Case Report

Primary mesenteric liposarcoma with multiple mesenteric lipomas and Meckel's diverticulum

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ABSTRACT

Abdominal liposarcomas more commonly arise from the retroperitoneum. However, primary mesenteric liposarcoma is a rare neoplasm. Primary mesenteric liposarcoma is a rare diagnosis; hence, a differential diagnosis of an abdominal mesenteric tumor should also be considered. Here, in this case, report, we are reporting a well-differentiated primary mesenteric liposarcoma with Meckel's diverticulum, which has not been reported till now. The clinical findings and imaging were more suggestive of the gastrointestinal stromal tumors, but on laparotomy, it turned out to be primary mesenteric liposarcoma (well-differentiated) with multiple mesenteric lipomas and Meckel's diverticulum.

Key words: Mesenteric liposarcoma, Mesentery, Meckel's diverticulum

Liposarcomas are malignancies that originate from the mesenchyme and arise from the adipose tissue. Among the intra-abdominal liposarcomas, retroperitoneal liposarcoma is the most common. Liposarcoma primarily arising from the mesentery is a rare condition. The peak incidence is seen in the fourth to sixth decades [1]. As per the World Health Organization (WHO) classification, the various subtypes of liposarcoma are: Well-differentiated (most common), pleomorphic, round-cell, myxoid, and dedifferentiated [2].

Here, we are reporting a rare case of large primary mesenteric liposarcoma with multiple small mesenteric lipomas with Meckel's diverticulum. In our case, the presence of mesenteric liposarcoma with the other smaller mesenteric lipomas in adjunct with a Meckel's diverticulum makes it unique in its presentation.

CASE REPORT

A 70-year-old female presented with a history of vague abdominal discomfort and intermittent non-colicky pain in the central and left side of the abdomen for the past 1 year. There was also abdominal distension for the past 3–4 months. The pain and abdominal distension was not associated with vomiting, constipation, or obstipation. There was no history of melena or hematochezia. There was no significant history of anorexia or weight loss. The patient is a known case of hypothyroidism and hypertension and on regular medications for the past 10 years. There is also a history of an exploratory laparotomy done around 19 years back for an intra-abdominal lump, the details of which were not available with the patient.

The patient presented to the surgery OPD, and on general examination, she was conscious and oriented with no evidence of pallor, icterus, cyanosis, or lymphadenopathy, and her vitals were stable. Per abdomen, examination revealed a well-healed previous midline scar and left-sided abdominal fullness on inspection. A firm lump of size approximately 15 × 8 cm was palpable in the left para-umbilical region extending up to the left lumbar and left iliac fossa region. The lump was transversely mobile and also moving with respiration. A probable diagnosis of the mesenteric tumor was made.

The patient was carrying an ultrasonography report, which was suggestive of an intra-peritoneal oval heterochronic soft-tissue lesion, measuring approximately 96 × 52 × 77 mm in size seen in the left iliac fossa region, the nature of which is not known. Furthermore, there was a simple left ovarian cyst of size 30 × 23 mm. A computed tomography (CT) scan of the abdomen was done, which was suggestive of a pseudo-encapsulated, septated lesion with predominant fat density encasing the jejunal segment, measuring 7 × 14.3 × 12.1 cm, and displacing the rest of bowel loops peripherally (straddling sign) (Figure 1). There

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is also evidence of another round hypodense lobulated mass lesion measuring 7 × 8.3 × 7.6 cm in the mesentery of the left iliac fossa region. The liver, spleen pancreas, and kidneys were normal. There was also no evidence of any lymphadenopathy or any vascular invasion on the CT scan.

The patient was then taken up for the surgery after the pre-operative workup under general anesthesia. Preoperatively, multiple mesenteric tumors were seen in the ileal mesentery, out of which two of the masses were large (Figure 2). The larger one was approximately 15 × 8 cm in size in the proximal ileal mesentery, with the adjacent part of the ileum densely adherent to the mass. The smaller mass was approximately 8 × 7 cm in size present in the terminal ileal mesentery (Figure 3). There were few other small mesenteric masses present which appeared lipomatous in origin. Excision of all the mesenteric tumors, along with the resection of the proximal ileal segment of around one foot, was done around five feet distal to the duodenum-jejunum flexure. There was also a diverticulum in the terminal ileum, which was wedge resected, and anastomosis was done. Preoperatively, there was no ileocaecal junction, and ileotransverse anastomosis was seen, most probably due to the right hemicolectomy done in the previous laparotomy. Furthermore, preoperatively, there were no ascites, lymphadenopathy, vascular invasion, or any deposits over the liver.

Histopathology showed features suggestive of well-differentiated liposarcoma from the tumor composed of spindle cells, bizarre floret cells, and adipocytes. A rare lipoblast was seen. In foci collections of lymphocytes, and foamy histiocytes with vacuolated cytoplasm were present. The final histopathology report was suggestive of well-differentiated liposarcoma with multiple lipomas and Meckel's diverticulum (Figure 4).

The post-operative course of the patient was uneventful. After being discharged, the patient was followed in OPD, and the

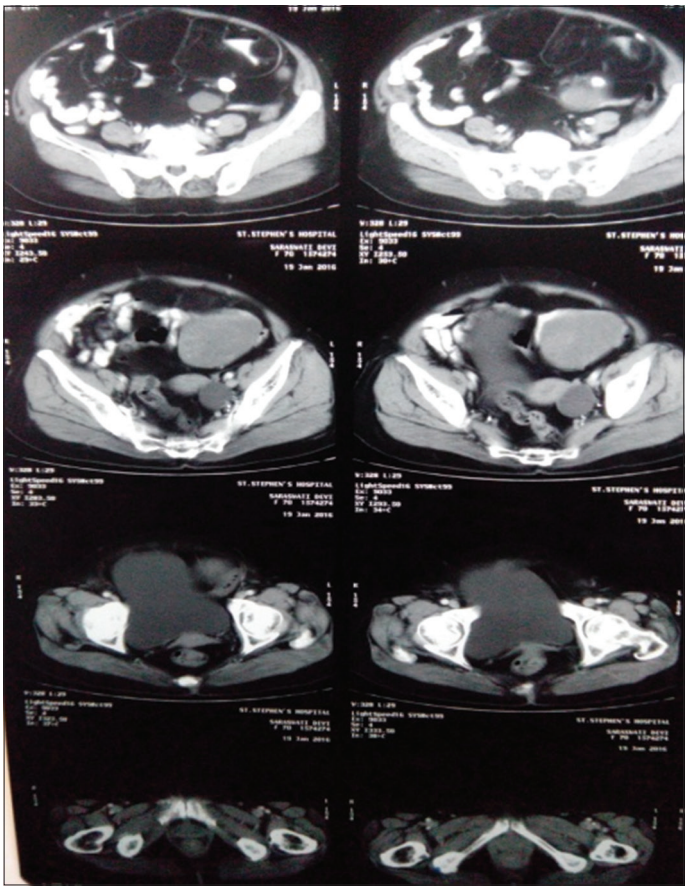

Figure 1: Contrast-enhanced computed tomography abdomen showing mesenteric encapsulated lesion in the left iliac fossa displacing the bowel loops peripherally

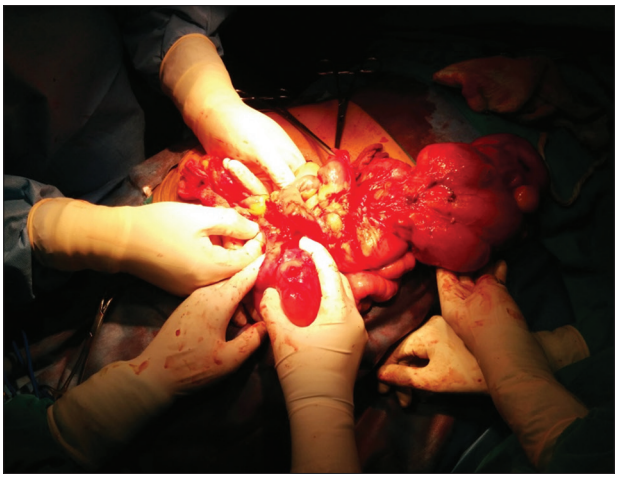

Figure 2: Intra-operative picture showing multiple mesenteric tumors arising from the ileal mesentery

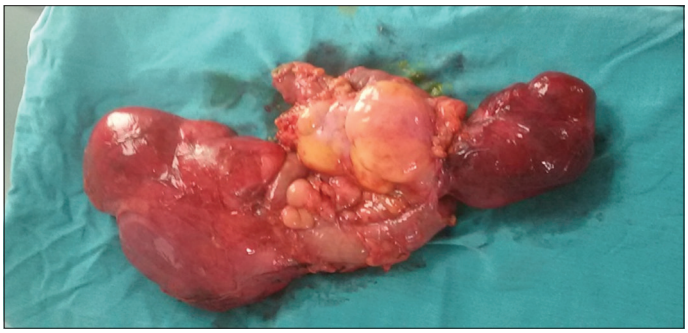

Figure 3: Excised multiple mesenteric tumors with resected ileal segment

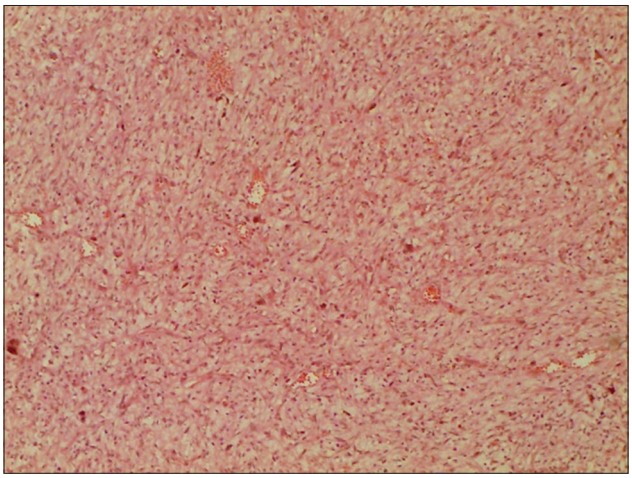

Figure 4: Histopathology showed features suggestive of well-differentiated liposarcoma from the tumor composed of spindle cells, bizarre floret cells, and adipocytes. In foci collections of lymphocytes and foamy histiocytes with vacuolated cytoplasm present

patient was tolerating diet, and per abdomen, examination did not reveal any abnormality.

DISCUSSION

Liposarcoma is the most common soft-tissue sarcoma that occurs in the adults [3]. However, a primary mesenteric liposarcoma is an extremely rare entity. They usually occur in the fifth to seventh decades of life, and the incidence is slightly higher in males as compared to females [4].

The patients may present with complaints of gradual abdominal distention, pain abdomen, weight loss, early satiety, and freely mobile abdominal lumps. These tumors rarely cause perforation, obstruction, intussusception, acute appendicitis, or symptoms mimicking prostatism [5]. Among all histological types, the well-differentiated type is the most common. Evans in 1979 reported that the median survival of patients with well-differentiated, myxoid, de-differentiated, and pleomorphic types was 119, 113, 59, and 24 months, respectively [2].

Various staining methods also help in the diagnosis of liposarcoma. S-100 positivity is a feature of well-differentiated type but is negative for the undifferentiated tumors. On immunohistochemistry (IHC) analysis, CD117 and CD34 do not stain the dedifferentiated region [6]. Staining and IHC were not performed in our case. Well-differentiated liposarcomas and de-differentiated liposarcomas have amplification of several genes, including MDM-2 [7,8].

A similar case was reported wherein the primary mesenteric liposarcoma was seen arising from the transverse mesocolon in an elderly female, which was diagnosed on contrast-enhanced CT (CECT) abdomen findings and the tumor was excised completely through a midline laparotomy successfully showing multicentricity and histopathology showing well-differentiated liposarcoma [9].

The treatment of choice for these tumors remains surgical, which is wide excision with adequate surgical margins (in the absence of any distant metastasis). The role adjuvant chemotherapy for soft-tissue sarcomas in adults was explored in a meta-analysis of 14 randomized trials and showed significant improvement in the in local and distant recurrence and overall recurrence-free survival. However, no studies have been carried out for mesenteric liposarcomas [10]. The role of neoadjuvant chemotherapy for mesenteric liposarcoma was evaluated in one study with doxorubicin, cisplatin, and ifosfamide and reported that it was successful in the shrinkage of large ileocolonic mesenteric liposarcoma [11].

CONCLUSION

The patient presented in our case underwent complete surgical resection. No adjuvant chemotherapy was given. Long-term follow-up and observation are required because of the high risk of recurrence.

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