Japanese Journal of Gastroenterology and Hepatology

Case Report

ISSN: 2435-1210 | Volume 10

A Rare Case Report of Liver Sarcoma Misdiagnosed as Primary Hepatocellular Carcinoma Before Surgery

Yi X[1#], Yunfei Y[2#], Rui T[1] and Feifei Y[3*]

[1]Department of General-Hepatobiliary Surgery, Naval Medical Center of PLA, China

[2]Department of Hepatobiliary and Pancreatic Surgery, Shanghai Punan Hospital of Pudong New District, China

[3]Department of Medical Service Center, Naval Medical Center of PLA, China

[#]These authors contributed equally to this study.

[*]Corresponding author:

Yu Feifei,
Naval Medical Center of PLA, Naval Medical University (Second Military Medical University), No. 800 Xiangyin Road, Yangpu District, Shanghai, China

Received: 10 Nov 2023
Accepted: 15 Dec 2023
Published: 26 Dec 2023
J Short Name: JJGH

Citation:

Feifei Y. A Rare Case Report of Liver Sarcoma Misdiagnosed as Primary Hepatocellular Carcinoma Before Surgery. 2023; V10(6): 1-4

Keywords:

Liver sarcoma; Primary hepatocellular carcinoma; Malignant tumor

1. Abstract

1.1. History summary: Male patient, 70 years old, with right upper abdominal distension for two months, was admitted to the hospital with the finding of hepatic occupancy for 10 days. Abdominal CT examination showed cirrhosis, ascites, portal hypertension formation, and hypodense mass shadow in the S3 segment of the liver.

1.2. Symptoms and signs: moderate nutrition, no yellowing of the skin and sclera, no enlargement of superficial lymph nodes, soft abdomen, no limited pressure or rebound pain, no abnormal abdominal mass. Mobile turbidities were negative, and bowel sounds were 4 beats per part. There was no edema in both lower extremities.

1.3. Diagnostic method: complete related examination, initially considered primary hepatocellular carcinoma, performed open surgical resection, postoperative specimen: the size of the left outer lobe of the liver 15 * 8 * 6 cm, the cut surface saw a nodule, the maximum diameter of 3.5 cm, hard, the border is not clear, and the central area saw necrosis. Pathological analysis was performed, and microscopy showed that the tumor cells were arranged in bundles, and the cells were spindle shaped, with obvious nuclear heterogeneity, and multinucleated tumor giant cells were seen, accompanied by necrosis in some areas. The diagnosis of liver sarcoma was confirmed based on the pathologic pattern and immunohistochemical results.

1.4. Treatment: surgical resection, discharged after one week of postoperative anti-inflammatory, hepatoprotective, and supportive therapy, with chemotherapy proposed after one month.

1.5. Clinical return: Discharge to date has been relatively short and has not yet reached the return date for review.

2. Introduction

Liver sarcoma is a rare hepatocellular carcinoma, which belongs to a special type of hepatocellular carcinoma and contains both sarcoma and hepatocellular carcinoma components [1]. It has a low incidence, rapid progression and poor prognosis. The incidence of this disease is low, its progression is rapid, and its prognosis is poor. There are few reports on this disease at home and abroad, and it is easy to be misdiagnosed with primary hepatocellular carcinoma and intrahepatic cholangiocarcinoma in clinic. One case of liver sarcoma was admitted to our hospital in July 2023, and we retrospectively analyzed its diagnostic and treatment process, and reviewed the literature from home and abroad, in order to enhance the understanding of this disease.

3. Clinical Information

3.1. General Information

Male, 70 years old, with right upper abdominal distension for two months, was admitted to the hospital 10 days after the discovery of hepatic occupancy. The patient presented with upper abdominal distension without any specific triggers two months ago, accompanied by decreased frequency of urination, which was relieved by oral administration of antitussive tablets. He had decreased appetite and

weight loss (about 15 pounds in two months). She had a history of hepatitis B without antiviral treatment, and a history of alcohol consumption for more than 40 years, mainly white wine, in varying amounts. There was no regular physical examination in the past. Denies a history of hobbies and had an appendectomy 25 years ago. His father died of hepatocellular carcinoma, and he denied any family history of hereditary disease. Two weeks before admission, an abdominal CT examination was performed in a local hospital, which showed cirrhosis, ascites, portal hypertension, and a hypodense mass shadow in the S3 segment of the liver, and a CT enhancement scan was recommended. And abdominal puncture ascites drainage was performed.

3.2. Inspection

Relevant examinations and laboratory tests were perfected after admission. Abdominal ultrasound suggested cirrhosis; substantial occupancy in the left lobe of the liver. Gallbladder wall edema. Double kidney cysts. Enhanced MRI of the upper abdomen suggested: 1. Occupation of the left lobe of the liver, considered as primary hepatocellular carcinoma.2. Cirrhosis of the liver; accumulation of fluid in the abdominal cavity.3. Small cysts in the right lobe of the liver, multiple cysts in both kidneys, and small cysts in the caudal part of the pancreas.4. Gallbladder stones, cholecystitis. Laboratory results: routine biochemistry suggests direct bilirubin 8.73umol/L, aspartate aminotransferase 53.43U/L, glutamyl transpeptidase 85.75U/L, alkaline phosphatase 155U/L, prealbumin 0.04g/L. Hepatitis B surface antigen 512.46IU/mL, Hepatitis B e antibody is greater than 100.00Inh%, Hepatitis B core antibody 844.22C.O.I. Alpha-fetoprotein 13.16ng/mL, carbohydrate antigen 125 was 270.46U/ml

3.3. Diagnosis and Differential Diagnosis

Preoperatively, according to the patient's medical history, he had a history of hepatitis B for many years without antiviral treatment, a history of alcohol consumption for many years without regular physical examination, and a family history (his father died of liver cancer). Primary hepatocellular carcinoma was the first consideration in the imaging findings of the outside hospital and our hospital. In addition, alpha-fetoprotein was high. Preoperatively, it was also differentiated from metastatic hepatocellular carcinoma, Intrahepatic cholangiocarcinoma and liver abscess, but all lacked evidence. The diagnosis was not confirmed until final postoperative pathology

3.5. Treatment

Open partial hepatectomy was performed on 2023-07-24. The operation went smoothly, intraoperatively, the liver mass was seen to be located in the dirty surface of segment II, near the left inner lobe, and was the size of a ping-pong ball. No obvious enlarged lymph nodes were seen next to the hepatic artery, around the celiac trunk, or next to the head of the pancreas, no mass was seen in the pelvis, and no metastatic nodes were seen in the greater omentum or peritoneum. The tumor was about 45 mm×37 mm×35 mm in size, with an incomplete peritoneum and a fish-like cut surface. Intraoperative rapid pathology was not performed. The final pathological analysis described the results: the size of the left outer lobe of the liver was 15 cm×8 cm×6 cm, and a nodule was seen on the cut surface with a maximum diameter of 3.5 cm, hard, with poorly defined borders, and necrosis was seen in the central area. Immunohistochemical results: GPC3 part +, HSP-70 part +, GS -, Hepatocyte -, Arg-1 -, AFP -, CD34 blood vessels +, p53 positive cells about 80%, HER2 -, CK7 -, CK19 -, desmin -, Vim +, CKpan part +, CAM5.2 part. Conclusion: liver sarcoma with necrosis in some areas and negative margins; chronic hepatitis of the surrounding liver and cirrhosis. Postoperatively, the patient recovered well and was discharged after 10 days.

3.6. Treatment Outcome, Follow-Up and Regression

Due to the short period of time since discharge, the deadline for returning for a follow-up visit has not yet been reached.

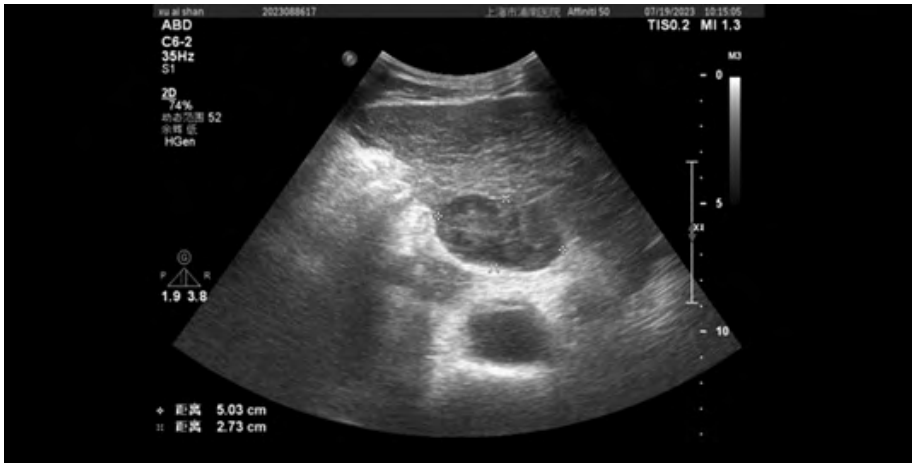

Figure 1: Hypoechoic left outer lobe of the liver seen on ultrasound.

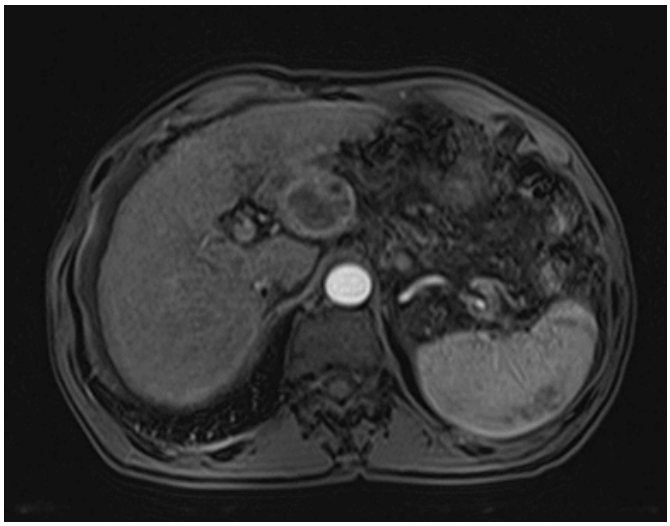

Figure 2: Enhanced magnetic resonance of the upper abdomen, the lesion is located in the left liver and peripheral enhancement is seen in the arterial phase

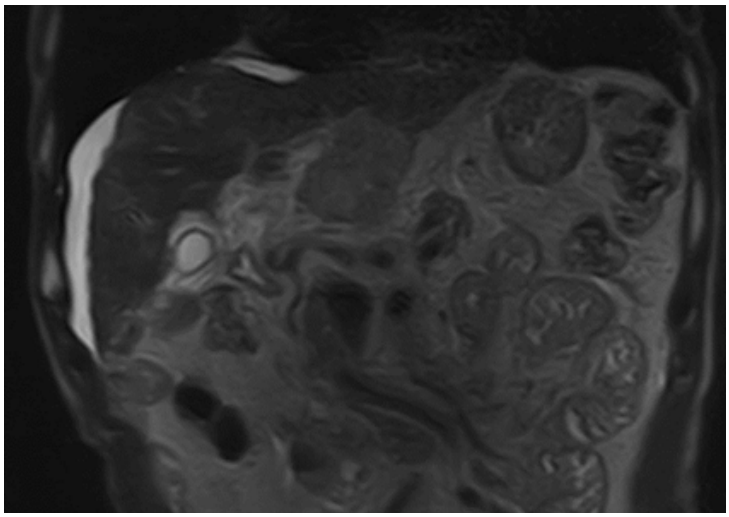

Figure 3: Coronal view of the abdomen with cirrhosis, ascites, and left liver occupancy

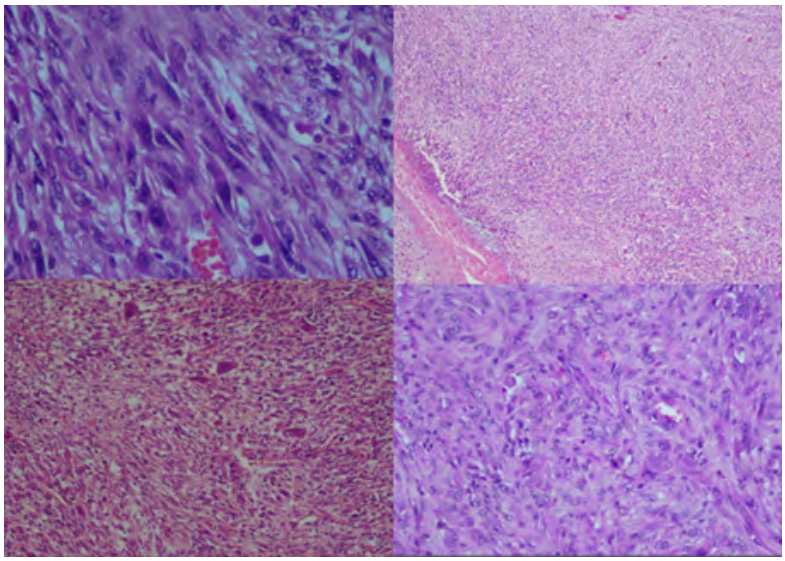

Figure 4: Pathologic findings. Microscopically, the tumor cells were arranged in bundles, the cells were spindle-shaped, the nuclear heterogeneity was obvious, and the multinucleated tumor giant cells were seen, and some areas were accompanied by necrosis

4. Discussion

Liver sarcoma is a kind of hepatocellular carcinoma or intrahepatic cholangiocarcinoma based on the emergence of characteristic proliferating spindle cells with a certain degree of heterogeneity, the spindle cell component of this spindle cell expresses both mesenchymal and epithelial markers [2], which belongs to the rare hepatic malignant tumors, accounting for only 1.8%-2.0% of the hepatic malignant tumors, and accounting for the 3.9%-9.4% incidence of the cases at autopsy [3]. The lesions tend to be fast-growing and invasive, and are relatively common in middle-aged and elderly people, and their occurrence may be related to viral infections, cirrhosis, radiotherapy, chemotherapy, and interventional therapy [4,5]. At present, it is widely recognized that this disease has no specific clinical manifestations, and it is often difficult to distinguish it from primary liver cancer, liver abscess and other diseases. For example, in the case admitted by the author, there was a history of cirrhosis of hepatitis B, and there was a history of drinking for many years, and the high alpha-fetoprotein found in the hospital was combined with the imaging manifestations, which led to the preoperative misdiagnosis of primary liver cancer. According to the current study, alpha-fetoprotein has little significance in the diagnosis of liver sarcoma. The imaging performance is similar to that of primary hepatocellular carcinoma, but compared with hepatocellular carcinoma, liver sarcoma has a relatively clear border in enhanced CT, and the central cystic component of the tumor is more, which is in line with the manifestation of "fast in, fast out" [6]. Enhanced magnetic resonance shows marginal enhancement in arterial phase and reduced enhancement in delayed phase [7]. Pathologically, the tumor is characterized by its unique morphology, which consists of sarcoma cells and hepatocellular carcinoma cells, and the two cellular components can be distributed independently or in a mixed distribution. Sarcomatoid cells are spindle-shaped, with a matted arrangement, eosinophilic cytoplasm, pronounced nucleoli, and a high proliferative index with extensive karyorrhexis, and the lesions are positive for the epithelial marker, cytokeratin (ck), and the mesenchymal marker, vimentin (vim). There is no clear treatment guideline strategy for liver sarcoma, and the results of early surgical resection, liver transplantation or local ablation are often unsatisfactory, while systemic chemotherapy, TACE or local ablation can be performed to reduce the tumor conformity in patients with intermediate and advanced stages. However, regardless of the treatment, the overall prognosis is poor [8]. Conflict of Interest Statement All authors declare that there is no conflict of interest in this study.

5. Declarations

5.1. Competing Interests: No, the authors have no competing interests as defined by Springer, or other interests that might be perceived to influence the results and/or discussion reported in this paper.

5.2. Authors' Contributions: Conceptualization, Yi Xie, Yunfei Yang, Rui Tian, and Feifei Yu; Methodology, Yi Xie; Data, Yunfei Yang; Writing—original draft preparation, Yi Xie and Rui Tian; Writing—review and editing, Yunfei Yang and Feifefi Yu; Visualization, Yunfei Yang; Supervision, Feifei Yu. All authors reviewed the manuscript.

References

1. Maeda T, Adachi E, Kajiyama K, Takenaka K, Sugimachi K, Tsuneyoshi M. Spindle cell hepatocellular carcinoma: a clinicopathologic and immunohistochemical analysis of 15 cases. Cancer: Interdisciplinary International Journal of the American Cancer Society. 1996; 77(1): 51-7.
2. Yuanyuan Y, Lu Y, Limin Z. Clinicopathological analysis of 4 cases of sarcomatoid hepatocellular carcinoma. J Clin Exp Pathol. 2019; 35(04): 471-3.
3. Lee KB. Sarcomatoid hepatocellular carcinoma with mixed osteoclast-like giant cells and chondroid differentiation. Clin Mol Hepatol. 2014; 20(3): 313-6.
4. Liao SH, Su TH, Jeng YM, Liang PC, Chen DS, Chen CH, et al. Clinical Manifestations and Outcomes of Patients with Sarcomatoid Hepatocellular Carcinoma. Hepatology. 2019; 69(1): 209-21.
5. Koo HR, Park MS, Kim MJ, Lim JS, Yu JS, Jin H, et al, Radiological and clinical features of sarcomatoid hepatocellular carcinoma in 11 cases. J Comput Assist Tomogr. 2008; 32(5): 745-9.
6. Yanli C, Tianwu C. A case of CT images of hepatic sarcomatoid carcinoma. Diagnostic Imaging & Interventional Radiology. 2016; 25(04): 343-5.
7. Congjun Z, Min T. Analysis of magnetic resonance imaging features of sarcomatoid hepatocellular carcinoma. Radiol Practice 2017; 32(08): 856-860.
8. Wenjia W, Bing J, Zhiwei C. Clinical analysis of 24 patients with sarcomatoid hepatocellular carcinoma. Chin J Clin Oncol. 2020; 47(15):769-775.