



**Hematocolpos Secondary to Imperforate Hymen in Adolescent Patient.**

**Case Report**

Dr. Daniel Manzano Moscoso\*<sup>1</sup>, Dra. Laura González Gordón<sup>2</sup> Md. Ana Lucía Cevallos Rodríguez<sup>3</sup>

1 Pediatric Surgery Attending Physician, Armed Forces Specialty Hospital N°1 Quito-Ecuador

2 Pediatric Surgery Attending Physician, Hospital Institute of Social Security IESS Quito Sur. Quito

3 Resident Physician, Armed Forces Specialty Hospital N°1 Quito-Ecuador

\***Correspondence to:** Dr. Daniel Manzano Moscoso, Pediatric Surgery Attending Physician, Armed Forces Specialty Hospital N°1 Quito-Ecuador

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### ***Abstract***

*The imperforate hymen is an extremely low-frequency pathology, caused by the lack of perforation of the hymen, which causes there to be no communication between the vagina and the perineum, occurring in 1 in 1000 to 2000 newborns. We present the case of an 11-year-old female patient with symptoms of urinary retention and abdominal pain. The diagnosis was based on the anamnesis and physical examination, using abdominal ultrasound as support. The treatment was surgical. A review of the literature on diagnosis, treatment, and complications is made.*

### **Introduction**

The hymen is a membrane of mucosal epithelial tissue that separates the vaginal cavity from the urogenital sinus in the embryonic stage, perforating in the fetal stage to establish communication between the vagina and the perineum. (1) So the absence of its perforation takes the name of imperforate hymen. With an incidence of 0.05% to 0.1%. (2) and 1 in 1000 to 2000 newborn women. (3) Although there are family cases, the vast majority are isolated and sporadic cases.

This pathology presents a bimodal pattern since patients can be diagnosed both in the neonatal stage and in adolescence. (2) It is usually asymptomatic until menarche, its age of presentation is between 11 and 15 years. (4) although the imperforate hymen is not accompanied by other genitourinary anomalies, it can be associated with complications if diagnosed late such as endometriosis, subfertility, infections, hydronephrosis, and kidney failure. (5)

Clinically, it is expressed as amenorrhea and cyclic abdominal pain in hypogastrium, constipation, urinary tract infection, or urinary retention. (6)

The diagnosis is made through a detailed medical history and a correct physical examination that includes genital inspection, where it is necessary to differentiate between an imperforate hymen and other vaginal anomalies such as vaginal atresia, cervical atresia, or vaginal septum. (7).

The presence of a bulging, bluish hymen is usually diagnostic. A pelvic ultrasound would show a cystic mass with echogenic content. (7) about the use of magnetic resonance imaging or tomography, could be used when a congenital malformation is suspected. (8) The treatment is surgical hymenotomy. Among the existing techniques are: the simple incision, the U-shaped incision, the Y-plasty, and even the circular incision with balloon dilation. (9) (8)

## Case Report

We present the case of an 11-year-old female patient, with a history of constipation for 7 years, with a history of obstetric gynecology: pubarche, thelarche, and age-appropriate menarche, absent menarche.

She went to the pediatric emergency room for urinary retention and abdominal pain.

On physical examination, the patient was irritable, afebrile, and algic with abdominal pain VAS 9/10, the presence of a mass in the hypogastrium was observed that was painful on palpation, due to suspicion of a bladder balloon, a bladder catheter was placed, which the patient eliminated urine 500 c/c, but it is striking that the size of the mass persists in the hypogastrium. The genital region was evaluated where a bulging imperforate hymen with a slight bluish tint was observed, it was palpated tense and thickened figure 1.



Figure 1 Imperforate hymen.

Laboratory findings: elemental and microscopic urine negative, blood count, blood chemistry, acute phase reactants, CRP, normal renal function. Abdominopelvic ultrasound reports: bladder with pre-void volume of

59cc and post-void residue of 53cc. The uterus and myometrium are unaltered. The cervix is larger than usual in its longitudinal, anteroposterior, and transverse diameters, with blood remaining visible from the endometrial cavity, an approximate volume of 400 ml. A renal ultrasound was performed, which revealed bilateral pyelic ectasia.

The patient underwent surgery, and after placing a bladder catheter, a cross incision was made, with the evacuation of bloody, chocolatey fluid at approximately 650c/c, with abundant clots. Finally, the vaginal canal was washed with a warm saline solution of 500 c/c, with adequate hemostatic control. (Figure 2)



Figure 2 Hymen after hymenotomy-cross-incision

Subsequently, in hospitalization, he received analgesic treatment with paracetamol and ketorolac combined, as well as prophylactic antibiotic therapy with cefazolin. She remained hemodynamically stable with spontaneous diuresis and no bleeding and was discharged 48 hours after surgery without complications.

She was evaluated in the outpatient clinic 72 hours after her hospital discharge, finding her asymptomatic, with a patent hymen and scarce chocolate blood fluid. And 15 days after the procedure, she has normal menstruation. A follow-up renal ultrasound was performed for bilateral renal ectasias, which disappeared, and the control pelvic echo was normal.

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## Discussion

The hymen, apart from being found within vaginal abnormalities, is an uncommon cause of acute urinary retention in adolescence. In the case presented, the patient presented urinary retention as the main symptom, which led to the thought that it was a bladder balloon of etiology to be determined without suspecting an imperforate hymen.

This pathology usually goes unnoticed until puberty and, in most cases, reports reviewed, the most common presentation is hematocolpos. The symptoms are made more evident by the absence of menarche, cyclic pain, abdominal distension, and dyschezia due to compression of the urethra by the hematocolpos. (11)

A correct anamnesis and a good physical examination are usually enough for a correct diagnosis of the pathology, generally, the revision of the genitals is an uncomfortable practice in pediatric patients, so at the time of placing the bladder catheterization it is important to check them to rule out any abnormality in the genitals. (12)

Generally, this pathology is isolated, however, other pathologies such as other uterine, vaginal, digestive, urinary, vertebral, anorectal, and genital malformations must be ruled out, as well as congenital adrenal hyperplasia. (13)

The test of choice is the abdominopelvic ultrasound, in which dilation of the vagina and uterus may be evidenced, and bilateral hydronephrosis due to obstructive uropathy may also be evidenced. Additional studies such as magnetic resonance imaging and computed tomography should be reserved to rule out the malformations explained above or other complex abnormalities. (14)

The therapeutic approach is based on hymenotomy and the application of bladder catheterization. Hymenotomy is a surgical procedure that is performed under general anesthesia, making a U-shaped incision, cross incision, Y-plasty, even the circular incision with balloon dilation, or simply a vertical incision always taking care not to lacerate the urethra.

## Conclusions

The imperforate hymen is a gynecological pathology of very low incidence, with low diagnostic suspicion whose complications could be preventable, so performing a complete physical examination would help an early diagnosis with a medical-surgical treatment in time, to avoid complications that could be so complex

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that they would put the patient's life or fertility at risk.

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