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Microperforated hymen: a case of delayed diagnosis

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ABSTRACT

Although the incidence of microperforated hymen (MH) is unclear, this hymenal subocclusive anomaly is considered a rare entity. Differently from imperforated hymen, MH may be asymptomatic until puberty when the women's quality of life is jeopardized. Depending on the size of the microperforation, MH's clinical features me be very similar to those found in imperforated hymen cases. However, MH may present infectious complications since the accumulated secretion retained in the vaginal canal has contact with the external environment and therefore represents a source of entry for infectious agents. The authors report a case of a 28-year-old woman who sought the gynecologist complaining of inability to have vaginal intercourse. She referred normal menses, but in fact, although regular, bleeding was filiform and was exteriorized only through the right side of the vagina. Physical examination and imaging disclosed a microperforation of the hymenal membrane at 10 o'clock position. Hymenotomy under general anesthesia was undertaken. Outcome was favorable and the patient could thenceforth have a normal life. We conclude that this anomaly may be overlooked, interfering on its incidence determination. The delayed onset of symptoms and psychological embarrassing aspects, which postpone gynecological consultation, may contribute for misdiagnoses. We call attention to a mandatory detailed anamnesis and thorough physical examination to diagnose this anomaly before the puberty, when complications are less frequent and treatment is advisable.

Keywords
Hymen; Dysmenorrhea; Dyspareunia; Surgical Procedures, Operative.

CASE REPORT

A 28 year-old woman sought the gynecology ambulatory, complaining of inability to achieve a complete sexual intercourse because of pain, for 8 years. She referred regular 5-day-duration menses, every 28 days. Menstrual bleeding was characterized by scarce ffiliform flow exteriorized only by the right side of the vagina. Physical examination showed normal external genitalia with an intact hymenal membrane showing a microperforation in the upper right quadrant of the membrane (at 10 o'clock position) (Figure 1).

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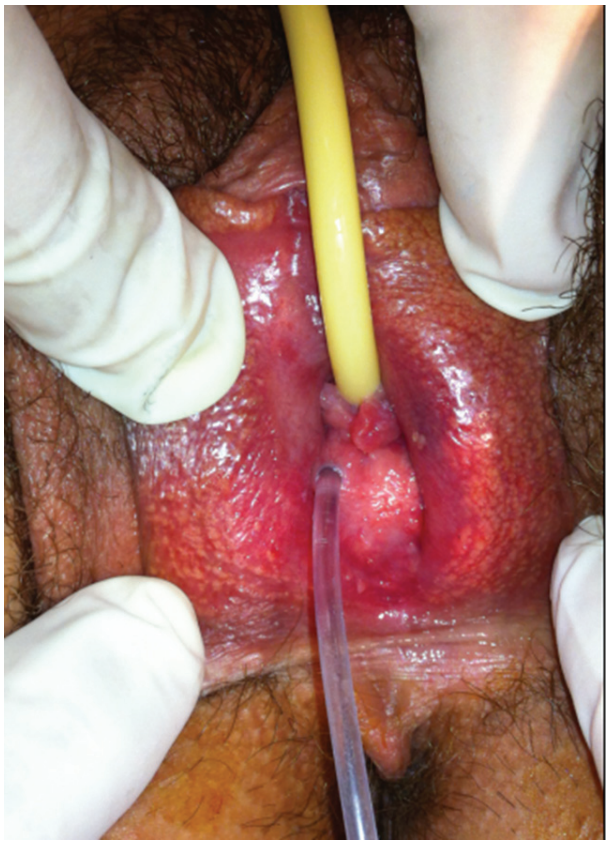

Figure 1. External female genitalia showing a catheterization of the hymenal microperforation as well as urethral catheterization.

The pelvic ultrasonography undertaken with the vaginal canal filled with saline after the microperforation catheterization, showed: uterus, cervix and bladder with normal morphology (Figure 2A). However when the images were taken via transperineal, a small and incomplete vaginal septum, measuring 3 mm, was found at the right lateral vagina wall (Figure 2B).

The patient was submitted to a hymenotomy under general anesthesia. The surgical procedure consisted in catheterization of the hymenal perforation with a Foley catheter (Figure 3A) followed by a cruciate incision over the hymenal membrane and removal of the Foley catheter (Figure 3B). The hymenal edges were stitched with catgut 2.0, afterwards, to prevent the membrane fusion (Figure 4). After this procedure the patient was discharged and outcome was uneventful.

DISCUSSION

Microperforate hymen (MH) is a variant of obstructive hymenal membrane with a tiny opening, which impairs vaginal intercourse and menstrual hygiene consequently impacting negatively the quality of life

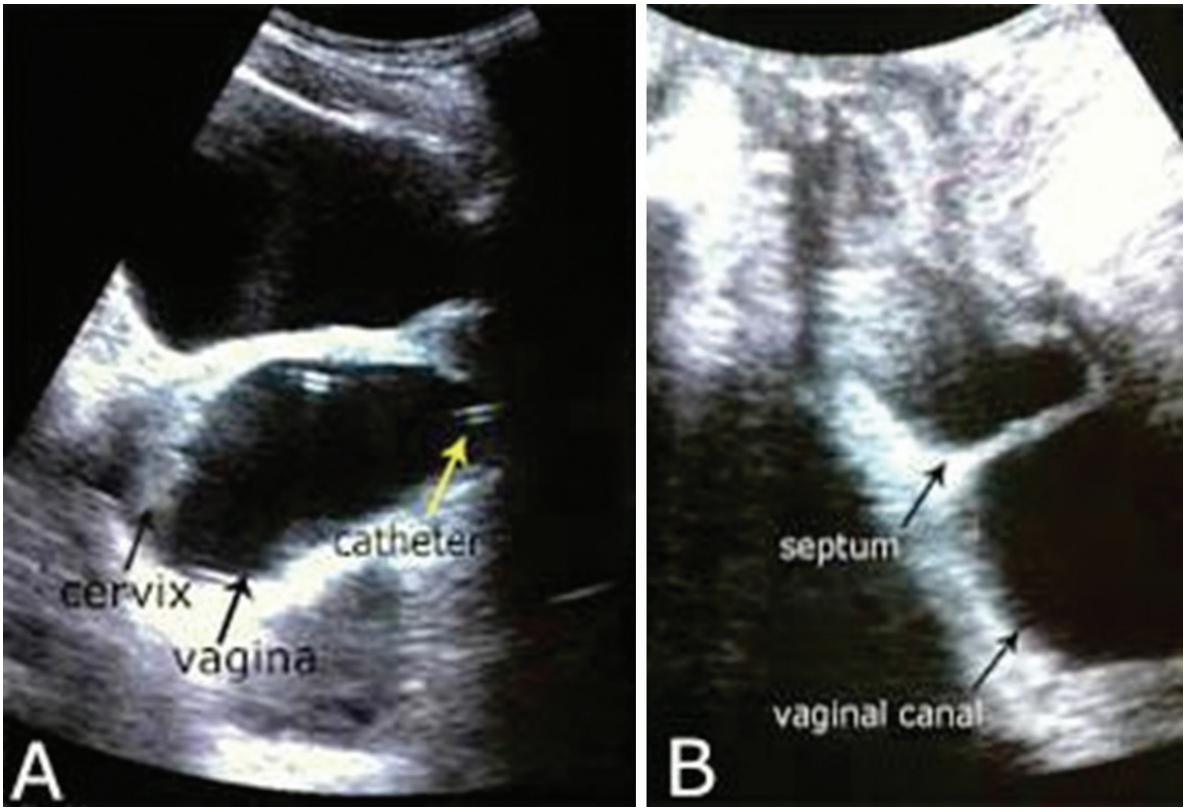

Figure 2. Pelvic ultrasonography showing in **A** - normal cervix, uterus and bladder and in **B** - note the presence of an incomplete vaginal septum.

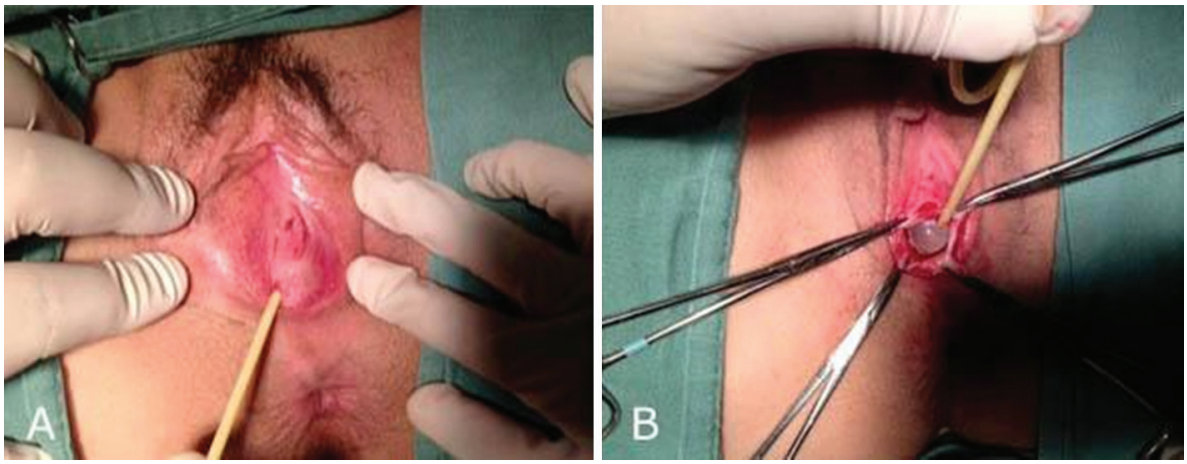

Figure 3. A - catheterization of the hymenal perforation with the Foley catheter, **B** - removal of the Foley catheter after cruciate incision on the hymenal membrane.

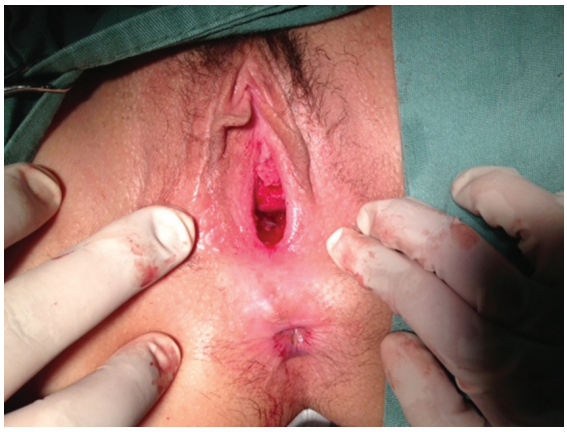

Figure 4. Final result after hymenotomy. Note the lack of hymenal membrane edges, which were sutured to avoid restenosis.

of the Young women.[1] Abnormal hymenal variations result from different degree of hymens failure to open in the perinatal period.[2,3] Although Capraro et al.[4] proposed that MH should be considered a distinct clinical entity, the German Society of Gynecology and Obstetrics adopts the Vagina Cervix Uterus Adnex-associated Malformation (VCUAM) classification, which divides hymenal occlusions in subtotal (V1a) and complete (V1b) hymenal obstruction.[5]

Many authors have already emphasized the scarcity of publications on MH.[1] In the review undertook by Watrowski et al.[1] (2013) only 7 records were found in an unrestricted search in PubMed, 6 cases in Embase and 7 in Scopus. Therefore the incidence of MH remains unclear, although its rarity is recognized. On the other hand, the incidence of complete hymenal occlusion ranges between 0,014% to 0,1% of the newborn girls.[6,7] Subocclusive hymenal variants as well as imperforate hymen take part of the urogenital sinuses anomalies caused by a failure of the canalization process of the vaginal plate at the extreme caudal aspect.[1] Although there is small number of reported cases to support a genetic factor, Watrowski reported a case of MH in dizygotic twins.[1,8,9]

Although few cases of imperforated hymen have been reported in association with bifid clitoris, polydactyly, ureter duplication, hypoplastic kidney, imperforate anus,[10] until now these conditions have not been described in association with MH. However, MH has been reported in association with vaginal septa, mostly those under 1 cm.[11,12]

MH can be asymptomatic until the menarche when the menstrual bleeding may be unable to completely flow out. The difficulty to insert the tampon, vaginal creams or suppositories, as well as inability to have vaginal intercourse may be another complaint.[1,13] Recurrent vulvovaginitis and urinary tract infection in the female child may be a clue for the pre menarche diagnosis of MH.[4,8,14] Due to the presence of this "incomplete" menstrual bleeding the diagnosis is delayed and may favor abnormal sexual behavior such as urethral coitus.[15] On the other hand, imperforated hymen may be responsible for primary amenorrhea, cyclic pelvic pain, symptoms due to compression of the bladder or intestine, hematocolpos, hydrometrocolpos, hematometra and hematosalpinx.[13,16,17] Depending on the size of microperforation, that sometimes is a pinhead-sized, the diagnosis of imperforate hymen may be mistaken, at the first glance. In these cases, MH may present

similar clinical features of the imperforate hymen. But differently from the former, as the accumulated blood in the vagina is in contact with the external medium, severe infection may supervene resulting in bilateral pyosalpinges and pelvic abscess.[13] Vaginal stones, that was already reported in cases of vaginal septum and imperforated hymen, was also reported in a case of MH.[18] Although subocclusive hymenal anomalies preclude normal vaginal intercourse, it is not synonymous of infertility. Two cases of primigravida with MH have been reported.[19,20]

Differential diagnosis of MH includes imperforated hymen and Mayer-Rokitansky syndrome, transverse vaginal septum, and labial adhesions.[10,13,15] In this setting, anamnesis, physical examination and imaging workup may furnish the correct diagnosis.[15]

Treatment is directed towards the opening of the subocclusive hymenal membrane. Techniques may vary according to the type of incision on the hymenal membrane (vertical, central or cruciate). The restenosis is not infrequent, mostly when the preservation of the annular-intact structure of the hymen is important due to social concerns. Inserting a Foley catheter through the operated hymen for 2 weeks may prevent the restenosis or, as was undertaken in the case reported herein, stitching the hymenal edges after a cruciate incision.[21,22]

We conclude that, although not that difficult to diagnose, MH is frequently overlooked and diagnosed mostly post puberty. We believe that a combination of factors contribute to this delayed diagnosis. Among them, the unawareness of this entity by some clinician added to the lack of demand for medical care due to psychological problems and ignorance of the patient on the presence of the anomaly. Efforts should be made to diagnose before puberty preventing likely complications, incorporating an examination of external genitalia into the routine practice.

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