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Case Report

Peritoneal leiomyomatosis status post laparoscopic myomectomy: A case report

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ABSTRACT

Fibroids are benign tumors of the uterine myometrium that often affect childbearing women and are the most common solid benign uterine neoplasms. They are also called *leiomyomas* or *myomas*. Other than uterus, there are other unusual sites where fibroids are found. These unusual patterns include disseminated peritoneal leiomyomatosis, metastasizing leiomyoma, intravenous leiomyomatosis, parasitic leiomyoma and retroperitoneal lesions. Extrauterine fibroids are extremely rare and are commonly associated with previous morcellated hysterectomies or myomectomies. If all fragments are not removed, they may parasitize hematogenously and present as abdominal or pelvic masses. The Food and Drug Administration (FDA) issued a press release in 2014 discouraging the use of power morcellators. We present a case of a patient who had past history of morcellation therapy for myomectomy and presented with large abdominal and pelvic masses which were increasing in size.

1. Introduction

A 41 years old female patient presented with abdominal pain since 1 month and intermittent constipation since 2 years. There was a past history of laparoscopic myomectomy 12 years before, laparoscopic surgery for ectopic pregnancy and cesarean section 9 and 5 years before, respectively. There were no menstrual complains. A sonographic examination revealed multiple nodular intraperitoneal mass lesions; the largest lesion measuring about 7 x 12.5 x 14.5 cm. MRI of abdomen and pelvis was performed for further evaluation. Two large heterogeneously T2 hypointense nodular lesions were seen, one each in right subhepatic; and left lumbar and iliac fossa regions (Figures 1 and 2). The right and left sided lesions measured about 10 x 8.4 x 14.2 cm and 6.5 x 12.9 x 13.7 cm in size, respectively. These lesions were causing mass effect on the adjacent right kidney, liver and left psoas muscle. Another two similar lesions were detected posterosuperior to the left sided lesion and in the pouch of Douglas, measuring about 3.3 x 4.4 x 4 cm and 6.3 x 6.4 x 6.8 cm, respectively (Figures 3 and 4). The uterus was found to be bulky with focal intramural cystic/necrotic fibroid in its left lateral wall which was measuring about 2.8 x 3.2 x 1.9 cm in size (Figure 5). Both ovaries were normal. The patient underwent exploratory laparotomy with hysterectomy and bilateral salpingho-oopherectomy and multiple mass lesions were removed from peritoneum and around sigmoid colon mesentery (Figure 6). Histopathological examination of excised lesions revealed interlacing fascicles of bland monomorphic spindle (smooth muscle) cells with well circumscribed borders, suggestive of leiomyomas (Figure 7).

2. Materials and Methods

The study was performed on Philips Achieva 3T MRI machine. T2W coronal, axial and sagittal, SPAIR axial and coronal, T1W axial images were acquired. Post contrast T1W coronal, axial and sagittal images were also acquired after intravenous administration of gadolinium.

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3. Discussion

Disseminated peritoneal leiomyomatosis (DPL) is a rare benign entity characterized by innumerable smooth muscle nodules disseminated throughout the peritoneal cavity.[1] DPL was described by Wilson and Peale in 1952.[2] This rare entity appears as multiple small nodules varying in size on/or beneath the peritoneal surface which can, mimic a malignancy but generally showing histologically benign features and are identical to their uterine counterparts. A history of hysterectomy for uterine leiomyoma may be indicative.[1–4] Other rare locations where uterine leiomyomas can be metastasized include lungs(common location), heart, brain, lymph nodes, bone and skin. Dessemination to lungs usually manifests as incidentally detected pulmonary nodules in middle aged women. The mean reported interval between hysterectomy and the appearance of pulmonary nodules ranges from 3 months to 20 years. It is now largely accepted that the lesions arise as hematogenous metastases from benign tumors; however, a second school of thought still supports a hypothesis of multiple independent foci of smooth muscle proliferation. Rare cases of malignant transformation have also been reported.[5–7] In the differential diagnosis of disseminated peritoneal leiomyomatosis, the most common entity is peritoneal carcinomatosis, which typically manifests with metastatic disease, weight loss, ascites, and rapid progression of disease. Other possible differentials include malignant peritoneal mesothelioma, and primary peritoneal serous carcinoma.[8]

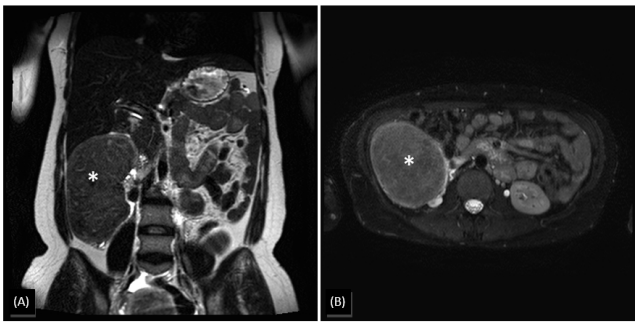

Fig. 1: **[A]** Coronal T2W image and; **[B]** Axial SPAIR image,showing heterogeneous lobulated mass in right subhepatic region(*).

4. Conclusion

In a suspected case of peritoneal mass or masses, especially if there is history of coexisting uterine fibroids or past history of hysterectomy or uterine myomectomy for the fibroid, disseminated leiomyomatosis should be considered, inspite of it being a rare entity. The peritoneal masses generally have a darker whorl-like appearance on T2-weighted MRI images similar to other smooth muscle

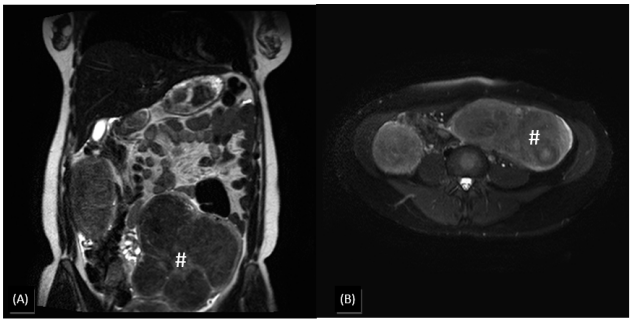

Fig. 2: **[A]** Coronal T2W image and; **[B]:** Axial SPAIR image, showing heterogeneous mass in left lumbar and iliac fossa regions(#).

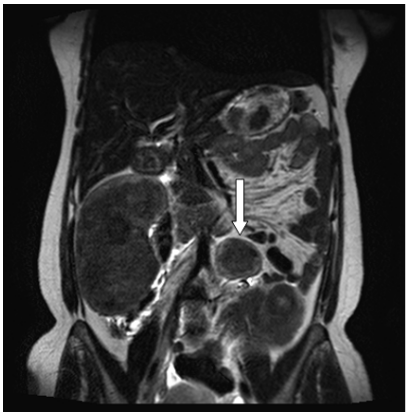

Fig. 3: Coronal T2W image showing heterogeneous mass(arrow) posterosuperior to the left sided lesion.

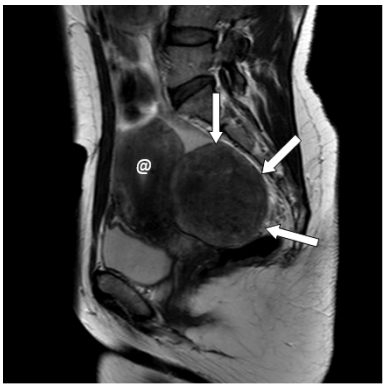

Fig. 4: Sagittal T2W image showing heterogeneous mass in the pouch of Douglas (arrows) and the uterus (@).

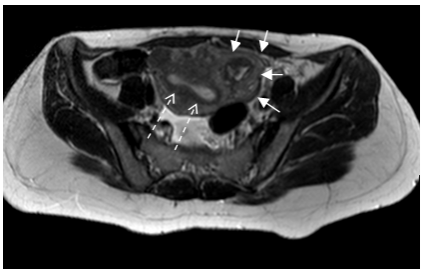

Fig. 5: Axial T2W image showing intramural fibroid (arrows) in the left lateral wall of uterus which is displacing the endometrial cavity (dotted arrows) on the right

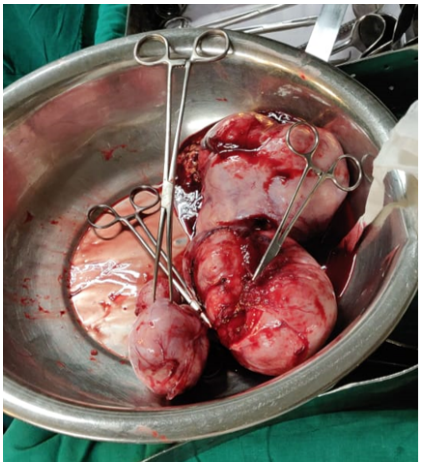

Fig. 6: Gross specimens of peritoneal mass lesions

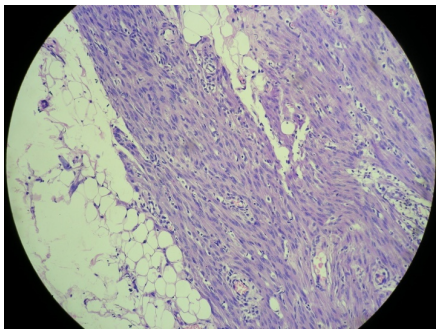

Fig. 7: Histopathogy – slide photograph of intraperitoneal mass lesion revealing interlacing fascicles of bland monomorphic spindle cells with well circumscribed borders, suggestive of a leiomyoma

tumors and there is usually a lack of ascites and omental caking.

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