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Liposarcoma of Greater Omentum: A Case Report on Rarity of Tumor Localization

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Abstract:

Liposarcoma is the second most common soft tissue sarcoma among adults. Most common sites are retroperitoneum and limbs but intra-abdominal localization is very rare. Herein, authors report a case of omental liposarcoma who had progressive abdominal distension and vague abdominal pain. A complete macroscopic resection of tumor was done and adjuvant chemotherapy was prescribed. The peculiarity of this report lies in the infrequency of anatomical localization of this tumor.

Key words: Liposarcoma, Sarcoma, Abdominal pain, Chemotherapy, Omentum, Humans.

Introduction

Incidence of liposarcoma was reported as 10-12% among soft tissue sarcomas which makes them second most common soft tissue sarcoma among adults. However, primary liposarcoma of the greater omentum is very rare [1]. In a review of the medical literature, only 16 cases have been reported with largest series reported by Hasegawa *et al*. who have studied 32 cases of de-differentiated liposarcoma out of which 5 were primarily originated from mesentary [2]. We present a case of well-differentiated liposarcoma of greater omentum. The peculiarity of this report lies in the infrequency of anatomical localisation of tumor.

Case Report

A 65 year old woman had symptoms of generalized mild abdominal pain, progressive abdominal distension and decreased appetite since 6 months. Physical examination revealed 20×20 cm sized ill-defined, firm mass localised to epigastric and umbilical region. Laboratory investigation showed slight anaemia, elevated levels of CA-125 "220 IU/L" and lactic dehydrogenase "740 IU/L".

Ultrasonography showed mixed echogenic lesion with few calcific densities anterior to stomach and small bowel loops. Contrast enhanced CT scan of abdomen revealed giant heterogenic lobulated mass with few non-enhancing cystic areas compressing stomach and proximal small bowel loops from anteriorly. There was no any evidence of distant metastasis [Fig.1].

At laparotomy further assessment showed an intra-peritoneal tumor with a gelatinous components

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in the greater omentum which was adherent to anterior surface of stomach at one site for which omentectomy, tumorectomy and wedge resection of stomach with primary closure were done. There was no any evidence of intra-abdominal distant metastasis. Tumor measured 23x20x12 cm in diameter and weighed 7500 gm. The cut surface of tumor was yellowish-grey with foci of hemorrhagic and necrotic area.

The histopathological examination revealed well-differentiated liposarcoma. Immunohistochemistry was negative for CD-117 [Fig.2] and CD-34 and therefore a gastro-intestinal stromal tumor was ruled out and final diagnosis of primary well-differentiated liposarcoma of greater omentum was made. Patient had uneventful post-operative period and adjuvant chemotherapy with doxorubicin was started during follow-up in view of tumor adherence to stomach. During follow up of 36 months the patient is asymptomatic and disease free till date.

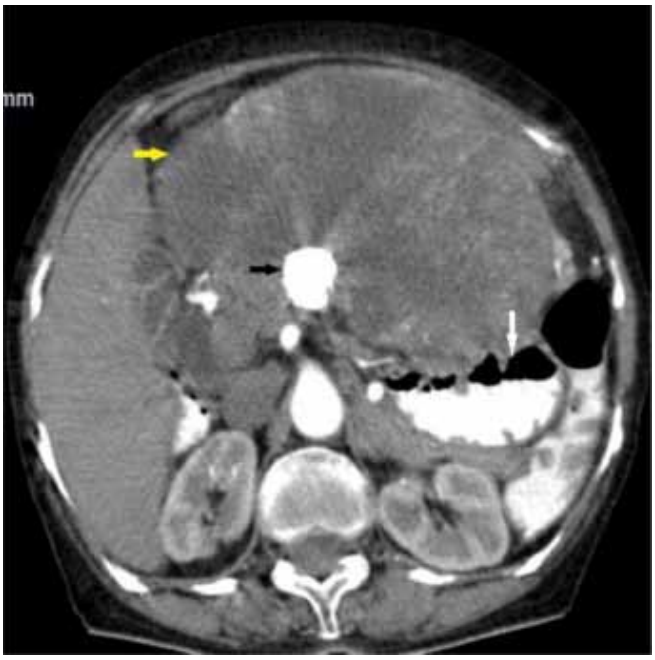

Fig.1: CT abdomen with intravenous and oral contrast showing non-homogenous enhanced lobulated intraperitoneal mass (yellow arrow) with central calcification (black arrow), pushing stomach from anterior side (white arrow).

Discussion

Liposarcoma originates from primitive mesenchymal cells and can appear at any age but more frequently in 6th and 7th decade of life with M:F ratio of 2:1 [3]. Common sites are gluteal region, thighs, popliteal fossa, shins and retroperitoneum. Intra-abdominal localisation of liposarcoma is very rare. Vague abdominal pain and progressive abdominal distension are most common symptoms for tumors originating from greater omentum. Sometimes large sized omental tumors may present with signs of compression i.e. vomiting, constipation and urinary signs.

Omental liposarcoma is a voluminous, soft, irregular yellowish mass with gelatinous components. Microscopically, they are divided into four sub-types: well differentiated, myxoid, round cell and pleomorphic [4]. Prognosis depends upon

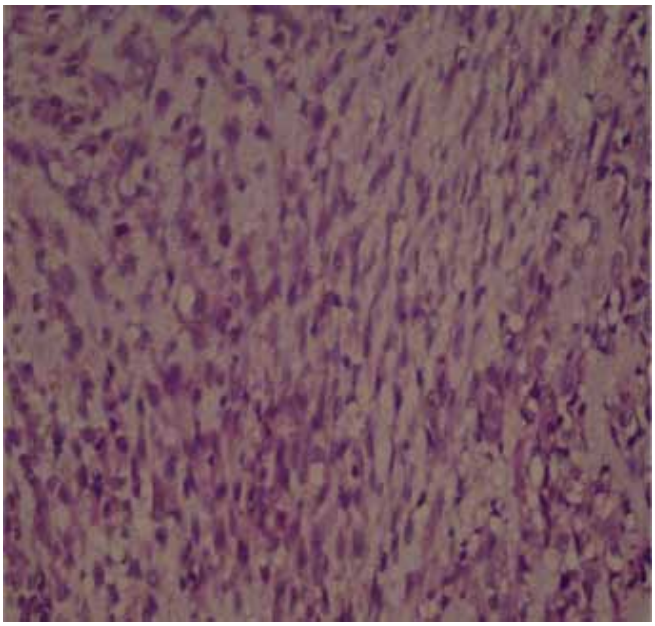

Fig.2: HPE: Well-differentiated liposarcoma.

this histological classification with poor outcome in pleomorphic sub-type.

Contrast radiography in patients with omental liposarcoma shows displacement or compression on adjacent organs. Ultrasonography can differentiate them from cystic lesions. CT scan pattern of liposarcoma is a fatty, low attenuation mass with enhancing intervening thick, irregular, fibrous strands traversing through it [5]. Hunter *et al*. reported that denser lesions tends to occur in the malignant types whereas less aggressive tumors have a higher fat content and lower density [6]. Role of fine-needle aspiration biopsy is limited to unresectable tumors only because of risk of tumor seeding along the puncture route [7].

Radical excision is the recommended treatment for the primary greater omental liposarcoma [8]. Although the role of adjuvant treatment remains controversial, chemotherapy seems a promising solution in treatment of liposarcoma [9]. 5-year survival rate ranges from 10-50% based on histological subtypes [8].

Conclusion

Primary omental well-differentiated liposarcomas are extremely rare and differential diagnosis with other abdominal tumour entities can be challenging. Although radical surgical excision is the best treatment, chemotherapy seems promising in this pathology. However the prognosis does depend on histological types.

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