

Comments:

This is a case report of a liver transplant recipients developing a gastric and a lung malignancy after surgery. De novo malignancies are one of the leading mortality causes late after liver transplantation, but it has been rarely reported in the literature the occurrence of multiple solid malignancies in the same patient.

Nevertheless, I would like to point out some concerns:

Introduction:

- Appropriate references should be provided for the first sentences of the first paragraph

Answer: Thank you for your good advice, and the reference has been adjusted according to your suggestion.

Case report:

- It would be relevant to report the details of the pre-transplant centre screening protocol.

Answer: Thank you very much. Due to the higher operational risk and poorer compliance of the patients, it is very rare to perform electronic gastroduodenoscopy screening before liver transplantation in most centers of our countries, which has been modified in our revised manuscript.

- What was the triple immunosuppressive regimen based on, apart from FK? Was the maintenance regimen different from the postoperative one? What was based on and with which doses/trough level goals?

Answer: Thanks for your kind suggestions. The triple immunosuppressive regimen contained FK506, mycophenolic acid and glucocorticoids, and the latter two drugs were discontinued 6 months after LT, which is also our center's regular program. And the trough level of FK506 was maintained as to 5-8ng/mL 1 year after LT and 3-5ng/mL 3 year after LT.

- The presence/absence of all known risk factors for gastric and lung cancer development in this patient should be described

Answer: Thank you very much and we have modified the manuscript according to your comments.

- The Authors should mention if they adopt a malignancy screening protocol after transplant, and if so, how it is structured

Answer: Thank you very much. Due to the lack of understanding of de novo tumor after LT and poorer compliance of these patients, our center haven't carried out routine gastrointestinal screening after LT, which need us to strengthen in the future.

- The result of the PET-CT is not described clearly: was the lung nodule avid? Was it suspected to be a metastasis from the gastric tumour?

Answer: Thank you very much for your kind suggestions and we have modified the manuscript according to your comments. According to the postoperative

histopathological examination which revealed intramucosal signet ring cell carcinoma without invading the muscularis mucosa and metastasis, the possibility of lung nodule metastasis from the gastric tumor was very small.

- Details about the medical oncology evaluation about the opportunity of giving/not considering the patient for adjuvant chemotherapy should be provided

Answer: Thanks a lot. Because both of these two de novo tumors were diagnosed in the early stage (the gastric tumor was intramucosal signet ring cell carcinoma without invading the muscularis mucosa and metastasis, and the lung tumor was adenocarcinoma in situ, without lymph node or distant metastasis) depending on the histopathological examination and received curative treatments at the first time, the risk of recurrence or metastasis has been minimized, which avoided to receive adjuvant chemotherapy.

Discussion:

- “Generally, the prognosis of MPC is poor, and the prognosis of SC after liver transplantation is worse.”: appropriate references to support this statement should be provided

Answer: Thank you very much and we have modified the manuscript according to your comments.

- Would be interesting to report the probability/incidence of developing MPC in the general non-transplant population

Answer: Thank you very much and we have modified the manuscript according to your comments.

- Since the Authors state: “It has been suggested that for patients after LT, those who are <40 years old need to undergo gastroscopy once every 2 to 3 years, and those who are ≥40 years old need to undergo gastroscopy once every 2 years.” But it appears that this screening protocol was not adopted, and the patient underwent a gastroscopy only >3 years after LT and because symptomatic. How do the Authors justify it?

Answer: Thanks a lot for your kindly suggestion. Due to the lack of understanding of de novo tumor after LT and poorer compliance of these patients, our center haven't carried out routine gastrointestinal screening after LT, which need us to strengthen in the future. These suggestions mentioned in the manuscript was followed as the reference 7.

- “Therefore, it is necessary to screen the recipients after LT with chest CT. For liver transplant recipients >40 years old, especially smokers, low-dose spiral CT should be routinely performed for lung cancer screening” did the Authors adopt this screening they mention, if not, why?

Answer: Thanks a lot for your kindly suggestion. Due to the lack of understanding of de novo tumor after LT and the patient's primary disease was hepatitis B cirrhosis,

not primary liver cancer; this patient failed to receive chest CT screening in time. The discovery of this MPC case will arouse our center's attention to the screening of de novo tumors after LT.

- “early screening of new malignant tumors after LT and adjusting the immunosuppressive regimen into mTOR inhibitors are effective strategies to delay the progression of disease.” It does not seem that the patient has been switched to mTOR inhibitors after the first and not even after the second malignancy has been diagnosed, as the Authors appear to suggest would be recommended, how can they justify it?

Answer: Thanks a lot for your kindly suggestion. As these two de novo MPC were in early stage and received curative treatments at the first time, the risk of recurrence or metastasis has been minimized, so we didn't adjust the patient's immunosuppressive regimen into mTOR. Besides, the patient's medical burden is another factor.

- “minimally invasive or surgical resection” surgical resection can be both minimally invasive or not, maybe the Authors are referring to minimally invasive treatments alternative to surgery such as ablation therapies?

Answer: Thank you very much for your kind suggestions. In our opinion, compared with ablation therapy, the endoscopic surgery was preferred with more maneuverability and pathological specimens could be obtained at the same time to confirm the diagnosis. After all, which kind of treatment would be chosen should be based on the center's surgical skills, de novo MPC and patient's condition, et al.

- In the conclusions, the Authors appear to recommend a post LT follow up they did not adopt themselves

Answer: Thanks a lot for your kindly suggestion. Due to the lack of understanding of de novo tumor after LT in our center, the discovery of this MPC case will arouse our center's attention to the screening of de novo tumors after LT according to more advanced experience in other centers.

- The manuscript would benefit from a professional English language editing.

Answer: Thank you very much and the manuscript has been modified by a professional English language editing service.