Abstract:

Primary hepatic liposarcoma is an extremely rare mesenchymal tumor, accounting for only 0.1-2% of primary malignant liver tumors. Due to its rarity, the knowledge of its clinical course, management and prognosis are deficient. Only fifteen cases of primary liposarcoma of the liver have been described since 1973. However, among these fifteen cases, only two cases of primary liver liposarcoma with pleomorphic subtype have been reported. We reported the third and fourth case of primary pleomorphic liver liposarcoma. Our first case involved a 57-year-old female presented with abdominal discomfort and progressively abdominal distension for two weeks. Computed tomography of her abdomen revealed a large well-defined solid nodule mass with an area of necrosis and hemorrhage occupying the segment IV-B of the liver. Wide local excision was performed. She had an uneventful recovery and remained well after six months post-treatment. Our second case involved a 65-year-old male presented with an abdominal mass for two months duration. Computed tomography demonstrated a mass in the left lobe of the liver with mixed soft tissue and fat attenuation. He underwent wide local excision, and was discharged day three post-operatively. Both histological analysis revealed liposarcoma of the liver with pleomorphic subtype.

Keywords
Liposarcoma, mesenchymal tumor, pleomorphic subtype
**Introduction:**

Primary hepatic liposarcoma is extremely rare, accounting for only 0.1-2% of primary malignant liver tumors (1). Liposarcoma is originated from the mesenchymal tissue, and is usually typically found in the shoulder, extremities and retroperitoneum space (2). Primary hepatic liposarcoma can be divided into five subtypes, which are namely, myxoid, well-differentiated, dedifferentiated, pleomorphic and myxoid pleomorphic, while with pleomorphic liposarcoma being the rarest subtype (3). The clinical presentation of primary hepatic liposarcoma is highly variable. Early diagnosis of liver liposarcoma is challenging, because most of the patients remained asymptomatic until the mass effects emerged such as abdominal pain, abdominal distention, or obstructive jaundice symptoms. Some might experience fever, nausea, vomiting and weight loss. Physical examination might reveal a palpable abdominal mass. A computed tomography (CT) scan may provide a certain typical characteristic of liver liposarcoma, and it is the best tool to evaluate the resectability of liver sarcoma. Complete resection with clear margin is the likely curative therapy. To the best of our knowledge, only two cases of primary pleomorphic liver liposarcoma had been reported in the literature. Here, we presented two cases of primary pleomorphic liver liposarcoma, with successful curative resection at our center.
Case presentation:

A 57-year-old woman presented with abdominal discomfort and progressive abdominal distension for two weeks. She denied nausea, vomiting, jaundice, reduced effort intolerance, or constitutional symptoms. Besides, she had no risk factors such as drug abuse, alcoholism, or viral infection. She had no significant medical or surgical history. Physical examination revealed a palpable large mass that occupied the right upper quadrant of the abdomen. There was no stigmata of chronic liver disease such as edema, ascites, splenomegaly or spider naevi. All the blood investigations were normal. Viral markers of hepatitis B and hepatitis C were negative. Both serum markers alpha-fetoprotein (AFP) and carcinoembryonic antigen (CEA) were normal. A CT scan of the abdomen revealed a large well-defined predominantly solid nodule mass measured about (11 x 7 x 9.8 cm) with an area of necrosis and hemorrhage occupying the segment IV-B of the liver (Figure 1). The mass displaced the second part of the duodenum, head of pancreas and pylorus. No other abnormality was detected in the abdominal viscera. Further investigation and workup showed no other primary lesion.

An elective laparotomy and wide local excision of the tumour was scheduled. Intraoperatively, we found a huge lipomatic liver mass measured about (12 cm x 11 cm) was arising from segment IV-B, extending laterally into segments 5 and 6. The liver was smooth and non-cirrhotic. A Macroscopic examination showed a well-circumscribed and encapsulated fleshy, pale yellowish tumour. A Bi-valved section of the specimen appeared brownish and gelatinous with haemorrhage foci. (Figure 2).

Microscopically, the mass showed heterogeneous histology composed of neoplastic spindled to markedly pleomorphic cells within a variable loose myxoid background. Furthermore, the tumour consisted of large cells with markedly pleomorphic vesicular nuclei and moderate amounts of variably