Endometriosis is a benign gynecological disease that is characterized by the presence of functional endometrial tissue outside the uterus. Although the ovaries and uterine ligaments are the most common locations, urinary tract involvement especially the bladder endometriosis is a rare entity in women of reproductive age with clinical symptoms of cyclical urgency, hematuria and suprapubic pain. We herein present magnetic resonance imaging (MRI) findings of spontaneous bladder endometriosis case with cyclical hematuria symptoms.

**Keywords:** Magnetic resonance imaging (MRI); endometriosis; bladder

Submitted Jul 21, 2014. Accepted for publication Aug 04, 2014.
doi: 10.3978/j.issn.2223-4292.2014.08.05
View this article at: http://dx.doi.org/10.3978/j.issn.2223-4292.2014.08.05

A 29-year-old woman applied to the urology clinic with the complaints of cyclical hematuria attacks. After revealing an ovarian cystic mass at the abdominal ultrasonography, she was examined by the pelvic magnetic resonance imaging (MRI). There was a left adnexial cystic mass which was hyperintense on T1 weighted (W) and iso-hypointense on T2W images suggesting endometrioma (**Figure 1A,B**). Additionally a soft tissue at the bladder wall which was isointense on T1W and hypointense on T2W images compared to the adjacent muscles was noticed. It had milimetric hyperintense focuses on both T1W and T2W images which showed no contrast enhancement on the MRI (**Figure 2A,B**). With these findings radiologic impression of the mass was bladder anterior wall endometriosis. Transurethral biopsy was performed and finally endometrial tissue was observed in the pathologic specimen which verified the radiological impression.

Endometriosis mostly presents within the ovaries and uterine ligaments which is commonly known as chocolate cyst (endometrioma) because of the recurrent internal hemorrhage. The symptoms of the bladder endometriosis are cyclical urgency, hematuria and suprapubic pain. Cyclical menstrual hematuria is pathognomonic for bladder endometriosis however it is present in only 20% of patients (2,5).
The characteristic imaging criteria for endometriomas are T1W hyperintensity and T2W hypointensity (shading) on MRI. Hypointensity on T2W MRI is defined for the ovarian endometriosis as the shading sign which is due to high levels of protein and iron concentration (6). The ovarian cyst in our case had T2W hypointensity and T1W hyperintensity with characteristic endometrioma imaging findings. The bladder lesion had similar imaging findings with the left ovarian endometrioma. As a result, the lesion was diagnosed as bladder endometriosis with her clinical symptoms and MRI examination findings.

Vesical endometriosis can occur spontaneously or iatrogenically (postoperatively) whereas bladder wall limited involvement is usually described as a result of iatrogenic form (5). Our case did not have surgical history so it was presumed to be the spontaneous form.

Bladder endometriosis is a rare entity in women of reproductive age with cyclical hematuria symptoms. The knowledge and recognition of the rare location of endometriosis can be helpful to diagnose the pathology by MRI examination which is the optimal imaging modality.

Disclosure: The authors declare no conflict of interest.

References
4. Donnez J, Spada F, Squifflet J, Nisolle M. Bladder endometriosis must be considered as bladder adenomyosis.


Cite this article as: Akpinar S, Yilmaz G, Celebioğlu E. A rare cyclic recurrent hematuria case; bladder endometriosis. Quant Imaging Med Surg 2015;5(3):485-487. doi: 10.3978/j.issn.2223-4292.2014.08.05