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Case Report

A case of imperforated hymen in a regularly menstruating girl

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Abstract

Uterus didelphys, a mullerian anomaly, coincidental with renal agenesis and unilateral imperforated hymen is extremely rare. It mostly presents with cyclical abdominal pain, dysmenorrhea or the feeling of abdominal mass. In this report, a case of uterus didelphys regularly menstruating from the left side and suffering from cyclical abdominal pain due to hematocolpos and hematometra because of imperforated hymen on the right side is presented. Fifteen-year-old girl was admitted to the emergency service with the symptoms of dysmenorrhea and abdominal mass. Her medical history revealed chronic abdominal pain and right renal agenesis. Laboratory tests were normal. Ultrasonographic examination revealed a tubular cystic mass. Magnetic resonance imaging demonstrated that uterin didelphys and duplicated vagina with right hematocolpos and hematometra. Imperforated hymen on the right hemivagina was confirmed by pelvic inspection. We performed an incision on longitudinal unilateral septum using a fine scalpel without any hymenal damage, and thereafter 400 ml hematoma was drained. Vaginal septum was resected completely via linear surgical stapler. Symptoms disappeared during follow up, and after two months, the didelphic uterus was clearly seen on transabdominal ultrasonography. Mullerian anomalies should be suspected in recently menstruating patients who present with dysmenorrhea.

Key words:

Uterus didelphys, hematocolpos, hematometra, hemivagina, renal agenesis.

Introduction

Various anomalies emerge in female genital tract in case of an inadequate fusion of mullerian ducts during embryonic period. The incidence of mullerian anomalies varies across different populations in the range of 0.1% to 3.8%. Among these anomalies, incidence of uterus didelphys is about 5% [1]. Unilateral obstructed hemivagina, renal agenesis and transverse vaginal septum referred to as Herlyn-Werner-Wunderlich syndrome (HWW) are seen in 15% of uterus didelphys [2]. The syndrome is also known as obstructed hemivagina and ipsilateral renal anomaly (OHVIRA). Abdominal pain and feeling of mass in the first menstrual period might be two main complaints of patients suffering from this pathology. Diagnosis of disease requires careful physical examination and imaging methods. In this report, we aimed to present a case who complained about abdominal pain, abdominal discomfort and feeling of pelvic mass during and after her menstrual period and who was diagnosed with Herlyn-Werner-Wunderlich syndrome (HWW) in our clinic.

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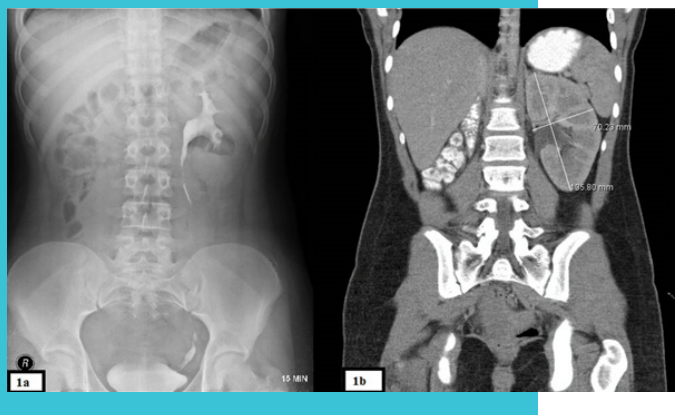
Case presentation

A 15 years old girl applied to our clinic with complaints of abdominal pain and pelvic mass. Her menarche was 3 years ago and she had regular menstrual periods. She stated that she had severe abdominal pain and feeling of pelvic mass during her menstrual periods. Her medical history revealed right renal agenesis (Figure 1). Her height and weight were consistent with her age. There was no abnormality in laboratory findings. She applied with abdominal pain to another hospital and she was on analgesics with the diagnosis of 5 cm corpus hemorrhagicum. Ultrasonographic examination revealed a tubular cystic mass mea-

suring 4x8 cm, extending from right lower abdominal quadrant to end of the midpelvis. Magnetic resonance imaging demonstrated uterin didelphys and duplicated vagina with right hematocolpos and hematometra (Figure 2). Imperforated hymen on the right hemivagina was confirmed by pelvic inspection. For treatment, an incision on longitudinal unilateral septum was performed through a fine scalpel without any hymenal damage. Next, 400 ml hematoma was drained and vaginal septum was resected completely via linear surgical stapler (Figure 3). Symptoms disappeared during follow up, and after two months, the didelphic uterus was clearly seen on transabdominal ultrasonography.

Figure 1.

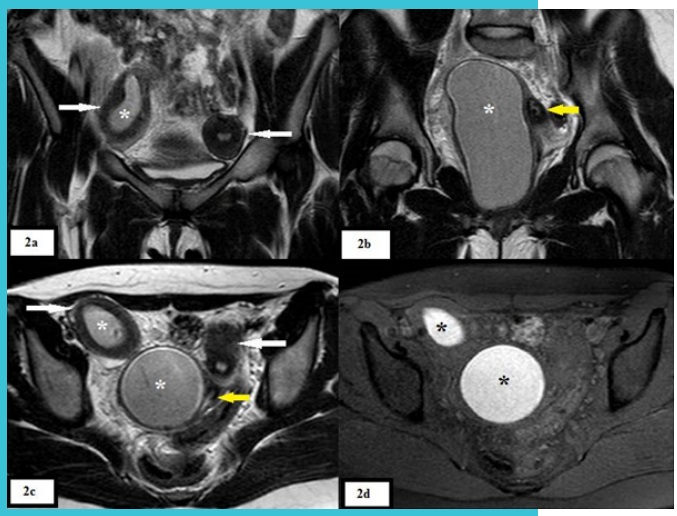


Right renal agenesis and compansatris hypertrophy of left kidney at the intravenous urography (1a) and abdominal computed tomography (1b).

Discussion

Mullerian ducts fuse in midline and form uterus, cervix and 2/3 of upper vagina at sixth week of the embriyonic period. Various anomalies take place in cases which mullerian ducts do not fuse in midline. If mullerian canals develop separately without fusion, two hemiuteri emerge with different uterus, cervix and vagina. Partial vaginal septum arises because of this reason. Uterus didelphys is seen in population with a prevalence of 1-5% [3,4]. It comprises 5% of uterus malformations [1]. Uterus didelphys was first introduced by Wilson in a patient with hematocolpos in 1925 [5]. Unilateral metanephrogenic mesoderm and metanephric tubercle do not develop in absence of one of the wolfian ducts which help the fusion of mullerian duct in midline. In this condition, the kidney and collecting duct of the same side do not develop either. [6,7]. Anomalies of mullerian duct are usually diagnosed after puberty. Cyclic abdominal pain related to menstruation is more severe in mullerian anomaly patients. The diagnosis of uterus didelphys in patients with obstructed hemivagina and unilateral renal agenesis is even more difficult. These patients could have regular menstrual periods. They are usually treated with nonsteroidal anti-inflammatory drugs (NSAID) with the diagnosis of dysmenorhea in their early menstrual periods. Zurawin et al. find that in eight patients with uterus didelphys, obstructed hemivagina and ipsilateral renal agenesis had been misdiagnosed in all in initial evaluations [6]. In the present case, the patient was misdiagnosed as dysmenorrhea and prescribed a NSAID.

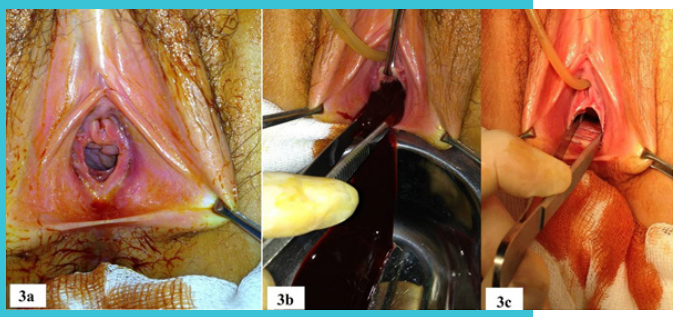
Figure 2.



Uterin didelphys and duplicated vagina with right hematocolpos and hematometra at magnetic resonance imaging. Koronal T2A (2a,b), axial T2A (2c) and fat saturated T1A images demostrated that double uterus (white arrows), normal left vagina (yellow arrow) and hematocolpos and hematometra (asterisk).

Many imaging modalities such as ultrasonography (USG), hysterosalpingography and magnetic resonance imaging (MRI) could be used in diagnosis of uterus didelpyhs. First step should be pelvic USG. Cameron et al. demonstrated that 11 patients with ipsilateral agenesis, obstructed hemivagina and uterus didelphys were diagnosed by pelvic USG [8]. Recently, MRI has become one of the more reliable techniques. Probability of hematocolpos, hematometria and endome

Figure 3.



The swelling from mass, drainage of hematocolpos and vaginal view after operation are clearly seen in 3a, 3b and 3c, respectively.

trisosis development increases in uterus didelphys and obstructed hemivagina cases. Infection incidence is reported to be increased relative to hematocolpos and hematometria [9]. In treatment, it is necessary to drain hematocolpos first. Resection of transverse septum generally has good results. There are many studies on the resection of vagina septum as a treatment modality [8]. In these cases, as they all originate from urogenital sinus, kidneys and collecting ducts should be evaluated. Intravenous pyelography is quite reliable for these patients. Uterus anomalies should be kept in consideration while evaluating adolescent patients with complaints of severe abdominal pain and feeling of pelvic mass. Anomalies of uterus are usually diagnosed after puberty and many diagnostic and treatment modalities exist. Pelvic USG should be preferred as the initial diagnostic tool as it is easily available. In clinical suspicion, patients should undergo MRI for exact diagnosis. IVP is generally adequate to evaluate co-existant urinary anomalies. In the treatment of these anomalies, fertility sparing surgery should be preferred.

Conflict of Interest
Authors declare no conflict of interest

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