

# An unusual case of acute urinary retention in young females

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## ABSTRACT

Urinary retention is an unusual problem in females and may be psychogenic, especially in the young. However it is important to remember that there are also organic causes for retention. We present 2 cases of an uncommon cause of urinary retention in the young female, namely hematocolpos.

**Keywords:** Young female, urinary retention, hematocolpos.

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An imperforate membrane may exist at the lower end of the vagina, which is loosely referred to as the imperforate hymen.<sup>1</sup> The imperforate hymen is usually asymptomatic prior to menarche, after that the menstrual blood will collect in and distend the vaginal vault, causing low abdominal pain, suprapubic cramps, and difficulty or pain with urination, this usually occurs with the 2nd or 3rd menstruation.<sup>2</sup> This is a report of 2 cases of urinary retention in young females due to hematocolpos, which was diagnosed and treated successfully.

## Case Report.

**Patient 1.** A 14 year old girl presented to casualty with a 10-hour history of lower abdominal pain and inability to void. She was catheterized and after drainage of about 500 ml of clear urine, she felt comfortable and the catheter was removed. However, a few hours later there was a further episode of retention. She has had no urinary symptoms in the past, had never menstruated and was not taking any medication. On examination, she was in pain, afebrile with a pulse of 90/min, and blood pressure of 120/70 mmHg. Abdominal

examination revealed a suprapubic mass which was symmetrical, tender and dull to percussion. A 10th Foley catheter was inserted, again draining 500 ml of clear urine. Examination of the vulva revealed bulging of the hymen with normal coloration. Ultrasonography showed a large, oval, cystic mass posterior to the distended bladder, suggestive of hematocolpos (Figure 1). The ovaries were normal and there were mild bilaterally distended upper urinary tracts. Hymenotomy was performed and about 300 ml of turbid blood was drained. She later passed urine spontaneously.

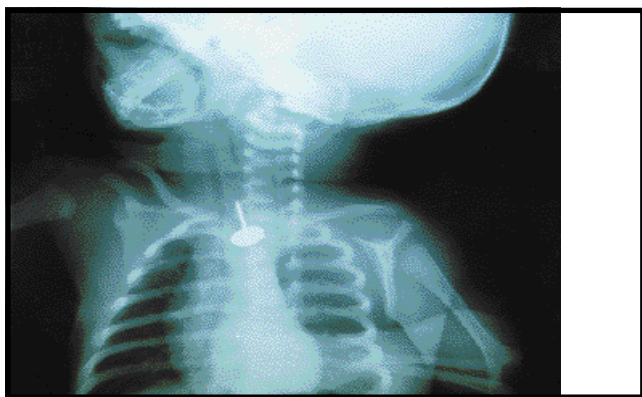
**Patient 2.** A 10 year old girl was seen at the clinic with a history of recurrent abdominal pain for the previous 5 months, associated with difficulty in voiding. She had a past history of recurrent attacks of urinary tract infection. At the age of 4 years, she had a micturating cystogram, and vesico-ureteric reflux was observed. She was treated with antibiotics. Subsequently she had been well. She had never menstruated and was not taking any medication. On examination she was afebrile, with a pulse of 80/min and a blood pressure of 120/70 mmHg. Abdominal examination revealed suprapubic tenderness and dullness to percussion but

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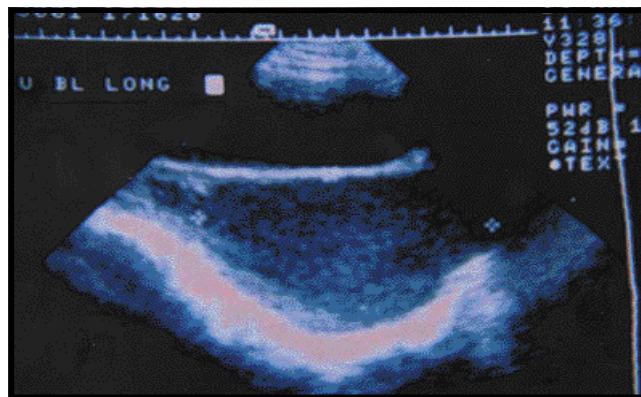
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**Figure 1** - Ultrasonography showed a large, oval, cystic mass posterior to the urinary bladder, suggestive of hematocolpos.



**Figure 2** - Ultrasonography showed a distended vagina behind the urinary bladder, suggestive of hematocolpos.

no mass was palpable. Examination of the vulva appeared normal. Ultrasonography showed a distended vagina behind the urinary bladder, suggestive of hematocolpos (Figure 2). The ovaries and upper urinary tracts were normal. Hymenotomy was performed and about 250 ml of turbid blood drained. She later passed urine spontaneously and the pain disappeared.

**Discussion.** Hematocolpos is the consequence of an imperforate hymen in a female in whom prenatal vaginal and cervical secretions were not produced in sufficient volume to cause hydrocolpos very early in life.<sup>3</sup> The imperforate hymen is a rare gynecologic abnormality that may be easily diagnosed on initial presentation.<sup>4</sup> In most patients, a lower abdominal mass accompanied by an interlabial bulge is detected clinically.<sup>5</sup> The accumulation of the menstrual blood in the vagina and uterus may produce a mechanical effect on the urethra and bladder and lead to obstructive urinary symptoms.<sup>6</sup> As many as 58% of hematocolpos cases present with urinary problems.<sup>7</sup> Ultrasonography is easy and safe and has made an important contribution to the diagnosis of hematocolpos and indeed several other organic causes of bladder outlet obstruction.<sup>8</sup> Such include intrinsic causes (ectopic ureterocele, urethral stenosis and bladder calculus) and extrinsic causes (tumors of

ovaries, vagina and uterus, metastatic tumors, pelvic abscess, retrovesical hydatid cyst and constipation.

In conclusion, we present 2 cases of urinary retention in young females to highlight the need to consider organic causes for this condition, which include the rare condition of hematocolpos. Simple clinical examination may suggest the diagnosis, which can be confirmed by ultrasound.

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