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Clinical Quiz

Cystic Pelvic Lesion

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A 27 years old Omani female presented with a history of vaginal mass, urethral irritation, post void dribble, and pus per urethra. On examination with patient straining, there was a 2x3 cm cyst felt in the anterior vaginal wall. There was no cervical prolapse or rectocele. Pelvic MRI scans (selected images) are shown below (Figs. 1 & 2).

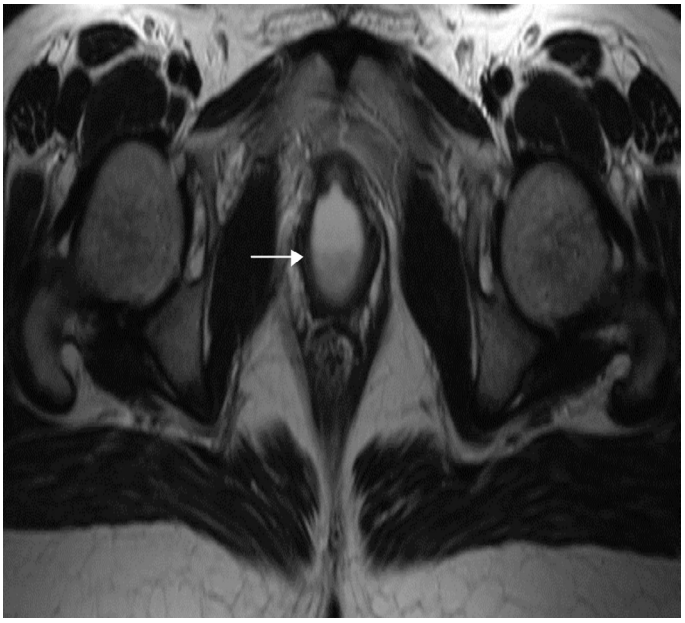

Figure 1: Axial Image T2 weighted sequence at level of urethra, which demonstrates a cystic lesion (arrow) with a narrow neck arising from the urethra at 6 o'clock position.

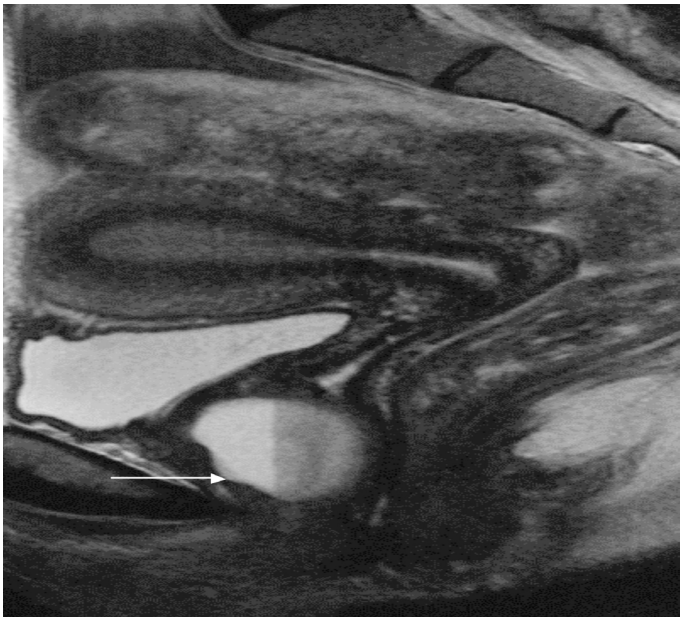

Figure 2: Sagittal Image T2 weighted sequence, which demonstrates a cystic lesion (arrow) posterior to the urethra with mass effect on anterior vaginal wall.

Question

What is the most likely diagnosis?

1. Vaginal cyst
2. Uretheral diverticulum
3. Ectopic uretrocele
4. Endometrioma
5. Uretheral tumor

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Answer

The correct diagnosis is "urethral diverticulum"

Discussion

Acquired female urethral diverticulum usually occurs at the age of 26-74 years, the two main theories reported as cause for this condition are the obstruction of the para-uretheral glands with subsequent infection and rupture into the urethra.[1] The second theory is the disruption of the peri-uretheral fascia during surgery or catheterization which results in focal posterior urethral prolapse.[1] The common location for urethral diverticulum formation is the postero-lateral aspect of the mid-urethra.[1] This condition may present with urinary complaints like dysuria (45%) or post void dribbling (25%).[2] It may present also with dyspareunia (10%).[2] Recurrent urinary tract infection can be seen as well in almost (40%) of the cases. Patients can be totally asymptomatic (3-20%). Physical examination may reveal an anterior wall vaginal mass which may be painful and with compression of this mass, a purulent discharge can be seen coming out of the urethra.[2] The diagnosis can be made with voiding cystourethrography with an overall accuracy of 65% or with cross-sectional imaging, MRI, and transvaginal ultrasound.[2] However, MR appears more superior to the others in making the diagnosis due to its multi-planar capability, lack of ionizing radiation and its excellent tissue contrast.[2] It is even better with the use of the pelvic phased-array coils which can provide high resolution of the urethral diverticulum details. Transvaginal ultrasound can be helpful as well in making the diagnosis. Urethral diverticulum can be complicated with stone formation (10%), infection or malignant degeneration and the most frequently described tumor in female urethral diverticulum is adenocarcinoma.[2] The main differential diagnosis includes vaginal cysts, ectopic uretrocele, endometrioma and urethral tumor.[2]

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References

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