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Hematocolpos as a Cause of Urinary Overflow Incontinence in a Young Girl: A Case Report

Urinary overflow incontinence is an unusual problem in young girls. Hereby we introduce hematocolpos as one of the rare causes of overflow incontinence in a 14-year-old girl.

In this case, hematocolpos simultaneously compressed the bladder and the bladder-outlet and finally caused overflow incontinence.

Keywords: Hematocolpos, Urinary Incontinence, Imperforate Hymen

Introduction

Overflow incontinence happens when the normal flow of urine is blocked and the bladder cannot empty completely. It is rare in young girls. Sometimes it is caused by partial obstruction due to external mass compression such as pelvic organ pathologies (e.g. large ovarian cysts) on the urethra and the bladder. An inactive bladder muscle, spinal cord injuries, nervous system disorders are additional causes of overflow incontinence.[1]

In this report, we introduce hematocolpos as a rare cause of overflow incontinence that has not yet been reported.

Hematocolpos due to imperforate hymen can be a rare cause of external mass compression on the lower urinary tract in teenagers. As many as 58% of patients with hematocolpos present with urinary hesitancy or dysuria and 47% manifest with acute urinary retention (AUR).[2] The incidence of imperforate hymen is reported differently in literatures (1%, 1.2%, and 6.7%).[3,4]

Ultrasonography (US) has been the investigation of choice in most cases of imperforate hymen with hematocolpos and hematometra reported in the literature,[5] but if MRI is available, it is a more exact imaging modality in confirming hematocolpos and also in excluding the occurrence of other abnormalities of the mullerian tract or related urological abnormalities. As many as 25%–90% of women with renal anomalies have been reported with concurrent genital anomalies.[6]

Case Presentation

A 14-year-old girl presented to the urology clinic with a history of frequency, dysuria and previously dribbling incontinence with mid-lower abdominal pain and constipation.

On examination, the vital signs were normal but she was in distress. Secondary sexual characteristics were well developed. Abdominal examination revealed a grossly enlarged mass up to the umbilicus.

After performing examination of the urogenital tract, there was a thin bulging

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hymen, which was totally obstructing the vagina. In bladder catheterization, there was no significant urine residue.

Pelvic and abdominal US demonstrated a dilated uterine cavity and vagina and mild bilateral hydro-uretero-nephrosis. For more details, we performed MRI (Figs. 1A & B) and with the diagnosis of hematocolpos, she was admitted to the gynecologic department for treatment. At operation, hymenotomy was performed and approximately 3500 ml blood was drained. The patient was discharged home the following day and in the two-week and one-month follow up, she did not have any urinary symptoms. In abdominal US the bladder had a normal capacity without significant residue, and the uterus and the vagina were also normal.

Discussion

Along with more common causes of urinary incontinence in children, such as urinary infection, urogenital abnormality and neuropathic bladder-sphincter status, the rare causes such as imperforate hymen with hematocolpos should be considered. US should be performed immediately in suspected cases to confirm the diagnosis and then MRI should be requested for more details and to rule out associated urogenital anomalies. A history of lower abdominal pain, urinary symptoms and a mid-abdominal mass in a 12 to 18-year-old girl should lead any consulting physician to consider imperforate hymen with hematocolpos. Although in recent literatures urinary retention has been the most reported symptom in hematocolopos[7,8] and these patients often have some simultaneous congenital genito-urinary abnormalities,[9] our case had been referred by urinary incontinence without any concurrent congenital genito-urinary anomalies.

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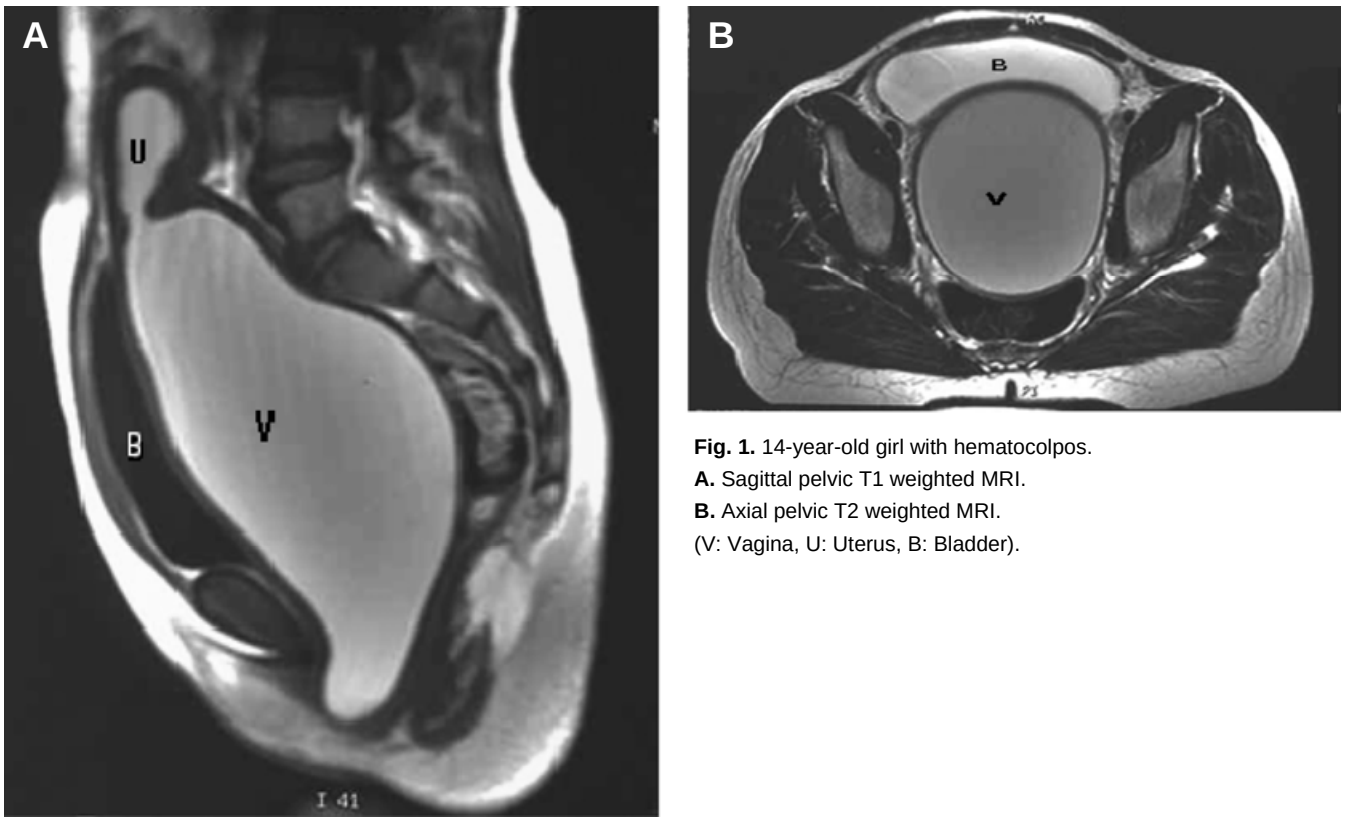

Fig. 1. 14-year-old girl with hematocolpos.
A. Sagittal pelvic T1 weighted MRI.
B. Axial pelvic T2 weighted MRI.
(V: Vagina, U: Uterus, B: Bladder).

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