

## Case Report

# An Overlooked Diagnosis in an Adolescent Admitted with Abdominal Pain: Imperforate hymen

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### Abstract

Imperforate hymen is a rare anomaly of the female genital system. Patients are usually admitted with an absence of menarche and accompanying cyclic abdominal pain, despite the presence of secondary sex characteristics during puberty. Diagnosis is usually delayed; however, keeping this condition in mind may facilitate earlier diagnosis. The observation of purplish swelling at the vestibular opening site on genital examination may guide diagnosis.

**Keywords:** Imperforate hymen, menarche, puberty

Imperforate hymen is among the rare anomalies of female genital system and seen in 0.1% of newborns.<sup>[1]</sup> The cases are usually sporadic although familial cases have been reported. Patients are asymptomatic before puberty. Diagnosis is made through presence of primary amenorrhea or during examination done for pelvic pain in adolescence. Pelvic pain occurs as episodes as it is more frequent during menstruation and diagnosis may be delayed as the patients feel comfortable between pain episodes.<sup>[2]</sup> Hemato-colpos may develop when blood is accumulated in vagina, hemato-metra may develop when blood is accumulated in uterus and hemato-salpinx may develop when blood is accumulated in tuba. Diagnosis is usually delayed however it may easily be made through observing a hymen with a swelling which reflects purple on a basic genital examination in all age groups.<sup>[3]</sup> Rarely pyo-colpos, pyo-metra-colpos or pyo-colpo-metrasalpinx may develop due to secondary infections caused by accumulated secretions.<sup>[4]</sup> We wanted to present this case report to pull attention to imperforate hymen which should be kept in mind in differential diagnosis of abdominal pain in girls in puberty.

### Case Report

A 15-year-old female patient was admitted to Family Medicine Outpatient Clinic due to abdominal pain and swelling in lower part of the abdomen lasting for 3 days. On her medical history, she was learned to experience this intermittent pain during 3 years, and her blood and urine tests done at another center were found normal, she was administered analgesic drugs via intra-muscular route during painful periods.

She was learned not to have menarche when her last date of menstruation was asked.

On her examination done for secondary sex characteristics, breast development, axillary and pubic hair development was consistent with Tanner stage 3.

On her abdominal examination, a firm and smooth mass lesion was palpated in the lower quadrant of abdomen. On her gynecologic examination, external genitalia were normal however a swelling suggested with hemato-colpos was observed at vestibular opening site.

The patient was consulted to Gynecology and Obstetrics

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Clinic with pre-diagnosis of hemato-colpos developing due to imperforate hymen.

The patient was performed partial hymenectomy under general anesthesia at lithotomy position, approximately 500 cc of hyperviscose hematoma fluid was aspirated and eversion was applied through enabling hemostasis at hymen margins.

## Discussion

Cyclic abdominal pain is seen together with amenorrhea during adolescence in imperforate hymen cases. Findings may vary depending on age, duration between menarche and diagnosis, magnitude of hemato-colpos and pressure caused by hemato-colpos. Diagnosis is usually made between ages 12-16. Diagnosis may rarely be made during intra-uterine period or during childhood.

While diagnosis of imperforate hymen is diagnosed by detection of hydro-colpos caused by increased vaginal secretions due to elevated maternal hormones during intra-uterine period as a pelvic mass on ultra-sonography, sometimes diagnosis may be made through detection of hydro-colpos caused by accumulation of utero-vaginal secretions in vagina during childhood.<sup>[5]</sup>

As in our case, the pain was tried to be relieved through analgesics administered at cyclic pain periods however pain became more severe in time together with the mechanic pain developing due to hemato-colpos.

Physical examination is important for diagnosis. Imperforate hymen is seen as a thin and blue membrane, however opening is not observed or a thick tissue is observed in atresia.<sup>[6]</sup>

Although anamnesis and inspection-based physical examination is sufficient for diagnosis, these cases may be overlooked until menstruation. Patients with imperforate hymen may admit with different clinical manifestations like back pain, urinary symptoms and constipation.<sup>[7]</sup>

Standard treatment approach includes surgical hymenectomy or hymenotomy. X, T, + incisions may be used and excessive hymen tissue may be removed when required.<sup>[8]</sup>

Sometimes hematocolpos-related mass lesion may be confused with malignity. Imperforate hymen cases accompanying with elevated CA 19-9 and CA 125 were reported in literature.<sup>[9]</sup>

In conclusion, imperforate hymen may easily be diagnosed with a detailed anamnesis and a careful physical examination. However cases may manifest with different clinical presentations like acute urinary retention, pelvic masses which may be confused with malignity. While treatment may be done with a simple incision, selecting the proper method would be important for the future socio-cultural status and sexual life of the patient. Family physicians should make the diagnosis through taking a detailed anamnesis and a simple inspection and should consult to the most appropriate department.

## Disclosures

**Peer-review:** Externally peer-reviewed.

**Conflict of Interest:** None declared.

**Informed consent:** Written informed consent was obtained from the patient for the publication of the case report.

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