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Case Report

Leiomyosarcoma of Colon Presented as Retroperitoneal Mass: A Rare Case Report

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Abstract

Introduction: Retroperitoneal tumors are lesions with diverse pathological subtypes that originate from the retroperitoneal space. About forty percent of these tumors are benign. These lesions are often surrounded and associated with vital abdominal blood vessels; therefore, a complete surgical resection is difficult.

Presentation of the case: Here we are presenting a 42-year-old female presented with abdominal lump from last two monthswith persistent abdominal pain from one month. The computed tomography and ultrasound scan confirmed the presence of a solid retroperitoneal tumor. She underwent surgical exploration and histology confirmed that the tumor composed of spindle shaped cells disposed in intersecting fascicles, whirling and storiform pattern. The tumor cells are oval to spindle shaped with blunt ended nuclei, dispersed chromatin and moderate amount of cytoplasm. On immunohistochemical staining, tumor cells were positive for vimentin. The patient was followed up for two years, with no evidence of tumor recurrence. No standardized guidelines have been established for its treatment because too small a number of cases have been reported, but surgical resection was considered the treatment of choice. In summary, we report a unique case who developed leiomyosarcoma of colon presented as retroperitoneal mass.

Conclusion: In this case report we described this rare occurrence of leiomyosarcoma of colon and highlight the diagnostic difficulties such cases can pose along with a review of relevant literature.

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Introduction

A retroperitoneal tumor (RT) is an abnormal and rare growth that develops inside in posterior part of the abdominal cavity. Symptoms such as an enlarged belly and abdominal pain may eventually develop. Although retroperitoneal tumors can be benign, or harmless, most often, they may cancerous. Surgical removal is the most common treatment, although tumors can reappear [1-3]. RTs are uncommon tumor that account for only 1%-2% of all solid tumors. Most of sarcomas occur outside of the retroperitoneum and only 10%–20% of them originate in the retroperitoneal space. The overall incidenceof retroperitoneal sarcomas is estimated at an average of0.3%-0.4% for 100.000 inhabitants [3-6]. Leiomyosarcoma, a neoplasm of mesenchymal origin derived from adipose tissue, is one of the most common soft tissue sarcomas. Leiomyosarcoma is usually located in the lower limbs of adults, and retroperitoneal tumors are uncommon. It very rarely presents in the gastrointestinal tract and even less frequently in the colon. Despite the potential involvement of the gastrointestinal tract, the precise location of secondary colonic tumor development has not been described yet [4-6]. Diagnosing a retroperitoneal tumor usually involves a computed tomography scan or an ultrasound sonography scan, which can show an image of the growth and its effect on surrounding structures. RT can be removed completely and whether it has grown into surrounding organs or spread into other areas of the body [4-9].

If a tumor is removed completely before it has had a chance to spread, the patient will have a more positive prognosis, although there is still the chance of recurrence. Some tumors invade major blood vessels and nerves, and this can make it impossible to remove them completely [10-15]. Here we report a case of RT and describe the histologicalcharacteristics and the difficulties in the diagnosis.

Case Report

1. Case presentation

A 42-year-old female was admitted to our hospital with abdominal lump from last two monthsand persistent abdominal pain from one month. She had loss of appetite and weight from one month. No history of exertional dyspnea, palpitation, syncopal attack, and headache was observed. She also does not have history of proximal muscle weakness, abdominal striae, tuberculosis, hypertension and diabetes mellitus.

Physical examination showed a palpable mass especially extended in the right lower quadrant of the abdomen. Abdominal ultrasonography showed a solid, 15×14cm heterogeneous lobulated mass in left hypochondriawith multiple foci of variable size. It does not move with respiration, dull on percussion. Bowel Sounds was present. These mass are non-separable from pancreatic tail reaching up to splenic hilum and displacing the left kidney.

2. Ultrasonography (USG) finding

The liver and spleen were not enlarged and their structures were normal. No liver nodule, metastasis and ascites were observed. The both kidney appeared normal and tumor mass was not adhered to kidney.

3. Computed tomography (CT) report

CT also revealed the presence of growths of varying size of mass occupying the whole of the abdominal cavity. Large lobulated heterogeneous mass is noted in the left side of retroperitoneum containing fatty component, soft tissue component and calcification. Soft tissue component shows mild enhancement. It measures 22x14x12cm (approx.). Lesion abuts the anterior aspect of the

pancreas (with loss of fat plane) and left kidney. It displaces the left colon and sigmoid mesocolon anteriorly and small bowel loops to the right side of the abdomen. Mild left perinephric stranding is noted. Distal SMA (superior mesenteric artery) branches are contributing to the vascular supply of the mass. Aorta, IVC (inferior vena cava) and left renal pedicles are minimally displaced without any obvious compression or encasement.

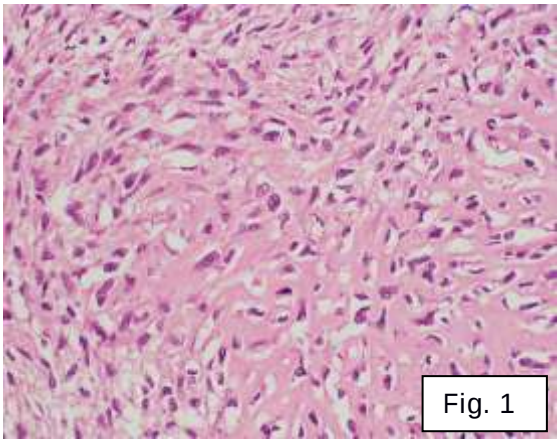
Pelvic region reveals normal urinary bladder. Uterus is grossly bulky (11x6x6.5cm) with especially cervical enlargement (7.2x5.8cm). Ill-defined nodules are noted in the posterior myometrium. Endometrial outline is central.

4. Surgical procedure and findings

After adequate preoperative preparation, proper informed consent was taken for the surgery and possible complications. Under general anesthesia, patient put in supine position, part painted and draped. Midline incision was made for exploratory laparotomy. No liver nodule/metastasis. Spnenic flexure of colon and spleen mobilized. Large mass in left retroperitoneum densely adhered to descending colon- about 15 cm of colon resected along withtumor mass. End to end colonic anastomosis done in single layer by vicryl 3-0. Multiple parasitic vessels ligated & divided. Tumor was densely adhered to pancreas and hence distal pancreatectomy was done. Hemostasis maintained. Tumor also found densely adhered to splenic vein and hilum and hence splenectomy was performed. Multiple discrete tumor masses also dissected out. Hemostasis secured.

5. Histopathological examination

Gross were capsulated, firm-hard with soft areas weight: 1.58 kg, size: 17 x 13 x 9 cm c/s hard calcific tumor wall with fleshy areas.



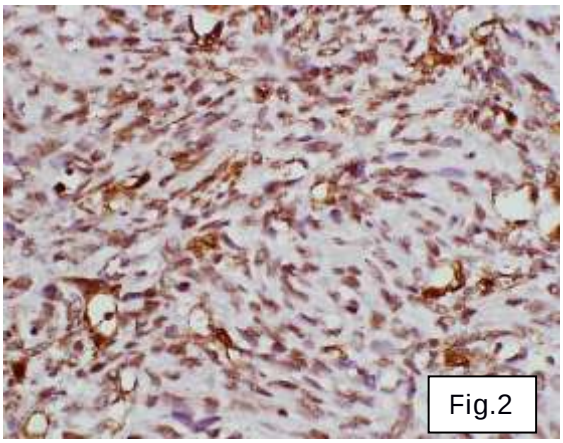


Fig. 1 Histopathological photomicrograph of tumor. Tumor composed of spindle shaped cells disposed in intersecting fascicles, whorling and storiform pattern. The tumor cells are oval to spindle shaped, with blunt- ended nuclei, dispersed chromatin and moderate amount of cytoplasm.

Fig. 2 Immunohistochemistry photomicrograph showing the tumor cells are diffusely positive for vimentin.

Histopathological examination of left retroperitoneal tumor with distal pancreatectomy and splenectomy with descending colectomy specimen shows a tumor composed of spindle shaped cells disposed in intersecting fascicles, whirling and storiform pattern. The tumor cells are oval to spindle shaped with blunt ended nuclei, dispersed chromatin and moderate amount of cytoplasm. There is moderate pleomorphism with few bizarre cells and osseous differentiation. Tumor is involving serosa

and muscularis propria of intestine and pancreas adhered to tumor mass. Section from tail of pancreas shows unremarkable pancreatic parenchyma, which is free of tumor infiltration. Section from spleen shows unremarkable splenic parenchyma. Section from splenic hilum shows threelymph nodes, all free of tumor infiltration (Fig. 1). Immunohistochemistry result showed that the tumor cells are diffusely positive for vimentin (Fig. 2).

The postoperative course was without complication. The patient was discharged from the hospital, in good general condition. At the most recent check-up the patient showed no signs of recurrence.

Discussion

Leiomyosarcoma occurs most commonly in the extremities and retroperitoneum, however, it has been rarely observed in the colon. Leiomyosarcoma is one of the most common soft tissue sarcomas, and represents 20% of mesenchymal malignancies. It tends to occur in the retroperitoneum and deep soft tissues of the trunk and extremities in adults. It is unlike lipoma and relatively rare in the fat-rich areas such as the subcutaneous tissue, intestinal tract, and mesocolon. Leiomyosarcoma rarely involve the gastrointestinal tract, and a primary leiomyosarcoma of the colon is extremely uncommon. The diagnosis of retroperitoneal leiomyosarcoma is often difficult because symptoms appear only after the tumor becomes very large. Some retroperitoneal leiomyosarcoma are found on computed tomography by chance [16-18].

Guidelines for treatment of leiomyosarcoma have not been well established. Complete wide excision, which has been recommended by most authors, is the most important component of therapy. Leiomyosarcoma, a neoplasm of mesenchymal origin derived from adipose tissue, is one of the most common soft tissue sarcomas. Leiomyosarcoma is usually located in the lower limbs of adults, and retroperitoneal tumors are uncommon. It very rarely presents in the gastrointestinal tract and even less frequently in the colon. Despite the potential involvement of the gastrointestinal tract, the precise location of secondary colonic tumor development has not been described yet [13,19-21]. RT can be very challenging to manage andis often enormous and close to critical retroperitoneal structures and organs, hence complete resection is difficult and the potential for perioperative complications is high [4,17,21-23]. RT is an uncharacteristic and infrequent growth that develops inside part of the abdominal cavity. Symptoms such as an enlarged belly and abdominal pain and bowl symptoms are absent. Although retroperitoneal tumors can be benign, or harmless, most often, they are cancerous. Surgical removal is the most common treatment, although tumors can recur. On diagnosis it does not shows bowl symptoms, no abdominal bleeding [11,22,24-26].

The diagnosis of retroperitoneal leiomyosarcoma is often difficult because symptoms appear only after the tumor becomes very large. Some retroperitoneal leiomyosarcoma are found on computed tomography by chance. The clinical course of this case was very rare because of the presentation of melena as the first symptom and the detection of an invasive mass in the ascending colon using colonoscopy.

In summary, we report a unique case who developed leiomyosarcoma of colon presented as retroperitoneal mass.

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