ISSN: 2634 - 680X

Journal of Clinical Case Studies Reviews & Reports

SCIENTIFIC Research and Community

Case Report

Open Access

Endometriosis A Missed and Complicate Diagnosis: Case Report of Ureteral Endometriosis

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ABSTRACT

Ureteral endometriosis is a rare and under diagnostic condition, defined as "the silent killer" of the kidney. The incidence of ureteral endometriosis varies from 0, 1% to 1 %. Although it is relatively a rare and uncommon pathology, affecting a very small number of women of reproducing age, it is of particular importance because of its silent and severe loss of renal function towards renal failure. Despite its presentation, both intrinsic and extrinsic ureteral endometriosis, present a diagnostic and therapeutic challenge.

Aim: The purpose of our presentation is to turn the attention of the clinicians toward rare conditions in order to provide an accurate approach for differential diagnosis and lead to accurate therapeutic procedures.

Method: we will represent a case report of a 42 years' woman diagnosed with extrinsic ureteral obstruction and hydronephrosis of the right kidney, suspected for metastasis from cervical or endometrial carcinoma. She undergoes surgical procedures that relieve the obstruction. The pathological examination diagnosed extrinsic ureteral endometriosis. After six months the patient was suspected again for extrinsic ureteral obstruction and is under examinations for further diagnosis and treatment.

Conclusions: Although the preoperative diagnosis is essential for an appropriate surgical approach, the diagnosis of ureteral endometriosis is sometimes negligible and missed because of the unclear clinical signs and because they do not display typical symptoms. In these conditions recurring cases become frequent, making the treatment difficult and complicate.

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Received: August 14, 2025; **Accepted:** August 19, 2025; **Published:** August 28, 2025

Keywords: Ureteral Endometriosis, Hydronephosis, Cyclic Hematuria, Infertility, Endometriosis

Introduction

Endometriosis is a gynecologic pathology affecting woman of reproductive age. It is defined as the presence of endometrial gland and stroma outside the uterine cavity [1]. Epidemiological dates report that 6-10% of women of reproductive age, but these dates could be variable because of the limited accessibility to diagnostic measures for women affected by this condition [2]. Some studies have concluded than when woman were subject of exploratory laparoscopy, the prevalence of endometriosis were form 25-60%, including the "chocolate ovarian cyst" [1, 3]. The most common site of endometriosis is the ovary, broad ligament and after that cervix, vagina [4, 5]. The involvement of urinary tract in endometriosis is a rare and uncommon pathology, more occurred on the bladder, but on the literature, we found case reports of ureteral and kidney endometriosis [6, 7]. Ureteral endometriosis is a rare and under diagnostic condition, defined as "the silent killer" of the kidney. The incidence of ureteral endometriosis varies from 0, 1% to 1 % [8, 6, 9]. Although it is relatively an uncommon pathology, affecting a very small number of women of reproducing age, it is of particular importance because of its silent and severe loss of renal function towards renal failure. The patients represent a wide and unclear clinic, mostly displayed with local pain, rarely hematuria. In most cases the patients are asymptomatic and the diagnosis was made through pathologic examination after a nephrectomy for renal carcinoma or urothelial carcinoma of ureter [10, 6, 11]. Despite its presentation, both intrinsic and extrinsic ureteral endometriosis, present a diagnostic and therapeutic challenge. Through this discussion, we attempt to bring in the focus of the clinicians and urologist the diagnosis of abdominal endometriosis as a differential diagnosis, especially at woman in young age with fertility problems.

Case Report

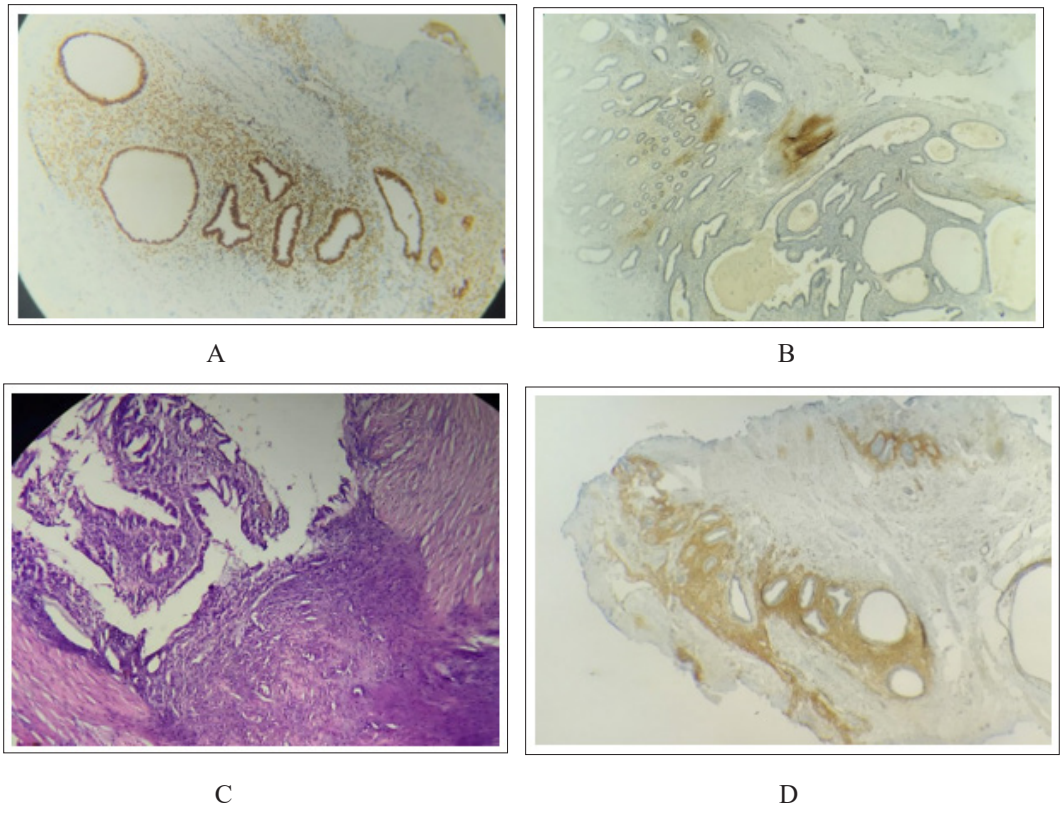
A 42 year woman represent on the emergency room with a severe pelvic pain, mostly on the right. She revealed that the pain started several days ago and become more severe in time. She referred that she has had the pain other times, but it was for shorter periods of time and she feels better with the usage of some analgesic. The anamnesis revealed an history of CIN 1 (cervical intraepithelial neoplasm grade 1), she has a child from a previous pregnancy about 23 years before and no other pregnancies. On the physical

examination she has increased sensitivity on the lower right abdominal quadrate and the back. The ultrasound examination was performed and she was diagnosed with a heterogenic total ureteral obstruction, probably by an ureteral carcinoma, leading to a grade III hydronephosis. A surgical procedure was performed and the obstruction was removed.

The pathological examination was performed and it reveal proliferation of nonuniform glands, made up of a single layer of large, uniform cell proliferation, some of them with more layers of cells. The nucleuses were large with disperse chromatin, with no atypia but with some mitosis. Most of the glands were surrounded by stromal proliferation of small spindle cells, with no atypia but with some mitosis. Hemorrhage, siderophage, chronic inflammatory infiltrate was present and the glands show no atypia or polymorphism. The proliferation was present from the adipose tissue around the ureteral wall through the muscularis layer to the mucosa of the ureter and have caused ulceration of the mucosae.

IHC stain was performed and the results show ER +, Vimentin +, p53 – leading to the diagnosis of endometriosis.

Even though under observation and after the surgery, the patient recurred in over a year, leading to another intervention.



Figures: (A) HE Stain: We Observe the Endometrial Gland and Stroma, Infiltrating Until the Ureteral Mucosae.
(B) IHC Stain CD10+ Reveling the Endometrial Stroma.
(C) IHC Stain PR + Reveling the Endometrial Gland and Stroma.
(D) IHC Stain p53- Negative Excluding the Oncocytic Process.

Discussion

Endometriosis is classified as an underdiagnosed disease. Although it is responsible for the symptoms of 70% of the woman with pelvic chronic pain and is the cause of 50% of infertility problems, the diagnosis is delayed [1]. Though endometriosis has been described as a distinct entity from 1940 by Sampson, the pathological mechanism that is affected in this disease is still undetermined. The exact physiologic mechanism involved in the development of the disease is not unified, but many studies have concluded in various pathogenic theories, which can be classified into three major groups: Myllerian metaplasia theory, metastasis and transplantation theory by vascular pathways of lymphatic, but also by retrograde menstruation and the pathogenesis, as well as the combination of these two theories together [12].

Urinary tract endometriosis is a rarer disorder, involving only 1 % of pathological proven endometriosis, and in only 0,1-0,4 % affects the ureters [7, 13, 9]. The left ureter is affected more than the right one [7].

Histological examination classifies them in intrinsic and extrinsic ureteral endometriosis. Extrinsic endometriosis is diagnosed when the uterine glands and stroma invade ureteral adventitia and periureteral tissue. Intrinsic endometriosis is diagnosed when endometrial tissue was found in muscularis mucosae and sometimes the ureteral lumen [8, 14, 9]. The path physiology of the disorder occurs through cyclic change of the endometrial tissue and hemorrhage that activates the inflammatory reaction, leading to thickening of the ureteral wall, obstruction of the ureteral lumen, hydronephosis, slowly damaging the renal function and progressing to renal failure [10, 11]. The biggest problem of abdominal endometriosis, especially in rare locations like ureters, is the adequate diagnosis.

The chronic pelvic pain, as the most common symptom, most of the times is not enough to lead to the right diagnosis. Even though associated with fertility problems, it needs several times of suffering and a lot of examinations, to get through differential diagnosis. When we have in front of us, a woman of reproductive age that has given birth before, as in our case report, makes the situation more complicated. The radiological examination, the CT-scan or MRI can make a first diagnosis, but when the clinic is acute and can be associated with hemorrhage in the cavity, then the surgery become necessary. For these reasons, the diagnosis of ureteral endometriosis is, in the most of them, after surgery. Usually, the patients diagnosed with urinary system endometriosis, even treated with surgery, recurred. Although the preoperative diagnosis is essential for an appropriate surgical approach [10, 8, 6, 14]. The diagnosis of ureteral endometriosis is sometimes negligible and missed because of the unclear clinical signs and because they do not display typical symptoms [14, 6, 7, 15]. In these conditions recurring cases become frequent, making the treatment difficult and complicate.

Conclusion

The diagnosis of rare conditions like ureteral endometriosis, needs the collaboration of in order to provide an accurate approach for differential diagnosis and lead to accurate therapeutic procedures.

Funding: No funding sources

Conflict of Interest: None declared

Ethical Approval: Not required

Author Contributions

Eriselda Kurushi - Corresponding author
Daniela Xhemalaj - Pathological Diagnosis
Iva Plaku - Pathological Diagnosis

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