

CASE REPORT



Unusual presentation of parasitic leiomyoma; a tale of twists and turns

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ABSTRACT

Uterine leiomyoma is the most common benign pelvic tumor of the myometrium, as the prevalence could be as high as 70%. Major risk factors include age between 40–60 years and African descent. It usually presents with abnormal uterine bleeding and/or pelvic pain or pressure. Extra-uterine cases of leiomyoma have been reported including Leiomyomatosis Peritonealis Disseminata (LPD), in which multiple nodules are found in the pelvis, peritoneum, or intestine. The term parasitic leiomyoma has been used in literature to describe a non-disseminating pattern. There is no clear explanation for pathogenesis; however, some reports linked it to previous uterine procedures. We are presenting here a case report of an unusual presentation of extra-uterine leiomyoma in a patient with a remote history of hysterectomy for uterine fibroids.

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KEYWORDS

Leiomyoma; post-hysterectomy; pelvic tumor; uterine; morcellator

1. Case report

A 45-year-old female with Diabetes, hypertension and GERD presented to the ED with right lower quadrant abdominal pain, nausea and vomiting. Her past gynecological history was significant for menorrhagia secondary to uterine leiomyoma for which she had hysteroscopy with dilation and curettage twice, followed by laparoscopic supra-cervical total hysterectomy and bilateral salpingectomy four years prior to this presentation. Physical exam was positive for mild generalized abdominal distension and slightly reduced bowel sounds; otherwise, she had no rebound tenderness or guarding, had negative Psoas and Murphy signs. Initial complete blood count and comprehensive metabolic panel were unremarkable except for mild leukocytosis ($11.8 \times 10^9/L$).

A CT abdomen and pelvis with intravenous contrast showed an 8 cm loculated peritoneal mass partially obstructing the small bowel loops and a 4.3 cm mass on the vaginal cuff with small amount of ascites (Figure 1). A provisional diagnosis of Peritoneal Carcinomatosis was considered. Shortly after admission, small bowel obstruction resolved spontaneously. Further blood work up showed normal CA 19–9, CA 125, and CEA.

A CT-guided core needle biopsy of the mesenteric mass was obtained and microscopic examination showed a benign spindle cell lesion. Subsequent immunohistochemical (IHC) staining was positive for actin and desmin, and negative for CD34 and CD117. This morphologic finding along with the immunohistochemical staining concluded leiomyoma,

confirming a final diagnosis of parasitic leiomyoma. The patient was referred to outpatient surgical team where she underwent exploratory laparotomy, lysis of the adhesions and resection of the mesenteric and pelvic masses. The pathology confirmed the findings of Leiomyoma with benign features, however she also had an incidental finding of adenomyoma. She recovered completely postoperatively with no complications.

2. Discussion

Uterine leiomyoma is a common benign tumor, and has higher incidence in African American females. The Prevalence is variable among females of different ethnic back grounds and age groups, it could be as high as 68.6% [1,2]. It is more prevalent in females b/w 40 to 60 years of age and is also associated with early menarche, hypertension and obesity [2]. Leiomyoma may present with menorrhagia or metrorrhagia, iron deficiency anemia, pelvic pain and/or pressure, urinary symptoms [3], constipation, or infertility and is associated with an increased risk of miscarriage [2,4].

Extra uterine cases of leiomyomas have been reported [5,6] with histological features essentially identical to benign uterine leiomyomas but with spread to the peritoneal cavity, or to distant sites such as the lungs [7]. One identified entity is Leiomyomatosis peritonealis disseminata (LPD), a rare phenomenon in which multiple nodules stud the pelvic and peritoneal surfaces, often giving the appearance of metastatic ovarian or peritoneal carcinoma. Intravenous leiomyomatosis is another entity where benign smooth muscle neoplasms

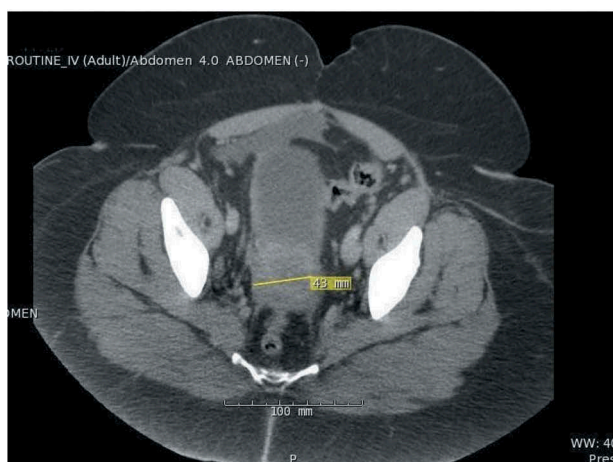
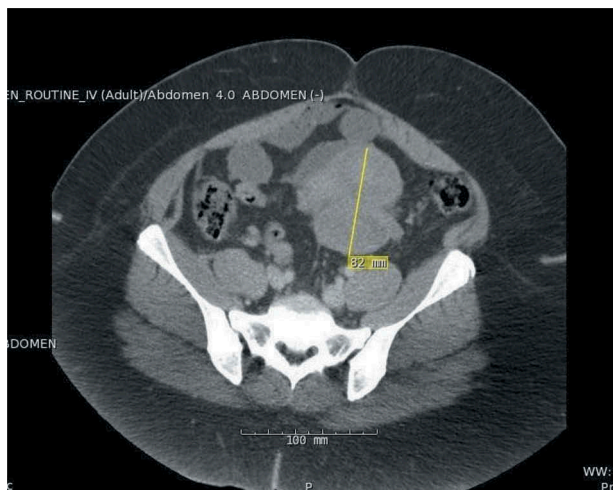


Figure 1. CT ABDOMEN / PELVIS with 8 cm lobulated solid, enhancing mass which entraps and partially obstructs mid small bowel loops. CT ABDOMEN/PELVIS with a mass at the vaginal cuff which measures 4.3 cm.

extend in a worm-like fashion into the uterine and pelvic veins, vena cava, and sometimes as far as the heart [8]. Solitary low-grade smooth muscle neoplasms have been identified in distant locations, most commonly the lungs, and have been referred as Benign metastasizing leiomyomas [9].

The pathogenesis is still unclear and multiple hypotheses exist. The most convincing ones include pedunculated subserosal fibroids becoming separated from the uterus by torsion of the peduncle and obtaining blood supply from adjacent sources, metaplasia of the peritoneum [10] or dissemination after the use of a tissue morcellator for myomectomy or hysterectomy [11–15]. In this report, the patient had a history of hysterectomy with the use of morcellator, the spread could be due to dissemination of the myometrial smooth muscles during the surgery and, presenting later as a mass in the peritoneum. If asymptomatic, or smaller in size, may need no management. Medications that lower estrogen levels have been reported to cause regression of these lesions for

short period of time [5]. However, for large lesions and for other co-existing tumors causing compressive symptoms like in our patient, surgical resection seems appropriate.

3. Conclusion

Leiomyoma is a common benign tumor that frequently needs surgical intervention [16–18]. It is important to consider parasitic leiomyoma in the differentials for peritoneal carcinomatosis in a patient with history of Leiomyoma. One of the common surgical techniques for hysterectomy is morcellation. However, morcellation and other procedures may be associated with seeding of leiomyoma and producing a ‘recurrence’ in the form of Leiomyomatosis peritonealis disseminata or parasitic leiomyoma, such as in the case of our patient. The duration between the initial surgery and occurrence of parasitic leiomyoma is highly variable, there is no set time for potential intervention therefore further studies are required to address this issue.

Disclosure statement

No potential conflict of interest was reported by the authors.

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