

Reviewing of the manuscript N° 36026

Sequential tumor-directed and lobar radioembolization before major hepatectomy for hepatocellular carcinoma

Reviewer 1 (02855928):

1. Please show detailed findings of 3D image studies:

Unfortunately, these images are not available.

2. Did you think the possibility of pure laparoscopic surgery after size regulation ?

We agree with this comment. Left hepatectomy has been shown feasible though laparoscopic approach. In the present case, we preferred an open procedure but this is highly debatable.

3. This case is Child-Pugh A and liver remnant was sufficient:

It is true that the initial future remnant liver (FRL)/total liver volume ratio was 65%, corresponding to a FRL/body weight ratio of 0.68. However, in case of cirrhosis, it has been clearly shown that, in case of major resection of at least 3 segments, such as in the present case, preoperative liver volume modulation improves the safety (references 6 and 7). Accordingly, preoperative portal vein embolization (PVE) is largely proposed and considered as a standard before major resection in cirrhotic livers, irrespective to future remnant liver/total liver volume ratio. In the present case, and with the rationale to treat the tumor during the waiting time, we proposed to use radiation lobectomy as an alternative to the classical strategy using PVE before major resection in cirrhotic livers.

Reviewer 2 (00722239):

The figures need some revisions, delete useless area and assemble the pictures:

The figures have been reorganized and legends adapted:

Figure 1 showing preoperative images

- *Figure 1a: baseline contrast-enhanced MRI, arterial phase*
- *Figure 1b: baseline contrast-enhanced MRI, portal venous phase*
- *Figure 1c: 90Y PET-CT after first SIRT showing selective intra-tumor deposition of 90Y microspheres*
- *Figure 1d: 90Y PET-CT after second SIRT showing deposition of 90Y microspheres to segments II and III.*

Figure 2: intra- and postoperative images

- *Figure 2a: intraoperative view*
- *Figure 2b: resected specimen*

- *Figure 2c: pathology showing massive necrosis and fibrosis together with the presence of microspheres*
- *Figure 2d: pathology showing a residual hepatocellular carcinoma focus, surrounded by necrosis and fibrosis and together with the presence of microspheres*

I am very interested in how was the pathology. Please document it in detail with some histopathological photos.

Two picture of the pathology has been added (Figure 2c and 2d, see above), showing microspheres that have been injected and surrounding changes in embolized liver.

Reviewer 3 (03656588):

No corrections asked

Reviewer 4 (00053888):

The authors need to radically reduce all area of the manuscript, including the figures:

The length of the manuscript has been significantly reduced, omitting some repetitions and speculations.

Original word count (title and abstract not included): 1751.

Current word count: 1457.