Primary Anterior Abdominal Wall Leiomyoma - A Rare Case with a Common Approach

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ABSTRACT

Extra-peritoneal leiomyoma is a rare condition with the recognized etiological factor being direct seeding of the site by a prior uterine surgery with a right metabolic environment. We report a rare case of an isolated abdominal wall leiomyoma developing in a fertile woman with no known predisposing factor and highlight the common approach to establish the diagnosis so as to deliver appropriate treatment to the patient.

Keywords: Anterior abdominal wall, Atypical leiomyoma, Extra-peritoneal leiomyoma, Leiomyoma


Introduction

Leiomyoma is the commonest benign tumor of the reproductive tract found in 20% of women in the reproductive age. Rather than leiomyoma, rhabdomyoma is the expected abdominal wall tumor considering its composition being of skeletal muscle and loose or aponeurotic connective tissue (1).

Case Report

A 43 years old, para 3 lady, presented with an abdominal mass in the left lower quadrant region since 2 years ago. There was associated intermittent dull aching pain unrelated to menstrual cycles, urinary frequency and constipation. She had 1 previous Caesarean section done 20 years prior and had no history of steroid usage, hormonal therapy, gynecologic procedures or family history of cancer.

Clinically, there was a smooth surfaced, mobile, non-tender mass at the left lower abdominal quadrant measuring 13X8 cm. Abdominal computed tomography (CT) revealed a well encapsulated, 5.3X7.0 X 10.5 cm heterogeneously enhancing soft tissue mass arising from left external oblique muscle at the inguinal region. A clear fat plane with adjacent internal oblique and rectus abdominus muscle was seen. There was no intra-abdominal extension and normal uterus and bilateral ovaries were seen. Histopathologic examination (HPE) from fine needle biopsy is suggestive of leiomyoma. Intra-operatively, the abdomen was entered via the previous Caesarean scar (Figure 1). The incision was deepened into the subcutaneous tissue, external oblique muscle and its aponeurosis. There was a well-encapsulated mass between internal and external oblique space, attached inferiorly to the rectus sheath by loose connective tissue (Figure 2). It was easily dissected and completely removed after the feeding vessel branching from deep inferior epigastric artery was ligated. The wound was closed in layers with a drain placed in the subcutaneous plane. Immediate postoperative period was uneventful and the patient recovered well from the surgery.

The final histopathology examination report was consistent with benign leiomyoma which showed a well-circumscribed mass covered by thin fibrous tissue composed of interlacing fascicles of well-differentiated smooth muscle cells without mitosis, necrosis or atypia.

Informed consent was obtained from the patient in regards to the publication of the case report.

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Discussion

The uterus is a common site of development of leiomyoma in a female while extra-uterine leiomyomas are known to develop in the round ligament, utero-ovarian ligament, vagina and broad ligament (1). This tumor also can occur outside the pelvic region such as the on abdominal wall or even on the chest wall. Anterior abdominal wall leiomyoma is rare, generally benign and occasionally cause diagnostic dilemmas as they can mimic malignancy. It is thought to result from the seeding of myomatous tissue during gynecological surgeries and is more common in laparoscopic than in laparotomy procedures (2). However, there are few reported cases of isolated abdominal wall leiomyoma without previous gynecologic surgeries or the presence of uterine fibroids. Theoretically, leiomyoma can be found anywhere with smooth muscles including the abdominal wall. De novo leiomyoma can even develop in areas devoid of myomatous tissues or smooth muscle cells (1,3-6). Retroperitoneal myomas are even extremely rare and usually malignant in nature and commonly found in the pelvis. This atypical entity had been described with a retroperitoneal leiomyoma found in the obturator fossa (7). Another rare location of this tumor that is worth to note was at extra-thoracic chest wall which was reported just recently (8).

Our patient had a Caesarean section twenty years back. However, we have yet to come across any literature suggesting seeding of smooth muscle cell from normal uterus onto the anterior abdominal wall (9). Recently there was 1 case report that has similar feature and presentation to our case which was operated via laparoscopically and was found that the tumor was arising from the anterior abdominal sheath (10). Our case has the common manifestations of intra-abdominal mass presenting with compressive symptoms. CT scan was performed to determine the site of origin as well as to differentiate the mass features and fine needle biopsy to define the nature of the benign or malignant tumor. Here, we would like to stress that the role of pre-operative histological diagnosis of abdominal wall leiomyoma is very important, so as to avoid unnecessary investigation (e.g. laparoscopy) and operation (e.g. laparotomy) (1,2). There are more than 300 distinct varieties of tumors, each with a characteristic biology. Moreover, tumors have a course of historical development and progression. Despite the clinical, radiological and pathological similarity between desmoids tumor and leiomyoma, the treatments differ (5). Thus, a clinically benign and rare, deep soft tissue smooth muscle tumor should be identified using stringent histologic criteria prior to any surgical intervention (11). Leiomyoma may need simple excision while minimizing tumor cells spillage to prevent recurrences. Whereas desmoid, soft-tissue sarcoma or dermatofibrosarcoma protuberans require aggressive, complete surgical resection to achieve local control and soft-tissue sarcoma needs additional adjuvant systemic therapy due to its metastatic nature (5,6).

Although primary anterior abdominal wall leiomyoma is a rare entity and poses a greater diagnostic challenge, common workout in tumor management should not be disregarded as it may avoid unnecessary investigation and operation.

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References


