Oncology

Mullerianosis of the urinary bladder

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ABSTRACT

Endometriosis is the ectopic presence of endometrial tissue outside of the uterus. Bladder involvement of these lesions is not uncommon and has been reported and studied extensively. Mullerianosis is a term that describes the ectopic presence of tissues from the endocervix and endosalpinx in extrauterine sites. Only a few cases of Mullerianosis involving the urinary tract system have been reported in literature. We report a case of a 32-year-old lady with bladder mass and periodic hematuria and dysuria. She underwent TURBT and on histopathology was found to have bladder Mullerianosis. Patient was later treated with oral contraceptives with improvement.

Introduction & background

Endometriosis is the abnormal presence of endometrial glands and stroma in extrauterine sites. They mostly occur in the pelvis but can be found throughout different body sites. Urinary tract endometriosis refers to their presence in the urethra, bladder, ureters or kidneys. Mullerianosis is a term that describes the presence of ectopic tissue from the endocervix or endosalpinx individually or together in conjunction with endometrial tissue. Most reported cases have mentioned only the presence of 2 types of these epithelia in the urinary tract. Very few studies have mentioned all 3 types together. We present a case of bladder lesion containing endometriosis, endocervicosis and endosalpingiosis.

Case presentation

A 32-year-old lady presented to our clinic complaining of gross hematuria associated with frequency and dysuria for the last 3 years. She noticed her symptoms increasing before her menstrual cycles. Urine microscopy revealed microscopic hematuria, but culture and cytology were unremarkable. Bladder ultrasound showed a vascular posterior bladder wall mass. Later on, she was taken for cystoscopy which revealed a 3-cm sessile mass surrounded with erythematous patches. Transurethral resection of the mass released a chocolate-like fluid and deep muscle specimens were taken as well. Postoperative course was uneventful and she was discharged the next day. Histopathology results showed benign urothelium with underlining Endometriosis, Endocervicosis and Endosalpingiosis (Figs. 1-3), which were consistent with Mullerianosis.

Discussion

Urinary tract endometriosis (UTE) is a rare disease that is found in 1% of all women diagnosed with pelvic endometriosis. In deep infiltrating endometriosis, UTE can reach up to 50% of cases, with bladder involvement accounting for 90% of UTE cases. Ureteral involvement is much rarer and was only reported in about 0.1% of all UTE cases. The ages of the affected patients ranged from 19 to 82, so it has no specific age group. In the largest literature review of 39 case reports of UTE, the etiology was speculative but there seems to be a relation with previous pelvic surgery as about half of the reported cases have had previous pelvic surgeries. Symptoms depend on the location of these lesions.

Presumptive diagnosis of UTE is usually made in women with known endometriosis that present with a new onset of hematuria or cyclical dysuria. As shown in reported bladder cases, several patients had cyclical hematuria, dysuria, frequency, urgency and gynecological cyclical pain. Ureteral involvement is usually asymptomatic in 50% of patients. 25% of patients they present with flank pain. Gross hematuria was found in 15% of cases.

These symptoms are usually nonspecific and other urinary tract conditions could be missed. Differentials include UTI, interstitial cystitis/Chronic pelvic pain syndrome (IC/CPPS), urinary tract stones or bladder neoplasms.

Initial work up includes urinalysis and microscopy. Then, a renal and pelvic ultrasound should be done as part of the evaluation to rule out bladder lesions and asses for hydronephrosis. Cystourethroscopy is done after for the assessment of patients having hematuria or a visible bladder mass on ultrasound.

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Literature review

The aim in treating bladder endometriosis is to resolve symptoms and to follow up asymptomatic patients. Medical and surgical treatments are available but there is limited data comparing both modalities. Medical treatment is usually the first step in the management of such cases except for cases involving hydronephrosis, surgical treatment is preferred to avoid renal impairment. Options include combined estrogen-progestin contraceptives, progestins, and gonadotropin releasing hormone agonists, all of which have been associated with reduction of symptoms. Gonadotropin releasing hormone agonists are the second option for women not responding to oral contraceptives. Medical treatment is the preferred method for women since it is cost effective, has lower risks involved and are easy and available to use. Surgical treatment on the other hand is done for patients not responding to medical treatment after 6 months or have ureteral

Fig. 1. Endometrial glands with endometrial stroma (Endometriosis).

Fig. 2. Cervical mucinous epithelium (Endocervicosis).
involvement. Treatments include laparoscopic shaving of serosal lesions and partial cystectomy for full thickness lesions to prevent recurrences. Complete surgical resection has been shown to have good results on long term follow up in a reported series of 75 women with 77% improvement of symptoms and none of them required repeated surgery.  

Conclusion

Urinary tract endometriosis is rare. Patients with known endometriosis having premenstrual urinary tract symptoms should be evaluated to confirm the diagnosis and to rule out other conditions that are similar in presentation. Care should be taken not to miss hydronephrosis in these patients to avoid silent renal impairment. Medical treatment is usually sufficient for most cases but some patients will need surgical intervention for definitive treatment of UTE.

References

1. Knabben L, Imboden S, Fellmann B, Nirgianakis K, Kuhn A, Mueller MD [cited 2018Oct.22]. Urinary Tract Endometriosis in Patients with Deep Infiltrating Endometriosis: Prevalence, Symptoms, Management, and Proposal for a New Clinical Classification. vol. 103. 2015 Jan.1:147–152. https://doi.org/10.1016/j.fertnstert.2014.09.028, 1.
2. Habiba Marwan, Brosens Ivo, PhD MD, Benagiano Giuseppe. 'Müllerianosis, Endocervicosis, and Endosalpingiosis of the Urinary Tract: A Literature Review', Reproductive Sciences. 2018, 193371911877344.
3. Fedele L, Bianchi S, Montefusco S, Frontino G, Carmignani L [cited 2018Nov.18]. A Gonadotropin-Releasing Hormone Agonist versus a Continuous Oral Contraceptive Pill in the Treatment of Bladder Endometriosis. vol. 90. 2008 Jan.1:183–184. https://doi.org/10.1016/j.fertnstert.2007.09.066, 1.