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Ureteral Endometriosis Masquerading As Urothelial Cancer

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Abstract: ***We present a case of ureteral endometriosis masquerading as urothelial carcinoma of ureter. The patient was diagnosed intraoperatively to have ureteral endometriosis, after excision of the lesion and intraoperative frozen section.***

Keywords: ureteral, endometriosis, urothelial, carcinoma, surgery

1.Introduction

Ureteral endometriosis is a rare form of deep endometriosis which often evades diagnosis till the late stages when there is impending or established renal failure. We present a rare case of endometriosis and obstructive uropathy, masquerading as primary urothelial carcinoma of the ureter.

2.Case Report

A 42-year-old woman presented with vague left flank pain since 4 months. There were no episodes of acute exacerbation of the pain and no history of haematuria or any lower urinary tract symptoms. There were no bowel complaints, no abdominal pain or back pain. She also complained of loss of appetite with a weight loss of around 2 kg in 4 months. On enquiry, she gave a history of having undergone total abdominal hysterectomy with preservation of both ovaries at the age of 34 years for complaints of menorrhagia. Prior to this surgery, her menses were painful, but regular.

Ultrasonography revealed left severe hydronephrosis secondary to left lower ureteric obstruction and a left haemorrhagic ovarian cyst. Contrast enhanced CT scan (Figure 1, 2a &2b) revealed a 5.2 x 3 cm left ureteric mass with intraluminal as well as extraluminal extension at the level of S3 vertebra causing severe left hydronephrosis and hydroureter with a 2.9 x 3.2 cm left para-aortic and bilateral enlarged iliac lymph nodes. Ureteroscopic evaluation of the left ureter showed narrowed irregular haemorrhagic lower ureteric segment, and it was not possible to negotiate the scope beyond that. It was not possible to take an adequate biopsy from this area. Metastatic work up in the form of CECT chest and isotope bone scan was normal. On DTPA scan, the GFR of the right and left kidneys were 50 ml/min and 16 ml/min.

In view of the findings on imaging studies, the patient was advised surgery. Intra-operatively, there was a solid mass lesion of 6 x 3 cm involving the left distal ureter causing gross left hydroureter. The mass was extending laterally to involve the left adnexa. Excision of the left ureteric mass was done and the intraoperative frozen section revealed presence of "endometriosis of the ureter, with no evidence of malignancy". Left ureteric re-implantation into bladder [ureteroneocystostomy] with psoas hitch was done. The frozen section revealed "extrinsic endometriosis in the ureter". Bilateral oophorectomy was also done.

Six months post-operatively, the left sided hydronephrosis has resolved and repeat CT scan showed bilateral well-functioning kidneys. She is presently asymptomatic and free of recurrence of endometriosis clinically and radiologically.

3.Discussion

Endometriosis is the presence of functioning endometrial tissue outside the uterine cavity and can be superficial (peritoneal, ovarian) or deep and infiltrating (>5 mm) [1]. The incidence of urinary tract endometriosis is 1-1.5% with the bladder being involved in 70-80%, ureter in 9-23%, kidney in 4% and urethra in 2% [2, 3]. Patients with ureteric endometriosis are usually associated with more advanced stages of endometriosis [2].

With its peak incidence in the age group of 30-35 years [3], the diagnosis of ureteral endometriosis is difficult since the disease may be clinically silent in about 30% of patients and non-specific symptoms are present in up to 50% of women [4, 5] leading to an underestimation in its prevalence [2, 5]. While pelvic pain and dysmenorrhoea are the most common symptoms reported by the patients, only about 10-15% patients present with urinary symptoms including cyclical haematuria considered highly characteristic of ureteral endometriosis [6].

Although bilateral lesions occur in 10-42%, unilateral lesions are much more common with a predisposition for the left side [7] and usually involves the distal 3-4 cm of the ureter. The degree of symptoms correlates poorly with the severity of obstruction, which if long-standing, could lead to renal failure [8]. Pateman (2015) reported a sensitivity of 92% and a specificity of 100% with ultrasonography for diagnosing ureteric endometriosis [9]. Knabben (2015) proposed a radiological-clinical classification of ureteric endometriosis – our patient had a Grade 4 ureteric endometriosis in view of the impaired renal clearance [2]. The definitive diagnosis of ureteric endometriosis and its extent and severity is often based on surgery and histopathological examination and not on imaging studies.

Optimal recommendations regarding diagnostic methods and therapeutic management cannot be made in view of the relative rarity of this condition. Hormonal contraceptives and progestogens are the first line for pain relief in deep endometriosis [5]. Ureteral endometriosis is usually treated with surgery and the mode of treatment varies depending on the level and length of ureteric involvement, the degree of obstruction and the renal function and can range from hormonal therapy alone or with double-J stent insertion to ureterolysis, segmental ureterectomy and end-to-end anastomosis, or segmental ureterectomy and uretro-neocystostomy, and nephrectomy. DTPA renal scan can be quite useful in deciding between preservation of kidney and nephrectomy. Ureteric resection is the method of choice in cases of ureteric obstruction in order to reduce the risk of recurrence, as was done in our patient [10]. The effectiveness of post-operative medical therapy has not yet been proven. Our patient had a long segment lower ureteric involvement and a large mass implicating the ureter and hence she was not suitable for simple ureterolysis or end-to-end ureteric anastomosis after resection of ureteric segment. Hence she underwent ureteroneocystostomy with a psoas hitch to make a tension-free anastomosis.

4.Conclusion

Ureteral endometriosis is a rare elusive disease which could lead to permanent renal damage. A high index of suspicion is required to aid early detection in order to ensure treatment is less invasive and prognosis is better. Our patient had a pelvic mass masquerading as urothelial cancer and ureteric endometriosis was diagnosed only at laparotomy.

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Figure 1: CT scan showing a left ureteric mass

Figure 2A: CT scan showing left hydronephrosis secondary to left ureteric mass

Figure 2B: CT IVU showing cut-off at lower end of left ureter with proximal left hydroureter and hydronephrosis

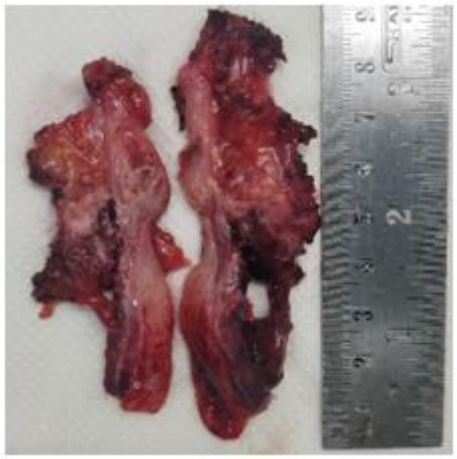

Figure 3: Surgical specimen (cut section) of excised left ureteric mass