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Hematocolpos due to Hymenal Imperforation: A Case Report.

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Abstract*: Hymenal imperforation is a fairly rare malformation, and serious if ignored. ignored. Based on the data in the literature concerning this malformation. The range of clinical signs is dominated by abdominopelvic pain; the existence of an abdomino-pelvic tumefaction. Diagnosis is mainly clinical, and is guided by ultrasound. Hymomenal imperforation remains the most frequent etiology, and was found in our patient. Surgical treatment is straightforward, involving incision of the obturating membrane, and drainage of the collection.*

Keywords : hymenal imperforation,hematocolpos ,hymenotomy.

Introduction

Hymenal imperforation is a relatively rare condition, but the most common congenital malformation of the female genital tract

female genital tract (1). It is often isolated(2),

Painful cryptomenorrhea due to parapubertal hymenal imperforation is the most classic symptom(3). Non-gynaecological symptoms can sometimes lead to misdiagnosis.

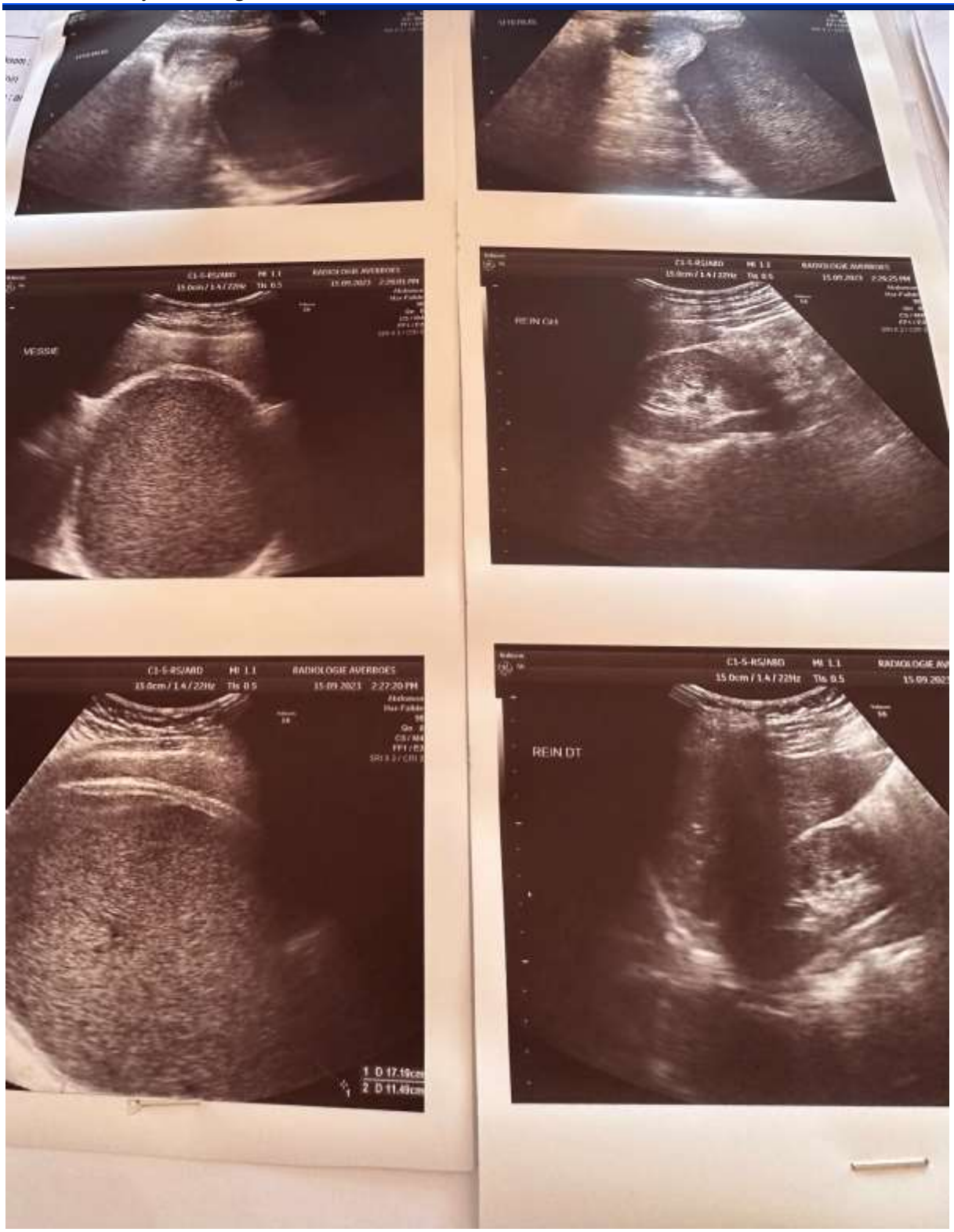
Hymeneal imperforation is easily diagnosed by inspection of the external genitalia. Ultrasound has simplified analysis of this rare condition, and in utero ultrasound is the best method for early diagnosis.

Hymeneotomy is the treatment of hematocolpos by hymenal imperforation. For hematocolpos revealing malformations, treatment of the causal malformation is more complex.

Early diagnosis and treatment of hymenal imperforation is important to avoid tubal sequelae.

Case report

A 14-year-old female patient was referred to the pediatrics department of the Rabat children's hospital for an acute abdomen with the notion of cyclic pain for three months. She had not gone through menarche, but had developed sexual characteristics (breasts at S4 and pubic hair at P5). Examination showed slight bulging of the hymen and recto-vaginal septum (photo1). Ultrasound revealed a hematocolpos (photo 2). Surgical incision of the hymen drained 500 millilitres of blackish blood. The patient's progress was favourable at the three-week follow-up examination. A medical certificate of loss of virginity was issued to the family.



Discussion

The hymen is a remnant of the mesodermal layer, which normally perforates during the final stages of embryonic development (4). Hymenal imperforation is a rare event, estimated at 1 in 2000 female births (4,5). The incidence reported in the literature varies widely, depending on whether it is assessed globally, according to age, or according to the type of anatomical lesion (6). In

typical cases, the age of discovery of hematocolpos is between 12 and 15 years (the age of menarche) (7 ; 8). The majority of cases reported in the literature are sporadic, although a few familial cases have been described, suggesting a probable genetic predisposition (5,9). Diagnosis of hymenal imperforation is possible in utero when a hydrometrocolpos is observed on ultrasound (10, 11). In utero diagnosis has the added advantage of allowing us to search for associated renal malformations. This diagnosis can be made through systematic screening at birth, but also in the presence of hydrometrocolpos during the genital crisis of female newborns (12). Most often, this malformation is discovered at puberty. The diagnosis should be suspected in young girls presenting with primary amenorrhea and normally developed secondary sexual characteristics.

Blood is retained first in the vagina, then the uterus (haematometry) and possibly the fallopian tubes. Its volume varies from one patient to another, and may even reach 3 liters (9). Retrograde menstrual flow may alter the fallopian tubes or lead to endometriosis lesions which may later impair fertility (23). However, this is rare if the diagnosis is made early, and fertility is usually preserved (24, 25, 26). Clinical diagnosis of this malformation is usually straightforward. Examination of the abdomen reveals an oval suprapubic tumefaction, with a large upper end, regular contours, fluctuating consistency or renitence, sensitive, dull to percussion, and plunging downwards behind the pubic symphysis. Inspection of the vulva reveals a bluish translucent membrane protruding between the labia minora. Rectal examination reveals a median, anterior tumefaction of liquid consistency, renitent, extending with the abdominal mass and descending close to the anal sphincter. In our case, genital examination revealed the presence of hymenal imperforation with a bulging imperforate hymen in the 3 patients. Palpation could confirm the existence of a mass. In cases of diagnostic uncertainty, ultrasound can be useful by showing hematocolpos as a median, retrovesical, fluid-like image containing some heterogeneous echoes. It also helps assess the impact upstream of menstrual retention by looking for hematometra, hematosalpinx, and intra-abdominal effusion. MRI is used in the investigation of pelvic masses and uterovaginal malformations. These advantages are particularly relevant when there is difficulty with ultrasound diagnosis.

IVUS is performed in the presence of suggestive ultrasound signs.Laparoscopy enables a precise lesion assessment to be carried out upstream, and any endometriosis or periannexal adhesions secondary to chronic inflammation to be treated(10). Laparoscopy is particularly indicated in the event of significant hematocolpos, giving rise to fears of an upstream impact (10,11,12,28).

In our patient, the abdomino-pelvic ultrasound was complementary to the clinically confirmed diagnosis. It revealed a uterine and vaginal fluid collection indicative of hematocolpos. The treatment is surgical. The objectives of this treatment are:

- Restore the patency of the genital tract.

- Ensure normal sexual function.

- Attempt to preserve future fertility.

It must be undertaken in all cases, as spontaneous regression of the retention should not be relied upon. Even in mild forms, abstention risks the establishment of a genital and urinary infection, more frequently encountered in cases detected late. The treatment is limited in many cases to simple drainage of the retention pocket.

Total circumferential excision of the hymen may cause sclerosis and orificial dyspareunia (28, 29), and should thus be avoided. Hymenotomy should allow normal menstrual flow while trying to respect the virginity of these young patients, especially in our social context, and ensure a normal future sexual life by avoiding restenosis. Therefore, it is important to respect the orifices of Bartholin's glands at 5 o'clock and 7 o'clock and to incise at 11 o'clock in the gynecological position to free the lower edge of the urinary meatus and ensure meatal-hymenal dissociation. Several surgical techniques are proposed in the literature. Salvat (30) recommends the technique of star-shaped radial hymenal incisions, which is simple but does not guarantee virginity. Another technique was described by Ali et al. (31). It involves excising a small central collar of the hymen through which a Foley catheter is inserted. The balloon of the catheter is inflated to 10 cm^3. This catheter is then removed after 2 weeks. This technique seemed interesting to us because it is simple, less invasive than other methods, and preserves the normal architecture of the hymen. The only relative disadvantage of this technique is the inconvenience caused by wearing the catheter for 2 weeks. The results of this technique are rather encouraging: only two patients out of 65 presented secondary hymenal stenosis in Acar's series (31). In all cases, a postoperative clinical check-up is essential to verify the absence of secondary stenosis.

That being said, the best treatment remains preventive, based on early diagnosis of the malformation and surgery undertaken after the development of the genital organs but before the appearance of hematocolpos.

In our patient who presented with hematocolpos due to an imperforate hymen, a Y-shaped incision of the hymen, evacuation of the hematoma, and drainage with a catheter left in place for 1 week to 10 days was performed as a principle.

Conclusion

Imperforate hymen encompasses a range of genital malformations. It is often a benign condition with a favorable prognosis if diagnosed and treated early. Conversely, a lack of awareness can lead to serious complications, posing a threat to life and significantly jeopardizing future obstetric outcomes. Ultrasound remains the diagnostic tool of choice to confirm the diagnosis and allows for the identification of potential upstream impacts and any associated urogenital anomalies. Systematic screening at birth and early treatment are the best measures to prevent complications from this condition.

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