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Case Report

Cryptomenorrhoea due to imperforate hymen: a case report

Romi Bansal, Priyanka, Sneha*

Department of Obstetrics and Gynecology, Adesh Institute of Medical Sciences and Research, Bathinda, Punjab, India

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***Correspondence:**

Dr. Sneha,

E-mail: snhdocks@gmail.com

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ABSTRACT

Imperforate hymen is a rare obstructive congenital anomaly of the female genital tract which arises as a result of complete failure of canalisation of the inferior end of the vaginal plate at the junction between the urogenital sinus and the vagina. Its prevalence is 0.05%-0.1%. We are presenting a case of 14 years old girl who came with complaints of lower abdominal pain since 10 days not associated with nausea, vomiting and diarrhoea. She had not attained menarche but her secondary sexual characters were developed with breast, pubic and axillary hair in tanner stage 4. MRI revealed hematocolpos and hematometra with imperforate hymen. Hymenotomy was performed and 300-400 ml of thick tarry colour blood was drained. Her postoperative period was uneventful, and patient was discharged in satisfactory condition. On follow up after 1 month, patient resumed normal menses.

Keywords: Genital anomaly, Imperforate hymen, Primary amenorrhoea, Puberty

INTRODUCTION

Imperforate hymen is a rare obstructive congenital anomaly of the female genital tract with prevalence of 0.05%- 0.1%.¹ It arises as a result of complete failure of canalisation of the inferior end of the vaginal plate at the junction between the urogenital sinus and the vagina.¹ Imperforate hymen prevents passage of blood causing accumulation of menstrual products in the vagina or uterus. The most common age of presentation is around puberty or during newborn period and childhood.²⁻⁵ Treatment is simple, virginity preserving, socially acceptable surgical procedure known as hymenotomy with a few types of incisions on an imperforate hymenal membrane to provide an annular intact hymen.

CASE REPORT

A 14 years old girl came to the department of obstetric and gynaecology at adesh medical college, bathinda with chief complaint of severe colicky lower abdominal pain

since 10 days, not associated with nausea, vomiting or diarrhoea. She had history of cyclic lower abdominal pain since 4 months. She had not attained menarche but had developed secondary sexual characters.

On general examination

- Pulse- 72beats/min
- Blood pressure- 110/70 mm Hg
- Afebrile to touch

On physical examination

Well developed secondary sexual characters with breast, pubic and axillary hair in tanner stage.⁴

- Per abdominal examination.
- Abdomen was soft with tenderness present in suprapubic region.

On genital examination

Bulging, bluish grey membrane, present posterior to urethra which was non tender on touch and exaggerated on valsalva manoeuvre.

On rectal examination

- Mass was found anterior to rectum
- All blood and urine laboratory tests were normal.

On MRI

Vagina dilated and measure 11.5×6.2×6.2cm with haemorrhagic fluid seen in vaginal cavity likely hematocolpos. Collection extending into cervix and lower uterine segment. Uterus is anteverted and anteflexed and measure 5.8×2.8 cm with endometrial thickness 10mm. Bilateral ovaries appear normal.



Figure 1: Bulging imperforate hymen.



Figure 2: Dark tarry blood coming from vagina after giving central excision on hymen.

The diagnosis was hematocolpos and hematometra with imperforate hymen. Patient was taken up for surgery.

Hymenotomy was performed using a simple central excision of hymen. Following the drainage of 300-400 ml of thick tarry colour blood, we performed vaginal washing with saline (Figures 1, 2, 3, 4) Antibiotics were prescribed and instructed to maintain the perineal hygiene. Postoperative period was uneventful and she was discharged in satisfactory condition. Follow up after one month revealed patent outflow tract with normal menses.



Figure 3: Edges of the opening are everted.



Figure 4: Hymenal opening created.

DISCUSSION

Imperforate hymen is a rare condition where vagina and uterus is filled with menstrual blood. It is an isolated anomaly but rarely can be associated with other female genitourinary tract anomalies or genetic disorders.^{1-3,6} So we need to rule out other associated mullerian malformations.^{7,8} Most cases are sporadic in nature however multiple familial cases with both recessive and dominant inheritance have been reported.⁹ Hymen is the membranous structure at the junction of sinovaginal bulb and urogenital sinus which becomes patent during fetal life to establish a connection between vagina and

perineum. During prepubertal period hymen provides physical barrier to infection when vaginal immunity is not fully developed.⁴ The diagnosis is easy with detailed history and genital examination. It is usually asymptomatic until the patient attained menarche. However, after menarche, blood start to accumulate in the vagina and uterus resulting in hematocolpos-hematometra-hematosalpinx leading to following symptoms:

- Amenorrhoea- primary and secondary.³⁻⁵
- Recurrent cyclical lower abdominal pain.^{3,5,7}
- Retention of urine- acute and chronic.^{8,10}
- Vaginal bulge at introitus (bluish in color).¹¹
- Mass per abdomen.⁸
- Retrograde menstruation- endometriosis.
- Rarely intestinal obstruction and constipation.

Differential diagnosis of imperforate hymen includes other obstructive reproductive tract anomalies like lower vaginal septum. The associated vulvar distension however, uniquely suggests imperforate hymen.¹²

The treatment is surgical hymenotomy under anaesthesia after catheterisation. Care should be taken to avoid injury to urethra. The outcome of the surgery is excellent and recurrence is rare.¹³

CONCLUSION

Imperforate hymen is a rare condition but easy to diagnose. Young girls presenting with amenorrhoea and cyclical abdominal pain should be suspected of the condition and treated by virginity preserving hymenotomy.

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