

Hematocolpos on Hymenal Imperforation

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Abstract

Hymen imperforation is a relatively rare congenital malformation; Hematocolpos, which refers to the progressive accumulation of menstrual blood in the vaginal cavity, it is most common manifestation in adolescence. Clinically, it is manifested by cyclical pelvic pain and primary amenorrhea. More rarely, it can be revealed by a pelvic mass. Diagnosis is easy and, above all, clinical and must be made early in order to preserve the patient's subsequent fertility. Ultrasound and nuclear magnetic resonance are the complementary examinations of choice to detect possible associated genitourinary malformations. Treatment consists of a hymenotomy.

Keywords: Hymen; Hematocolpos; Genito urinary malformations

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Received: April 22, 2021; **Accepted:** May 13, 2021; **Published:** May 20, 2021

Introduction

Hymenal imperforation is a rare congenital malformation. Its frequency is 1 per 2000 female births [1,2]. It causes an obstruction of the vulvar orifice responsible for vaginal retention of menstrual blood. Diagnosis, although easy from birth through systematic screening, is generally made at puberty. It manifests itself by more or less cyclical pelvic pain. The diagnosis and management of this malformation must be early in order to limit the impact of menstrual retention and to preserve the future fertility of these young girls.

We report a case of hematocolpos secondary to hymenal imperforation. This diagnosis is most often overlooked in early childhood.

Case Report

A 16-year-old girl visited the emergency department for abdominal pain that had been worsening for several days. The history reveals primary amenorrhea, cyclic abdominal pain evolving for 8 months and worsening recently without associated urinary or digestive signs. On clinical examination, hemodynamic and statural parameters are normal. Secondary sexual characteristics are present (Tanner stage 4).

Inspection of the vulvar region allowed the diagnosis of hymenal imperforation by showing a bulging bluish imperforated hymen (**Figure 1**). The digital rectal exam combined with abdominal palpation revealed a soft, tender pelvic-abdominal mass measuring 10 cm.

The suprapubic ultrasound showed a uterus of homogeneous structure and normal size measuring 60 mm × 47 mm × 23 mm, with a visible vacuity line containing a haematometrical slide. In the vaginal region, a voluminous oblong image with thick contents measuring 122 mm × 78 mm × 77 mm was noted, suggesting a haematocolpos (**Figure 2**).

A drainage by hymenotomy under general anesthesia is performed and about 1 liter of hematic fluid is collected. Post-operative follow-up is simple. A nuclear magnetic resonance is performed at a distance to rule out possible genitourinary and/or anorectal malformations as well as complications such as pelvic endometriosis.

Discussion

Hematocolpos is the vaginal retention of menstruation. It is formed at puberty from the first menstruation and hymenal imperforation is the most common etiology. The prevalence of hymenal imperforation is 0.1% [3]. Familial character is exceptional. The hymen is derived from the interface between the urogenital sinus and the Müllerian ducts which fuse to form the uterus. It is composed of two epithelial blades interposed by connective tissue that partially degenerates during the fifth month in utero, making the vaginal lumen communicate with the



Figure 1 Bulging imperforate hymen.

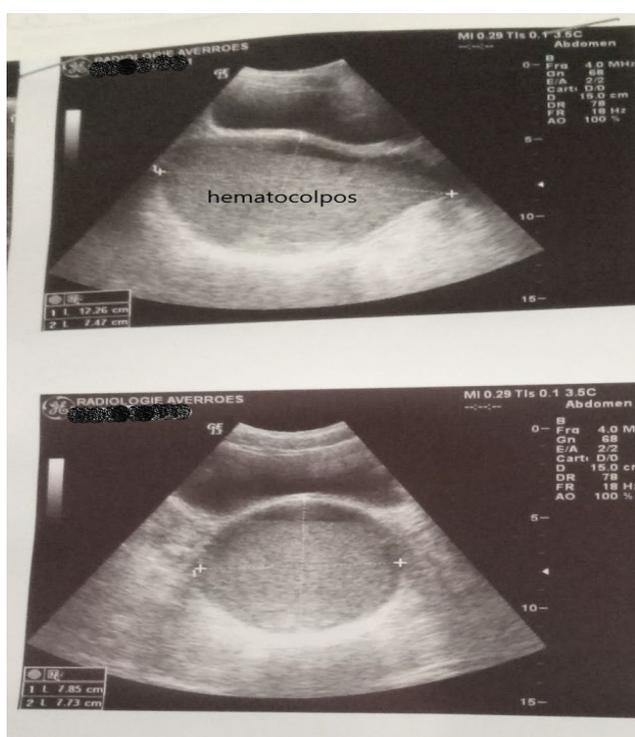


Figure 2 An ultrasound scan showing a large retrovesical collection in favor of a hematocolpos.

vestibule. The hymenal imperforation could be due to a defect in apoptosis or to an inappropriate hormonal environment [4].

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Puberty remains the most frequent period of discovery of a hematocolpos. Normal development of secondary sexual characteristics coexists with primary amenorrhea. The typical clinical picture is dominated by cyclic median pelvic pain, which can sometimes take on a pseudo-appendicular character, sometimes accompanied by lumbosciatic pain. A pelvic mass syndrome may, in case of large hematometria, cause urological and/or digestive complications such as urinary retention, dysuria, hydronephrosis or constipation [3].

The diagnosis is easy to establish clinically. Examination of the vulva shows obstruction of the vaginal orifice by a thin, bulging membrane (hymen) in a patient who has not yet menstruated despite the development of secondary sexual characteristics [1,2]. Pelvic ultrasound and nuclear magnetic resonance, because of their safety in adolescents, are not only useful to confirm the diagnosis in case of doubt, but also to detect possible malformations or associated complications [1].

The treatment of hymenal imperforation is, above all, surgical. It consists of a hymenotomy. Its purpose is to drain the hematocolpos and to restore vaginal flow. Several incisions have been described: vertical, T-shaped, cross, radial and circumferential incisions [5]. Circumferential incisions should be avoided because they lead to orifice stenosis, a source of dyspareunia. The hymenotomy must meet two requirements: to respect the orifices of Bartholin's glands and to encourage urethro-hymenal disassociation. Antibiotic therapy is prescribed during the operation to avoid any infectious complications [1]. A post-menstrual consultation is envisaged to ensure that there is no stenosis and to confirm hymenal healing [6].

Conclusion

Hymenal imperforation is a rare malformation. Its diagnosis and management require early detection in order to preserve the subsequent fertility of these girls. This diagnosis should ideally be made at birth by careful examination of the external genitalia of all female newborns. More commonly, the diagnosis is made in an adolescent girl with primary amenorrhea, normal secondary sexual characteristics, and cyclic abdominal pain. Management is surgical. New techniques have made it possible to ensure a normal menstrual flow while respecting virginity.

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