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Case report

A case of giant extra-uterine myxoid leiomyoma: An unusual benign pathology mimicking malignancy

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Abstract

Introduction: Leiomyoma is the most frequent benign pathology in females and arises from uterine smooth muscle.

Aim: We present an uncommon example of a big, cystic-solid extra-uterine myoma that seemed on sonography and magnetic resonance imaging to be a primary malignant tumor.

Case study: A woman was admitted to our hospital with a palpable abdominopelvic mass. Imaging studies described a large semisolid mass of 30 × 25 × 23 cm that filled the abdomen from the pelvis to the xiphoid process. Preoperatively, a primary malignant ovarian cancer or teratoma was identified.

Results and discussion: Histological analysis confirmed a leiomyoma with myxoid degeneration without any malignancy.

Conclusions: There is a high risk of malignancy in a giant uterus/mass and fast-growing myomas. For the treatment of large leiomyomas/large extra-uterine leiomyomas, a surgical approach is usually chosen. Myxoid leiomyoma of the broad ligament is very rare, its diagnosis remains histological to date like uterine myxoid leiomyoma. Malignancy should always be ruled out.

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1. INTRODUCTION

The most common pelvic tumor occurring in women in the reproductive age group is fibroid, a benign smooth muscle tumor in the uterus. Although giant myomas are very rare nowadays, if undue pressure is exerted on the contiguous organs, it may be life-threatening.[1] Further, the incidence of broad ligament myoma is less than 1%.[2] Myxoid degeneration of a fibroid is defined by the absence of mitotic activity and the presence of a myogenic phenotype.[3]

2. AIM

We wanted to demonstrate the clinical and histologic features of this uncommon pathology in this case.

3. CASE STUDY

A 48-year-old multiparous lady was admitted to our outpatient clinic who reported abdominal fullness, a palpable abdominopelvic mass for approximately 12 months, and a recent weight gain of approximately 18 kg. She reported no changes in her menstrual cycle and bowel habits. Her medical history was normal; she had no history of serious illness and medicine (hormonal therapy etc.). She had five previous vaginal deliveries with no abdominal surgical operation. Last child birth was 17 years back. She had no personal history of cancer, and also a family history of cancer. Her vital signs were regular. The uterus could not be felt independently upon vaginal assessment and fullness was present in the right fornix.

A pelvic abdominal sonogram revealed a huge and solid mass, approximately 30×25 cm in diameter, encompassing the entire right pelvis and most of the right abdomen. A magnetic resonance imaging (MRI) scan of all abdomen revealed a huge solid-cystic mass that could be differentiated from the womb and an approximately 25 × 23 cm cystic tumor extending to the liver neighbour to this structure (Figure 1). It appeared to arise from the right adnexa and displace the uterus contralateral to the mass. The mass had encircled the abdominal aorta 270° and displaced it. The MRI impression was a probable malignant tumor. Tumor markers (CA125, CA15-3, CA19-9, carcinoembryonic antigen, alpha-fetoprotein, human chorionic gonadotropin, lactate dehydrogenase, and estradiol) levels were not found high.

A vertical skin incision was made in the median lower abdomen wall, exposing a large solid-cystic mass about 40 × 30 cm in size (Figure 2). This complex and pre-dominantly solid tumor originating from the right broad ligament invaded the right abdomen and pressed the adjacent intraperitoneal organs. It was also in close contact with the aorta without any adhesions to contiguous tissues. The uterus was in size about a 12-week pregnancy and was displaced to the opposite side by the mass. The uterine tubes and ovaries were normal in size and appearance. A frozen

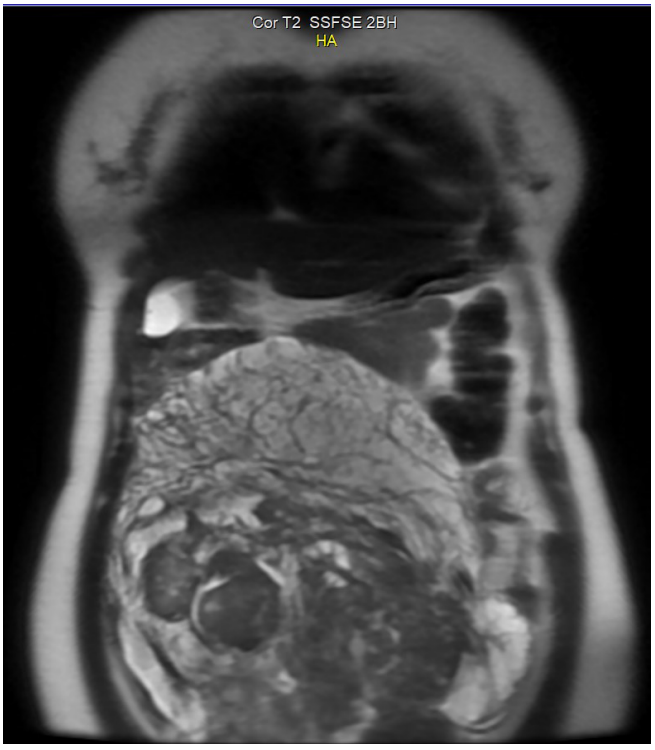

Figure 1. MRI image of giant pelvic mass filling whole abdominopelvic cavity with heterogenous and semisolid appearance.

section examination showed a well-circumscribed mass with a pseudocapsule measuring 41 × 30 × 6 cm macroscopically and weighing 4.8 kg. The cut section showed a fibrous appearance, with cystic and myxoid areas (Figure 3). Microscopically, the tumor consisted of bland spindle cells forming a fascicular pattern in the myxoid-edematous stroma (Figure 4). The frozen diagnosis was reported as 'spindle cell mesenchymal neoplasia' (no atypia, mitosis, and necrosis were observed in frozen sections). We decided to perform a total hysterectomy and bilateral salpingo-oophorectomy. Leiomyoma with myxoid degeneration was the ultimate diagnosis.

4. RESULTS AND DISCUSSION

There is still unclarity about the exact etiology of uterine fibroids in the literature. Some uncommon degenerative uterine tumors have inherited variants as well.[4] Uterine/broad ligament leiomyomas can reach enormous sizes before they generate complaints due to the distensibility of the abdominal structures and the considerably tremendous capacity of the abdominopelvic cavity.[5] Leiomyomas could have multiple forms of atypical degeneration, which are considered due to inadequate blood supply, such as dystrophic calcification, red degeneration, hyaline, myxoid and cystic degeneration. Myxoid leiomyoma is also challenging to detect clinically. Myxoid changes of myoma are distinguishable from myxoid leiomyosarcoma by histopathologic examination.[6] Myxoid leiomyoma is defined by the absence of mitotic activity and

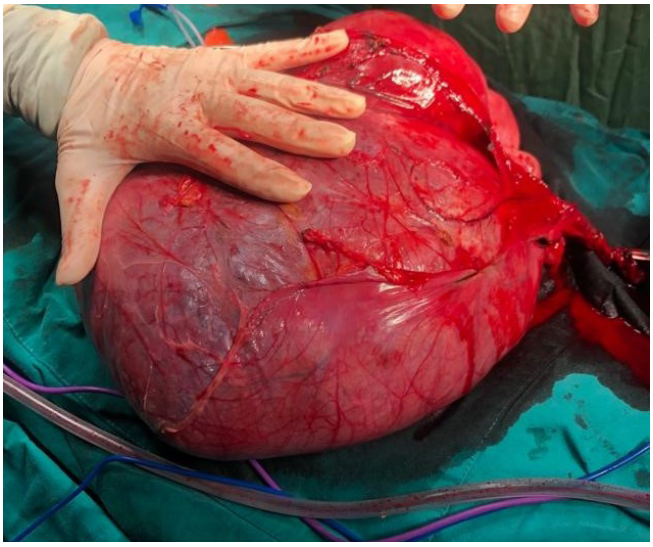

Figure 2. Intra-abdominal view of multilobulated mass.

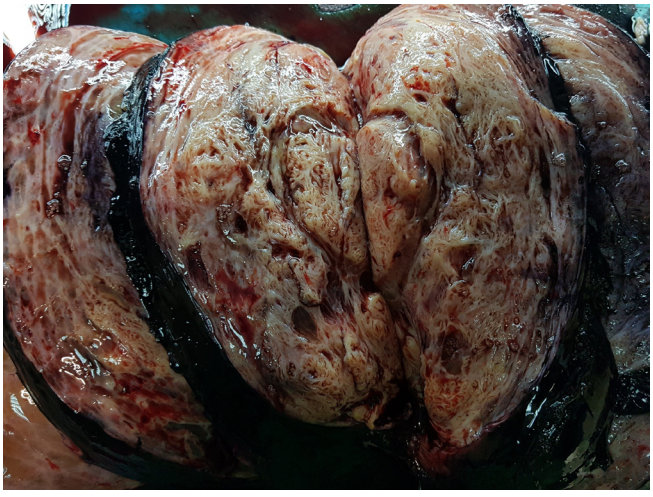

Figure 3. Cut section of the leiomyoma showed fibrous appearance, contained cystic and myxoid areas.

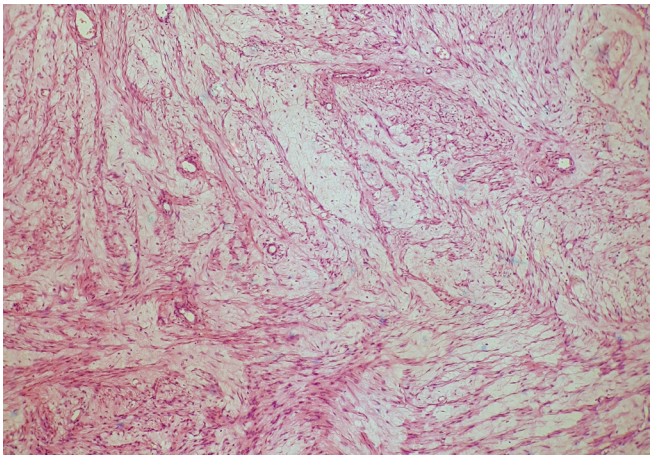

Figure 4. Leiomyoma with myxoid degeneration consisting of bland spindle cells on an edematous and myxoid background (HE, magnification ×100).

the existence of a myogenic phenotype.[3] This is also a very common form of degeneration seen in broad ligament leiomyoma.[7] The first imaging modality used in evaluations is ultrasonography. Secondly, MRI, which may not clearly distinguish between myxoid leiomyoma and myxoid leiomyosarcoma, may also be selected. Besides the mass, the anatomy of the uterus and ovaries can be specified by MRI. The definitive diagnosis can only be made through histopathologic studies.[2,8] Two new reports focused on the medical challenges of the differential diagnosis for giant large ligament fibroids.[2,9] In their cases, other treatments such as expectant therapy or uterine artery embolization were not preferred for giant broad ligament fibroids, as in our case. Thus, surgery is preferred primarily for the treatment of broad ligament fibroids. Therefore, anamnesis, gross features of the mass, laboratory test results, radiologic findings, and suspicion of cancer are critical to this difficult preoperative diagnosis of fibroid of the broad ligament. In the case of an intraabdominal big mass, the differential diagnosis might be investigated in a larger context.

5. CONCLUSIONS

Myxoid degeneration in a giant broad ligament fibroid is very unusual and mimics malignancy. Conscientious preoperative/perioperative evaluation with an interdisciplinary healthcare team is essential to prevent morbidity and mortality. The final diagnosis of broad ligament fibroids can still be established by histopathologic examination, and malignancy should always be ruled out.

Conflict of interest

The authors declare that there are no conflicts of interest.

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Ethics

Informed approval was obtained from the patient for data presentation and ethical concerns.

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