

YOUNG GIRL PRESENTING WITH ABDOMINAL PAIN AND ABDOMINAL-PELVIC MASS: A PRESENTATION FOR HAEMATOCOLPOS DUE TO IMPERFORATE HYMEN**Dr. K. E. Karunakaran***

Department of Clinical Sciences, Faculty of Health-Care Sciences, Eastern University, Sri Lanka.

***Corresponding Author: Dr. K. E. Karunakaran**

Department of Clinical Sciences, Faculty of Health-Care Sciences, Eastern University, Sri Lanka.

Article Received on 05/02/2021

Article Revised on 25/02/2021

Article Accepted on 15/03/2021

ABSTRACT

a fourteen year old girl presented to the Emergency Treatment unit of the Hospital with vague lower abdominal pain and a cystic mass in the hypogastrium suspected for ovarian cyst. It was diagnosed with haematocolpos by ultrasonography. The mass measured 8cm x 6cm with normal size uterus. Subsequent perineal examination revealed imperforate hymen without significant bulge. Hymenotomy was done; 1000ml chocolate colour material drained. Although rare, imperforate hymen can be kept in mind specially by the attending physician and a history about menstruation plus perineal examination shall be made when adolescent girl presents with lower abdominal pain and/or mass.

KEYWORDS: Abdominal pain, Imperforate hymen, Haematocolpos,**INTRODUCTION**

Delay in an adolescent attaining menarche worries the parents. Nevertheless, in the present context, their attention is diverted towards their child engaging in education. Sri Lanka has the high literacy rate with female child education rate of almost 100% (99.4% in 2018).^[1] Menstruation is associated with different degrees of pain and the pain is more significant in young girls. Thus, often there is a history of monthly attacks of lower abdominal pain or backache^[2] as the girl menstruate which may get concealed in the case of imperforate hymen. Pelvic discomfort and rectal pain are also noticed by some patients.

Imperforate Hymen is a rare congenital malformation of the female urogenital sinus with reported incidence of 1 in 2000 female births.^[3] This is one of the causes to be kept in mind when there is delay in a girl attaining menarche. The menstrual blood gets accumulated within the vagina, known as haematocolpos, then can fill the endometrial cavity known as haematometron and can fill the Fallopian tubes.

Haematocolpos is thus a rare condition and presents with an abdominal mass mimicking an ovarian cyst since vagina accommodates large amount of concealed menstrual fluid. This mass displaces the urinary bladder upwards and causes retention of by interfering with the opening of the internal urethral sphincter. Thus, the girl presents with monthly abdominal pain, urinary retention and a tumour in lower abdomen. We reported such a case

whose initial presentation was a vague abdominal pain and abdominal mass.

Case: Fourteen year old Miss. A presented with vague lower abdominal pain of one month duration. She has not attained menarche. Pain was so vague that her mother took her to the General Practitioner (GP) who gave analgesics. In January 2021 she experienced significant lower abdominal pain and when she was admitted to the Emergency Treatment Unit of Teaching Hospital, Batticaloa, Sri Lanka. Her urinary and bowel habits were normal. She denied cyclical abdominal pain to indicate menstruation. Examination showed her general condition satisfactory. Development of secondary sexual characteristics such as breast and pubic hair of Tanner stage II were noted. A cystic mass in the hypogastric region was found. Initially an ovarian cyst was suspected. The ultrasonography revealed a cystic mass in the pelvi-abdominal region measuring 8cm x 6 cm, suggestive of Haematocolpos (pic 1). Her Perineal region was examined subsequently which showed imperforate hymen with Tanner stage II external genitalia (pic 2). A vertical incision was made on the hymen. About 1000 ml thick chocolate colour material was drained (pic 3). She was subsequently discharged. She is under follow up.

DISCUSSION

During the process of development, the vagina is formed by canalization of Mullerian ducts and sinovaginal bulb tissues. This canalization may get arrested at different levels causing abnormality in the vagina. The

commonest among them is the imperforate hymen.^[4] Normal uterine and ovarian functions are indicated by the presence of haematocolpos.

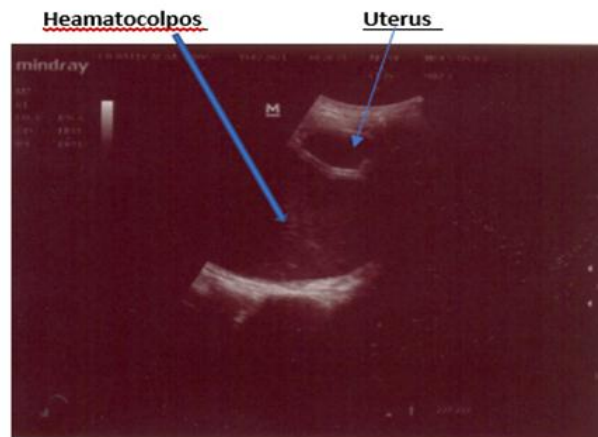
The common presentation of this condition is reported to be cyclical abdominal pain and amenorrhoea at the age of menarche.^[5] A mass is being created when the menstrual blood gets accumulated in the vagina. The patient we encountered presented with vague abdominal pain of one month duration which prompted her parents to seek treatment from a General practitioner. When presented to the Emergency department in the major hospital, the presence of a cystic lump in the hypogastric region was found out, thus made the clinician to the diagnosis of an ovarian cyst. This was also due to the fact that her urinary functions were normal and also she didn't have cyclical pain to suspect haematocolpos. Similar situation was also reported by others as well.^[3,6] In our case we drained about one liter of altered menstrual fluid. Despite such great amount the girl didn't have much pain nor discomfort indicating the elasticity and accommodative nature of the normally collapsed vagina.

Further, due to the presentation which made the suspicion more towards ovarian neoplasm and also the

fact that there was no complaint of delay in menarche, we missed the examination of her external examination at the outset. This situation has been denoted in the reported cases as well^[7,8] where the girl presented with urinary retention was treated for urinary tract infection and subsequently diagnosed as having haematocolpos by computerized tomography and ultrasonography. The imaging such as ultrasonography is adequate to make the diagnosis and lead the clinician to the detection of the imperforate hymen. Thus, when a girl at the age of puberty presents with urinary symptoms, a detailed Gynaecological history and examination of external genitalia becomes essential^[9] to avoid missing this condition.

Treatment option is often simple and the mainstay of treatment is to drain the contents of the genital tract, keep the genital tract open for subsequent menstrual functions. Simple procedure such as hymenotomy^[10] is generally adequate. However other methods such as incision and insertion of Foley catheter for two weeks also reported to be effective.^[3] Regular follow up is essential to ensure the occurrence of normal menstrual bleeding and fertility function.

Ultrasonography of abdomen, showing uterus and haematocolpos



Pic 1. Ultrasonography.



Pic 2. Imperforate Hymen.



Pic 3. Draining about 1000 ml chocolate colour material.

IN CONCLUSION

Haematocolpos occurs secondary to imperforate hymen and often missed as this is a rare condition. Delay in menarche, urinary symptoms, vague abdominal pain, a mass in lower abdomen should raise suspicion. A detailed gynaecological history and examination of external genitalia should be advocated to those practitioners to whom the parents take their children to seek treatment. The condition is easily treatable to ensure normal menstrual functions.

REFERENCE

1. Sri Lanka – Literacy rate: countryeconomy.com accessed on, 2021.
2. Malformations and Maldevelopments of the Genital Tract. In; Malhothra N, Kumar P, Mathothra J, Bora N M, Mittal P eds. *Jeffcoat's Principles of Gynaecology*, 2014; 191 – 194.
3. Lahfourri M, Benhaddou H, Ettabi F. Hematocolpos on imperforated hymen and acute urinary retention. A rare disease About seven observations and literature reviews. *J Gynecol Res Obstet*, 2020; 6(2): 014-018. DOI: 10.17352/jgro.000079
4. Ramareddy RS, Kumar A, Alladi A. Imperforate Hymen: Varied Presentation, New Associations, and Management, 2017; 22(4): 207–210. doi: 10.4103/0971-9261.214451. PMID: 28974871
5. Abdelrahman HM, Feloney MP. Imperforate Hymen. [Updated 2020 Dec 17]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK560576/> [accessed on 10.March 2021]
6. Kotter HC, Weingrow D, Canders CP. Hematometrocolpos in a Pubescent Girl with Abdominal Pain. *Clin Pract Cases Emerg Med*, 2017; 1(3): 218-220. Published 2017 Jul 6. doi:10.5811/cpcem.2017.3.33369
7. Abraham C. Imperforate Hymen Causing Hematocolpos and Urinary Retention. *J Emerg Med*. 2019. 57(2) doi: 10.1016/j.jemermed, 2019; 03: 014. Epub 2019 Apr 22 2019 Aug;57(2):238-240
8. Hematocolpos secondary to imperforate hymen, 2017; 1(3): 218–220. Published online 2017 Jul 6. doi: 10.5811/cpcem.2017.3.33369. ,
9. Geum Hwa Lee, Mi-Jung Lee, Young Sik Choi, Jae Il Shin Imperforate Hymen Causing Hematocolpos and Acute Urinary Retention in a 14-Year-Old Adolescent. *Child Kidney Dis*, 2015; 19(2): 180-183. <https://doi.org/10.3339/chikd.2015.19.2.180>
10. Abu-Ghanem S, Novoa R, Kaneti J, Rosenberg E. Recurrent urinary retention due to imperforate hymen after hymenotomy failure: a rare case report and review of the literature. *Urology*, 2011; 78: 180–2.