

# Haematometrocolpos due to transverse vaginal septum with distal atretic vagina

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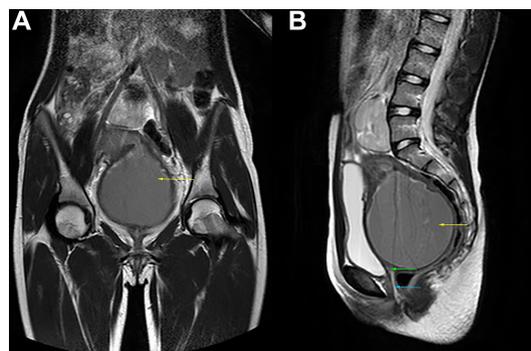
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## DESCRIPTION

A 15-year-old girl presented with cyclical pelvic, lower abdominal pain and cramping beginning at age 13. She had not yet had onset of menarche and no history of sexual intercourse. On examination, she presented with lower abdominal distension, which felt like a firm mass extending up to the umbilicus and into the pelvic cavity. Abdominal ultrasound showed an ectopic right kidney in the paramedian position at the level of the umbilicus. Ultrasound also showed a large midline cystic structure located between the urinary bladder and rectum, containing low-level homogenous echoes suggestive of blood products. MRI confirmed the ultrasound findings as it showed the endometrial, endocervical and vaginal canal were distended by low-signal material (T2 and short-tau inversion recovery). Images appeared hyperintense on T1W1, suggestive of haematometrocolpos due to a complete transverse vaginal septum at the level of the pubic symphysis, distal portion of vagina was atretic (figure 1). The patient underwent vaginoplasty with a vaginal pull through procedure. At first, the blood drainage relieved the haematocolpos. Surgeons removed the fibrous band causing the obstruction. They then sutured the edges to the hymeneal ring. The operation required no graft because the atretic part of the vaginal canal was less than 3 cm. Postoperatively, surgeons placed a silicon dilator in the canal to keep it patent until healing was complete.



**Figure 1** (A) MRI pelvis (coronal view). (B) MRI pelvis (sagittal view). MRI of the pelvis showing endometrial, endocervical and vaginal canal distended by low-signal material (T2 and short-tau inversion recovery (STIR)) (yellow arrows), which appears hyperintense (on T1W1), suggestive of haematometrocolpos due to a complete transverse vaginal septum at the level of the pubic symphysis (green arrow), with an atretic distal portion of vagina (blue arrow).

Transverse vaginal septum, a rare anomaly (1 per 30 000–80 000)<sup>1</sup> of the female genital tract, occurs as a result of the failure of canalisation or fusion of müllerian ducts and the urogenital sinus. Anatomically, a majority (46%) of cases present with a septum in the upper two-thirds of the vagina (upper third: 46%, middle third: 40%) and the rest in the lower part of the vagina. These septa are usually no more than 1 cm thick and usually have a central or eccentric perforation that allows for vaginal flow. This structural hindrance may obstruct the vaginal outflow and can present as mucocolpos in prepubertal children or as haematocolpos associated with pelvic pain soon after menarche in adolescents. Ultrasonography may reveal the diagnosis by showing a hypoechoic crescent-shaped tissue with a distended uterus, full of blood or secretions.<sup>2</sup> However, MRI has been recommended for a complete evaluation of an obstructed vagina, as it can help locate and measure the thickness of a septum for surgical correction.<sup>3</sup>

## Learning points

- ▶ Haematometrocolpos due to a transverse vaginal septum or imperforate hymen can be a cause of abdominal pain and distension in a young woman. A high index of suspicion is needed to diagnose transverse vaginal septum as the cause for the abdominal pain and late onset of menarche.
- ▶ Ultrasound and MRI are useful during diagnosis and help with locating and measuring the septum for further surgical correction.
- ▶ Undiagnosed, haematometrocolpos can lead to long-term sequelae, including endometriosis and infertility.

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