

Imperforate hymen and its complications: report of two cases and review of literature

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ABSTRACT

Imperforate hymen is a rare female genital tract malformation, arises as a result of complete failure of the inferior end of the vaginal plate to canalize. We report two cases of imperforate hymen with different presentation. Our first case was a 14 year old girl presented with lower abdominal pain and acute retention of urine with history of cyclical lower abdominal pain for last 6 months. Examination revealed mass of 14 weeks gravid uterus with bulged imperforate hymen. The second case was a 16 year old girl presents with primary amenorrhoea with mass per abdomen. There was history of difficulty in micturition and constipation for last 4 months. On examination, a mass of size corresponding to 22 weeks gravid uterus with bulged bluish colour imperforate hymen was found. Both the cases were managed with incision and passive drainage of collected menstrual blood. On follow up both the cases resumed menstruation and doing well.

Keywords: Imperforate hymen, Primary amenorrhea, Acute urinary retention

INTRODUCTION

Imperforate hymen is the commonest female genital tract malformation and is noted in approximately 1 in 2000 females.¹ Although the most common age of presentation is around puberty^{2,3} diagnosis in utero⁴⁻⁶ and during the new born period and childhood^{4,7} are also reported. We report two cases of imperforated hymen with different symptoms of presentation.

CASE REPORT

Case 1

A 14 year old girl presented with colicky lower abdominal pain and acute retention of urine for one day. She had not attended her menarche but had developed secondary sexual characters. There was history of cyclical colicky lower abdominal pain with backache for

which she took medication from local hospital. For last one month there was increased frequency and difficulty in micturition. Although she had reduced appetite and poor intake of food due to colicky pain, there was no history of constipation, diarrhoea, vomiting or fevers.

She was catheterised with an indwelling Foleys catheter and one litre of straw coloured urine was drained. Abdominal examination revealed, pain and tenderness in lower abdomen with a suprapubic mass corresponding to a uterus at 14 weeks. Examination of external genitalia revealed a bulging bluish colour imperforate hymen (Figure 1) which was exaggerated on valsalva manoeuvres. The mass was found to be anterior to rectum in per rectal examination. Pelvic ultrasonography revealed distended uterus and vagina all filled up with homogenous thick fluid with internal echos (Figure 2). She was diagnosed as a case of hematometra and hematocolpos with imperforate hymen and planned for

incision and drainage. In operation theatre, a cruciate incision was given and 800 ml of thick tarry blood was drained. The quadrants of the hymens are excised; the mucosal margins were everted and anchored by fine delayed absorbable suture (Vicryl 2/0). Local analgesic cream and prophylactic oral antibiotics were prescribed. Postoperative period was uneventful and she was discharged on 2nd postoperative day after removal of catheter. Follow up after one month revealed patent outflow tract and consummation of normal menstrual cycle.



Figure 1: 14 year old girl with bluish bulged imperforate hymen with associated vulvar distension.

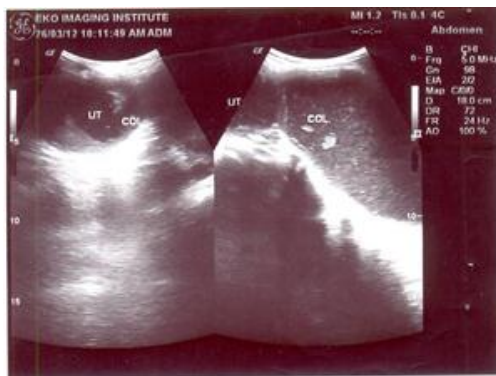


Figure 2: Ultrasound scan showing hematometra and hematocolpos.

Case 2

We report a case of 16 year old girl who presented with primary amenorrhoea and mass per abdomen. She had history of colicky cyclical lower abdominal pain 4 months back for which she was treated in a local peripheral hospital after which pain subsided. She gave history of difficulty in micturition, constipation and occasional pain in back for last 4 months.

Examination revealed well developed secondary sexual characters with tanner stage IV breast, pubic and axillary hair. On per abdominal examination, the size of mass corresponds to 22 weeks gravid uterus and it was well defined, mobile, tender with non-palpable lower border.

Examination of genitalia revealed bulged bluish colour imperforated hymen (Figure 3) and per rectal examination revealed that the mass was anterior to rectum. Abdominal and pelvic ultrasonography revealed large fluid collection in dilated and enlarged vagina, uterus and tubes with fine internal echo's suggestive of hematomocolpos, hematometra with hematosalpinx (Figure 4 & 5). Bilateral mild hydronephrosis due to mass effect of the lesion with no free fluid in peritoneal cavity was reported in ultrasound. CT scan revealed no associated Mullerian duct and skeletal anomalies. She was planned for incision and drainage. In theatre, X shaped or cruciate incisions was made through the hymenal membrane at the 2-, 4-, 8-, and 10-o'clock positions after putting an indwelling Foleys catheter and 1000 ml of collected chocolate coloured blood was drained passively (Figure 6). The individual quadrants were excised along the lateral wall of the vagina, avoiding excision of the vagina. Margins of vaginal mucosa were approximated with fine delayed-absorbable suture (Figure 7). Local analgesic cream and oral antibiotic were given. She had an uneventful postoperative period and was discharged on 2nd postoperative day after removal of the catheter. She had menstruation after one month and is doing well in follow up examination.

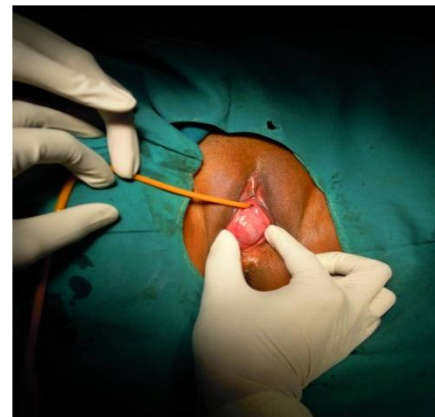


Figure 3: 16 year old girl with imperforate hymen presented as a case of primary amenorrhoea and mass abdomen.

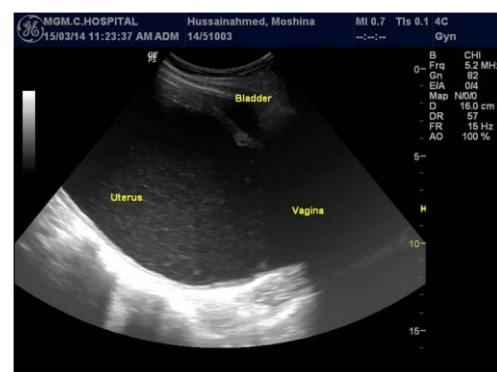


Figure 4: Ultrasound scans showing hematometra and hematocolpos.

3. In chronic cases intestinal obstruction leading to constipation (20-27%)¹⁰ and tenesmus¹³ also seen.

4. Lymphovenous obstruction due to compression of the pelvic veins and lymphatics can lead to edema of limbs.²

IV. Mass per abdomen due to distended uterus and vagina with accumulated menstrual blood.¹⁰

V. Retrograde menstruation may lead to the development of endometriosis and laparoscopy can be performed at the time of excision of an imperforate hymen to detect this.¹

Differential diagnosis of imperforate hymen includes other obstructive reproductive tract anomalies like lower transverse vaginal septum. The associated vulvar distension, however, uniquely suggests imperforate hymen.¹ Imperforate hymen is usually a clinical diagnosis which can be confirmed by ultrasonography.

The treatment includes surgical hymenotomy under anaesthesia following catheterisation with an indwelling Foleys catheter to re-establish vaginal outflow. An X-shaped incision at 2-, 4-, 8-, and 10-o'clock positions is used which has the advantage of decrease risk of injury to the urethra. The quadrants of the hymen are then excised, and the mucosal margins are approximated with fine delayed-absorbable suture.¹⁵ Pressure on the uterus in order to expel more blood is discouraged as it can lead to retrograde flow through the tubes causing endometriosis and tubal adhesions.¹³ Needle aspiration of mucocolpos or hematocolpos should be avoided as in can lead to infection and pyocolpos formation.¹ The outcome of surgical hymenotomy is good and the recurrences are rare.⁵

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