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Transverse vaginal septum evaluation

Madalina Piron[1,2], Lucian Pop[1,2], Bianca Danciu[1], Nicolae Bacalbasa[2,3], Irina Balescu[4], Ioan D. Suciu[5]

[1] "Alessandrescu-Rusescu" National Institute of Mother and Child Care, Bucharest, Romania
[2]Department of Obstetrics and Gynecology, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania
[3]Department of Visceral Surgery, Center of Excellence in Translational Medicine, Fundeni Clinical Institute, Bucharest, Romania
[4]Department of Visceral Surgery, Ponderas Academic Hospital, Bucharest, Romania
[5]Floreasca Emergency Hospital – General Surgery Department, Bucharest, Romania

ABSTRACT

Female genital malformations mostly affect women`s reproductive health. Vaginal septa are rare conditions that occur secondary to defectuous fusion or canalization of the Mullerian ducts. There are longitudinal and transverse septa. Transverse septa can be found in the upper, middle or lower vagina and the main symptom is primary amenorrhea in the presence of cyclic pelvic pain. Imaging discoveries can reveal urological, anorectal and uterine abnormalities that accompany the vaginal abnormalities.

Keywords: transverse vaginal septum, amenorrhea, urogenital abnormalities, vaginoscopy, Mullerian abnormalities

INTRODUCTION

Among the Mullerian anomalies, the transverse vaginal septum has an incidence of 1 in 70,000 women, being one of the rare malformations of the female genital tract [1,2,3]. The association of the transverse vaginal septum with other structural abnormalities such as uterine and urological abnormalities, aortic coarctation, atrial septal defect, imperforate anus and lumbar spine malformations should be considered [2,3]. The etiology of the transverse vaginal septum does not appear to be genetically inherited, although the possibility of an autosomal recessive disease has been evaluated in the Amish population to explain hydro mucocolpos [1,3].

Transverse vaginal septum is formed when reabsorption of the fused Mullerian ducts fails. The functional length of the vagina is reduced by the formation of two vaginal segments divided by the septum that can be perforate or imperforate and can occur at any level of the vagina. Depending on the location, the transverse vaginal septa of the upper vagina are the most common (46%), in second place being those of the middle vagina (40%), the rarest being those of the lower vagina (14%) [3,4].

The evaluation of the obstruction given by the transverse vaginal septum is clinical and imaging: ultrasonographic or MRI or even by vaginoscopy and cystoscopy.

CLINICAL FINDINGS

At presentation, patients may experience normal secondary sexual characteristics [5,6,7], cyclic pain in the hypogastrium [5,6], primary amenorrhea [3,5,6,7], dyspareunia and infertility [3], or even menouria [8].

On pelvic examination, the external genitalia appear normal, but on bimanual or speculum examination, the lower vagina is shortened and the upper vagina or cervix cannot be visualized. A mass may be observed [9] or palpated above the examining finger on rectoabdominal examination [6,10].

Clinical vaginal evaluation is important for evaluating the length of the vagina and assessing the level of the vaginal septum [5,11].

Speculum evaluation can also evaluate a perforated transverse vaginal septum and identify the perforation [12].

IMAGING EVALUATION

Ultrasound examination includes transabdominal, transvaginal, tranperineal and transrectal eval-

Corresponding author:
Dr. Madalina Piron
E-mail: dumitrascumadalinap@gmail.com

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uation [3,10]. Ultrasonographic evaluation may identify a mid-abdominal tumor mass located in the hypogastrium suggestive of hematometrocolpos [6,7]. Uterus appears filled with hypoechoic fluid and the cervix is dilated, connected to the filled with hypoechoic fluid in the obstructed vagina [3].

Ultrasonographic imaging helps to see the location and thickness of the septum and the distance from the obstructing tissue to the level of the introitus. Ultrasound or magnetic resonance imaging (MRI) can be helpful to differentiate between a high septum versus congenital absence of the cervix [10].

In neonates, ultrasound thar reveals a cystic structure in the lower abdomen and pelvis showing fluid- debris level, causing displacement of the urinary bladder anteriorly and an uterus with endometrial collection seen at the cranial end of the above structure and appeared to be continuous with it is a diagnosis of neonatal hydrometrocolpos [9].

Magnetic Resonance Imaging of the abdomen revealed a collection of fluid intensity T1 hypointense, T2 hyperintense contents within the vagina and endometrial cavity. The resulting distended vagina was extending above the level of umbilicus. Bilateral hydronephrosis and pitting lower limb oedema can appear mostly secondary to mass effect from the above structure [9].

Computed tomography is important in assessing the nature of the clinically detected abdominal tumor. It can identify large hematocolpos over which hematometry can overlap, with possible extrinsic ureteral obstruction and secondary ureterohydronephrosis [7].

MINIMALLY INVASIVE PROCEDURES

Vaginoscopy is a minimally invasive procedure that can be taken in consideration in evaluating a transverse vaginal septum and it`s characteristics. Several possibilities may be taken into consideration: vaginoscopy, ultrasound guided vaginoscopy and vaginoscopy unde laparoscopic control.

Vaginoscopy alone is useful in high transverse vaginal septa, but low septa are difficult to evaluate [6].

Ultrasound guided vaginoscopy offers details in operative vaginoscopy with septotomy and hematocolpos drainage [13]. Laparoscopy may assist vaginoscopy in evaluation of the genital tract and in vaginal septum resection [14].

During menarche, menstrual fluid may accumulate and hematocolpos may develop. But if a communication exists between the upper vagina and bladder, the menstrual fluid will finds its way through this communication into the bladder and menouria results [15,16].

Cystoscopy can reveal a normal urethra, bladder neck and unilateral hemitrigone with normal efflux from ipsilateral ureter. The contralateral ureteric orifice is absent and a fistula may ne identiffied. One kidney is hypoplastic with a dilated and tortuous right ureter with the lower end opening into the proximal vagina. A dye study may be performed, which may show dye entering into the proximal vagina and a slow trickle of the dye into the bladder [16].

CONCLUSION

Transverse vaginal septum is a rare condition, with an intriguing diagnosis, but which, once performed, can lead to adequate, minimally invasive surgical behavior. The clinical evaluation is completed by the paraclinical one, offering details on the correct approach to the case, taking into account the sexual status of the patient, but also her wishes.

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