Imperforate Hymen Presented with Acute Urinary Retention: A Case Report

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Abstract

Acute urinary retention in an adolescent girl is not common. Imperforate hymen causing hematocolpos can cause mechanical obstruction, resulting in acute urinary retention. A case is reported here who was a 14 year-old girl with repeated attack of acute retention of urine. After examination & investigations she was diagnosed as a case of imperforate hymen with hematocolpos. She was treated by hymenotomy. Postoperatively her recovery was satisfactory. This case report is presented to address to clinicians the possibility of imperforate hymen with hematocolpos as a differential diagnosis in adolescent girls particularly those who have not started having their menstruation in their teens and present with acute retention of urine.

Keywords: *Imperforate hymen, Urinary retention, Hematocolpos*

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Introduction

Imperforate hymen is a rare congenital anomaly related to the absence of tearing of this membrane during neonatal development[1]. The incidence of imperforated hymen is 1 in 2000 girls and approximately half of this subsequently present with urinary retention[2]. Hematocolpos is a rare condition where the vagina is filled with menstrual blood, caused by uterovaginal pathogenesis such as imperforate hymen[3]. Treatment is surgical opening of the hymen and draining of the accumulated material. After the intervention most of the patients remain asymptomatic and start menarche, reducing the possibility of recurrence[4].

Case Report

A 14 years old girl came to International Medical College Hospital (IMCH) outpatient department with history of acute retention of urine and with bladder catheterized from outside performed 2 days back. She also complained of cyclical lower abdominal pain for last 10 months and that became severe for last 3 days of reporting. Her menarche was not established. On general examination she was found healthy with normal stature and normal development of secondary sexual characteristics. On per-abdominal examination there was a lump in the superpubic region, measuring about 18-week-pregnancy size that was tense and tender on palpation. Pelvic inspection showed a normal vulva & perineum, but there was a bulging membrane in the introitus. Bimanual pelvic examination of the rectum revealed a markedly distended vagina bulging into the anterior rectal wall.

Urinary pregnancy test was negative and other blood tests with hormone analysis were unremarkable. Ultrasonography of lower abdomen showed a fluid filled tubular area located behind the bladder. This appears to be the distended vaginal cavity with a large collection showing fine low level echoes. The uterus could be recognized at the top showing uniform myometrium and a widely distended endometrial cavity. Both ovaries were visualized and normal size. Both kidneys were normal. Pelvicalyceal system was not dilated. So, confirmed diagnosis of her condition was imperforate hymen with hematocolpos with urinary retention.

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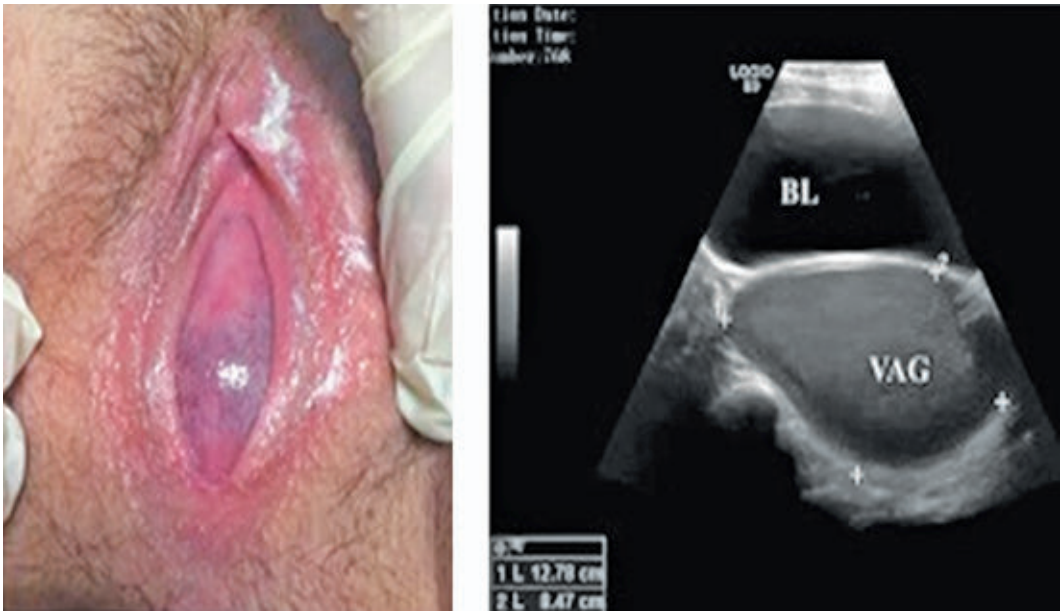

Figure 1: *Bulging membrane in the introitus*

Subsequently, she underwent a hymenotomy (using elliptical incision) with drainage of viscous chocolate coloured blood. Postoperatively, she made a good recovery. Since returning home, she started experiencing normal menses and had no further urinary problems.

Discussion

Acute urinary retention is not a common presentation in children. When young females present, the causes can include mechanical obstruction (urinary tract by stone, urethral stricture, trauma to the external genitalia and imperforate Hymen), neurological disorders and urinary tract infection[5]. Imperforate hymen, despite being a rare disease, is the most frequent congenital anomaly of the female internal genitalia, with an incidence of 1 per 100 women, according to the Americans college of obstetrician and gynecologist (ACOG)[6].

The absence of hymenal perforation is related to an alteration in the canalization of the vagina and the absence of degeneration of epithelial cells during embryonic development[1,7]. The form of presentation is variable. Most of the symptoms are derived from the accumulation of blood due to the obstruction generated by the imperforate hymen. In a study by Darwish et al[4] on 36 patients evaluated with imperforate hymen, all presented hematocolpos and 70% had cyclic pelvic pain. Lee et al[8] conducted a study in which 236 women with imperforate hymen were included and 27.7% showed urinary retention, while 5% had renal involvement. Cases of repeated urinary tract infections and urinary incontinence related to accidental penetration of the urethra have been described[4].

Most of the patients are diagnosed between 12-18 years of age by examination of the internal genitalia[8], visualizing a bluish bulging membrane covering the entire vaginal introitus[1]. Abdominal ultrasound is used in the confirmation of the diagnosis, not requiring any additional test[9]. However, for differential diagnosis, pelvic MRI with anatomical study of the pelvis may be necessary[1].

The treatment of imperforate hymen is surgical. The ACOG recommends cross hymenectomy, which consists of draining the accumulated material through an incision at the level of the hymenal membrane[9].

After surgery, the symptoms reported by the patient disappear, with a very low percentage of recurrences. It is estimated that only 6.6%

manifest restenosis or vaginal adhesion after surgery[8.10]. Post-operative comorbidity is low and 86% patients do not present dyspareunia[1]. It is therefore advisable to carry out a subsequent checkup in order to assess the absence of recurrences and adverse effects.

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