CASE REPORT

Parasitic leiomyoma: A rare case report

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Abstract

Uterine leiomyomas or fibroids are the most common benign tumors of the female genital tract in the reproductive age group. Parasitic fibroids or wandering fibroids are rare variants of uterine fibroids which present outside the uterus. They are known for their rarity and atypical clinical presentation which can often impose a diagnostic dilemma. Due to increase in the use of minimally invasive surgeries, the incidence of parasitic leiomyoma is rising. We report a case of large parasitic broad ligament fibroid in a 33-year-old lady post hysterectomy. The lady presented with a mass per abdomen, and the firm mass extended deep into the pelvis. Exploratory laparotomy revealed a vascular mass of approximately 2.8 kg and confirmed by histopathological examination as leiomyoma. Post-operatively she was conservatively managed and discharged with a good outcome.

Keywords: Uterine Fibroids, parasitic leiomyoma, myomectomy

Introduction

Uterine leiomyomas or fibroids are the most common tumors of the female genital tract in the reproductive age group, with 70-80% appearing around the age of 50 years [1-2]. They are benign tumors with smooth muscle tissue origin and are hormone-dependent [2]. Uterine fibroids are classified based on location as subserosal (outside the uterus), intramural (within myometrium), and submucosal (projecting into the uterine cavity) [2]. Parasitic Leiomyoma (PL) or wandering leiomyomas is a rare subtype of fibroid presenting outside the uterus [3]. It is a pedunculated subserosal fibroid which undergoes torsion and detaches from the uterus and outgrows its blood supply from surrounding structures [4-5]. It mimics malignancy, thus presenting a diagnostic dilemma [4]. Women with a previous history of laparoscopic myomectomy reported a 0.9% incidence [1]. The rare occurrence and atypical presentation of these tumors pose a challenge in diagnosing preoperatively. Here, we report a challenging case of large retroperitoneal fibroid in a middle-aged woman with a prior history of hysterectomy.

Case Report

A 33-year-old multiparous woman presented with a 2 month history of an abdominal mass, dyspepsia and loss of appetite. There was increased frequency of micturition and incomplete voiding with left-sided hydroureteronephrosis for which she underwent Double J stenting. She had no other gynecological complaints. No family history of any cancers. She underwent open myomectomy ten years ago, followed by total abdominal hysterectomy six years ago in view of multiple fibroids. No other significant medical or surgical histories were elicited. On general examination,

the patient was moderately built and nourished. On abdominal examination, a diffuse mass occupying the entire abdomen, smooth in surface, firm in consistency with restricted mobility was present, and the lower border could not be made out. On vaginal examination, a large hard mass was felt in the pouch of Douglas. MRI Abdomen and pelvis showed a well-defined solid mass lesion with multiple T2 voids (suggestive of vascularity) arising from the pelvic cavity and extending into the abdominal cavity, measuring 8.9 × 19.5 × 17 cm with similar lesions of 9 × 10.4 × 9.3 cm and 4×4.5 × 5.1 cm postero-inferior and left lateral, respectively, to the above lesion with normal ovaries. The report suggested a large fibroid with moderate bilateral hydroureteronephrosis with a left small kidney. Serum CA 125 concentration was 30 U/ml (within the normal range <35 U/ml). The patient was taken up for exploratory laparotomy.

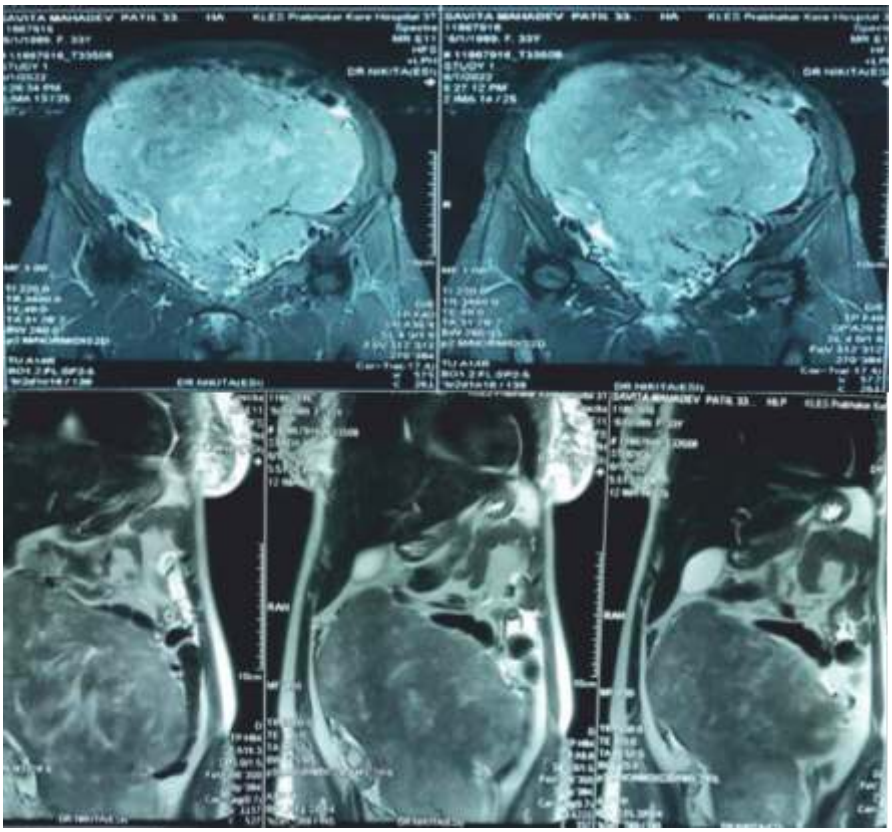

Figure 1: MRI of abdomen and pelvis showing a large retroperitoneal mass

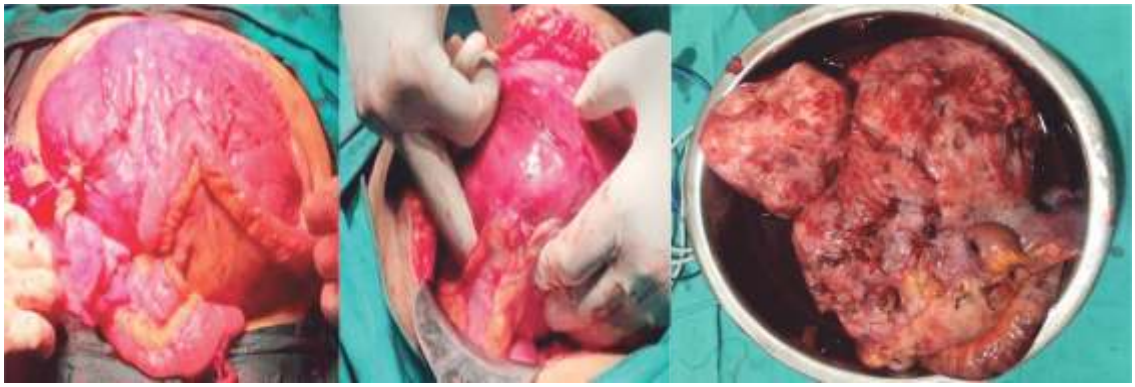

Figure 2: Intraoperative image of retroperitoneal mass with adhered part of the intestine

Laparotomy findings showed a large mass of 30 × 20 × 15 cm occupying the whole of the pelvis and extending into the upper abdomen up to 32 weeks in size and anteriorly adhered to the bladder, posteriorly to the small bowel, laterally to the pelvic wall and inferiorly to the pouch of Douglas including the rectum. Intraoperatively, the mesenteric lymph node was sent for frozen section and was reactive. Due to dense adhesion between the mass and small intestine, ileal resection and anastomosis was performed. Further retroperitoneal approach of dissection was done as the mass was impacted deep into the pouch of Douglas causing bilateral hydronephrosis and a large mass of approximately 2.8 kg along with adhered part of the small intestine was excised. Loop ileostomy was performed and a colostomy bag was placed. The drain was placed in the pouch of Douglas. Total intraoperative blood loss was 4800 ml, and a massive transfusion of 11 packed cells and eight fresh frozen plasma with 4 random donor platelets was given. The histopathological report showed spindle-shaped cells with no signs of pleomorphism and mitotic activity and revealed leiomyoma along with adhered part of the intestine. During her stay in the hospital, her serum creatinine was on rising trend up to 8.56 with decreased urine output. She underwent two cycles of hemodialysis. She was conservatively managed and discharged on post-operative day 30 with good follow-up outcomes. She underwent colostomy closure after 3 months of laparotomy. At 6 months post laparotomy follow-up, the patient was doing fine with no complaints.

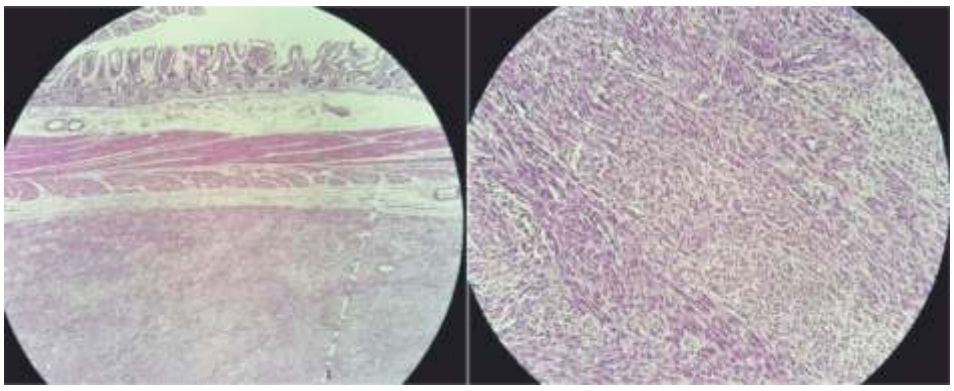

Figure 3: Histopathological image showing fibroid with attached part of intestine

Discussion

We report a case of 33-year-old woman who presented with mass per abdomen with history of myomectomy followed by hysterectomy. Our initial diagnosis was an ovarian mass, which subsequently was diagnosed as broad ligament fibroid by MRI scan and necessitated complex surgery for removal of the fibroid along with part of the adhered bowel. The histopathological report confirmed it to be parasitic leiomyoma with part of the small intestine. Parasitic fibroids are categorized to type 8 leiomyomas as per FIGO classification with uterine attachment or no myometrial involvement [5]. They are classified into primary spontaneous and secondary parasitic leiomyomas [1]. Spontaneous parasitic fibroids are originated when pedunculated subserosal fibroid undergoes torsion, which after detachment from the uterus becomes adhered to other surrounding structures [1]. It can occur without any previous history of surgery. The diagnosis can be made during surgery or following histopathology assessment which can be a diagnostic challenge [1, 6, 7]. Only few cases of primary spontaneous parasitic fibroids have been reported [6-7]. In contrast, the incidence of secondary parasitic leiomyoma of 0.2–1.25% is increasing, which usually occurs as a complication of unintentional seeding of the fragments during any previous laparoscopic myomectomy procedures with the use of morcellator [6-7].

The common sites include the pelvic cavity, small intestines, rectum, cecum, vaginal/cervical stump, and laparoscopic port site [6]. The most common symptoms include abdominal distention, abdominal/ pelvic pain, abdominal mass, or pressure symptoms. PL mimic other pelvic tumors due to their atypical clinical presentation and unusual location and create clinical dilemma [6-7]. Therefore, having clinical suspicion and asking the detailed history of previous surgery (especially myomectomy or morcellation) is important in establishing a diagnosis [7]. However, further confirmation by histology examination is required [4]. MRI may help distinguish benign leiomyomas from other pelvic and abdominal tumors. Tumour markers like CA 125, α-fetoprotein, or CA19-9 may be falsely elevated with occasional ascites. Differentiating benign leiomyoma from malignant leiomyosarcoma emphasizes the need for detailed clinical history with histological diagnosis. Case series by Nehzat *et al*. [1] and Lu *et al*. [9] reported that history of uterine leiomyoma or laparoscopic hysterectomy or myomectomy using morcellation was the most significant risk factor for the development of parasitic myoma.

Differential diagnoses of PL are ovarian tumors, tubo-ovarian mass, broad ligament cysts, leiomyosarcoma, disseminated peritoneal leiomyoma, intravenous leiomyomatosis and benign metastasizing leiomyoma [10]. Benign Metastasizing Leiomyoma (BML) may manifest as multiple nodules or masses in the lungs or other sites, mimicking metastases from malignant tumors and histology shows smooth muscle fibers with connective tissue which is similar to PL while retroperitoneal leiomyomatosis usually manifests as single or multiple pelvic or retroperitoneal masses [8]. The management can be resection either by open, laparoscopic or robotic procedure [9-10]. Morcellation should be avoided when malignancy is suspected [5]. However, post-laparoscopic procedure, careful inspection with a thorough washing of abdominopelvic cavities should be done to remove fragments [9]. This can be prevented using “in bag technique” which can

reduce the risk of spreading or leaving behind the morcellated tissue [6].

Conclusion

Diagnosis of PL is a clinical challenge due to its atypical clinical presentation and unusual location. Increased use of minimally invasive procedures increase the incidence of parasitic fibroid post-morcellation. This can be prevented using in-bag morcellation technique. Therefore while diagnosing a PL, thorough clinical examination with detailed previous surgical history of either open or laparoscopic surgeries, will help to differentiate it from other abdominopelvic masses. Large masses may require multidisciplinary surgical approach.

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