

Huge Pelvic Lipomatosis as an Unusual Cause of Acute Urinary Retention

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Abstract

Pelvic lipomatosis is a benign tumor of adipose tissues rarely seen in young males. Its clinical presentation is variable. Acute urinary retention is unusual pattern of presentation. This reports a case and management of huge pelvic lipomatosis in a 33-year-old African male presenting with lower urinary tract symptoms and acute urinary retention. The relevant literatures were also reviewed.

Keywords: Acute urinary retention, lower urinary tract symptoms, pelvic lipomatosis

INTRODUCTION

Pelvic lipomatosis is a benign, progressive infiltrative disease characterized by deposition of mature adipose tissue in the pelvic cavity with the absence of delimitation by a capsule, associated with elevation and compression of the urinary bladder and rectum.^[1] This rare phenomenon was first reported in the English literature by Engels^[2] but the term “pelvic lipomatosis” was coined by Fogg and Smyth in 1968.^[3] The incidence of pelvic lipomatosis has been reported in the American population to be 0.6–1.7/100,000 hospital admissions with a male predominance and peak incidence occurring in the fourth and fifth decades.^[4] There is racial disparity with preponderance in individuals with dark-skinned phenotype.^[4]

Although the cause is unclear, several theories have been proposed to explain the etiology. Some have proposed pelvic lipomatosis to be a part of general obesity while others have described it as a variant of generalized lipomatosis such as Dercum’s disease.^[5,6] It has also been attributed to repeated inflammation from recurrent urinary tract infections or from some hormonal or metabolic imbalance.^[1,7] However, none of these have been confirmed.

The symptomatology of pelvic lipomatosis arises from the compressive effects on adjacent viscera: rectum, urinary bladder, ureters, blood vessels, and nerves. These symptoms

may include lower urinary tract symptoms (LUTS) and complications from obstruction of urine flow, changes in bowel habits, chronic pelvic pains, and leg swelling.

The physical examination findings may be variable, traceable to the mass effect caused by the pelvic lipoma.

Although abdominopelvic ultrasound scan and plain abdominal radiograph are useful in making diagnosis, the imaging modality of choice is computed tomography scan.^[8] Plain computerized tomogram will show deposition of homogenous tissue with low attenuation (–40 to –100 HU), signifying fatty tissue in the pelvis, while the contrast urogram may demonstrate the typical “teardrop” bladder due to bladder compression and other features of obstructive uropathy.^[9]

Treatment is essentially surgical. The primary treatment is surgical excision. Secondary surgical options include nephrostomy, ureteric reimplantation, and simple cystectomy with urinary diversion.^[4,10] These may be indicated in associated complications of the urinary tract. Bladder-sparing

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complete extirpation of the pelvic fat mass seems the preferred surgical option in young patients but is associated with surgical challenges with increased risk of bleeding posed by increased vascularity within the fatty masses and their intimate association with vascular structures.^[11,12] However, the long-term efficacy of this is still not proven.

Periodic follow-up is important because cystitis cystica and cystitis glandularis which are known to be premalignant lesions of adenocarcinoma in the urinary bladder has been shown to occur in about 70% of cases.^[13] We thus report a case of huge pelvic lipomatosis, an unusual cause of acute urinary retention in a young man.

CASE REPORT

Mr. A. N. is a 33-year-old African trader who presented with difficulty with micturation of 6-month duration and inability to micturate of 2 h. The difficulty was characterized with LUTS of both voiding and storage phase components. Symptoms were progressive and culminated into the inability to micturate 2 h before presentation, associated with severe urge to micturate, suprapubic pain, and swelling. No associated hematuria or prior pain on urination. No change in bowel habit, weight loss, or anorexia. No history of prior purulent urethritis. Patient had free and successful urethral catheterization with drainage of 2L of clear amber urine.

Clinical examination revealed a healthy looking but anxious man. He had normal vital signs. There was suprapubic mass which was nontender, multilobulated, firm, and poorly defined edge. No renal angle tenderness. No organomegaly. He had right irreducible nontender inguinoscrotal mass. The urethral catheter was *in-situ*, draining clear amber urine. Both testes and epididymis were normal.

Ultrasound scan showed pelvic soft tissue mass extending from the pelvis to the umbilicus, displacing the gut and urinary bladder anteriorly and an incarcerated right inguinoscrotal hernia. Other intrabdominal viscera were normal. A computed tomography (CT) or magnetic resonance imaging (MRI) could not be done due to financial constraints. Other basic

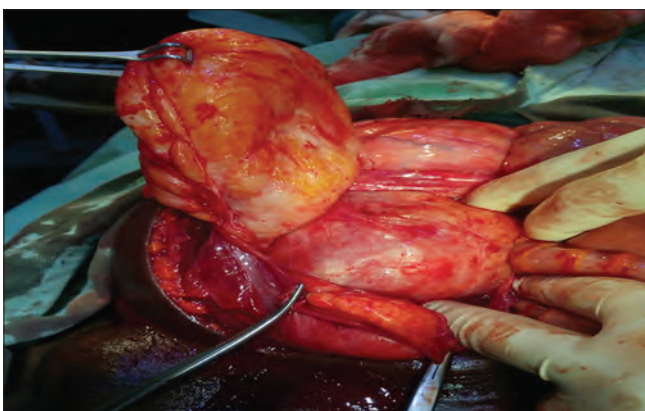


Figure 1: Intraoperative picture of huge pelvic lipomatosis with intraabdominal extension

investigations were normal. Diagnosis of a pelvic mass with bladder outlet obstruction and incarcerated right inguinoscrotal hernia was made.

The patient was counseled and gave consent for surgery, clinical pictures, and this report. An exploratory laparotomy through extended lower midline incision was done. Intraoperative finding was a huge, multilobulated pelvic fatty tissue extending from the right groin to the pelvis, subhepatic and gastric regions [Figures 1 and 2]. Excision of fatty tissue and right herniorrhaphy was done. Histology of fatty tissue specimen showed cut sections with yellowish appearance and benign mesenchymal neoplasm composed of matured adipocytes separated into lobules by thin fibrous bands. However, the histopathology slides, microgram, or tissue block could not be found at the time of this report. The patient had uneventful postoperative recovery and remained healthy 3 months after surgery.

DISCUSSION

Pelvic lipomatosis was reported by Cruz *et al.*^[11] as benign progressive infiltrative disease with deposition of matured adipose tissues with compressive effect on pelvic viscera. This description fits with this reported case whose histology reported no malignant cells. However, despite the progressive nature of this disease, patients tend to present to the doctor with the onset of symptoms as observed in this reported case. He presented with 2 h history of inability to urinate and background history of LUTS of 6-month duration. Heyns^[4] reported a male preponderance of this disease among the black American population with peak incidence at the fourth and fifth decades. This finding is similar to our reported case.

We found abdominopelvic ultrasound useful in diagnosis as reported by Zhao *et al.*^[8] Ultrasound helps to define the site, extent, and nature of the mass and associated compressive or displacement effects on surrounding viscera. However, the superior advantage of CT and MRI in characterizing this mass must be reemphasized.^[8,9]

In this reported case, the patient was offered surgery as suggested by other reporters.^[4,10] However, the option and extent of surgery may be determined by existing pathology and associated complications. The huge resectable pelvic and

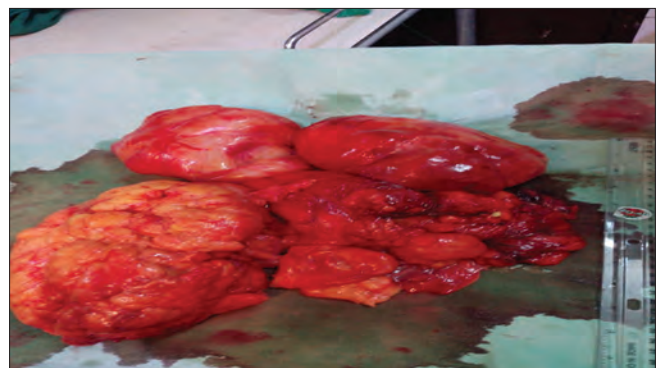


Figure 2: Postoperative specimen of the fatty tissues

abdominal fat with right inguinoscrotal extension in this young man with no comorbidities necessitated exploratory laparotomy, excision of fatty tissues, and right inguinal herniorrhaphy. Extirpation of fat mass among young patients with good quality of life was reported as preferred option of surgery.^[11,12]

Heyns CF *et al.* recommended periodic follow-up of patients treated for pelvic lipomatosis because of the risk of malignant transformation. However, this reported case was lost to follow-up after 3 months.

CONCLUSION

Pelvic lipomatosis is a benign disease of adipose tissue with the tendency of malignant transformation and rarely causes acute urinary retention in young males.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understand that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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