

A Radiological Review Of Herlyn-Werner-Wunderlich Syndrome

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lity, prolonged release, and higher antifungal activity were seen in curcumin-loaded lipid nanoparticles, suggesting that they may be an efficient antifungal delivery strategy. This method has the potential to reduce systemic toxicity and overcome drug resistance, making it a viable alternative to traditional antifungal treatments.

Keywords: Lipid nanoparticles, curcumin, antifungal therapy, targeted drug delivery, fungal infections, nanotechnology.

1. INTRODUCTION

Herlyn-Werner-Wunderlich syndrome also known as OHVIRA syndrome is a rare congenital disorder characterized by uterine didelphys, ipsilateral renal agenesis, and unilateral blocked hemivagina.[1]. Diagnosing this syndrome poses a challenge because of its rarity, necessitating a high level of suspicion. People with endometriosis and renal abnormalities should be especially vigilant in recognizing the symptoms of Herlyn-Werner-Wunderlich syndrome so that they might avoid serious problems.[2].

Case Report

A 15 -year-old female patient came with complaints of dysmenorrhea. She experienced a normal start of menstruation with regularity and no episodes of heavy menstrual bleeding. The patient did not get any prior pelvic examinations despite her history of dysmenorrhea and vomiting. A single vagina, cervix, uterus, and one opening (ostium) were seen during a vaginoscopy and hysteroscopy procedure conducted under general anesthesia.

Abdominal and pelvic ultrasound (USG) showed that the right renal fossa lacked the right kidney, with bowel loops occupying this space. [Figure 1a] The left kidney exhibited mild compensatory hypertrophy.[Figure 1b] Uterus didelphys was identified.[Figure 2a] In right uterine cavity and cervical canal, there was a hypoechoic collection with internal echoes indicating the presence of hematometra and hematocolpos or hematotrachelos [Figure 2b]

MRI of the abdomen and pelvis revealed: There is duplication of the uterine cavity and cervix with note made of a longitudinal vaginal septum which is suggestive of uterine diadelphys.[Figure 3a] There is cystic dilation of the right vagina, cervix, and uterine cavity with fluid accumulation showing hyperintensity on both T1 and T2 imaging sequences. It is seen causing mass effect on the left vagina- suggestive of right hematocolpos and hematometra.[Figure 3b] An elongated tubular cystic structure, appearing hyperintense on both T1 and hypointense on T2 sequences representing blood products was noted in the right adnexa indicating the presence of hematosalpinx

The diagnosis of uterine didelphys with right haematometra, hameatotrachelos, and haematosalpinx with right renal agenesis was made; these findings are suggestive of the Herlyn-Werner-Wunderlich syndrome (classified 1.2).

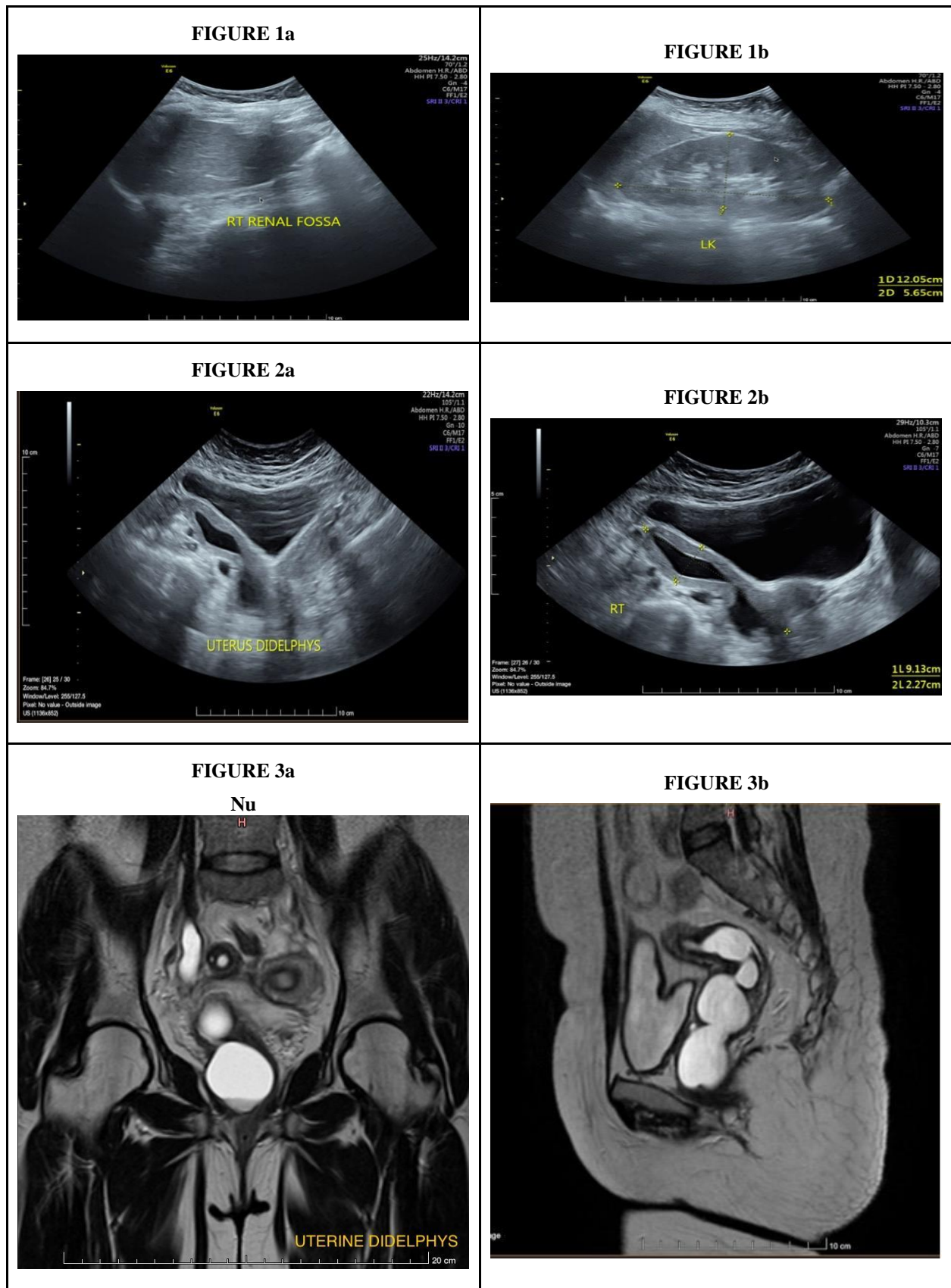


Figure 1a-2b: USG images; Figure 3a-3b: MRI images.

2. DISCUSSION

A wide spectrum of developmental problems, including non-development, defective fusion, and inappropriate septum regression during foetal development, are encompassed by Müllerian duct disorders [2]. A case report detailing a female patient with unilateral hematocolpos, hematometria, and hematosalpinx was published as early as 1922. However, it wasn't until 1971 that the triad was completely explained by Herlyn-Werner-Wunderlich. Wunderlich included bicornuate uterus as a characteristic of the disease in 1976. Since then, a case of renal agenesis, bicornuate uterus, and a single vagina, sometimes with hematocolpos, have been put together in a single case report. [2,3]. At Peking Union Medical College Hospital (PUMCH), Lan Zhu et al. examined the features of every HWWS patient and proposed a new classification system for the syndrome based on the existence of both fully and partially obstructed vaginal septa. Classification 1 refers to completely obstructed hemivagina conditions. Classification 2 relates to hemivaginal problems with partial obstruction [3]. Imaging studies such as ultrasonography and MRI are important diagnostic tools for diagnosing this condition. [2]. The primary objective of treatment is to enable the patient to have successful reproductive outcomes and normal sexual life after surgery.

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