

Review Article

Open Access

Imperforate Hymen Complicated by Hematocolpos; A Case Report

Mesfin Ayalew Tsegaye*, Solomon Muleta Ayano, Alemayehu Nigussie Adugna, Negusu Kassa Biza and Abinet Mitku Turo

Dilla University College of Medicine and Health Sciences, Department of Obstetrics and Gynecology, Dilla, Ethiopia

ABSTRACT

Introduction and Importance: Imperforate hymen is the complete obstruction of the vaginal canal caused by a non-regressed hymen. It is a rare condition that can be diagnosed antenatally, postnatally, during infancy, and after menarche. The presentation is usually cyclic abdominal pain, amenorrhea, and hematocolpos, which is an accumulation of blood in the vaginal cavity.

Case Presentation: This case report presents a typical instance of imperforate hymen in a patient who presented with hematocolpos. In addition to the clinical complications, she also experienced social repercussions, as her husband divorced her due to the condition. She was treated successfully.

Clinical Discussion: Imperforate hymen presents with multiple signs and symptoms. It is managed surgically with either hymenotomy or hymenectomy.

Conclusion: Pelvic examinations should not be avoided in virgin or young patients who present with amenorrhea and cyclic lower abdominal pain.

*Corresponding author

Mesfin Ayalew Tsegaye, Dilla University College of Medicine and Health Sciences, Department of Obstetrics and Gynecology, Dilla, Ethiopia.
Tel: +251912974861.

Received: January 03, 2025; **Accepted:** January 08, 2025; **Published:** January 15, 2025

Keywords: Imperforate Hymen, Hematocolpos, Hematometra, Cruciate Incision, Amenorrhea

Introduction

Imperforate hymen is a condition in which a thin membrane called the hymen completely covers the vaginal canal due to the failure of the membrane to regress during the embryonic period. This rare occurrence affects approximately 0.05-0.1% of females, or about 1 in 2000 [1-4].

One of the commonest presentations is amenorrhea associated with hematocolpos, which refers to the accumulation of menstrual blood in the vaginal cavity and sometimes in the uterus, leading to a condition known as hematometra. When both conditions occur simultaneously, it is termed hematocolpometra. Consequently, the typical age for diagnosis is after menarche, when patients often present with cyclic abdominal pain, lower abdominal heaviness, and swelling [5,6].

This case report discusses a 19-year-old woman who was divorced due to her imperforate hymen. She presented with cyclic abdominal pain and absence of menses. A cruciate incision of the hymen was performed, and she was discharged in good health.

This case report is prepared in line with SCARE criteria [7].

Case Presentation

The patient is a 19-year-old female who presented to our hospital with primary amenorrhea. She has experienced cyclic monthly lower abdominal pain for approximately five years, accompanied by a growing lower abdominal swelling and lower back pain. There is no family history of similar conditions.

She was married about a year ago, but her husband divorced her due to the imperforate hymen, which caused her significant psychological stress. Upon examination, there was a lower vaginal bulge with no vaginal opening, except for the urethral opening. Additionally, there was a lower abdominal swelling reaching up to the level of the umbilicus. A digital rectal examination revealed a soft anterior mass.

Her blood workups were all normal. An abdominal ultrasound showed a large cystic swelling consistent with hematocolpos, and no other associated anomalies were identified.

She underwent surgery, during which cruciate incisions were made over the hymen, allowing for the evacuation of 1500 mL of hemolyzed blood.(figure 3 and figure 4) Follow-up assessments at two weeks and one month post-procedure indicated that the hymen was patent, with no signs of closure or restenosis.

Discussion

Imperforate hymen is usually diagnosed during adolescence, often after menarche; however, antenatal diagnosis of imperforate hymen is possible. Reluctance to perform pelvic examinations in young individuals and virgins often delays the diagnosis.

The common presentations of imperforate hymen include amenorrhea, hematocolpos, and cyclic abdominal pain. The mass effect of hematocolpos may also lead to symptoms such as urinary frequency, recurrent urinary infections, rectal obstruction, and acute urinary retention. Complications like hydronephrosis and renal failure are also possible.

The diagnosis is primarily clinical, where a bluish bulge is observed at the introitus of the vagina. Abdominal palpation may reveal a mass in the pelvic area, which represents the hematocolpos. This mass can also be palpated during a digital rectal examination. Abdominal ultrasound is the first and most important diagnostic tool, as it aids in visualizing hematocolpos. It can also help rule out other associated anomalies and complications of imperforate hymen. However, associated congenital anomalies are almost absent with imperforate hymen, which decreases the importance of abdominopelvic MRI in diagnosis, although it may assist in assessing the thickness of the membrane.

Management of imperforate hymen involves draining the accumulated blood by making a cruciate or X-shaped incision over the hymen for those who want to preserve virginity. Removal of hymenal tissue (hymenectomy) may also be performed, especially if the membrane is thick, to avoid restenosis and closure.

Conclusion

Doing pelvic examinations in young and virgin patients who present with cyclic abdominal pain and amenorrhea is necessary to pick imperforate hymen. Additionally, raising awareness of it might reduce the social consequences of the condition. All authors approved the final submitted manuscript.

Funding

This work did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Patient consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Ethical Approval

Ethical approval for case reports is not required by our institution.

Conflict of Interest Statement

The authors declare that they have no conflict of interest regarding the publication of this case report.

References

1. Zade RD, Choudhary A, Inamdar SA, Bankar NJ, Junghari M (2024) Imperforate Hymen: A Report of a Case With Classical Signs. *Cureus* 16: e56014.
2. Marino G, Alfieri N, Vaglio Tessitore I, Barba M, Manodoro S, et al. (2022) Hematocolpos due to imperforate hymen: a case report and literature systematic review. *International Urogynecology Journal* 34: 357-369.
3. Kalaivani V, Gopalan U (2021) Imperforate hymen: a case report. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology* 10: 1172-1173.
4. Thiam M, Niang I, Diop M, Diouf KN, Ka S (2020) Late diagnosis of imperforate hymen with hematometrocolpos and bilateral hydronephrosis of a horseshoe kidney. *Radiology Case Reports* 15: 2217-2220.
5. Lee K H, Hong J S, Jung H J, Jeong H K, Moon, et al. (2019) Imperforate Hymen: A Comprehensive Systematic Review. *Journal of Clinical Medicine* 8: 56.
6. González Monzón B, Guzmán Muñoz M (2023) Himen imperforado con hematocolpos. A propósito de un caso. *Peruvian Journal of Gynecology and Obstetrics* 69: e2558.
7. Sohrabi C, Mathew G, Maria N, Kerwan A, Franchi T, et al. (2023) The SCARE 2023 guideline: updating consensus Surgical CAse REport (SCARE) guidelines. *Int J Surg Lond Engl* 109: 1136-1140.

Copyright: ©2025 Mesfin Ayalew Tsegaye, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.