Female Urinary Retention in the Young and Elderly: A Case Report and Review of Literature.

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Abstract.

Urinary retention rarely affects women. In obstructive retention the source must be determined and treated to allow the patient to void normally. A common anatomic cause of urinary retention is extrinsic compression due to a pelvic mass. In addition, obstruction can also be seen in women with pelvic organ prolapse. Haematocolpos and uterine fibroids have also been documented as causes of acute urinary retention.

The following cases of female urinary retention highlight the need to consider haematocolpos in the adolescent girl who has not attained menarche and fibroids in the older female.

Keywords Imperforate hymen, acute urinary retention, haematocolpos, fibroid.

CASE 1.

A 12-year-old school girl was admitted with a history of lower abdominal pain for two days. She had never been sexually active and reported no vaginal discharge or difficulty with bowel movements. Her medical history was unremarkable and she had not attained menarche yet. A few days earlier she had acute urinary retention which required catheterization and was later referred to our center for further management.

On examination she was comfortable with stable vital signs. She was not pale and secondary sexual characteristics were present.

The abdomen was soft, non-tender with no palpable masses. As she was 12 years old and not sexually active, vaginal examination was not performed.

A careful examination of her external genitalia revealed an imperforate hymen.

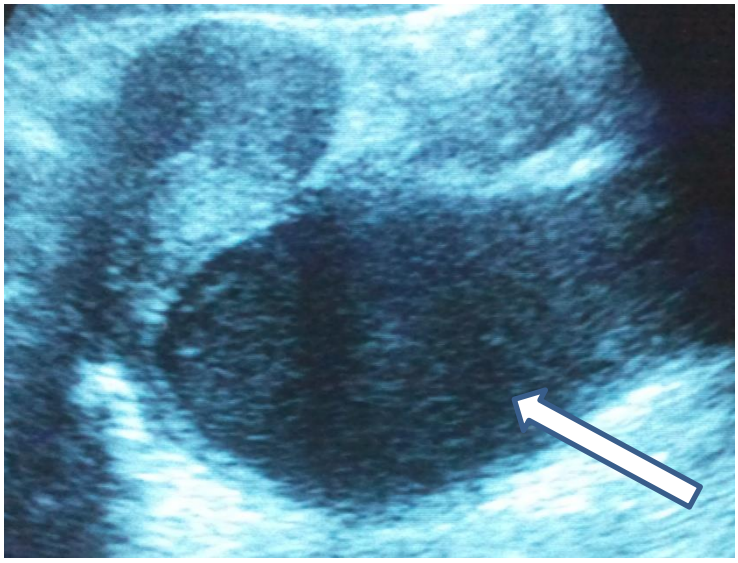

Fig.1. Transabdominal ultrasound scan showed a 5.7 by 7.1 cm haematocolpos (arrowed) with a normal sized ante-verted uterus pushed superiorly.

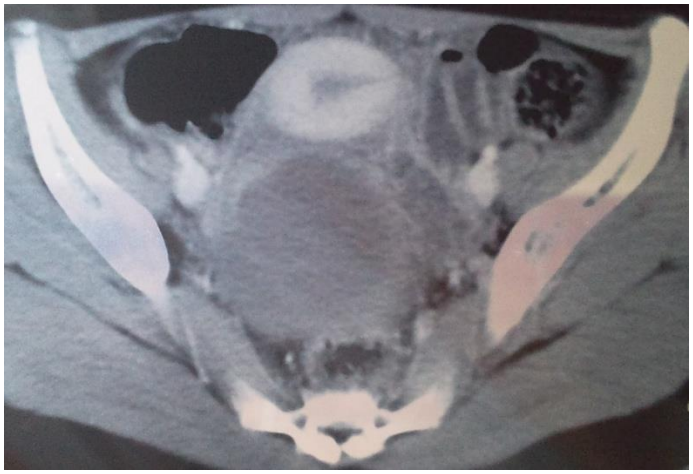

Fig.2. CT scan showed a vagina dilated with hypodense material (haematocolpos) 5.8 by 10cm. The uterus was pushed superiorly with a minimally fluid filled cavity. All other intra-abdominal organs were normal.

The patient was taken to the operating room where a cruciate hymenectomy was performed and 350 ml of dark stale blood was drained.

She was discharged well the following day with an uneventful follow up a month later.

CASE 2

A 49-year-old single nulliparous teacher had a history of recurrent urinary retention over the past nine months.

Prior to her admission, she had been seen at primary health care centers several times and treated as urinary tract infections. However, as the problem became worse with increasing abdominal distension, she decided to come to

Hospital Ipoh. Apart from intermittent urinary retention, she did not have any other urinary symptoms.

She attained menarche at 14 years of age. Her periods were regular with a 28 day cycle and menses lasting up to seven days. She had mild dysmenorrhea for the last 20 years with no heavy menstrual loss.

Her past medical and surgical history was uneventful. Her bowel habit was normal. She had no family history of malignancy.

On examination, her vital signs were stable and she was not pale. The abdomen was soft, non-tender and slightly distended below the umbilicus.

There was a palpable firm mass of 18 weeks size which was mobile left to right, unable to get below it. The liver and spleen were not palpable and the kidneys were not ballotable. There was no fluid thrill and the bowel sounds were present.

Her full blood count, renal profile and urine analysis results were all normal. Ultrasound showed-multiple uterine fibroids with a large fundal fibroid of 7.8x 6.5cm. The uterus was retro-verted and measured 10 x 8 cm.

She had total abdominal hysterectomy and bilateral salpingo-oophorectomy (TAHBSO) performed.

CASE 3

A 79-year-old para 0+2 was admitted into the surgical ward for acute urinary retention. No history of abnormal vaginal bleeding. Further evaluation revealed a 22 weeks size fibroid.

Ultrasound showed multiple calcified sub-serosal and intramural uterine fibroids. No hydronephrosis was seen.

TAHBSO was done with an uneventful follow up. The patient was well and able to pass urine normally.

The histopathological report confirmed the uterine fibroids.

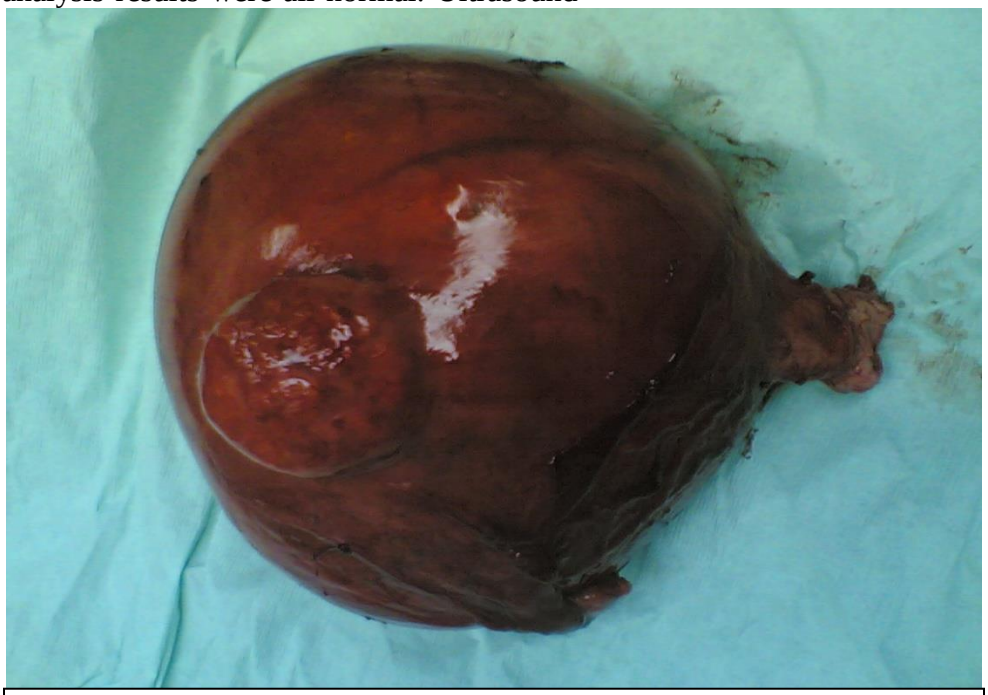

Fig.3 A post hysterectomy specimen of a fibroid uterus with atrophic adnexae and cervix from a 79-year-old lady.

DISCUSSION.

Haematocolpos can easily be overlooked as a cause of urinary retention since vaginal examination is not normally done in young girls who have not attained menarche.

The diagnosis of imperforate hymen with haematocolpos as a cause of urinary retention in children may be easily made after a genital examination. However, it is often missed as it is not considered and an incomplete examination performed.

In a series of cases of imperforate hymen reported by Calvin et al (1), 46% presented with acute urinary retention. This problem occurs when the accumulation of menstrual blood in the vagina and uterus may form a mechanical effect on the urethra and bladder and lead to obstructive urinary symptoms (2). In a study by Posner et al. (2), girls presenting with findings similar to ours were also given preliminary diagnoses other than imperforate hymen, including urinary tract infection, appendicitis, nephrolithiasis, and abdominal tumor. Hematocolpos does not always present with gynecological symptoms, just like our patient who presented a month earlier with acute urinary retention and lower abdominal pain. She was catheterized and treated as cystitis. On her second visit an ovarian tumor was suspected.

Ultrasonography is the preferred radiological method in the diagnosis of haematocolpos (3), however MRI may be required to exclude the occurrence of other abnormalities of the Mullerian tract or urological abnormalities that seem to be related. As many as 25–90 % of women with renal anomalies are suggested to have concurrent genital anomalies (4).

Treatment of haematocolpos due to imperforate hymen is generally achieved by making a cruciate incision on the hymen and evacuating the old blood under anesthesia.

With regard to uterine fibroid, which is the commonest benign tumour of female reproductive tract, a review of the literature has shown several case reports of urinary retention secondary to an impacted pelvic mass, uterine fibroid being one of them. (5), (6).

However,it is unusual for a 79-year-old to have such a large fibroid that can cause urinary retention. This is because the oestrogen which nourishes the fibroid is no more produced from the ovaries after menopause with resultant shrinkage of pre-existing fibroids. In this case, although the fibroid was still big enough to cause urinary retention it was already calcified. Other causes of urinary retention in old women such as lieyomyosarcoma or any other pelvic malignancy must be ruled out.

CONCLUSION

Just like men, urinary retention can occur in women. However unlike men, it is less common and when it presents it tends to confuse some unexperienced medical officers. The diagnosis of haematocolpos is easy but it may be overlooked and lead to unnecessary diagnostic tests in the emergency departments if a careful and comprehensive physical and genital examination is not performed. Therefore the possibility of haematocolpos should always be kept in mind while evaluating adolescent girls with a pelvic mass, intermittent lower abdominal pain, and acute urinary retention. Early diagnosis and adequate treatment may prevent future complications.

Although a huge uterine fibroid is uncommon at 79 years, it can still be the cause of urinary retention in elderly women.

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