Large solitary fibrous tumor arising from the omentum

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Solitary fibrous tumors (SFT) are uncommon spindle cell neoplasms generally associated with serosal surfaces especially the pleura. Recently, these tumors have been documented in a number of extra pleural sites.[1-5]Extra-serosal examples are becoming recognized.[6] In this report the case of a SFT arising from omentum is described. The diagnosis of SFT was not made until the excised tumor was subjected to histopathology and immunohistochemistry.

A 60-year-old male presented with a one week history of intermittent periumbilical pain and no past history of similar pain. He had weight loss of half a stone over 6 weeks and abdominal distension for 2 weeks, there was no loss of appetite or other systemic complaint. General examination revealed bilateral Dupuytren's contracture and grade 4 finger clubbing. Abdominal palpation revealed a very large non tender mass. The liver and spleen were difficult to assess due to the size of the mass. Rectal examination was normal. An abdominal ultrasound showed a central abdominal mass of mixed echogenicity. A CT scan showed a large lobulated mass with overlying serpinginous vessels with a clear plane posteriorly separating it from retroperitoneum. Liver, spleen, and pancreas showed no abnormality (**Figure 1**). A CT scan of the chest showed no abnormality. Core biopsy under ultrasound guidance revealed features consistent with a solitary fibrous tumor, hemangiopericytoma or angiosarcoma. The patient underwent a midline laparotomy, the mass was attached to the omentum by a pedicle with minimal adhesions to the lateral peritoneum. It was excised completely. The post-operative course was uneventful. Macroscopically the mass measured 24x19x10 cm, weighed 3870 grams and on section it was a fleshy lobulated tumor with few cystic areas. There was some attenuated fat on part of the surface. Microscopically, (**Figure 2**) the architecture was pattern-less with prominent stromal hyalinization, varying cellularity (mainly spindle and ovoid cells) and branching (hemangiopericytoma-like) vessels. Elsewhere the tumor cells are more atypical and showed a high mitotic rate (up to 25 mitosis/high power field). Mitotic activity >4 mitosis/high power field has been used to discriminate between benign and malignant forms at thoracic and extra thoracic sites. Immunohistochemistry was strongly positive for cluster of differentiation (CD) 34 and CD 99 while smooth muscle action (SMA), desmin, S-100 protein, and C-kit are all negative. The patient remains free of any symptoms and was recurrence free on follow up CT scan 4 months after the operation.

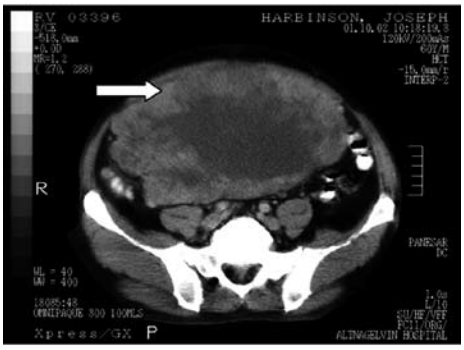

Figure 1 - Computerized tomography scan showing intraperitoneal solitary fibrous tumors arising from the omentum.

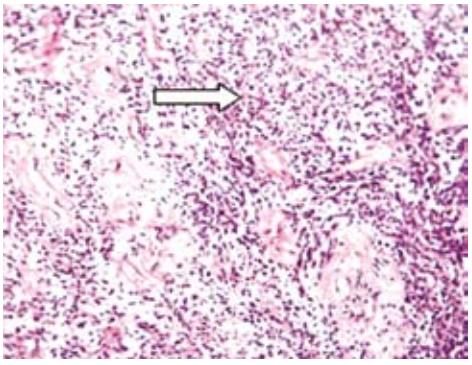

Figure 1 - Histopathology of solitary fibrous tumor (pattern-less with prominent stromal hyalinization, varying cellularity [mainly spindle and ovoid cells] and branching vessels).

The term SFT refers to a neoplasm, which was originally described in the pleura with several synonyms including localized or fibrous mesothelioma.[5] Identical tumors have since been described in other locations.[1-6] This is the first report of a SFT involving the omentum. Solitary fibrous tumors clinically have symptoms either related to the site or systemic symptoms (hyperglycemia, arthralgia, osteoarthropathy and clubbing fingers) all resolve with tumor excision.[1] Solitary fibrous tumor is a tumor with unknown etiology usually involving serosal surfaces but without evidence of methothelial differentiation, the result of recent immunohistochemical studies strongly suggest mesenchymal origin.[1,2] This tumor must be distinguished from hemangiopericytoma in which vascular pattern is seen throughout, and from fibrocytoma which has a prominent herring-bone pattern and lacks vascular architecture.[5] Clinical awareness of the lesion is important, as benign and malignant forms of the tumor occur. The malignant form pursue an aggressive course manifested by local invasion, recurrent

growth, or metastasis.[4] Recurrence is likely with larger and histological aggressive tumors (increased cellularity, pleomorphism, and mitosis >4/high power field).[1] Local excision is the initial treatment of choice. Long term follow up is very important as SFT may recur locally.[5,6] Rare location of an uncommon lesion often gives rise to difficulty in diagnosis or to misdiagnosis.[2] Clinical awareness of a SFT as a rare cause of intraperitoneal abdominal masses should be emphasized.

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