SCIENTIFIC QUALITY

Reviewer #1:

question 1: introduction is too general, I suggest to focus on IMT instead of a general section on primary liver tumors. For example, they could say that IMT is more frequently encountered in other anatomical sites in the GI tract, more common in children and youg adult instead of patients in their 60s and so. Moreover thay call IMT "hepatitis myoblastoma" in the last paragraph but they are not synonimous;

Answer 1: thank you for your advice and suggestion. According to your advice, we changed the first paragraph with IMT's introduction. The paragraph was shown below: Inflammatory myofibroblastic tumors (IMTs) are rare tumors that usually affects children and young adults and are slightly more common among females than males. The cause of IMT is unknown. IMT is more frequently encountered in other anatomical sites in the gastroenterology tract [1].

We have changed the "hepatitis myoblastoma" with HIMT in the last paragraph of introduction. Thank you for your advice.

Question2: case presentation: a more detailed description of the morphology of the tumor is appropriate. It appears mandatory to cite the

ALK1 clone used for IHC, there are several clones which can applied in different pathological contest.

Answer 2: thank you for your advice. We omitted the tumor description in our previously manuscript. Here we added the morphology description of the tumor: The tumor is spherical and hard in texture, grayish white in color, and with a complete capsule isolation from surrounding tissues and without obviously blood supply vessel.

To be sure, ALK clonal chromosomal rearrangements was related with HIMT as we detailed in discussion. In this paper, the antibody ALK 1A4/1H7 was an OriGene antibody. It is not a monoclonal antibody, but it can conjugate at clone 1A4 and 1H7, not 15B2, 10D7 and other sites. So this may fulfill the ALK1 clone you mentioned.

Thank you for your advice.

Question 3: Figure 3: I suggest showing the tumor and IHC at higher magnification to appreciate the morphological details.

Answer 3: thank you for your advice. The figures were provided by our pathologist. They explain to us that HE stain was most suitable in 10X4/10 magnification, to better express its morphological characteristics. But the IHC stain of CD138 and ALK was changed with higher

magnification of 10X40, to better express the protein stain of cells for a more clear result.

Thank you for your advice.

Question 4: discussion: interesting but can improved. Is there a specific pattern on imaging which could suggest IMT? Are there situation in which a biopsy could be performed? When clinicians have to suspect hepatic IMT? Whihc type of liver resection is more indicated? Frozen sections from the tumor could be an option? If yes why?

Answer 4:

1), Is there a specific pattern on imaging which could suggest IMT?

Answer: The imaging manifestations of HIMT are diverse, and their diversity is related to pathological characteristics. Due to the abundance of capillaries in the proliferative fibrous tissue within and around the lesion, the accumulation of contrast agents in the extravascular space during CT and MRI enhanced scans cannot be quickly cleared, resulting in more significant enhancement in the portal vein and delayed phase; However, there was no obvious enhancement (segregating sign) in the areas with plasma cell, lymphocytes and other infiltration in the focus. Therefore, CT or MRI enhanced scans often show no significant enhancement of the lesion in the arterial phase, while the main

enhancement is in the portal phase and delayed phase. Therefore, the edge ring and internal septal enhancement caused by the proliferation of fibrous tissue around and inside the lesion, with a more pronounced delay period, have important reference significance for the diagnosis of HIMT. Due to the lack of specificity in clinical manifestations and diversity in imaging manifestations, HIMT is easily misdiagnosed clinically and needs to be differentiated from benign and malignant diseases such as undifferentiated embryonic sarcoma of liver (UESL), primary liver cancer, cholangiocarcinoma, inflammatory malignant fibrous histiocytoma, liver metastasis and liver abscess.

2)Are there situation in which a biopsy could be performed? When clinicians have to suspect hepatic IMT? Which type of liver resection is more indicated? Frozen sections from the tumor could be an option? If yes why?

Answer: This is an interesting question. The reason why we did not do liver biopsy is that the patient's liver tumor is small. In order to minimize the damage to the patient, we decided to perform minimally invasive surgery under laparoscopy. Based on imaging and other auxiliary examinations (as well as liver cirrhosis) to support the diagnosis of liver malignant tumor, in order to avoid the inevitable risk of peritoneal dissemination and metastasis of malignant tumor under laparoscopic

pneumoperitoneum after needle biopsy, liver needle biopsy was not conducted before surgery.

We think some liver diseases can diagnosed on imaging, and not everyone with tumor all need biopsy for its peritoneal dissemination after needle biopsy under laparoscopic surgery when its pathological results shown malignant tumor.

Thank you for your nice comment.

Question 5: cocnlusions: appropriate - citation number 6: do you want to cite the 5th edition of WHO Classification Tumors?? The most appropriate citation is chapter 12 of Digestive system tumors, WHO Classification of tumors, 5th ed.

Answer: thank you for your comment. In this section of discussion, we just induce the basic information of IMTs, so we mentioned: IMTs were defined as a distinctive, rarely metastasizing neoplasm composed of myofibroblastic and fibroblastic spindle cells accompanied by an inflammatory infiltrate of plasma cells, lymphocytes, and/or eosinophils.

According to your advice, we changed the citation with: World Health Organization Classification of Tumours Editorial Board. Soft Tissue and Bone Tumours, 5th ed, International Agency for Research on Cancer, 2020.

Thank you for your excellent comment.

Reviewer #2:

Question 1: One major point of such cases should be to reach a diagnosis before surgical resection.

Answer: Thank you for your question. The reason why we did not do liver biopsy is that the patient's liver tumor is small. In order to minimize the damage to the patient, we decided to perform minimally invasive surgery under laparoscopy. Based on imaging and other auxiliary examinations (as well as liver cirrhosis) to support the diagnosis of liver malignant tumor, in order to avoid the inevitable risk of peritoneal dissemination and metastasis of malignant tumor under laparoscopic pneumoperitoneum after needle biopsy, liver needle biopsy was not conducted before surgery.

Question 2: A detailed description of the radiological findings should be welcomed. In particular, which CT and RM aspects could differentiate HIMT from HCC?

Answer: The imaging manifestations of HIMT are diverse, and their diversity is related to pathological characteristics. Due to the abundance of capillaries in the proliferative fibrous tissue within and around the lesion, the accumulation of contrast agents in the extravascular space

during CT and MRI enhanced scans cannot be quickly cleared, resulting in more significant enhancement in the portal vein and delayed phase; However, there was no obvious enhancement (segregating sign) in the areas with plasma cell, lymphocytes and other infiltration in the focus. Therefore, CT or MRI enhanced scans often show no significant enhancement of the lesion in the arterial phase, while the main enhancement is in the portal phase and delayed phase. Therefore, the edge ring and internal septal enhancement caused by the proliferation of fibrous tissue around and inside the lesion, with a more pronounced delay period, have important reference significance for the diagnosis of HIMT. Due to the lack of specificity in clinical manifestations and diversity in imaging manifestations, HIMT is easily misdiagnosed clinically and needs to be differentiated from benign and malignant diseases such as undifferentiated embryonic sarcoma of liver (UESL), primary liver cancer, cholangiocarcinoma, inflammatory malignant fibrous histiocytoma, liver metastasis and liver abscess.

Question 3: At surgical pathology, macronodular liver cirrhosis was present. It is singular that no evidence of this condition was detected in any imaging study before surgery.

Answer: Yes, this is a good question. In fact, the liver function tumor markers and other blood test indicators of this patient are within the

normal range, and the degree of liver cirrhosis under laparoscopy is not very obvious. The manifestation of liver cirrhosis is very mild, so the imaging examination did not provide corresponding indications for liver cirrhosis.

Question 4: Since the patient was considered without cirrhosis, had no reported evidence of liver disease, and AFP values were normal, why did the authors not perform a liver biopsy of the focal lesion before surgery?

Answer: Thank you for your question. The reason why we did not do liver biopsy is that the patient's liver tumor is small. In order to minimize the damage to the patient, we decided to perform minimally invasive surgery under laparoscopy. Based on imaging and other auxiliary examinations (as well as liver cirrhosis) to support the diagnosis of liver malignant tumor, in order to avoid the inevitable risk of peritoneal dissemination and metastasis of malignant tumor under laparoscopic pneumoperitoneum after needle biopsy, liver needle biopsy was not conducted before surgery.

Question 5: Instead of stating that lab values were within the normal range, principal liver enzyme and oncologic markers results should be reported.

Answer: Thank you for your suggestion. We have already mentioned the relevant principal liver enzyme and oncological markers results in the"Case presentation" section: After admission, the serum levels of RBC/WBC/PLT, AFP, CEA, CA199, TBIL, DBIL, IBIL, ALT/AST/GT/ALP and HBsAg were all within the normal range. But all the relevant results are within the normal range, so we did not detailed the exactly numerical value.

Question 6: Multi-Disciplinary Treatment (MDT): Treatment should be replaced with Team.

Answer 6：thank you for your advice. We have revised it in our manuscript.

Thank you.

Question 7: The English language must be improved in the paper.

Answer: language polishing was made by the AJE company. And the certificate was provided as appendix.

Thank you.