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DIAGNOSTIC VALUE OF MRI FOR THE FEMALE URETHRAL DIVERTICULUM

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KEY WORDS

urethral discharge; sexual intercourse; female urethral diverticulum; MRI

ABSTRACT

A woman, who discharged pus at the time of intercourse, was diagnosed to have a urethral diverticulum by combination of urethroscope and MRI. MRI provided clear view of the diverticulum in terms of the relationship with the surrounding organs.

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CASE REPORT

A 25-year-old woman was referred to our institution with a 6-month history of pus discharge from the urethra at sexual intercourse. Genital examination revealed a solid mass at the anterior vaginal wall. Yellowish pus discharge was observed when pressure was applied on the anterior vaginal wall with an index finger. A urethroscopic examination revealed a splash of pus from an opening of the cavity locating along the left side of the urethra when it was compressed through the vaginal wall. A diverticulum of the female urethra was suspected but the patient refused further transurethral maneuvers. Magnetic resonance imaging (MRI) was conducted to find the exact location of the cavity and to differentiate malignant diseases of the urethra. The T-2 weighed, fast-spin echo MRI showed a diverticulum in the posterior aspect of the urethra in its sagittal sections. The diverticulum compressed the urethra ventrally and its wall looked smooth and well demarcated from the surrounding tissue (Figure 1). The axial, T1-weighted, spin echo MRI showed a low-signal-intensity diverticulum adjacent to the urethra which was displaced anterolaterally (Figure 2).

The patient underwent the transvaginal diverticulectomy. The diverticulum was removed *en bloc* and no malignant lesion was reported pathologically.

MRI FOR A FEMALE URETHRAL DIVERTICULUM



Figure 1. A sagittal section of the T2-weighted, fast-spin echo MRI showed a large diverticulum arising from the posterior wall of the urethra. It is noteworthy that a clear boundary line is visible between the two different contents of the cavity (indicated by an arrow). This suggested the intra-diverticular hemorrhage or viscous fluid collection in the cavity.

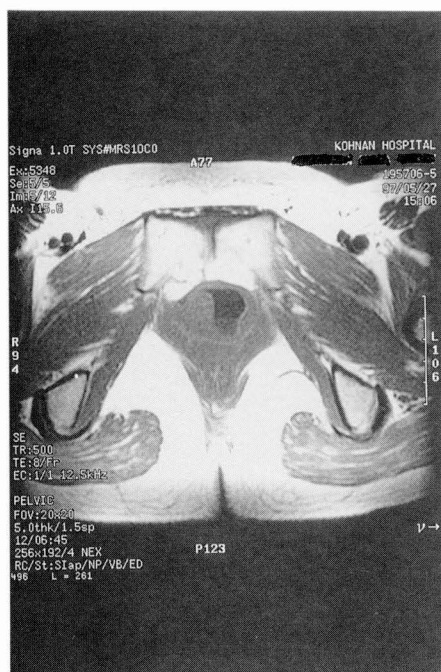


Figure 2. The axial, T1-weighted, spin echo MRI showed a low-signal-intensity diverticulum adjacent to the urethra which was displaced anterolaterally. No other lesion which suggested malignant tumor was seen in the periurethral region.

CONCLUSION

This is a very rare case of a diverticulum in the female urethra, which caused pus discharge at sexual intercourse.

For the diagnosis of the female urethral diverticulum a voiding cystourethrography or urethrography using double balloon catheters has been recommended.¹⁾ Since the opening of the diverticulum is not wide enough, the former method often failed to visualize the diverticulum, and the latter technique is uncomfortable for patients. The MRI can visualize the urethral diverticulum clearly by the non-invasive manner. Moreover the MRI can provide the information necessary to decide upon the treatment of female urethral diverticulum.²⁾ We think MRI is primarily indicated in a case such as the present case.

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