

Voluminous Abdominopelvic Cystic Mass in an Adolescent Girl: Rare Presentation of Imperforate Hymen

Tushar Sabharwal¹, Anupama Tandon^{1*}, Shuchi Bhatt¹ and Kanika Gupta²

¹Department of Radio-diagnosis, University College of Medical Sciences & GTB Hospital, Delhi, India

²Department of Obstetrics and Gynaecology, Max Hospital, Saket, New Delhi, India

Correspondence should be addressed to Anupama Tandon, anupamatandon@hotmail.com

Received: November 11, 2020; Accepted: December 01, 2020; Published: December 08, 2020

ABSTRACT

Imperforate hymen (IH) is an uncommon congenital anomaly of the female genital tract with an approximate incidence of 0.05% - 0.1% [1,2]. It usually presents as delayed menarche, cyclical abdomen pain and/or lower abdominal lump in an adolescent girl. Though bizarre presentations are known, huge hematocolpos due to imperforate hymen resulting in a voluminous abdomino-pelvic mass reaching up to the epigastrium is exceedingly rare. A rare presentation like this is quite misleading and the resultant delay in diagnosis can lead to complications. Awareness of this unusual presentation and a high index of suspicion is thus desirable.

KEYWORDS

Imperforate hymen; Cystic mass; Hematocolpos

CASE PRESENTATION

A 14-year-old adolescent girl presented to the hospital with complaints of progressively increasing abdominal distension with associated mild pain for the past 3 months. Patient also had difficulty in micturation with increased urgency and occasional constipation. On general physical examination she was well preserved with no pallor, icterus, lymphadenopathy or fever. Systemic examination revealed generalised abdominal distension, extending from the epigastrium to the pelvis, fullness of the flanks and a mildly tender abdomen (Figure 1). Shifting dullness was absent and the bowel sounds were unremarkable. Secondary sexual characters were normal for age, however she had not achieved

menarche. Possibility of a large intra-abdominal mass was considered and patient was referred for ultrasound examination. Ultrasound examination revealed a well circumscribed, thin walled, abdominopelvic cystic mass of volume ~2000 ml with internal hyperechoic content (Figure 2). No septations or solid component was seen within it. The mass was displacing all solid organs and bowel loops, compressing the urinary bladder and ureters with moderate bilateral hydronephrosis. Based on sonography, differentials included mesenteric cyst, duplication cyst and loculated ascites and a contrast enhanced CT abdomen was advised. CT scan revealed a well circumscribed, large, thin walled and smooth marginated cystic collection measuring 11.7 cm × 12 cm

Citation: Tushar Sabharwal, Voluminous Abdominopelvic Cystic Mass in an Adolescent Girl: Rare Presentation of Imperforate Hymen.

J Clin Cases Rep 4(S8): 4-6.

2582-0435/© 2021 The Authors. Published by TRIDHA Scholars.

× 27 cm with layering of hyperdense contents (Figure 3). The mass was seen extending from the under surface of liver and spleen, up to the pelvis. The mass was causing displacement of the bowel loops posteriorly and to the sides and urinary bladder anteriorly with stretching of urethra (Figure 3). There was compression of the ureters by the collection, causing bilateral hydronephrosis (Figure 4). Further, it was observed that uterus was seen pushed out of pelvis, lying in left hypochondrium with minimal amount of fluid within the endometrial cavity. This large cyst was seen to communicate with the uterus (Figure 4). A diagnosis of a massive hematocolpos was made. On gynaecological examination (done only after CT scan was performed) hymen was bluish and bulging, suggesting imperforate hymen. A hymenotomy was performed with drainage of ~3000 ml of coagulated blood.



Figure 1: Clinical photograph showing the large abdominal mass in a 14-year-old adolescent girl.

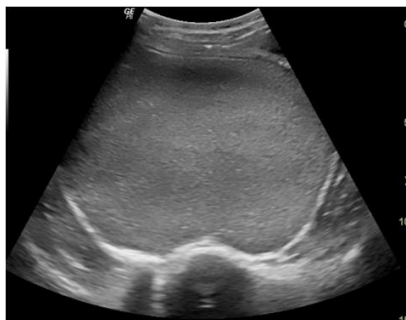


Figure 2: Transabdominal ultrasound image demonstrates the large intra-abdominal collection with internal hyperechoic contents.

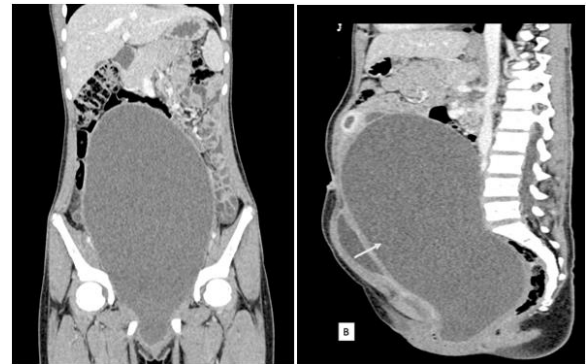


Figure 3: A) Coronal and B) Sagittal MDCT images showing the voluminous abdominopelvic cystic mass displacing the bowel upwards and bladder anteriorly.

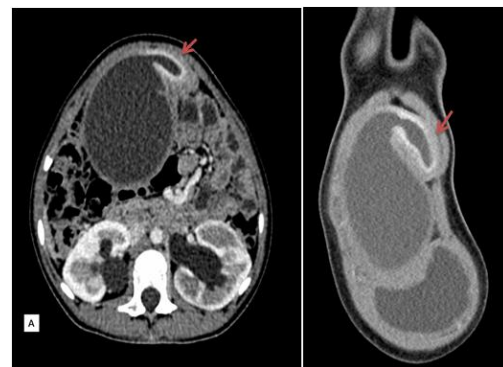


Figure 4: A) Axial and B) Coronal MDCT images (anterior section) showing superiorly placed uterus (red arrow) and the communication of the cystic mass with the uterine cavity. Also seen is the bilateral hydronephrosis.

DISCUSSION

Vagina has a dual source of origin. The upper one-third arises from the caudal fused müllerian ducts, and the lower two-thirds from canalisation of the vaginal plate developing from the sinovaginal bulbs which are cranial evaginations of the urogenital sinus. Hymen is the thin tissue plate that separates the lumen of the vagina from the urogenital sinus. At around 20 weeks of gestation, the central portion of the hymen begins to degenerate and establish a connection between the vaginal lumen and the perineum. When this fails to occur (0.014% - 0.1%), the hymen remains imperforate [3]. Vaginal outflow obstruction can also be caused due to vaginal atresia, transverse vaginal septum, persistent urogenital sinus and cloacal dysgenesis. At menarche, the menstrual blood collects in blind vaginal cavity resulting in hydrocolpos and hydrometra [4,5].

The usual presentation of hematocolpos is with primary infertility, cyclical abdominal pain or/and a lower abdominal fullness. Hematocolpos presenting as a large abdomino-pelvic mass reaching up to the hypochondrium is exceedingly rare. Presentations such as this are invariably misleading and thus pose a diagnostic challenge both for the clinician and the radiologist. Though clinical diagnosis is straightforward it is often missed due to vague symptoms, low index of suspicion and an adequate gynaecological examination. Although imperforate hymen is a benign condition with simple management and good prognosis, a late diagnosis with a resultant delay in treatment can result in significant morbidity due to the associated complications. These patients can develop endometritis, pelvic inflammatory disease (PID), endometriosis, tubo-ovarian abscesses

and occasionally renal failure due to associated obstructive changes. The present case had significant bilateral hydronephrosis and a renal failure was impending with any further delay in diagnosis [6].

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 [7,8]. Such patients have good prognosis with normal life post-surgery.

CONCLUSION

Imperforate hymen can occasionally have unusual presentations, one of which is a massive abdominopelvic mass. Awareness of such an entity and a high index of suspicion are imperative for prompt diagnosis and timely management.

REFERENCES

1. Lardenoije C, Aardenburg R, Mertens H (2009) Imperforate hymen: A cause of abdominal pain in female adolescents. *BMJ Case Reports* 2009: bcr0820080722.
2. Posner JC, Spandorfer PR (2005) Early detection of imperforate hymen prevents morbidity from delays in diagnosis. *Pediatrics* 115(4): 1008-1012.
3. Ray A, Kumari S (2020) Congenital hydrocolpos: Diagnostic journey and management - A case report. *The Journal of Obstetrics and Gynecology of India* 70(5): 407-408.
4. Nagai K, Murakami Y, Nagatani K, et al. (2012) Life-threatening acute renal failure due to imperforate hymen in an infant. *Pediatrics International* 54(2): 280-282.
5. Ayaz UY, Dilli A, Api A (2011) Ultrasonographic diagnosis of congenital hydrometrocolpos in prenatal and newborn period: A case report. *Medical ultrasonography* 13(3): 234-236.
6. Singh AP, Gupta AK, Pardeshi R, et al. (2019) Hydrocolpos caused by imperforate hymen in a preterm newborn. *Saudi journal of Medicine & Medical Sciences* 7(2): 124-125.
7. Basaran M, Usal D, Aydemir C (2009) Hymen sparing surgery for imperforate hymen: Case reports and review of literature. *Journal of Pediatric and Adolescent Gynecology* 22(4): e61-e64.
8. Cetin C, Soysal C, Khatib G, et al. (2016) Annular hymenotomy for imperforate hymen. *Journal of Obstetrics and Gynaecology Research* 42(8): 1013-1015.