

Imaging Study in Female Voiding Dysfunction (I): External Compression of the Urethra by a Vaginal Para-urethral Fibroid

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BRIEF HISTORY

A 36-year-old woman, gravida 3 para 2, presented at our urogynecology clinic with a protruding vaginal lump, dyspareunia, voiding difficulty and pressure symptoms of the urinary tract that had lasted for about one year. During that period, she was intermittently bothered by hesitancy of voiding and poor urinary stream.

CLINICAL EXAMINATION

Physical examination revealed a painless ovoid mass measuring 7 cm in diameter locating in the left anterior-lateral vaginal wall. The mass deformed the anterior vagina wall and dislocated the external urethral meatus toward the right (Fig. 1).



Fig. 1. On pelvic examination, an ovoid mass located in the anterior vaginal wall and dislocating the external urethral meatus toward the right (white arrow) was found.

ULTRASONOGRAPHY

Perineal ultrasound revealed a well-defined solid tumor, 79 x 38 mm in diameter, located in front of the urethra and pubic symphysis and compressing the distal urethra (Fig. 2A). Color Doppler mapping demonstrated a vascular stalk supplying the mass and this arose from the anterior vaginal wall beneath the urethra (Fig. 2B).

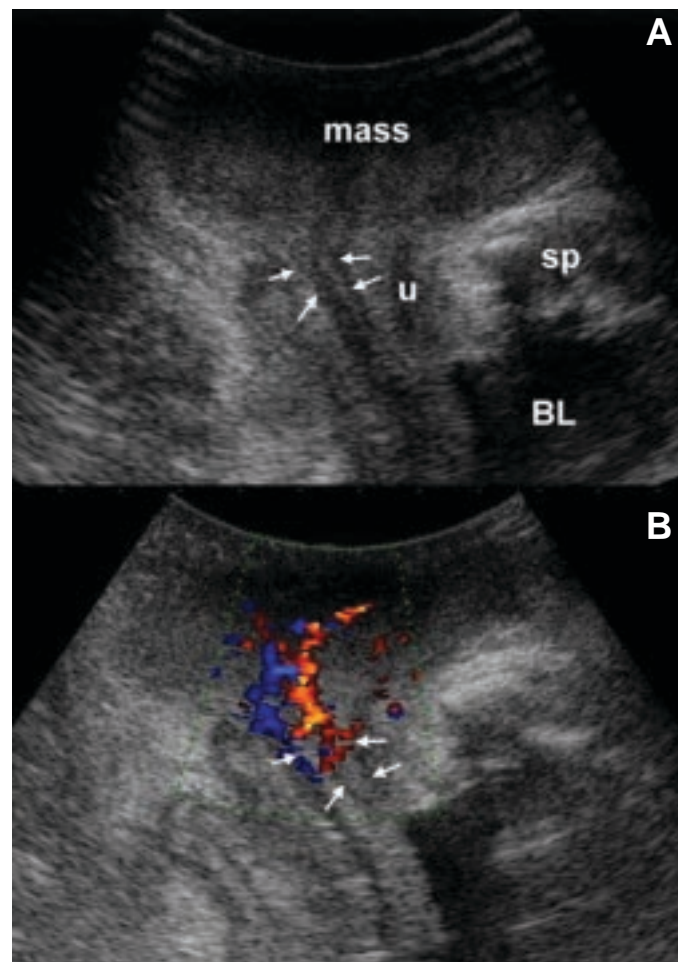


Fig. 2. (A) Gray scan model. (B) Color Doppler model. Perineal ultrasound revealing a well-defined solid tumor 79 × 38 mm in diameter with a vascular stalk (white arrows) arising from anterior vaginal wall beneath the urethra (u). (sp: pubic symphysis; BL: bladder)

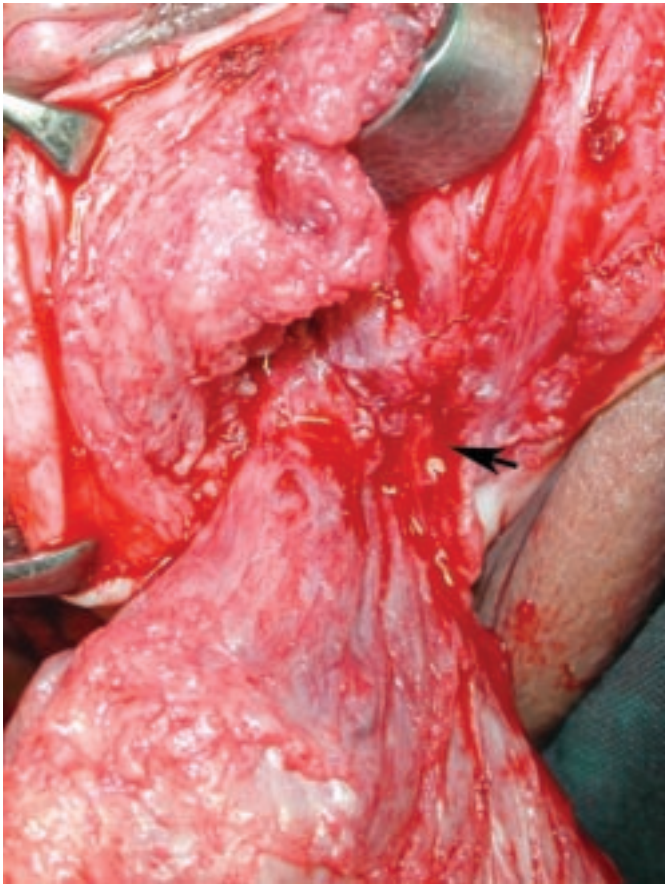


Fig. 3. The vascular stalk (black arrow) of the mass is identified before complete enucleation of the mass.

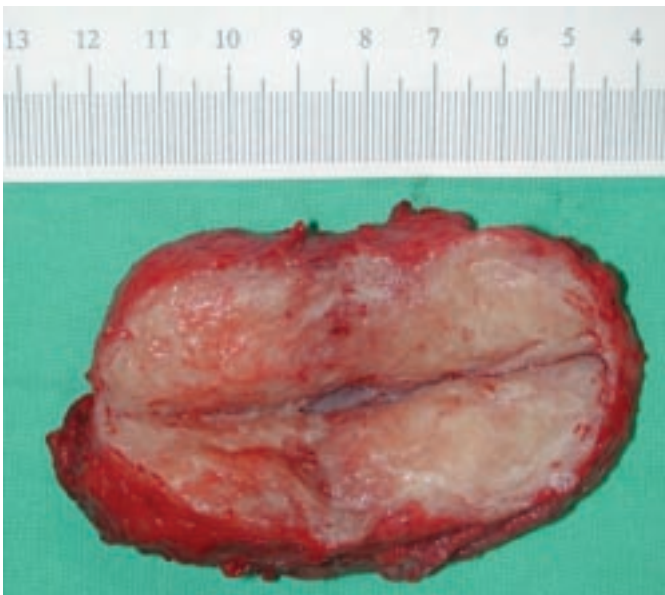


Fig. 4. The cut surface of the mass.

SURGICAL INTERVENTION

After placement of a urethral Foley catheter, a longitudinal incision was made on the anterior vaginal wall epithelium along the convexity of the mass. The vascular stalk was identified and double ligated (Fig. 3). Enucleation of the vaginal mass was performed without difficulty and with minimal bleeding. After the mass was removed, redundant vagina tissue was resected and vaginal wall was closed by two-layer sutures. The mass was a well-encapsulated solid tumor measuring 8 x 5 cm in diameter with a pink surface and moderate consistency. The cut surface had yellow-grayish color and a whorl or nodular pattern (Fig. 4).

COMMENT

Localization of leiomyoma in the vaginal wall is rare. A wide variety of clinical manifestations occur and therefore an imaging study is indicated to establish mass morphology and to explore the relationship of the mass with neighboring structures [1-3]. In most cases, surgical removal through vaginal approach is safe [1-3]. In this case, the critical maneuver for removal of the paraurethral leiomyoma included protection of the urethra during the enucleating procedure, isolation of the feeding vessels and the recovery of a normal structure [1]. Ultrasound provides the information needed to prevent urethral injury and helped in attaining minimal bleeding during the surgical procedure.

REFERENCES

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