Giant bladder leiomyoma presenting as a pelvic mass: a case report

E. Erdemoglu, *M.D., Assist. Prof.*; **M. Kamacı,** *M.D., Prof.*

Department of Obstetrics and Gynecology, Faculty of Medicine, Yüzüncü Yıl University, Van (Turkey)

Summary

We present a rare case of bladder leiomyoma with an unusual presentation as a pelvic mass. Bladder leiomyomas are very rare tumors, compromising less than 0.43% of all bladder tumors. Magnetic resonance imaging showed a 16 x 13 cm mass covering the entire pelvis and extending up to the umbilicus. There was a 20 x 20 x 11 cm immobile mass originating from the bladder at laparotomy. The mass was removed by bladder-sparing surgery and was reported to be leiomyoma. We conclude that bladder leiomyomas should be preoperatively recognized as a cause of pelvic mass in order to make the possible diagnosis.

Key words: Pelvic mass; Bladder leiomyoma; Treatment.

Introduction

Leiomyomas are benign tumors of smooth muscle, generally originating from the uterus. Bladder leiomyomas are very rare tumors, compromising less than 0.43% of all bladder tumors [1]. Bladder leiomyomas are usually endovesical (63%), however they may be extravesical (30%) or intramural (7%) [1]. We present a rare case of bladder leiomyoma with an unusual presentation as a pelvic mass.

Case Report

A 40-year-old woman, gravida 5, para 5, complaining of abdominal distension, pain and urinary frequency was referred with the diagnosis of a pelvic mass. Pelvic examination revealed a firm mass arising from the pelvis and extending above the umbilicus. The mass had restricted mobility and a regular surface. Rectal mucosa was not infiltrated. The laboratory results were unremarkable. The patient had an 18 x 16 cm, solid mass of unknown origin with a heterogeneous echo on ultrasonographic examination. There was no free fluid or hydronephrosis. Magnetic resonance imaging showed a 16 x 13 cm mass covering the entire pelvis and extending up to the umbilicus. The uterus and bladder were compressed and pushed aside (Figure 1). A well-defined plane was observed between the mass and uterus. After administration of intravenous contrast, the mass showed a heterogeneous and diffuse pattern.

Laparatomy was performed with a Cherney incision. There was a 20 x 20 x 11 cm, immobile mass covering the pelvis from left to right and extending above the umbilicus. The uterus was normal and pushed away, with a normal left ovary and fallopian tube adhering to the mass. The bladder was raised up with the tumor on the left side. The mass was strictly adhering to the posterior and lateral pelvic walls, hindering exposure of vital retroperitoneal anatomic structures such as the ureter, external iliac, common iliac, internal iliac arteries and veins. An extraperitoneal approach was immediately undertaken and paravesical, pararectal spaces on the left side, space of Retzius and uterocervicovesical space were developed in order to identify all of the vital structures. The tumor was found to arise from the left posterior surface of the bladder dome after mobilizing the mass from retroperitoneal structures, the uterus and uterine arteries (Figure 2). The tumor was excised totally en bloc however the bladder was spared and not opened as the extravesical tumor and seromuscular layer were repaired with a two-layer suture technique. Frozen section diagnosis of the tumor was leiomyoma.

The surgical procedure was completed by simple hysterectomy and salpingo-oophorectomy. The postoperative course was uneventful, and the Foley catheter was removed postoperatively on the first day. Pathological macroscopic examination revealed a 19 x 18 x 11 cm elastic, solid mass with whitish-pink color and whorled surface. Microscopic diagnosis was leiomyoma.

Discussion

Bladder leiomyomas, although rare, should be considered in causes of a pelvic mass. Intravesical bladder leiomyomas may cause irritative symptoms, obstruction and hematuria. Intramural and extravesical leiomyomas may be asymptomatic and are usually discovered incidentally [2]. These tumors must grow enough to compress the bladder and surrounding tissue to become symptomatic. They may present with abdominal pain and hydronephrosis. We reported an extravesical leiomyoma which presented with abdominal pain, pressure symptoms and a pelvic mass. Degenerated leiomyomas may be misdiagnosed as cystic tumors by imaging methods. Banerjee *et al.* reported one other case of bladder leiomyoma which was preoperatively misdiagnosed as an ovarian tumor [3].

Management of bladder leiomyomas is comparable to uterine leiomyomas [2]. Large symptomatic tumors may be resected, otherwise expectant management can be carried out. Although malign transformations have not been reported for bladder leiomyomas, there is a 0.07% risk of malign transformation for uterine leiomyomas [3].

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Fig. 1

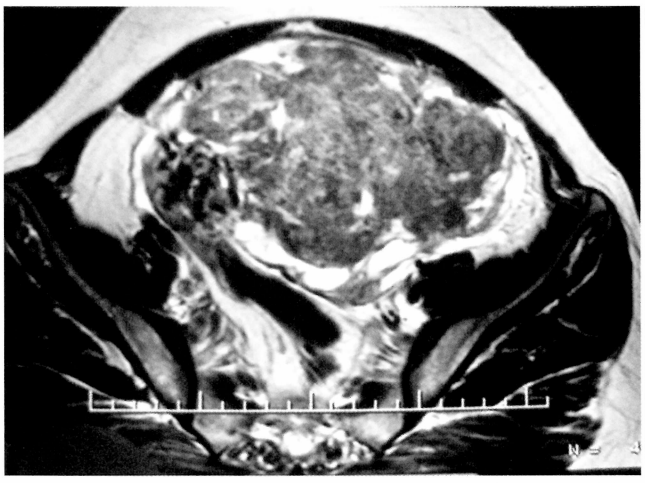

Fig. 2

Figure 1. — Magnetic resonance imaging scan showing a 16 x 13 cm mass covering the entire pelvis and extending up to the umbilicus.

Figure 2. — Giant bladder leiomyoma. The tumor was found to arise from the left posterior surface of the bladder dome after mobilizing the mass from retroperitoneal structures, the uterus and uterine arteries.

Therefore, conservative surgery with bladder sparing is the treatment of choice. Medical treatment of bladder leiomyomas is not reported but may be used before endoscopic procedures to diminish the volume of the tumor. Limits and benefits of medical therapy of bladder leiomyomas may be similar to its uterine counterparts [2, 3].

Diagnosis of bladder leiomyomas can be made by urography, ultrasonography, computerized tomography or magnetic resonance imaging [4]. Diagnosis is more reliable for intravesical tumors however, the differential diagnosis, especially for huge tumors may be difficult from other pelvic tumors which distort the bladder from outside. Therefore, bladder leiomyomas should be recognized as a cause of a pelvic mass to make the possible diagnosis.

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Address reprint requests to:
E. ERDEMOGLU, M.D.
Kıbrıs sok., 25/7, Elçi Apt.
Aşagıayrancı, Ankara (Turkey)