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Case Report

An abdominal-pelvic huge space-occupying lesion in a male

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Abstract: We herein report a rare case of mesenteric leiomyoma which is remarkable for its huge size in a male individual and cystic degeneration. A 22-year-old man presented with abdominal distention for 3 months. Systematic physical examination revealed abdominal bulge and soft abdomen. Laboratory examination indicated nothing but a slight increase of CA125. Abdominal computed tomography demonstrated a multilobulated well-defined giant lesion (measuring 33 × 30 × 19 cm) in the abdominal-pelvic cavity, which consisted of mixed solid and cystic parts. The patient underwent exploratory laparotomy. Intraoperatively, the giant mass was found originating from the mesentery, weighting 12 kg. Pathological analysis confirmed the diagnosis of mesenteric leiomyoma.

Keywords: Mesenteric leiomyoma, differential diagnosis

Introduction

Leiomyoma is a kind of benign tumor derived from smooth muscle tissue and usually well-circumscribed nodule, with spindle cell in fascicle pattern. They most occur in the uterus and the gastrointestinal tract, some occur in the skin and subcutaneous tissues. However, mesenteric leiomyoma is extremely rare. Immunostaining for smooth muscle actin and desmin are positive. Smoothelin may be a specific marker for muscle neoplasms of the gastrointestinal tract [1]. Surgical excision is the preferred treatment because a part of benign tumors can change to malignance [2].

Case report

A 22-year-old man presented with abdominal distention for 3 months.

Systematic physical examination revealed abdominal bulge and soft abdomen in this patient. Laboratory examination indicated a slight increase of CA125 (95.2 U/mL, normal level < 35 U/mL). Both blood routine test and fecal occult blood were normal. Abdominal computed tomography (CT) demonstrated a multilobulated well-defined giant lesion (measuring 33 × 30 × 19 cm, **Figure 1A**, **1B**) in the abdominal-pelvic cavity, which consisted of mixed solid and cystic parts, with heterogeneously enhancing. The endoscopy was unremarkable.

The patient underwent exploratory laparotomy. Intraoperatively, the giant mass was found originating from the mesentery, weighting 12 kg. Dark-red fluid could be found throughout the cysts. Complete excision was performed successfully (**Figures 2**, **3**). Pathological analysis of the tumor sample confirmed the diagnosis of mesenteric leiomyoma, including desmin diffusely cytoplasmic positive (**Figure 4**), CD34, CD117, DOG1 and β-catenin negative, Ki-67 about 1% positive. The patient recovered well and was discharged 2 weeks after the operation. The ultrasound results at 6 months postoperatively were normal in this patient.

Discussion

Leiomyoma rarely occur outside of the uterus and the gastrointestinal tract. Mesenteric leio-

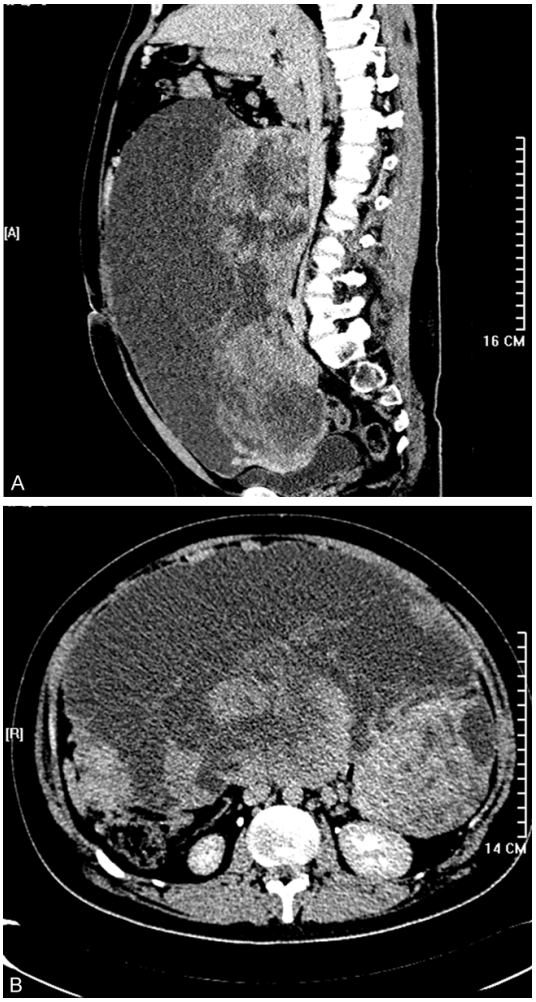

Figure 1. A and B. Computed tomography demonstrated a multilobulated well-defined giant lesion (measuring 33 × 30 × 19 cm) in the abdominal-pelvic cavity.

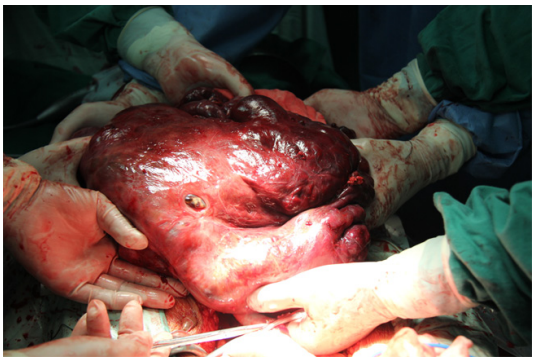

Figure 2. The giant mass was found originating from the mesentery.

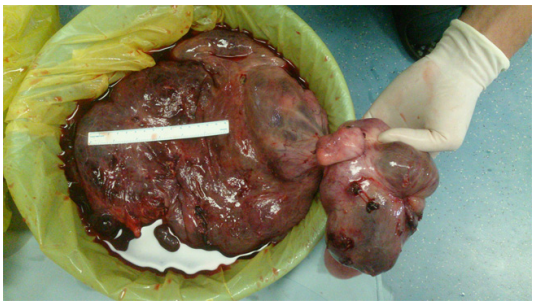

Figure 3. The giant mass was resected completely, weighting 12 kg.

myoma is extremely rare. This case reported is remarkable for the huge size in a male individual and its location and cystic degeneration. A review of the literature (MEDLINE and China National Knowledge Infrastructure) shows that the characteristics of leiomyoma originating from mesentery are as below. Firstly, as a benign mesenteric tumor, the leiomyoma takes time and space to grow up in peritoneum. Therefore, less specific clinical manifestations can be found when it is in small size, which makes it very difficult to diagnose such an abdominal mass in the early and preoperative period. But it's bigger in size once it was found. Clinical manifestations associate with the size, location and complications of the lesions. The main manifestations are abdominal distention, abdominal pain, and abdominal mass. Bleeding or change of fecal properties are less than gastrointestinal tract tumor. However a large proportion of such patients are asymptomatic until the local pressure, mass effect or complications caused by the mass were showed out, such as obstruction, necrosis, hemorrhage and torsion. Secondly, the missed diagnosis and misdiagnosis rate of the mesenteric leiomyoma are also higher than those of gastrointestinal tumor. Endoscopy and barium swallow are helpless for the diagnosis of mesenteric leiomyoma. CT not only help to exclude other abdominal space-occupying lesions, but also assist in determining the source and the relationship between the mass and the parenchyma. Moreover, CT is useful in planning surgical resection and predicting prognosis [3]. But sometimes intestinal gas, feces and poor bowel preparation have adverse effect on CT results. Angiography is used to clarification the vascularization of the tumors. The multiple imagine methods can improve the accuracy of diagnosis. Unfortunately, this mass is too big for imag-

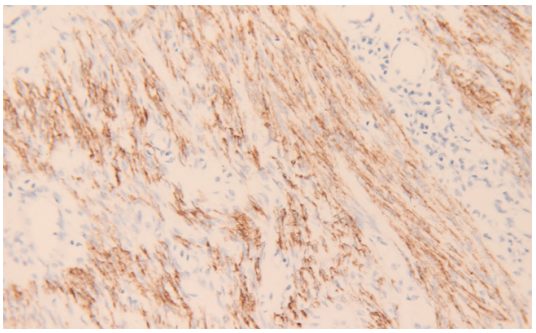

Figure 4. Diffuse positive staining for Desmin in tumor cell (EnVision™ × 100).

ing studies to confirm the accurate source in our case. Thirdly, mesenteric tumor is mobilized and can spread into plevic, which may lead to misdiagnose as bladder diverticulum, retrovesical mass, genitals tumor, pelvic tumor or ovarian cyst (in female), et al [3, 4]. On the other hand, moving of the mass is a clue for mesenteric diseases. Finally, the diagnosis of leiomyoma depends on histological and immunohistochemical examinations. The major differential diagnosis includes the other spindle cell tumors, such as gastrointestinal stromal tumor, inflammatory myofibroblastic tumor, calcifying fibrous tumour, schwannoma. Application of immunohistochemical markers (Such as CD117, CD34, desmin, actin and S-100) are useful in the differential diagnosis [5]. Additionally, how to distinguish leiomyoma from leiomyosarcomas is based on the test of mitotic index and Ki-67. FDG-PET is helpful to differentiate benign and malignant, but it's possible to get false positives [6]. Nowadays, the tumor size is a controversial prognostic factor. In this case, bordered by an intact capsule, the tumor showed no signs of malignancy. Its cystic degeneration may be the result of insufficient blood supply for this giant leiomyoma, which lead to necrosis and liquefaction. Anyway, close follow up is necessary because of its unpredictable biologic behavior [7].

Disclosure of conflict of interest

None.

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