



Surgical Management of Imperforate Hymen in an Adolescent Girl Complicated by Haematometrocolpos and Haematosalpinx with Suspected Pelvic Infection

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BACKGROUND

Imperforate hymen (IH) is the most common congenital anomaly of the female genital tract affecting approximately 1/2000 females.¹ Prompt diagnosis is essential to relieve symptoms and prevent long term complications.

- IH is rarely recognised at birth and girls often remain asymptomatic until menarche when uterine and vaginal secretions collect behind the hymen.
- Common presentations include cyclical pelvic pain or abdominal pain on a background of primary amenorrhoea.
- Delayed diagnosis may result in obstructive urinary symptoms, constipation and in more severe cases, acute urinary retention, endometriosis or peritonitis due to retrograde menstruation, ascending pelvic infection and subfertility.²

AIMS

To outline a case of IH complicated by haematometrocolpos and haematosalpinx and to describe the clinical presentation, diagnostic considerations and risks associated with the surgical management of IH.

CASE & RESULTS

- A 12 year old girl presented with severe abdominal pain, with a 3-month history of cyclical pain previously.
- Examination revealed a tender palpable uterus and a **thinned bulging hymenal membrane with blue discolouration**. Her lab investigations showed raised inflammatory markers.
- Transabdominal ultrasound revealed haematometrocolpos with 335mls of echogenic fluid and a distended right fallopian tube suggesting haematosalpinx (Figure 1).
- A **hymenectomy was performed, draining 450mls of dark menstrual blood**. Antibiotics were provided intra-operatively and post-operatively.
- She recovered well with **resumption of regular menstrual cycles 1-month post-operation**.

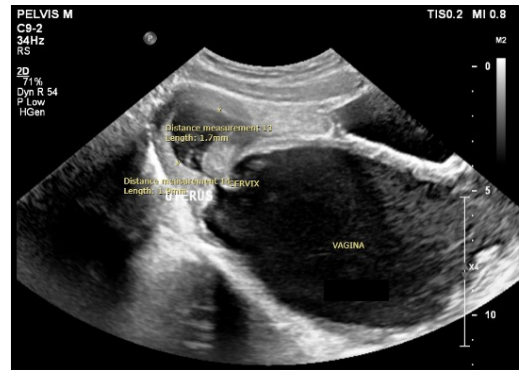


Figure 1: Transabdominal pelvic ultrasound demonstrating haematometrocolpos.

DISCUSSION

Differential diagnoses

- Differentials to consider in patients with suspected IH include transverse vaginal septum, distal vaginal atresia, urogenital sinus and labial adhesions.
- Accurate differentiation of IH from Müllerian abnormalities may be facilitated by a **pelvic MRI**.³
- Although urogenital anomalies are uncommon, **urinary tract investigations** should be considered in all patients with IH.²

Surgical management of IH

- Hymenectomy is the standard of care for definitive management.
- This typically involves a **cruciate incision (+/x)** avoiding the urethra. Pre-operative bladder catheterisation further allows for identification of the urethra and drainage of the bladder.
- Simple incision and drainage is **not recommended** as there is an increased risk of restenosis and inadequate drainage of the menstrual blood may lead to an ascending infection.
- **Gentle irrigation** of the vaginal vault may be used to drain old viscous menstrual blood however aggressive irrigation should be avoided to reduce the risk of ascending infection.²
- The use of **prophylactic antibiotics** may be indicated if there is suspicion of a pelvic infection.²
- **Topical estrogen** should be applied to the vaginal mucosa in pre-pubertal patients to reduce the risk of hymen restenosis.⁴

REFERENCES

- ¹Céline L, Robert A, Helen M. Imperforate hymen: a cause of abdominal pain in female adolescents. BMJ Case Reports. 2009;2009:bcr0820080722.
- ²Lee KH, Hong JS, Jung HJ, Jeong HK, Moon SJ, Park WH, et al. Imperforate Hymen: A Comprehensive Systematic Review. J Clin Med. 2019;8(1).
- ³Saleem SN. MR imaging diagnosis of uterovaginal anomalies: current state of the art. Radiographics. 2003;23(5):e13.
- ⁴Grimstad F, Strickland J, Dowlut-McElroy T. Management and Prevention of Postoperative Complications in a Neonate with a Symptomatic Imperforate Hymen. J Pediatr Adolesc Gynecol. 2019;32(4):429-31.