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Hematocolpos revealing a didelphic uterus with obstructed hemivagina in a young girl with renal agenesis

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Abstract

Hematocolpos is a retention of menstrual blood in the vaginal cavity. The main clinical signs are amenorrhea and cyclic pelvic pain. The most frequent etiology is hymenal imperforation, The didelphic or bicervical bicornuate uterus is defined by the presence of two uterine horns and two cervixes. It can be associated with a septate or normal vagina.

Imaging, in particular ultrasound, remains essential for the assessment of associated malformations. In case of delayed diagnosis, complications (endometriosis, infection) may occur and compromise the prognosis of subsequent fertility. The treatment of this malformation is surgical.

We report the case of a 13-year-old girl with renal agenesis admitted in our department for the management of pelvic pain in whom radiological explorations objectified a didelphic uterus associated with an obstructed hemi-vagina.

Keywords

Hematocolpos; Didelphic uterus; Obstructed hemivagina; Renal agenesis.

Introduction

The bicervical bicornuate uterus is a rare uterine malformation. It is most often associated with an obstructed hemivagina and manifests itself during the peri-pubertal period by unilateral hematocolpos with hematometry and typically cyclical pelvic pain [1]. It may be associated with other malformations, particularly kidney malformations.

Our objective is to clarify the clinical and paraclinical diagnosis of this condition, based on our observation and a review of the literature.

Case Presentation

We report the case of a young girl aged 13, with a history of repeated urinary tract infections revealing a congenital right mega-ureter on a single kidney operated at the age of 05 who underwent a two stages ureterostomy with reimplantation.

Currently admitted for the management of a non-febrile pelvic pain and heaviness with a preserved general condition. Clinical examination shows the presence of a tender pelvic mass on palpation.

The patient benefited from a pelvic ultrasound showing the presence of two distinct uterine hemi-matrices with individualization of two uterine. The analysis of the vagina shows the presence of a left unilateral obstructed hemi-vagina seat of retention, hypoechoic hematic in relation to hematocolpos (Figure 1).

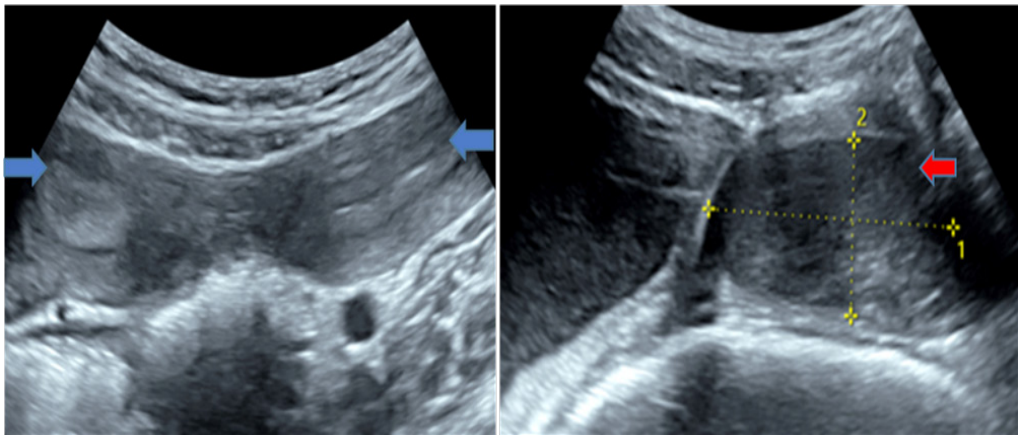

Figure 1: Ultrasound images showing the presence of two distinct uterine horns (blue arrows), with obstructed hemivagina site of hematocolpos with upstream hematometry.

Reference: Mother and child radiology department, CHU HASSAN II of FES

Complete abdominal ultrasound exploration found significant hydroureter with hydronephrosis laminating the renal parenchyma on a single right kidney with mega-bladder (Figure 2).

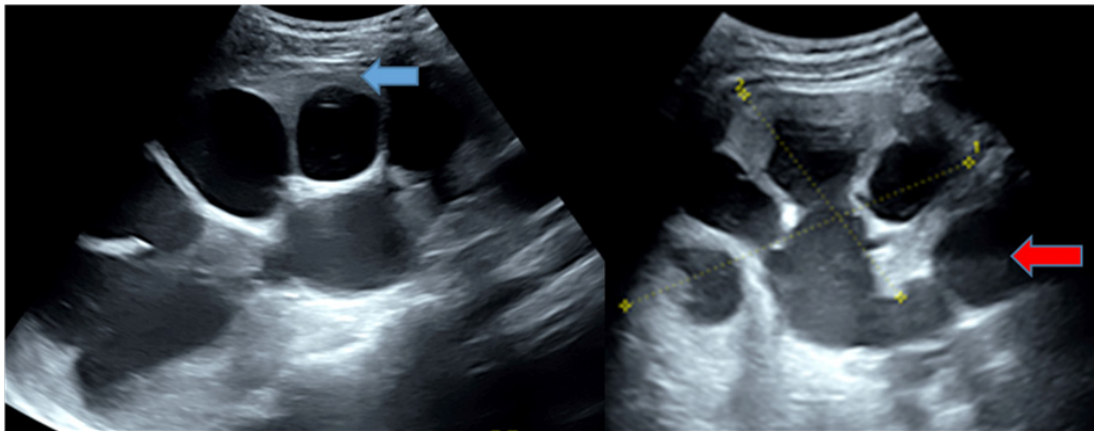

Figure 2: Ultrasound images showing a single right kidney seat of a significant hydroureter (red arrow) with hydronephrosis laminating the renal parenchyma (blue arrow).

Reference: Mother and child radiology department, CHU HASSAN II of FES.

An abdominopelvic computed tomography was subsequently performed, showing two distended uterine horns related to a didelphic uterus with obstructed left hemivagina and hematocolpos (Figure 3). It is associated with a single right kidney seat of significant hydroureter and hydronephrosis, a mega-bladder and a low-abundance intraperitoneal effusion (Figure 4).

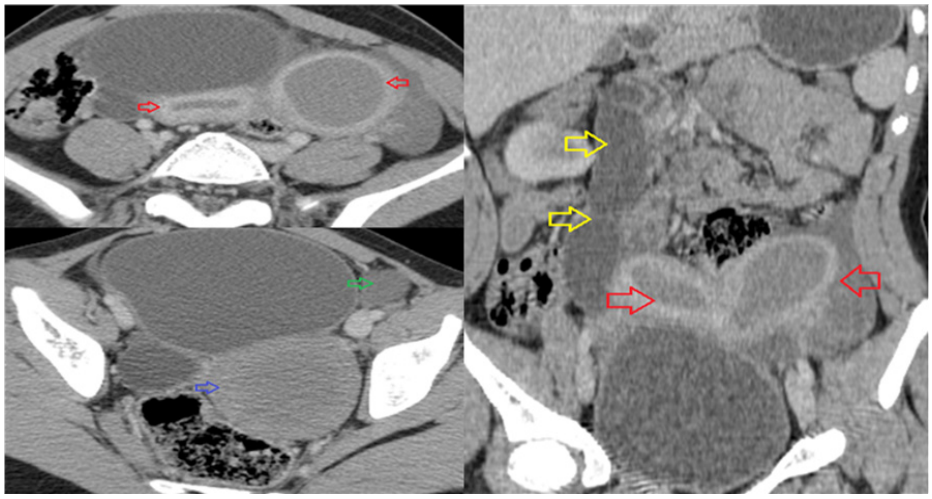

Figure 3: Axial and coronal CT sections showing two distended uterine horns (red arrows) with hematocolpos on the left obstructed hemivagina (blue arrow) associated with intraperitoneal effusion (green arrow).

Reference: Mother and child radiology department, CHU HASSAN II of FES.

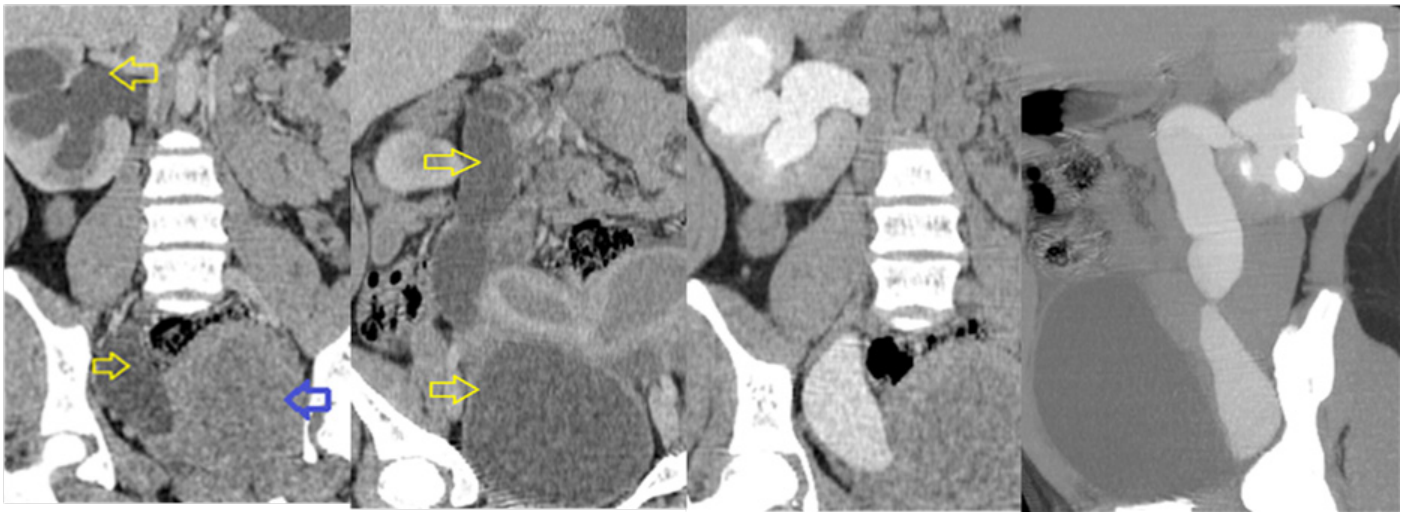

Figure 4: Coronal and sagittal CT sections showing a single right kidney seat of significant hydroureter and hydronephrosis with mega-bladder (yellow arrows).

Reference: Mother and child radiology department, CHU HASSAN II of FES.

An MRI was subsequently performed showing the same uterovaginal and urinary abnormalities described above (Figure 5).

Reference: Mother and child radiology department, CHU HASSAN II of FES.

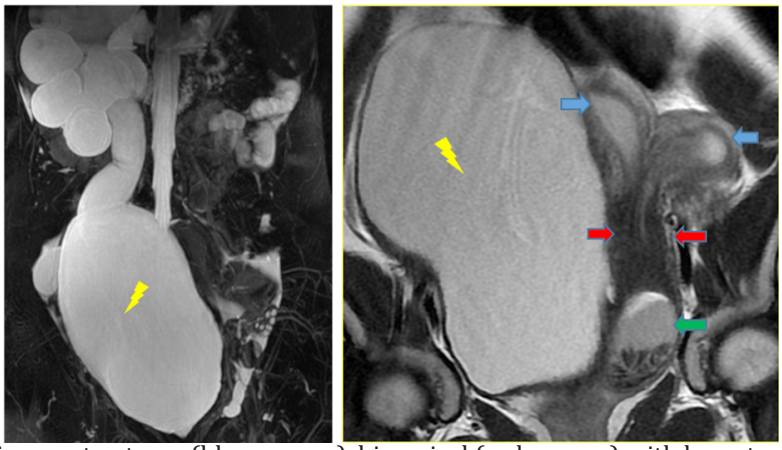

Figure 5: MRI showing a bicornuate uterus (blue arrows), bicervical (red arrows) with hematocolpos on the left obstructed hemivagina (green arrow) associated with a mega-bladder, a right hydroureter and hydronephrosis on a single kidney (yellow arrow).

Discussion

Hematocolpos is the retention of menstrual blood above an obstruction. It is discovered most frequently during puberty. Primary amenorrhea and pelvic pain are the main revealing clinical signs [2].

Hematocolpos is most often due to hymenal imperforation [3]. The didelphic uterus remains a much rarer etiology, linked to a stop of organogenesis between the 10th and 12th week of pregnancy with lack of fusion of the Mullerian ducts [4,5]. According to Musset's classification, it is defined by the presence of two uterine hemi-matrices and two distinct uterine cervixes associated in the majority of cases with a septate vagina consisting of a unilateral obstructed hemivagina, which, during menarche, explains the development of a hematocolpos [6].

In the case of the didelphic uterus, renal agenesis is often associated [7].

The paraclinical examinations are essential to make an accurate evaluation of the malformation assessment. Pelvic ultrasound is the first-line examination [8]. It can be performed suprapubic or transperineally [9]. It makes it possible to look for severe complications such as hematometry, hematosalpinx and to identify associated malformations. Magnetic Resonance Imaging (MRI) is, like ultrasound, a harmless examination in young girls. It would be the best paraclinical examination [10]. It makes it possible to locate the level of retained collections (vagina, uterus and fallopian tubes). Computed tomography has the same contributions as MRI, but it should be avoided because of the dangers of irradiation in young girls. These different means of imaging show the presence of two distinct uterine hemi-matrices with uterine cervixes. The vagina can be normal or often septate with obstructed hemivagina source of hematocolpos. Upstream hematic retention such as hematometry or hematosalpinx is frequently found. Renal malformations such as renal agenesis or dilation of the excretory cavities are almost constant.

The treatment is surgical, consists of a wide resection of the vaginal septum, thus allowing complete drainage of the hematocolpos [11]. A post-therapeutic control is also necessary to ensure the absence of subsequent stenosis. The chances of procreation in patients are preserved, however the risk of ectopic pregnancy and miscarriage is greater.

Conclusion

Hematocolpos may reveal a didelphic uterus with obstructed hemivagina, a rare uterine malformation often associated with renal agenesis. Imaging, in particular ultrasound and magnetic resonance imaging, is essential for a complete lesional assessment and the search for any associated malformations. The treatment remains surgical.

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