such as increased frequency and painful micturition for the last four years which was worse during the premenstrual period. There was no history of haematuria. She was married for 25 years, delivered two children by caesarean section and the last childbirth was 21 years ago. In the past, she has had regular menstrual cycles lasting for 3-4 days. However, in the last six months her periods became very heavy and prolonged, occurring once in 30 days, lasting for 10-15 days and changing 10-15 pads per day. She also complained of congestive dysmenorrhoea and deep dyspareunia. There was no history suggestive of pelvic inflammatory disease (PID) and her bowel habits were normal. In her past history she was treated by many doctors for PID and was not relieved of her symptoms. Because of her recurrent urinary

symptoms, she was also evaluated and treated by Urologists many times. In the last four years only once her urine culture showed evidence of infection and was treated. She has had a cystoscopy two years ago which showed a raised lesion in the trigone close to the left ureteric orifice. The biopsy of the lesion was reported as inflammatory lesion.

On examination, the patient was thin made, very pale, thyroid and breasts were normal. She had two vertical scars in the abdomen, there was suprapubic tenderness and the uterus was palpable 3 centimeters above the symphysis pubis. By speculum examination, the cervix was eroded. Bimanual pelvic examination showed the uterus to be uniformly enlarged to 16 weeks size and was tender. There was also tender nodularity in the midvaginal region in the anterior fornix. Rectal examination did not reveal any nodules in the pouch of douglas. Her investigation results were as follows: Haemoglobin – 6.1gms. %, PCV – 18, bleeding time, clotting time were normal, TSH – 2.1, and other investigations were within normal limits. Pap smear was negative for intra epithelial lesion. Combined transvaginal and transabdominal ultrasound of the pelvis showed an enlarged uterus with asymmetrically thickened myometrium with heterogenous echo texture. The endometrial thickness was 18 mm. The left ovary showed a clear cyst measuring 6cm. in size. Some irregularity was noted near the bladder base. Because of the long duration of her symptoms, MRI of the pelvis was also taken. MRI confirmed the USG findings and showed the bladder wall to be thickened to 8mms. near the trigone.

Her anaemia was corrected with three units of packed cells and she was taken up for a diagnostic curettage. Under anaesthesia, the irregularity in the anterior fornix was well appreciated. The HPE of the endometrial curetting showed severe complex hyperplasia without atypia.

With her history, examination findings and the results of imaging studies, a diagnosis of

adenomyosis with endometrial hyperplasia was made and the possibility of endometriosis of bladder was strongly suspected.

She was prepared for Total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAH with BSO). Because of her previous two caesarean sections and the strong possibility of bladder endometriosis, it was decided to proceed with the surgery with a preliminary cystoscopy. The patient was adequately counselled as to the possibility of opening into the bladder and extensive bladder surgery may be required.

At cystoscopy, there were bluish nodules bulging into but not eroding through the mucosa around the left ureteric orifice. (Fig. 1) Other areas of the bladder mucosa were normal. Ureteric stenting was done on the left side and was not possible on the right side. On opening the abdomen, there were dense omental adhesions and were released. The bladder was densely adherent to the cervix and was freed by sharp dissection. On the left side there was a firm bluish nodule between the bladder and the cervix. (Fig.2) In order to avoid injury to the bladder, sharp dissection was carried out close to the cervix and a wedge of tissue was excised from the nodular area for HPE. The remaining nodular area over the bladder was ablated with bipolar diathermy and TAH with BSO was carried out. Her postoperative period was uneventful except for the haematuria which cleared after one week. She was kept on continuous bladder drainage for 10 days and the ureteric stent was removed after 15 days.

The HPE was reported as follows:

Endometrium showing complex cystoglandular hyperplasia without atypia, and the myometrium showing adenomyosis with marked myohyperplasia. The left ovary showed a simple ovarian cyst and the excised nodule was reported as endometriosis.

At one year follow up, patient did not have any urinary symptoms or lower abdominal pain. On

examination, the anterior vaginal fornix was smooth without any nodularity.

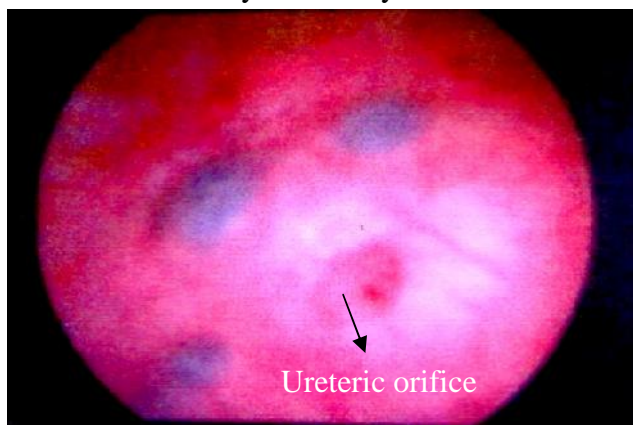


Fig1: Picture showing bluish nodules around the ureteric orifice at cystoscopy

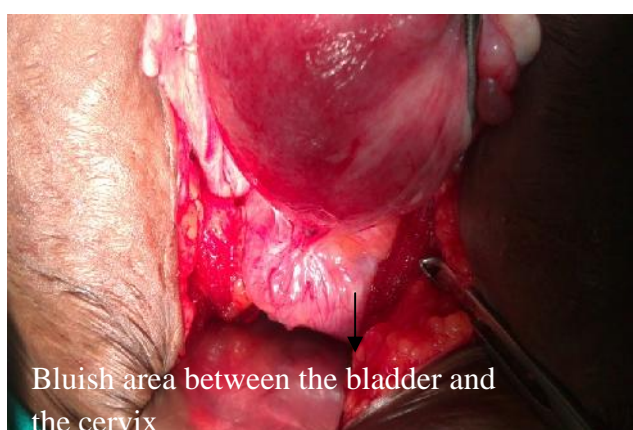


Fig 2: Picture showing bluish area between the bladder and the cervix

## DISCUSSION

Involvement of the urinary tract by endometriosis is rare, and it predominantly affects the bladder, followed by the ureter and the kidney in a ratio of 40:5:1.<sup>2</sup>

Endometriosis affecting the bladder could be primary or secondary. The primary form is a spontaneous disease. The secondary manifestation results following pelvic surgery such as caesarean section.<sup>3</sup> The primary form is commonly seen in association with severe pelvic endometriosis. Tohic et al reported that in a series of 24 patients with bladder endometriosis concomitant deep nodules were seen in the rectovaginal septum and uterosacral ligaments in 66% of patients.<sup>4</sup> Bladder endometriosis can be

intrinsic or extrinsic and the extrinsic disease is more common, where the disease involves the serosa and the peritoneal surface. The lesions are generally found in the trigone, dorsal wall or at the ureterovesical junction.

In nearly 50% of cases, there are catamenial frequency, urgency and dysuria. (Symptoms presenting around the time of menstruation). Most of them present with features of recurrent cystitis but, without evidence of bacteriuria. They can also present with dyspareunia with the involvement of the anterior vaginal wall. Occasionally gross haematuria is encountered where there is an intrinsic bladder disease.<sup>5</sup>

Our case was more of an extrinsic disease, because, though she had suffered from catamenial urinary symptoms for many years, she has never had haematuria. As well as at cystoscopy, endometriotic implants were not eroding through the bladder mucosa.

Endometriosis of the bladder, especially the extrinsic type is very difficult to diagnose and relies heavily on clinical suspicion. When young women present with urinary symptoms around the time of menstruation, with or without a possible diagnosis of pelvic endometriosis one should suspect bladder involvement and investigations should be initiated. In our case, endometriosis of the bladder was suspected pre-operatively as the patient presented with catamenial urinary symptoms and the presence of nodularity in the anterior vaginal fornix.

The occurrence of bladder endometriosis has been explained by various theories such as a development from the Mullerian remnants in the vesico-uterine/ vesico- vaginal septum, extension of an adenomyotic nodule of the anterior uterine wall or it results from implantation of regurgitated endometrium. Vercellini et al has looked at the association between the bladder endometriosis and adenomyosis and they have concluded that vesical endometriosis seems to originate from the implantation of regurgitated endometrial cells in the anterior cul-de-sac and not to be associated with uterine adenomyosis.<sup>6</sup>

In our case the involvement of bladder with endometriosis could be due to the direct implantation of the endometrial cells on to the bladder because of the previous two uterine surgeries.

Imaging modalities such as USG, CT and MRI may facilitate diagnosis.. Cystoscopy is able to visualize the endometriosis foci only when present on bladder mucosal surface.<sup>7</sup> In our case, cystoscopy which was done 2 years ago was reported normal. However, with increasing severity of the symptoms and further progression of the disease, repeat cystoscopy revealed the presence of endometriotic areas around the left ureteric orifice in the trigone.

Majority of bladder lesions are superficial and can be vaporized or ablated with bipolar or CO<sub>2</sub> laser. In our case, after the bladder was separated from the cervix, the bladder lesion was fulgurated with bipolar diathermy. When endometriosis invades the mucosa of the bladder, segmental resection of the bladder is the treatment of choice.<sup>8</sup>

Some authors have suggested hysterectomy with bilateral salpingo-oophorectomy to prevent relapses. Namnoum et al<sup>9</sup> concluded that compared with women who had oophorectomy for endometriosis, patients who underwent hysterectomy with ovarian conservation had 6.1 times greater risk of developing recurrent pain and 8.1 times greater risk of reoperation.<sup>9</sup> Others claim no specific advantages and suggest that hysterectomy with BSO should not be carried out for the sole purposes of prevention of relapses.<sup>5</sup> In our case, we had to proceed with TAH with BSO because of the adenomyosis of the uterus and the complex hyperplasia of the endometrium.

## CONCLUSION

Endometriosis involving the bladder is rare. One should have a high degree of clinical suspicion to diagnose the condition. Urinary tract involvement with endometriosis should be considered in all women who present with recurrent urinary symptoms not responding to

medical management, especially in those who have undergone caesarean deliveries or other pelvic surgeries.

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