

**Case report**

**Hematocolpos mimicking acute urinary retention in Emergency Department**

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**Summary**

Lower abdominal pain with lower urinary tracts symptoms in young girls presented to Emergency Department (ED) is urinary tract infection (UTI) until proven otherwise. We reported a case of classic UTI presentation with unusual finding of hematocolpos. We believed the unusual circumstance of this case is likely to be repeated in some other clinical practice and such differential diagnoses should be considered.

**Keywords:** *hematocolpos, urinary tract infection, Emergency Department*

**Introduction**

A young girl may present to Emergency Department (ED) for acute urinary retention (AUR) which commonly occur secondary to urinary tract infections (UTI). However, recurrent AUR or UTI in a premenarchal age group may signify other problem.

**Case Report**

An 11 years old girl, presented to ED for recurrent episodes of dysuria, increase frequency and inability to pass urine. She also had intermittent lower abdominal discomfort. There is no history of fever. She was at pre-pubertal. There was no significant family history.

This was her third visit and she was previously treated as clinical UTI based on symptoms and her urine microscopy revealed normal finding. However during this visit, the doctor noted that the abdomen was distended with “distended bladder”. Per rectal examination result revealed boggy and tender at the anterior rectal wall. Catheter Bladder Drainage (CBD) was inserted however the amount of urine was minimal. Ultrasounds revealed a huge cystic echogenic pelvic mass besides the distended bladder (Figures 1 and 2) which represented the fluid-distended uterus and vagina (haematometrocolpos).

Imperforated hymen was diagnosed during further examination and the patient was admitted to Gynaecological Ward for further management.

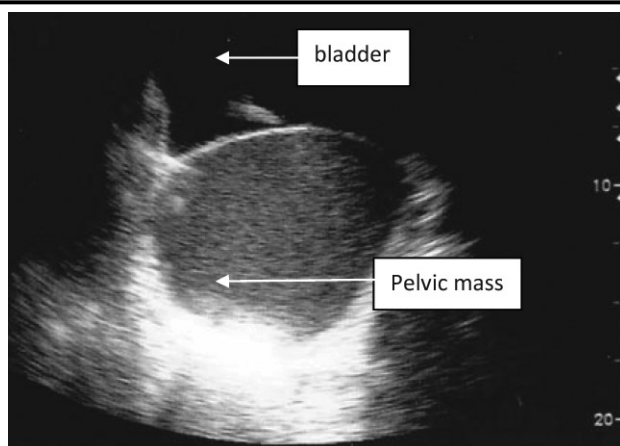


Figure II: Picture of Pelvic ultrasound prior to urinary catheterization (Transverse view).

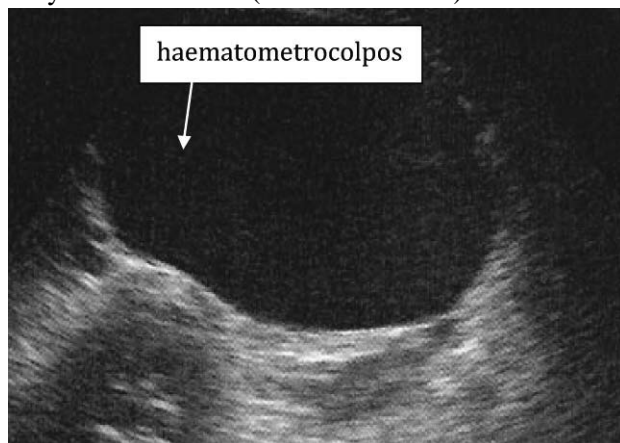


Figure II: Picture of Pelvic ultrasound after urinary catheterization

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## **Discussion**

Imperforated hymen is a rare congenital anomaly, with an incidence of about 1 in 2000 female births<sup>1</sup>. It was challenging for doctors in ED to diagnose this condition. Large hematocolpos may cause urinary urgency, frequency or dysuria. Acute urinary retentions<sup>2-3</sup>, abdominal pain<sup>4</sup>, protruding intraoital mass, lower abdominal mass and constipation<sup>5</sup> were among common complaint in those who are having hematocolpos.

The obstructive symptoms occur as the result of pressure effect. This is because when the girl starts to menstruate, the menstrual blood is collected inside the vagina (haematocolpos), the uterus (haematometra), or up to the fallopian tube (haematosalpinx).

Most cases of imperforated hymen are symptomatic only at the pubertal age and more morbidity would be noted in the group with delayed diagnosis<sup>6</sup>. Therefore, emergency doctors should have a high index of suspicion of imperforate hymen as a cause for pubescent girls presenting with acute retention of urine.

Classical finding during physical examination are lower abdominal tenderness with a pelvic mass, associated with a bluish bulging mass through the introitus. Per rectal examination may reveal an extrinsic mass corresponding to the vagina.

Nowadays ultrasound is available in most ED. The diagnosis of imperforated hymen can be made by the findings of a cystic pelvic mass representing fluid distended vagina and uterus (haematometrocolpos). The content of the cystic mass may be homogeneous dense fluid or heterogeneous content with blood clots or infection. Therefore, last menstrual period is an important point during history taking especially in pre-pubertal age.

## **Conclusion**

In summary, imperforated hymen and haematocolpos should be suspected in adolescent girls with primary amenorrhoea presenting with lower abdominal pain, acute urinary retention, pelvic mass, constipation or low back pain. Correct diagnosis can be made by thorough physical examination and bedside ultrasonography. The correct diagnosis in the ED is important because it will give positive impact on the patient in terms of proper admission to gynaecology wards and further management.

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