

Authors:

Tiara R. Dean

University of South Alabama College of Medicine, 5795 USA Drive North, CSAB 170, Mobile, AL 36688, USA

td2021@jagmail.southalabama.edu

Nicolette P. Holliday, M.D., F.A.C.O.G.

Department of Obstetrics & Gynecology, University of South Alabama, Strada Patient Care Center, 1601 Center Street, Suite 3D, Mobile, AL 36604, USA.

nholliday@health.southalabama.edu

ABSTRACT

Title: Sizeable Imperforate Hymen Presentation: A Case Report and Review of the Literature

Background: The hymen is a thin layer of mucosal tissue that occludes the opening to the vaginal canal. During development, the hymen normally perforates to form a connection between the vestibule and the vaginal canal. If this stage fails, the hymen completely obstructs the vaginal opening creating an imperforate hymen. This diagnosis can present during the perinatal, pediatric, or adolescent years with obstructive symptoms caused by hematometrocolpos, the accumulation of menstrual blood in the vaginal or uterine cavities. A diagnosis in neonates is made if a bulging introitus due to mucocolpos from vaginal secretions is noted at birth. If this physical exam finding goes unnoticed, the secretions are reabsorbed, leaving the child asymptomatic until menarche. At menarche, patients typically present with cyclic abdominal pain, primary amenorrhea, and hematocolpos causing a bluish discoloration of the hymenal membrane. Distension of the vagina may cause back pain, dyschezia, or dysuria. The treatment of choice for an imperforate hymen is a hymenectomy. Surgical management is commonly delayed until puberty when the vaginal tissue is adequately estrogenized, which promotes wound healing. Postoperative complications include reclosure, vaginal adenosis, or vaginal adhesion.

Objective: To report a case of a very large hematometrocolpos secondary to an imperforate hymen in an adolescent patient.

Study Design: Case report

Results: It is estimated that an imperforate hymen occurs in 1 out of 1000 genetically female births. Even though the steps involved in diagnosing and treating an imperforate hymen are relatively simple, the diagnosis is often missed or delayed due to its low incidence, generic symptoms, or incomplete physical examination. A 12-year-old nulligravid female presented to her primary care physician (PCP) with a 2-day duration of cramping, abdominal pain and dysuria associated with fever. Menarche was believed to have occurred approximately 3 months prior with irregular cycles since. Cycles were described as occurring every 2 weeks with a 2-week duration of brownish discharge and spotting. Believing that the patient had

appendicitis, her PCP sent her for imaging. The obtained CT scan was significant for hematometrocolpos measuring 27 cm x 12.5 cm x 12.9 cm with a massively dilated vagina. At the time of presentation, CBC showed leukocytosis with a neutrophil predominance and Hgb/Hct were 11.9 g/dL and 36.2%, respectively. Upon examination, she had a tense, vaginal bulge at the level of the hymen, bluish in hue. The patient was then admitted to the hospital for a hymenectomy the following day. Intraoperatively, a scalpel was used to make a cruciate incision in the hymenal tissue. The vaginal introitus was opened enough to pass a tampon. Vicryl 3.0 was used to attach the hymen to vaginal mucosa with interrupted stitches. Bovie was used at 7 o'clock position for hemostasis along the surgical border on hymen. By the end of the procedure, 2 L of blood were evacuated from the vaginal canal. At time of discharge, she was in stable condition with pain well controlled with Tylenol. At outpatient follow-up, she reported a significant improvement in quality of life. Changes included a 11 lb weight loss, regulation of menstrual cycles, and resolved dysuria and constipation.

Conclusion: Although an imperforate hymen is a benign congenital disorder, delay in treatment can cause severe consequences. Relevant to this case, a PUBMED search for “imperforate hymen” yielded 413 articles in the English language. Many of the published case reports about an imperforate hymen describe adolescent patients presenting with cyclic abdominal pain and primary amenorrhea. Therefore, patients experiencing irregular menstrual cycles are more likely to have a delayed diagnosis. Due to the ease of diagnosis and symptom severity of improper management, clinicians, especially gynecologists and PCPs, should include this diagnosis in their differential when evaluating abdominal pain, lower back pain, or urinary retention in premenarchal females or adolescent females with irregular menstrual cycles. Complications associated with untimely medical management include retrograde menstruation and ruptured hematosalpinx, endometriosis, pyocolpos, and infertility. It is important that these patients follow up routinely with their gynecologist to monitor for hymen re-closure and menstrual cycle regulation.