



Giant Hematocolpos and Hematometra in A Pubertal Girl: A Case Report and Review of Literature

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Abstract

Background

Imperforate hymen is an uncommon congenital malformation of vagina leads to accumulation of menstrual blood in vagina (hematocolpos) and uterus (hematometra).

Case

A 14-year-old girl presented with history of cyclic abdominal pain for six months and lower abdominal swelling for one month. She did not attain menarche till the time of presentation. On examination, her secondary sexual characteristics were normal for the age. Abdominal examination revealed a 24-26 weeks abdominopelvic mass, cystic in nature, tender on palpation. USG and MRI pelvis suggested gross hematocolpos and hematometra. Perineal examination was suggestive of imperforate hymen. Hymenotomy was performed under regional anaesthesia and approximately 1 liter of dark red colored old menstrual blood was drained.

Conclusion

Diagnosis and management of imperforate hymen is simple. But most of these cases diagnosed late or missed due to rarity of condition, vague symptoms, and inadequate gynecological examination. Awareness of such condition in young pubertal girl and a high index of suspicion is required for timely diagnosis and proper management.

Introduction

Accumulation of menstrual fluid in vagina and uterus is known as hematocolpos and hematometra respectively. In a pubertal girl, hematocolpos and hematometra may occur due to congenital malformation of the vagina such as vaginal septum, vaginal agenesis and imperforate hymen. Imperforate hymen is an uncommon congenital malformation of vagina. Reported incidence of imperforate hymen is approximately 0.05-0.1% [1]. Most of these girls present around puberty with complaint of primary amenorrhea, cyclical pain abdomen and sometimes with palpable mass per abdomen, urinary retention, constipation and bulging vaginal membrane at introitus [2]. Imperforate hymen occurs when hymen is failed to perforate during embryonic life to connect vestibule to vaginal canal leads to accumulation of menstrual blood in vagina (hematocolpos) and uterus (hematometra). If left untreated, it can further cause hematosalpinx and pelvic endometriosis.

We report a case of imperforate hymen with giant hematocolpos and hematometra in a pubertal girl.

Case report

A 14-year-old girl presented to the gynaecology clinic with history of cyclic abdominal pain for last six months and lower abdominal swelling for one month. She did not attain menarche till the time of presentation. She had occasional episodes of dysuria and urinary retention. On examination, her stature was normal and secondary sexual characteristics were normal for the age (Breast and pubic hairs-Tanner stage III). Abdominal examination revealed a 24-26 weeks abdominopelvic mass (Figure 1a), cystic in nature, tender on palpation with restricted mobility and dull on percussion. Perineal examination showed normal external genitalia and bulging vaginal membrane at introitus suggestive of imperforate hymen (Figure 1b). Transabdominal ultrasound (USG) showed approximately 15x10cm echogenic collection in vaginal cavity suggestive of gross hematocolpos associated with hematometra (Figure 2). A contrast enhanced MRI abdomen & pelvis revealed gross hematocolpos (9.4x9.2x1.9cm) with hematometra, confirmed the diagnosis of imperforate

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Figure 1a: Abdominal examination suggestive of a 24-26 weeks abdominopelvic mass

Figure 1b: Bulging vaginal membrane at introitus suggestive of imperforate hymen

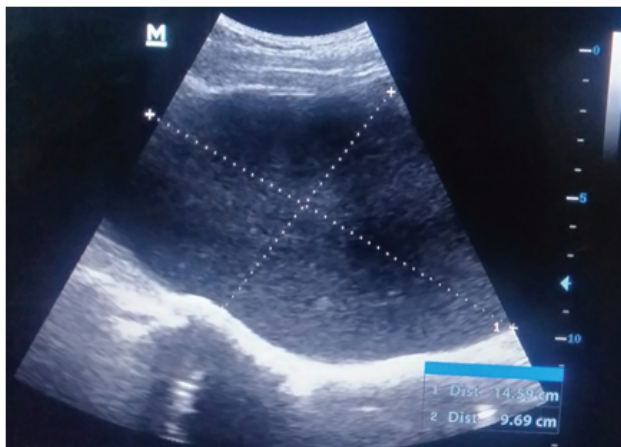


Figure 2: Transabdominal ultrasound showed approximately 15x10cm echogenic collection in vaginal cavity suggestive of gross hematocolpos

hymen. Bilateral hydronephrosis was also noted. The patient and her parents were informed about the diagnosis of imperforate hymen and counselled for the need of surgery. After informed and written consent, hymenotomy was performed under regional anaesthesia. Indwelling bladder catheter was inserted to avoid any inadvertent urethral injury. A simple vertical incision was made over the central portion of the bulging hymenal membrane. Approximately 1 liter of dark red colored old menstrual blood was drained (Figure 3a). Cut edges of hymen were sutured with 2-0 vicryl to evert edges and to prevent adhesive closure of hymenotomy (Figure 3b). Postoperative period was uneventful. On follow up, she resumed normal menstrual cycle from next month.

Discussion

Imperforate hymen is an uncommon congenital malformation of vagina. It may be associated with other urogenital tract malformations and müllerian abnormalities [3]. But some reports oppose this theory and suggest against evaluation of urogenital anomalies [4].

The occurrence is usually sporadic in nature, familial occurrence is reported rarely [5]. Most of these cases present around age of puberty but few cases have been diagnosed in utero and during newborn period [6,7]. In congenital and newborn period, uterovaginal

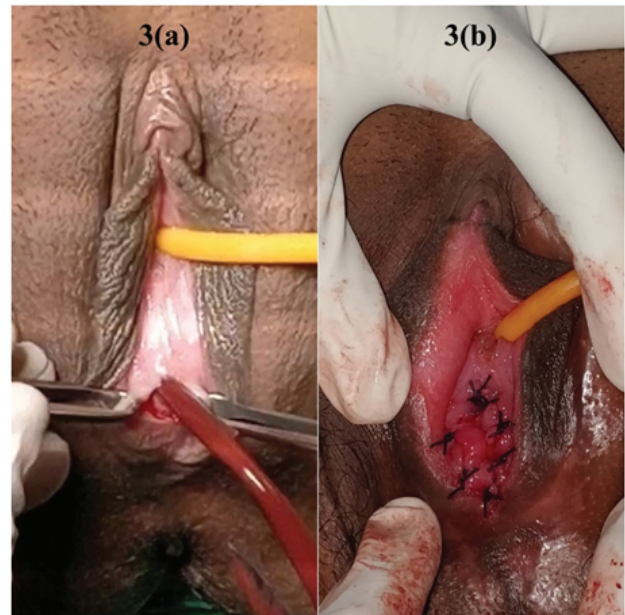


Figure 3a: Dark red coloured old menstrual blood was drained

Figure 3b: Sutured cut edges of hymen

secretions under influence of maternal estrogen collect in blind vaginal cavity results in hydrocolpos and hydrometra [6,7]. In a systemic review, Lee KH et al [1] reported 93.3% patients were diagnosed after birth and only 6.7% were diagnosed during prenatal period. Most common presentation was pain abdomen (54.2%) followed by urinary retention (20.3%), and menstrual abnormality (14%). Diagnosis is usually clinical by inspecting external genitalia. USG and MRI can aid in diagnosis in doubtful cases [1].

Though imperforate hymen is considered to be a benign condition, late diagnosis and improper management may result in severe morbidity which include hematosalpinx, endometriosis, pelvic infections, tubo-ovarian abscess, hydronephrosis and rarely kidney failure [6,8,9].

Management of imperforate hymen is based on excision of hymen (hymenectomy) or hymen preserving surgeries which include a cruciate or simple vertical incision and annular hymenotomy [10,11]. Other treatment modalities reported in literature are carbondioxide laser [12] and foley catheter application as a drain [13]. Needle aspiration of hematocolpos or hydrocolpos should be avoided as it can lead to infection and pyocolpos formation [3]. Long term outcome of hymenotomy is good and recurrences are rare [14]. Complications such as reclosure, vaginal adhesions or vaginal adenosis are reported after surgical procedure only in 6.6% cases [1].

Conclusion

Imperforate hymen is a rare congenital malformation of vagina usually present in young girls near puberty. It can be easily diagnosed clinically and easily treated with hymenotomy. But most of these cases diagnosed late or missed due to rarity of condition, vague symptoms, and inadequate gynaecological examination. Awareness of such condition in young pubertal girl and a high index of suspicion is required for timely diagnosis and proper management.

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