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Hematocolpos and Unilateral Hematometra on Uterus Didelphys: A Case Report

Christian Tomboravo[1*], Emmylou Prisca Gabrielle Andrianah[1], Lova Hasina Rajaonarison Ny Ony Narindra[1], Lantonirina Rainibarijaonina[2], Ahmad Ahmad[1]

[1]Department of Medical Imaging, University hospital center Joseph Ravoahangy Andrianavalona Hospital, Antananarivo, Madagascar

[2]Department of Gynecology and Obstetrics, University hospital center Befelatanana Antananarivo, Madagascar

Corresponding Author:** ***Christian Tomboravo, *Department of Medical Imaging, University hospital center Joseph Ravoahangy Andrianavalona Hospital, Antananarivo, Madagascar, Email:* ***ctomboravo@gmail.com***

Abstract

The uterus didelphys is a rare congenital abnormality that may affect patient's obstetrical prognosis. We report a case of an uterus didelphys with hematocolpos and unilateral hematometra in a 17-year-old girl, associated with unilateral renal agenesis. Ultrasound and CT scan permitted to evoke the preoperative diagnosis.

Keywords: *Uterus didelphys, hematometra, renal agenesis, Ultrasound, CT scan.*

1. Introduction

The combination of uterus didelphys and unilateral renal agenesis is a rare congenital abnormality [1]. We report a case of uterus didelphys, with hematocolpos and unilateral hematometra, associated with unilateral renal agenesis in a 17-year-old girl. The aim of this report is to highlight imaging's place for the diagnosis of this condition.

2. Observation

A 17-year-old girl, farmer was referred for an ultrasound scan referred for an ultrasound scan for a painful pelvic mass. These symptoms evolved since 1 year. A contraction-type pelvic pain appeared from time to time. The pain intensity is severe with paroxysm during menstruation. A feeling of progressive growth pelvic mass was associated with all of these symptoms, without fever nor dysuria. A right lumbar pain radiates to the external genital organs appeared 4 months ago.

Patient's history revealed menarche at the age of 14, no pregnancy or abortion antecedent and a history of right ovarian cystectomy.

On clinical examination, the abdomen was soft and depressible. The hypogastric region was tender. Palpation of the painful hypogastric region found a firm, well-defined, rounded mass. Vaginal examination revealed a tenderness of left lateral fornix. The pouch of Douglas was free. The pregnancy test was negative. Biology showed normocytic normochromic anemia.

Abdominal and pelvis ultrasound identified an didelphic uterus with hematometra and hematocolpos on the left side (Figure 1), and an uterus and vagina of normal morphology on the right, confirmed by CT scan of the abdomen and pelvis (Figure 2a and 2b). CT scan also showed an ureterohydronephrosis of a single right kidney, due to a compression (Figure 3).

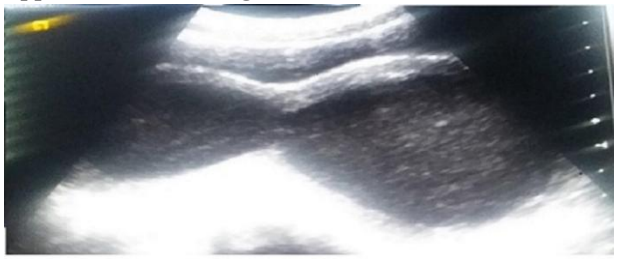

Figure 1. *Pelvic ultrasound axial image, showing pelvic mass, bilobe, well limited, with echogenic liquid content, with regular thick wall.*

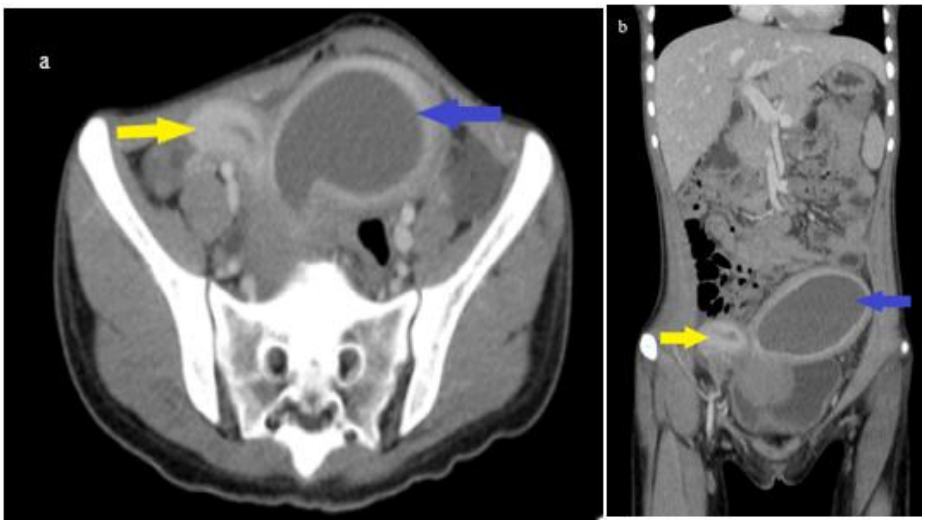

Figure 2. *Abdomino-pelvic CT scan image with contrast media in axial section (a) and coronal section (b), showing uterus didelphys with normal uterus on the right (yellow arrow) and with hemi-hematometra on the left (blue arrow).*

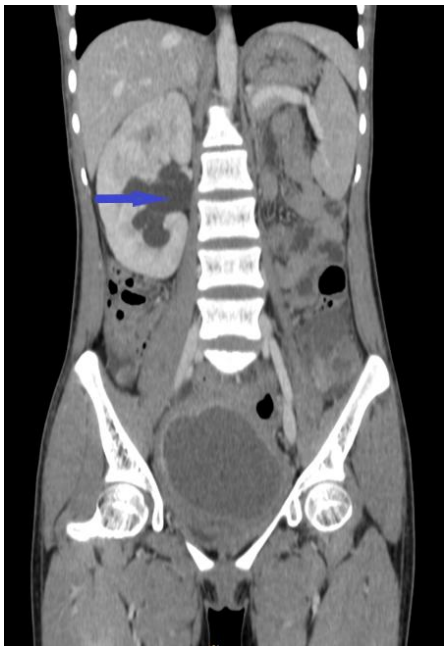

Figure 3. *Abdomino-pelvic CT scan image with contrast media in coronal section, showing a hydronephrosis of a single right kidney (blue arrow)*

A left hysterectomy was performed, leaving the right hemiuterus and vagina. The postoperative course was uneventful.

3. DISCUSSION

The anomalies of the müllerian ducts concern 0.1% to 3% of women [2], and associated renal agenesis is about 20% [3]. The early non development of a metanephric diverticulum (about 5 weeks of gestation) of the mesonephric duct leads to ureteral bud agenesis and then to the ipsilateral ureter and renal agenesis.

At about 9 weeks of gestation, the paramesonephric duct is lateral to the mesonephric duct in the first part, crosses it anteriorly and is median to it in convergent portion. Due to bad positioning of the paired paramesonephric duct, both hemi-uteri and hemi-cervix fail to unite, resulting in didelphic uterus [4].

Uterus didelphys usually manifests at puberty by cyclical pelvic pain of progressive severity or dysmenorrhea and a pelvic mass [3]. Other signs as fever, urinary incontinence and dyspareunia may appear [5].

Uterus didelphys is often diagnosed lately because of the heterogeneous clinical presentation and his low frequency. Imaging are essential for diagnosis, management and counseling on reproduction [6].

Ultrasound is the most available exam in practice. Transverse sections show two uteri separated by the hernia of the posterior bladder wall, producing a "V vesical", pathognomonic of the bicornuate uterus [7]. However, it can be misleading, and the diagnosis may be difficult because of several differential diagnosis such as ovarian cyst, pedicled subserous myoma, especially when the horns diverge a bit. Studying uterine cavity and uterine fundus by an endovaginal approach allows diagnosis [7].

Computed tomography can also help for the diagnosis, but it is more useful for highlighting associated lesions and complications such as ureteral compression and associated renal malformation.

MRI is the reference exam because it is effective, non-invasive, and it is also the most sensitive exam to evaluate müllerian duct anomalies. Its accuracy on classifying uterine anomalies is 96% to 100%, compared to 85% to 92% for endovaginal ultrasound scan and 6% to 55% for hysterosalpingography [5].

On MRI, hematocolpos and hematometra appear iso or hyperintense on T1 image and hyperintense on T2 image [8]. The assessment of the uterine horns is difficult on MRI. Therefore, hysterosalpingography should be considered for a complete evaluation of the malformation [5].

Treatment depends on the the existence of an obstruction or not. Excision of the vaginal septum is better to remove the obstruction, in order to drain the blood from the uterine cavity [6].

4. Conclusion

Unilateral hematocolpos and hematometra may complicate a didelphic uterus with a blind hemi-uterus. A painful progressive pelvic mass in a non-menstruating teenager should evoke the diagnosis. Thus, pelvis ultrasound can diagnose it, but CT scan will give certainty in case of doubt and will allow a pre-therapeutic assessment and detect associated anomalies.

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