



Acute Urinary Retention Caused by Large Incarcerated Posterior Fibroid

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ABSTRACT

Incidence of acute urinary retention in women is 7 per 100,000 populations per year. The male to female ratio is 13:1. The basis of obstruction is subdivided into urethral compression, bladder neck distortion or luminal occlusion ^[1]. Several predisposing factors of acute urinary retention include uterine malformations, endometriosis, and intramural fibroids. All these factors favour incarceration of the uterus in the pelvic cavity, leading to acute urine retention as a result of urethral compression. An impacted pelvic mass has also been described as a rare cause of urinary retention. Given the high risk of bladder rupture or neuromuscular dysfunction, the first action to take after a rapid physical examination is the drainage of the bladder by catheterization ^[2]. If a uterine fibroid is suspected as the aetiology of urinary retention and fertility is not desired, hysterectomy is the mainstay of management ^[3].

Keywords- Urinary retention, Uterine incarceration, Fibroid

INTRODUCTION

Incidence of acute urinary retention in women is 7 per 100,000 population per year. The male to female ratio is 13:1. The basis of obstruction is subdivided into urethral compression, bladder neck distortion or luminal occlusion. Immediate management requires bladder decompression with catheterization, either indwelling or intermittent catheterization. ^[1]

CASE

A 35 year old 3rd para with previous 2 live issues presented with complaints of difficulty in micturition, e.i. excessive straining with incomplete voiding and poor stream of urine since 6 -8 weeks. She also had intermittent episodes of acute retention of urine for which she was catheterized 4 times. However, there was no history of burning

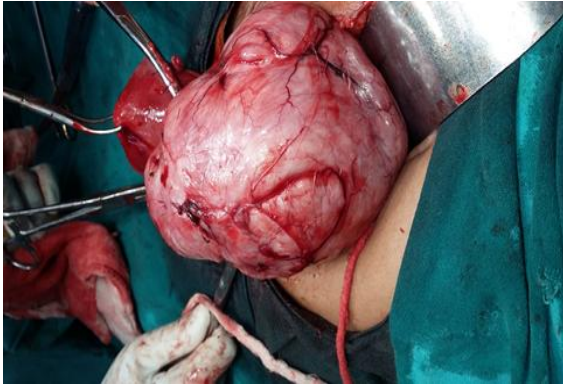
micturition, haematuria or incontinence. Since her problem persisted she reported to the emergency wing of our hospital and was catheterized. On examination of the abdomen, uterus was just palpable with no other organomegaly. Per speculum examination showed the cervix to be hypertrophied and placed anteriorly. P/V examination revealed the uterus to be about 14 weeks with left fornix free. The right fornix however was filled with a firm mass approximately 8.0x8.0 cm with mild tenderness. It extended posteriorly. No evidence of decreased sensation of the perineum or a decrease in levator muscle tone was found. All other systems including CNS were within normal limits. On investigations, renal function tests with urine microscopy and culture, sensitivity were consistently within the normal range, as were other routine investigations. Ultrasound revealed a mixed echogenic mass of dimensions 95.75 x 86.85 sq.mm. in the right adnexal area. The uterus was slightly enlarged also showing a hypoechoic area of 17x16 sq.mm. in the anterior wall. There was no ascites or fluid in the cul-de-sac. Bilateral kidneys and urinary bladder appeared normal showing a Foley's bulb in situ. Intravenous pyelogram however showed mild hydronephrosis on the right side. In the past, patient gave history of hysterotomy with tubal ligation for a 4 months pregnancy. She also had a very significant history of severe constipation for a month, six months back, which got relieved on treatment. Her menstrual cycles were normal as reported by the patient. With the above findings, the patient was referred to the obstetrics and gynaecology department where she was posted for exploratory laparotomy for a

provisional diagnosis of right complex adnexal mass with anterior wall uterine fibroid with acute retention of urine.

Per-operatively, the uterus was stretched and lifted out of the pelvis by a large fibroid which was about 8.0x8.0 cm, arising posteriorly, deeply impacted into the pelvis and simultaneously occupying the right adnexal region within the broad ligament. After cutting the right round ligament and first pedicle, a window was created through which access to the uppermost part of the fibroid was obtained. Due to lack of space, myomectomy was attempted by tunnelling under the posterior serosal peritoneum in an attempt to reach the lower limit. The fibroid was dis-impacted from the pelvis with great difficulty and a total abdominal hysterectomy was done.

Post-operatively, recovery was good and the patient could pass urine on her own with no problems as soon as the Foley's catheter was removed.





DISCUSSION

Several predisposing factors of acute urinary retention include uterine malformations, endometriosis, and intramural fibroids. All these factors favour incarceration of the uterus in the pelvic cavity, leading to acute urine retention as a result of urethral compression. Given the high risk of bladder rupture or neuromuscular dysfunction, the first action to take after a rapid physical examination is the drainage of the bladder by catheterization [2]. However, obstructive urinary retention is an uncommon event in women of reproductive age without previous surgery. An impacted pelvic mass has also been described as a rare cause of urinary retention. This can also be seen in pregnancy with an incarcerated uterus [3]. In our case, the impacted uterine fibroid displaced the cervix superiorly and anteriorly. This pressure added to the uterine impingement upon the lower

part of the bladder and resulted in obstruction of the internal urethral orifice.

Urinary retention may also be due to the posterior deflection of the uterus, with the fibroid causing anterior deflection of the cervix which compresses the bladder neck region. When the bladder is drained, the cervix moves away from the bladder neck and normal voiding can occur [3]. Another case report showed that anterior displacement of the bladder base and trigone by the stool-filled rectum in a 47 month old girl impaired the urethro-vesical and sacral reflex function [4].

CONCLUSION

To avoid urinary retention caused by a uterine mass, the following are recommended: (1) limit fluid intake before sleep, (2) change one's position from supine to prone prior to urination, and (3) lean forward when initiating voiding. Valsalva maneuver is to be avoided to maintain voiding [3]. Once urinary retention occurs, the effect caused by the mass has to be decreased to restore the urinary passage. Clean intermittent self-catheterization is also suggested before the mass can be removed. If a uterine fibroid is suspected as the aetiology of urinary retention and fertility is not desired, hysterectomy is the mainstay of management [3].

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