

Case Report

A case of pedunculated intraperitoneal leiomyoma

Chio Shuto¹⁾, Kuniyasu Soda²⁾, Takayoshi Yoshida¹⁾,
Fumio Konishi¹⁾

Abstract

We report a very rare case of a pedunculated intraperitoneal leiomyoma in the parietal peritoneum of the ventral abdominal wall. A 51-year-old female was admitted to our hospital because of a calcified mass detected on abdominal X-ray. CT scan and ultrasonography revealed a globular tumor with an irregular internal density in the peritoneal cavity. The parenchyma of the tumor appeared with patchy calcification and was well enhanced on contrast-enhanced CT scan. At surgery we resected a smooth-surfaced tumor of 50 × 30 × 30 mm in diameter, with a thin pedicle connected to the ventral peritoneal wall. The histological diagnosis was leiomyoma.

(Key word : leiomyoma, a calcified soft tissue mass)

Case report

A 51-year-old woman sought medical attention because of low back pain. An abdominal scout film revealed a calcified lesion in the left upper quadrant. She was referred to our hospital for further examination. The patient had undergone hysterectomy for uterine myoma at the age of 47. A scar in the middle of the lower abdominal wall remained from her previous surgery. Her abdomen was flat and soft, with no palpable tumor or tenderness.

Abdominal plain film revealed a round radiopaque mass with large areas of rough calcification. When the upright and supine films of the abdomen were compared, we found that the tumor location moved as a result of the postural change.

Abdominal ultrasonography showed a mass in the left upper abdominal cavity. The tumor had a relatively homogeneous internal structure, with a scattered strong echo suggestive of parenchymal calcification. The tumor was well circumscribed and free from any apparent structures continuous with the surrounding organs.

An abdominal computed tomography scan (CT scan) revealed a tumor of about 50 mm in diameter, with large and rough calcifications. The parenchyma of the tumor was enhanced well by contrast-enhanced CT. The CT scan also failed to detect any structures continuous with the surrounding organs and tissues.

At laparotomy, we found a hard, well-circumscribed tumor covered with peritoneum in the left upper abdominal cavity. The tumor was lobulated, about 50 × 30 × 30 mm in diameter, and connected to the up-

1) Department of Surgery, Saitama Medical Center

2) Department of Cardiovascular Research Institute and Surgery, Saitama Medical Center, Jichi Medical University

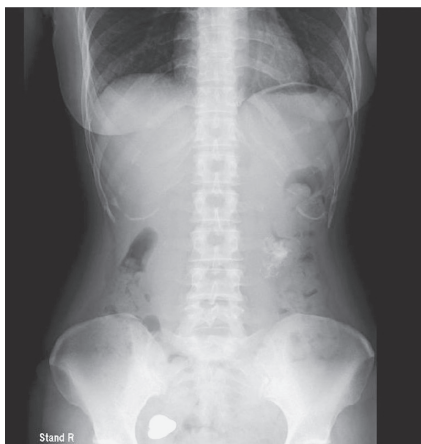


Figure 1A Abdominal plain film (upright)



Figure 1B Abdominal plain film (supine)

Figure 1 Abdominal film shows a round radiopaque area with a large rough section of calcification in the upper quadrant. A comparison of the upright and supine abdominal films reveals a movement in the location of the calcification as a result of the postural change. (A: upright, B: supine)



Figure 2A Abdominal plain CT

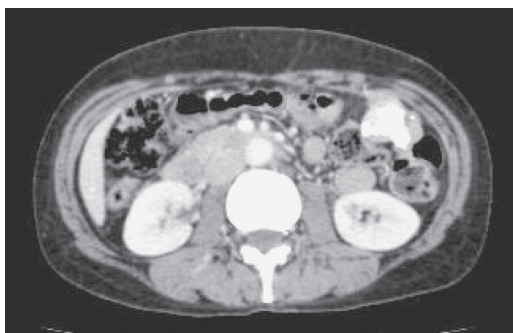


Figure 2B Abdominal enhanced CT

Figure 2 A) Plain CT scan shows a tumor with large rough sections of calcification. B) The parenchyma of the tumor is well-enhanced on contrast-enhanced CT.

per part of the left ventral abdominal wall with a short, thin pedicle of 10 mm in maximal diameter and 5 mm in length. The tumor was resected with a small part of the abdominal wall, the section to which the tumor pedicle was attached.

Pathological examinations revealed that the tumor was composed of interlacing bundles of spindle cells. The tumor showed no invasive features, and the mitotic figures were very low (1 to 2 mitoses/50 high power field (HPF)). No structures between the tumor parenchyma and muscle of the abdominal wall were resected together with the tumor. The tumor cells were strongly positive for both SMA and desmin in immunohistochemical staining, but there was little or no staining for c-kit, S100, CD34, or bcl-2. A very low MIB-1 labeling index of only 1-3% suggested that the tumor was not actively growing. On the basis of these features, we diagnosed the tumor as a leiomyoma of the peritoneal viscera.



Figure 3 Surgical findings

Figure 3 A lobulated tumor with a peritoneum-covered surface was found in the left upper preperitoneal space. The tumor was 50×30×30 mm in diameter and had a thin pedicle connected to the ventral visceral abdominal wall.

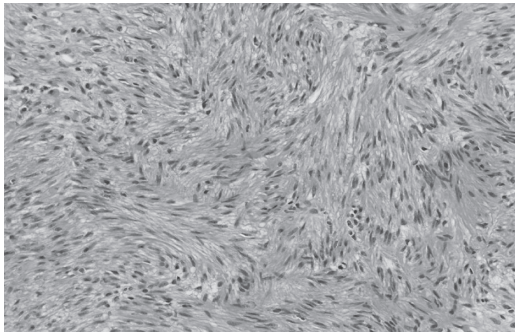


Figure 4A Histological findings

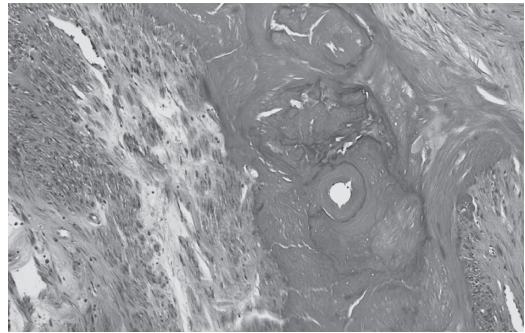


Figure 4B Histological findings

Figure 4 A) Histology of the pathologic specimen shows a typical leiomyoma composed of intersecting fascicles of slender smooth muscle cells (A: H&E stain, ×15). B) Prominent stromal calcification is a frequent finding in leiomyomas (B: H&E stain, ×30)

Discussion

Leiomyomas are a benign group of tumors composed of smooth muscle cells. They appear commonly in the uterus and skin, but very rarely in the soft tissue. Among all benign tumors of the soft tissue, leiomyomas account for only 3.8%¹⁾. Soft tissue leiomyomas are subdivided into two groups, depending on the site of origin: superficial leiomyoma and deep soft tissue leiomyoma²⁾. The latter type, deep soft tissue leiomyomas, are further divided into two subtypes: somatic soft tissue leiomyomas and retroperitoneal/abdominal leiomyomas³⁾⁴⁾.

Among the deep soft tissue leiomyomas, somatic soft tissue leiomyomas arise with equal frequency in males and females. Most of these tumors arise in the extremities, especially in the femoral region, and they often have calcification. Under a microscope, these tumors comprise matured smooth muscle

cells with abundant eosinophilic cytoplasm. The tumor cells lack atypical features, and they rarely have necrotic foci or mitoses (typically, less than 1 mitosis per 50 HPF). Retroperitoneal/abdominal leiomyomas arise preferentially in perimenopausal females such as the present case. They usually appear in the pelvic retroperitoneum, sometimes in multiple locations. Their histological characteristics are similar to those of uterine leiomyomas, with intersecting fascicles of slender and mature smooth muscle cells, and sometimes a cord-like pattern. Retroperitoneal/abdominal leiomyomas often manifest hydropic change, stromal hyalinization, and fatty change, as well as estrogen/progesterone receptor proteins. In contrast to somatic soft tissue leiomyomas, tumors with negligible mitosis, about 20% of retroperitoneal/abdominal leiomyomas have rather high rates of mitosis (1-4 mitoses/50 HPF).

Among the tumors that are completely resected, however, the rates of recurrence and metastasis are very rare³⁾.

Here we reported a very rare case of leiomyoma arising from the parietal peritoneum. As far as we have found in the literature, only one leiomyoma of the ventral parietal peritoneum has been reported⁸⁾. In spite of the very low mitotic figures and absence of atypicality in our case, the significant tumor diameter of 5cm called for ongoing observation. While the difficulty in diagnosing our patient compelled us to perform a small laparotomy, laparoscopic operations should also be kept in mind in cases of this type. And when a calcified soft tissue mass is found, leiomyoma should be included in the differential diagnosis.

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腹膜に発生した孤立性平滑筋腫の一例

周東 千緒¹⁾, 早田 邦康²⁾, 吉田 卓義¹⁾,
小西 文雄¹⁾

要 約

症例は51歳女性。腰痛を主訴に近医を受診し、腹部単純X線写真で左上腹部に石灰化を認め、精査加療目的に当センターを紹介受診となった。CTで腹腔内に5 cm大の粗大な石灰化を伴う腫瘤を認め、診断的治療のため、開腹手術の方針となった。開腹時、前腹壁に5 mmほど

の茎を有する5 cm大の分葉状の弾性硬の腫瘤を認め、一部腹壁を含めて一括切除を行った。病理所見より平滑筋腫と診断した。腹壁の腹膜に発生した孤立性平滑筋腫は非常に稀であり、文献的考察を含めて報告する。

1) 自治医科大学附属さいたま医療センター 外科

2) 自治医科大学附属さいたま医療センター 循環器臨床医学研究所 外科