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Case Report

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Bilateral ureteral Deep infiltrating endometriosis: a rare case.

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Abstract

According to literature urinary tract is affected in 0.3-12% of women with endometriosis. Ureter endometriosis is a rare situation and occurs in approximately 10% of urinary tract endometriosis and eight time less than bladder endometriosis . Ureter endometriosis is mostly asymptomatic and can lead to loss of renal function in 11.5%. Laparoscopy is used successfully to manage the ureter endometriosis. Ureter endometriosis is typically unilateral and bilateral occurrence is very rare. We present the case of a 41-year-old patient who was admitted to our endometriosis excellence center. She reported very severe dysmenorrhea and hypermenorrhea. There was a history of a laparoscopy for deep infiltrating endometriosis with partial bladder resection and right nephrectomy because of ureteral affection and subsequent loss of renal function. A re-laparoscopy was carried out. Intraoperatively a large endometriotic nodule appeared on the ureter, which could be removed completely.

Keywords: Endometriosis; Deep infiltrating endometriosis; Endometriom; Ureter; Ureter endometriosis

Introduction

The prevalence of endometriosis in women in reproductive age is 10-20% among the general female population [1]. Endometriosis is defined by the ectopic presence of endometrial gland and stroma outside the uterus [2]. There are three main types of endometriosis: endometrioma, what means ovarian endometriosis, superficial peritoneal endometriosis and deep infiltrating endometriosis, what means infiltrating of peritoneum more than 5mm [3,4]. Deep infiltrating endometriosis is considered as a most assertive form of endometriosis [4]. According to literature urinary tract is affected in 0.3-12% of women with endometriosis [5]. Ureter endometriosis is a rare situation and occurs in approximately 10% of urinary tract endometriosis and eight time less than bladder endometriosis [6]. There are two types of ureteral involvement: 38.5% demonstrate endometriosis inside the muscular layer (intrinsic) and 61.5% show adventitial infiltration (extrinsic) [7]. Ureter endometriosis is mostly asymptomatic and can lead to loss of renal function in 11.5% [8-11]. Laparoscopy is used successfully to manage the ureter endometriosis [12]. Ureter endometriosis is typically unilateral and bilateral occurrence is very rare [13].

Case Presentation

We present the case of a 41-year-old patient who was admitted to our endometriosis excellence center. She reported very severe dysmenorrhea and hypermenorrhea. There was a history of a laparoscopy for deep infiltrating endometriosis with partial bladder resection and right nephrectomy because of ureteral affection and subsequent loss of renal function. Four years after nephrectomy a diagnostic laparoscopy was performed, which was unremarkable. Both laparoscopies were performed in other hospitals. Drug therapy with various hormone medicaments (including dienogest, COC, etc.) has already taken place. During the hormone therapy a severe depression developed, up to suicidal thoughts, so the therapy was stopped. The patient did not wish any hormone therapy again. A laparoscopic total hysterectomy was discussed with the patient since she had definitively no longer fertility desire. Additionally, the result of cervix smear was PAP

IIID. The patient was prepared for the operation and gave the consent. The renal ultrasonography was unremarkable.

The laparoscopic total hysterectomy was performed without any complications. However, intraoperatively pronounced adhesions between the sigmoid and the left pelvic wall were detected. These adhesions were partially dissolved. The peritoneum in this area was scarred with suspicion to endometriosis. Since the patient was not explicitly informed about extensive ureterolysis and because of the high risk of ureteral injury in a patient with only one kidney, it was decided to complete the procedure in this stage. The postoperative course was inconspicuous and the patient was discharged. Six months later, the patient presented to us again. She had a 6cm endometriom on left ovarian and wanted a repeat laparoscopy with complete excision of the endometriosis. Unilateral endometrioms are associated with deep infiltrating endometriosis in 40% [14]. D-J stents is not always required in surgery of deep infiltrating endometriosis [15]. However, in this case because of history of nephrectomy a D-J stent was inserted and the patient was prepared for the surgery. There were again severe sigmoid adhesions to the left pelvic wall (Figure 1).

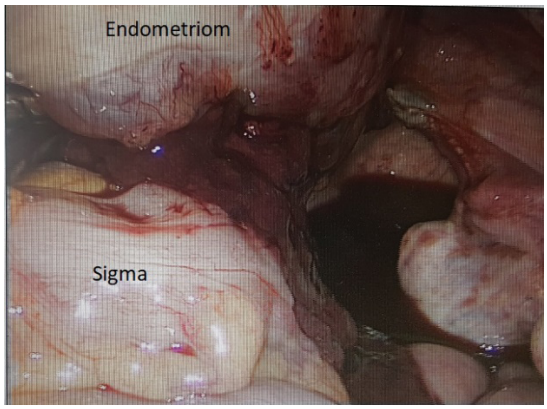

Figure 1: Adhesion between Sigma and left pelvis wall. Endometriom.

After the adhesions were completely dissolved, complete ureterolysis took place. A large endometriotic nodule appeared on the ureter (Figure 2). The endometriotic nodule was first reduced with cold scissors (Figure 3). The nodule could then be completely removed (Figures 5). The histologically examination could confirm the endometriosis. The postoperative course was inconspicuous and the patient was discharged after three days in good health condition. She came to follow up six months after surgery. No hydronephrosis was detected. She reported significant improvement of complaints.

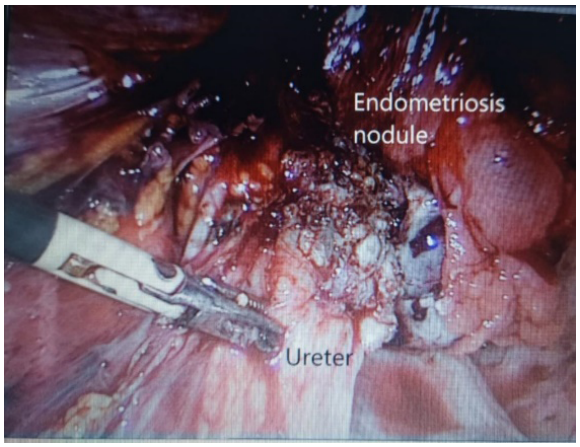

Figure 2: Endometiosis nodule on the ureter.

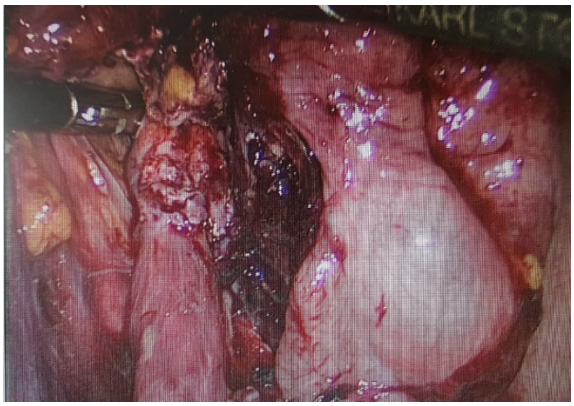

Figure 3: Reduced endometriosis nodule.

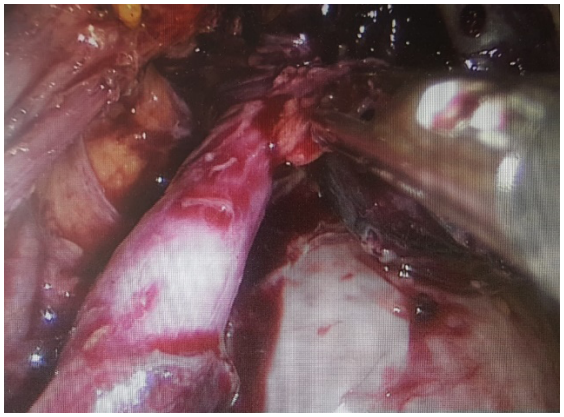

Figure 4: Complete excision of the nodule.

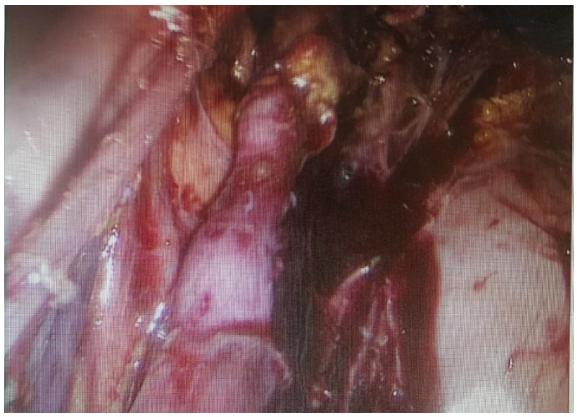

Figure 5: The ureter at the end of the surgery

Discussion

Urinary tract endometriosis is seldom and ureter endometriosis occurs only in 0.01% to 1.7% of endometriosis cases reported in the literature [16]. Ureter affection is a dangerous form of endometriosis and may impact on renal function in 30% of cases, whereby in case of hydronephrosis the ipsilateral kidney loses renal function in 30% of cases [8,9]. Typically, the distal third of the ureter is most affected part [17]. Ureter endometriosis is usually unilateral and left ureter is more severe than right [18-20]. Occurring of endometriosis in both ureter is a way to rare case. Statistic about bilateral ureter affection could not be found in PubMed by the authors. In 80% of cases with ureter endometriosis patients do not have any specific urinary symptoms and 48% of patients are asymptomatic [18,21]. Therefore, the diagnose of the ureter endometriosis is difficult, the hydronephrosis remains undetected and approximately in half of the cases the ureter endometriosis is diagnosed unexpectedly during routine health examinations [18,22]. However, there are three common symptoms in patients with ureter endometriosis: dysmenorrhea 75%, dyspareunia 70%, as well as pelvic pain 60% [19]. For this reason, in order to avoid missing a potentially ureter endometriosis target renal ultrasonography should be performed in all women with these symptoms [22].

The standard treatment of ureter endometriosis consists of complete surgical excision of endometriosis tissue followed by conservative hormone therapy. Minimally invasive techniques should be chosen in endometriosis surgery [23-26]. Drug therapy can only relieve the pain related to endometriosis, but is not enough for complete endometriosis treatment, since this does not have any impact to ameliorate the fibrotic, narrowed ureter that results from endometriosis [19]. Especially in case of ureter obstruction and/or hydronephrosis medical treatment alone is contraindicated because of increased risk of recurrence and renal impairment [27]. The surgical therapy depends on the type of ureter endometriosis. In case of intrinsic endometriosis with severe ureter obstruction and hydronephrosis ureterectomy with end-to-end anastomosis or ureteroneocystostomy are required [28,29]. In patients with extrinsic ureter endometriosis without obstruction or with mild obstruction without hydronephrosis is ureterolysis suitable [30]. In our case, since the patient had neither hydronephrosis nor sever obstruction a ureterolysis with complete excision of endometriosis nodule was carried out. In Figure 4 a healthy tissue between ureter wall and endometriosis nodule is showed, so we are secure about complete excision. The ureter wall was not infiltrated.

Conclusion

In all patients with dysmenorrhea and pelvic pain an ureter endometriosis should be taken into account and examined due ultrasonography and renal ultrasonography is obligated. Even in patients with history of ureter endometriosis surgery in one side an endometriosis in contralateral side should be considered, despite this case is rare. The standard surgery method is a laparoscopy. The laparoscopy must be performed by an experienced surgeon. Depends on kind of ureter affection (intrinsic or extrinsic) it should be chosen among ureterolysis with complete excision of endometriosis, ureterectomy with end-to-end anastomosis and ureteroneocystostomy.

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