

Parasitic Uterine Fibroid Causing Bladder Outlet Obstructions and Urosepsis: A Case Report

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Abstract

Background: Uterine leiomyomas (fibroids) are the most common neoplasm affecting women. Extrauterine leiomyomas are rare and may arise in any anatomic site; their unusual growth pattern may mimic malignancy and can result in a clinical diagnostic dilemma. Uterine fibroids are not well known to cause acute urinary retention (AUR) and subsequent urosepsis in women, and there have been few published cases of parasitic fibroids causing AUR. We present a case of a parasitic fibroid in the posterior vaginal wall occupying the rectouterine pouch (of Douglas) in a grand multiparous woman causing AUR and urosepsis requiring total abdominal hysterectomy and removal of the parasitic fibroid.

Case report: A 45-year-old business woman, P₈⁺⁰ who presented with abdominal swelling and pains and recurrent difficulty in passing urine with total urinary obstruction of five months duration. Abdominal examination revealed 20-weeks uterine size mass that was nodular, firm, non-tender and mobile from side to side. Pelvic examination revealed a healthy-looking cervix that was displaced anteriorly by the huge pelvic mass and occluded the pouch of Douglas. She was resuscitated and had exploratory laparotomy with removal of the mass and total abdominal hysterectomy. She had post-operation septic shock that was managed with intravenous and oral antibiotics. She had quick recovery and was discharged after four days of surgery. Histology confirmed the mass to be fibroid.

Conclusion: Parasitic fibroid can present as a case of bladder outlet obstruction and diagnosis can easily be missed. High index of suspicion, good investigation and institution of appropriate management protocol will ensure quick recovery and reduce further complications as in the case presented.

Keywords: Parasitic; Fibroid; Bladder Outlet Obstruction; Urosepsis

Introduction

Uterine leiomyomas (fibroids) are the most common neoplasm affecting women and has been postulated to occur in over 70% of women by the onset of menopause [1,2]. Extrauterine leiomyomas are rare and may arise in any anatomic site; their unusual growth pattern may mimic malignancy and can result in a clinical diagnostic dilemma [3,4]. International Federation of Gynaecology and Obstetrics (FIGO) currently classify parasitic fibroids as Type 8 with no attachment to the uterus [5]. Parasitic fibroids are thought to originate from a pedunculated fibroid which outgrows its blood supply and becomes attached to peritoneal structures where it derives its new blood supply [6].

Uterine fibroids are not well known to cause bladder outlet obstruction with acute urinary retention (AUR) and urosepsis in women [7] and there have been few published cases of parasitic fibroids causing AUR. Urosepsis is simply defined as a sepsis caused by a urinary tract infection [8]. It is a life-threatening condition and a serious complication of urinary tract infection (UTI) that requires immediate medical care. Depending on the geographical location, urosepsis occurs in both sexes and has constituted as much as 9-31% of cases of patients managed for sepsis. Urosepsis has caused mortality in 30-40% of cases of people affected and it mainly results from obstructive uropathy of the upper urinary tract [9].

We present a case of a parasitic fibroid in the rectouterine pouch (of Douglas) in a grand multiparous woman with urinary outlet obstruction and subsequent urosepsis requiring total abdominal hysterectomy and removal of the fibroid.

Case Report

A 45-year-old businesswoman, P₈⁺⁰ with eight living children who presented with abdominal swelling and difficulty in passing urine both of five months duration. The abdominal swelling was insidious in onset

and gradually increased in size. There was associated abdominal pain which was aggravated by urinary retention and relieved by voiding. Difficulty in urinating occurred at about the same time. It was associated with incomplete voiding, poor urine stream, urgency, intermittency and urinary frequency. There was also recurrent fever that was relieved with intake of antibiotics. Occasionally there was complete urinary obstruction that was relieved by catheterization. However, there was no obvious history of nocturia or haematuria. No history of abnormal vaginal discharge or vaginal bleeding was experienced. Patient had no previous history of abdominal or pelvic trauma. She received care from a nurse who relieved her occasional urinary obstruction by catheterization. She was equally managed by patent medicine dealers with pain killers and antibiotics.

At presentation, she was in obvious painful distress, afebrile, not jaundiced, not pale, not dehydrated and without pedal edema. Her vital signs were normal. Abdominal examination revealed a 20-week uterine size mass that was nodular, firm, non-tender and mobile from side to side. Pelvic examination revealed a healthy-looking cervix that was displaced anteriorly by the huge pelvic mass that occluded the pouch of Douglas and posterior vaginal wall. A diagnosis of acute on chronic

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urinary retention secondary to abdomino-pelvic mass most likely fibroid was made.

She was admitted and urinary retention relieved with urethral catheter. She was counselled on her condition and the need for laparotomy with possible total abdominal hysterectomy and removal of the mass in the Pouch of Douglas considering her requests and the fact that she had completed her family size (Para 8). Ultrasonography revealed a bulky uterus with numerous fibroid masses (nodules), the largest of which was in the posterior myometrium measuring 7.95 × 8.84 cm. All other pre-operative investigations were normal.

She had a laparotomy under epidural anaesthesia with total abdominal hysterectomy and removal of a parasitic fibroid in the pouch of Douglas abutting the posterior uterine wall measuring 20 × 15 cm. There was no established connection between the mass in the posterior vaginal wall and the uterus. The uterus was rather atrophic in size measuring about 5 × 4 × 2 cm in length, breadth and depth respectively and had no other obvious fibroid nodules. Figures 1-4 shows the pictures of the parasitic fibroid and its relationship with surrounding structures at different stages of the surgery.

On the first day after surgery, she developed fever, became irritable and confused. Her blood pressure was low (80/50 mmHg), pulse was fast and thready (110 bpm) with low volume, and there were cold clammy extremities. There was no bleeding from the operation site or any other part of her body. A diagnosis of urosepsis was made and she was given 2 litres of normal saline over 30 minutes, intravenous ceftriaxone (Rocephin), gentamycin and hydrocortisone. Her vital signs subsequently improved following commencement of the medications. Urine culture did not yield any organism as the patient was on antibiotics even at presentation. Her full blood count revealed raised white blood cell with relative neutrophilia.

She was discharged on the 5th day after surgery and subsequent histology report revealed that the mass was fibromyoma uteri. Her subsequent post-operative conditions remained unremarkable.

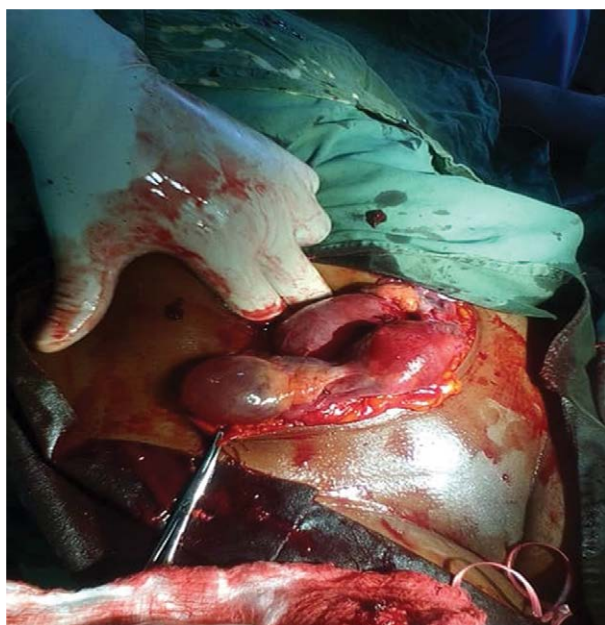


Figure 1: Showing normal sized uterus and huge mass in the Pouch of Douglas.

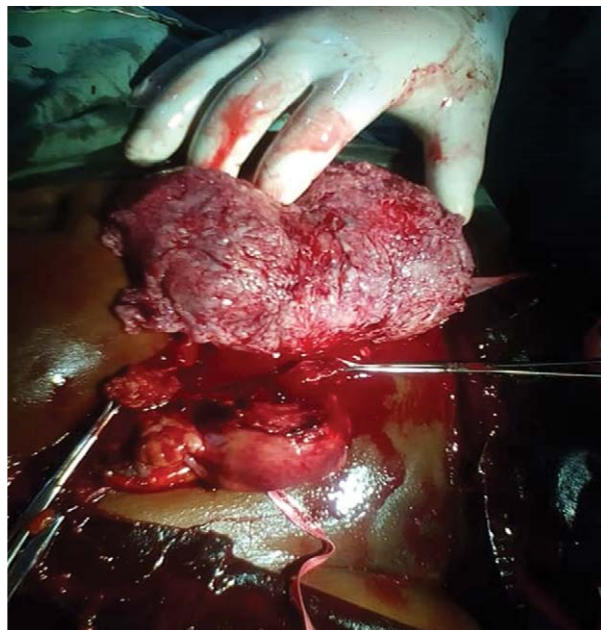


Figure 2: Showing huge parasitic fibroid at the point of removal.



Figure 3: Showing the huge parasitic fibroid after removal.

Discussion

Parasitic leiomyomas are benign smooth muscle tumours separated from the uterus. Diagnosis is usually missed due to their unusual presentations. Urinary outlet obstruction (acute urinary retention) is one of these unusual presentations. Generally, AUR is uncommon among women and diagnosis of leiomyoma as the cause is usually coincidental [7,10,11]. Most of these patient presents late to the gynaecologist which prolongs diagnosis to treatment interval [12,13].

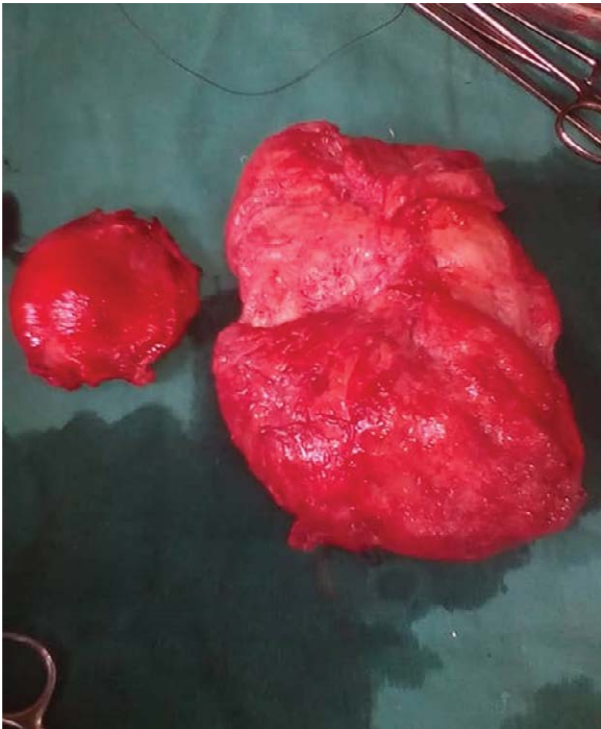


Figure 4: Showing the normal sized uterus and huge parasitic fibroid.

Parasitic leiomyomas may be classified as primary spontaneous and secondary which develops after myomectomy procedures [13]. Primary parasitic leiomyomas are rare unlike secondary parasitic leiomyomas whose incidence is on the rise due to increasing use of morcellation in laparoscopic myomectomy [14,15]. The index patient has never had an abdominal surgery, though there was a history of prior diagnosis of a pedunculated uterine leiomyoma.

Generally, patients with AUR secondary to fibroids experience variable difficulties with bladder emptying, intermittency and subsequent episodes of AUR.7 some mechanisms that has been proposed to explain how uterine leiomyoma cause AUR.

Impacted fibroid mass which causes proximal urethral or bladder neck compression by anterior and superior deviation of the cervix can result in urinary outlet obstruction [16,17]. Some authors postulated that the anterior displacement of the cervix leads to compression of the lower portion of the bladder and proximal urethra. Posterior or fundally located leiomyomas which are associated with a retroverted uterus seem to pose the greatest risk.

Following AUR from bladder outlet obstruction by a pelvic tumour such as uterine fibroids, dilatation of the ureters may occur leading to increased urine stasis and increased risk of urinary tract infection and urosepsis [18]. Other presentation of extra-uterine fibroids is abdominal pains, bowel obstruction and haemorrhage [19]. The index patient had urosepsis which manifested fully following surgery. She did not have frank fever and other symptoms and signs of urosepsis at presentation probably due to her frequent use of antibiotics out of prescription.

In management of AUR due to uterine fibroids, ultrasonography is usually the first modality of imaging as it can accurately diagnose leiomyomas and its position [20]. Doppler studies, CT scan and MRI

improve the diagnostic accuracy, but they are not routinely used. As in the case presented the ultrasound scan conducted misdiagnosed it as a posterior myometrial fibroid.

Immediate relief of urinary retention with Foley catheter, suprapubic catheter or intermittent clean catheterization [21] is necessary. An algorithm designed by Wu et al. [7] in their study summarises the management of AUR in a female patient with or without leiomyoma.

Conclusion

Parasitic fibroid can present as a case of complicated bladder outlet obstruction and diagnosis can easily be missed. Therefore, high index of suspicion, good investigation and institution of appropriate surgery is needed to ensure quick recovery and reduce complications as in the case presented.

Informed Consent

Patient freely gave her consent for the presentation of her case using the attached photographs in the Figures 1-4.

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