

Imperforate Hymen: Rare Types

A. Zidani^{1*}, M. A. Nouri¹, S. Ouassil¹, D. Basraoui¹, Jalal, H¹

¹Radiology Department; Infants Department; UHC Mohammed VI, Marrakech, Morocco

DOI: <https://doi.org/10.36347/sjmcr.2024.v12i10.051>

| Received: 14.09.2024 | Accepted: 21.10.2024 | Published: 25.10.2024

*Corresponding author: A. Zidani

Radiology Department; Infants Department; UHC Mohammed VI, Marrakech, Morocco

Abstract

Original Research Article

When the hymen, a thin membrane of stratified squamous epithelium circumscribing the vaginal introitus, does not spontaneously rupture during neonatal development, it is referred to as an imperforate hymen. An imperforate hymen is a rare cause of primary amenorrhea and can present with obstructive symptoms of the female genital and urinary tracts during the perinatal, pediatric, or adolescent years. Timely diagnosis and prompt treatment are critical. Specific pediatric and gynecologic knowledge and skills are necessary to provide comprehensive, patient-centered care. In addition to the anatomical and physiological aspects of imperforate hymen, its clinical presentation, and potential complications, the psychological impact on affected individuals must be understood. Best practices will ultimately improve patients' quality of life and reproductive health outcomes. This activity reviews the evaluation and treatment of imperforate hymen and highlights the role of the interprofessional team in improving care for patients with this condition.

Keywords: Imperforate Hymen, primary amenorrhea, sonography.

Copyright © 2024 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Imperforate hymen is a rare congenital anomaly. It creates an obstruction of the vaginal tract which retained vaginal and uterine secretions. It's should be diagnosed earlier to eliminate pain and discomfort and to establish a functional genital tract.

Objectives: Show the contribution of imaging in the diagnosis for imperforate hymen.

MATERIEL AND METHODS

Describe the case of 5 girls of imperforated hymen. They consulted in radiology and chirurgical infants departments at UCH Mohammed VI.

RESULTS

Patients ages were, 3 days, 3, 4, 13 and 16 years old. They consulted for lower abdominal midline mass and pain associated to urinary retention. Additional the older one presented primary amenorrhea. Physical examination of the lower abdomen showed a tender midline mass. Pelvic examination revealed a building imperforate hymen. On rectal examination the vagina bulged toward the rectum. Pelvic ultrasound (Fig 1) revealed in the lower pelvis, a fluid structure, extending inferiorly from the uterus, obscuring visualization of the cervico-vaginal junction with interior echos. The mass displaced the urinary bladder anteriorly. MRI (Fig 2) was done for one of these patients and demonstrated hyperintense signal in vagina. The treatment is chirurgical with hymenotomy. The hymeneal incision allowed drainage of old previously blocked fluid, secretions (2cases), blood (2cases) and pus (1case).

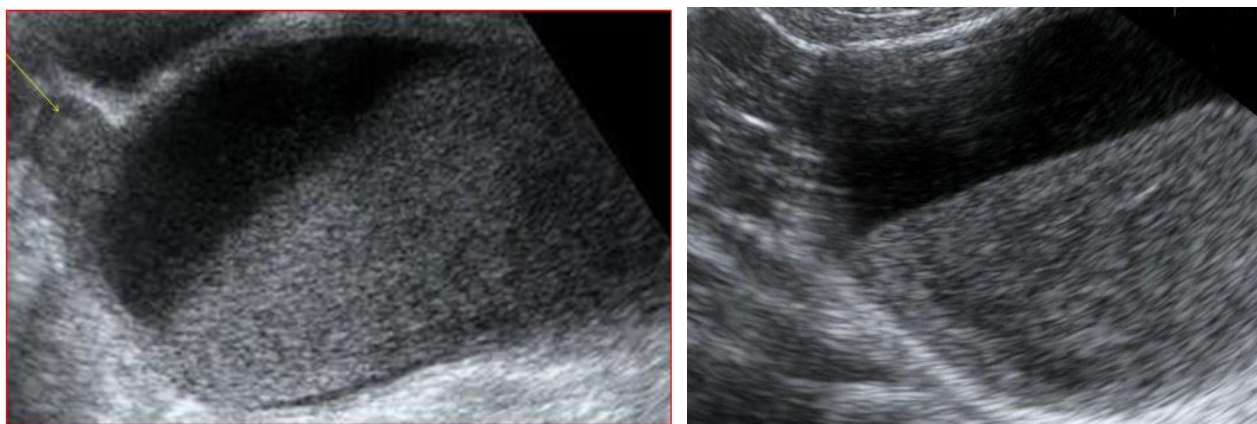


Fig 1: Pelvic ultrasonography: fluid structure extending inferiorly from the uterus to the vaginal with interior echos



Fig 2: Sagittal T2 image demonstrates a fluid-distended vagina between urinary bladder and compressed rectum

DISCUSSION

Imperforate hymen is a rare congenital anomaly in which the hymenal membrane occludes outflow from the femal genital tract. Hydrocolpos, hydrometrocolpos and pyocolpos can occur secondary to this condition.

The presentations of patients with imperforate hymen can be variable: incidentally detected or with symptoms of abdominal and back pain, constipation, dysuria or acute urinary retention, peritonitis, or primary amenorrhea. However, the diagnosis of congenital imperforate hymen should be made at birth, as pediatricians should determine if there is a patent hymen during the newborn period. Actually, the diagnosis can be made during the antenatal period. In the literature, sonography has been the imaging technique of choice for the prenatal diagnosis of imperforate hymen with hydrocolpos. Although, sonography is useful for evaluating fetal anatomy and showing abnormalities, its

capability of detecting fetal abnormalities decreases if the mother is obese or has oligohydroamnios and when the fetus is in certain positions. MRI has become an alternative and complementary for some of the equivocal prenatal cases owing to the recent developments in MRI technology. It provides excellent anatomic detail and soft-tissue contrast with multiple reconstruction planes and a large field of view. MRI has become more valuable in this setting and its role is still expanding.

Treatment generally consists of hymenotomy or hymenectomy. Because hymen is symbol of virginity in some communities, its destruction can be source of social problems for some girls. The technique using the Foley catheter is an adequate alternative when preservation of the hymen is required.

CONCLUSION

Prenatal diagnosis and early newborn imaging lead to early detection and treatment of these cases. This can prevent complications secondary to compression and obstruction of surrounding structures. Pelvic ultrasonography and MRI are the cornerstones of imaging for uterovaginal anomalies.

REFERENCES

- Adaletli, I., Ozer, H., Kurugoglu, S., Emir, H., & Madazli, R. (2007). Congenital imperforate hymen with hydrocolpos diagnosed using prenatal MRI. *American Journal of Roentgenology*, 189(1), W23-W25.
- Posner, J. C., & Spandorfer, P. R. (2005). Early detection of imperforate hymen prevents morbidity from delays in diagnosis. *Pediatrics*, 115(4), 1008-1012.