

Usefulness Of Diamond Technique For Laparoscopic Parenchymal-sparing Liver Resection Of Nonperipheral Liver Lesions

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Background : One of surgical approach of liver tumor is “parenchymal-sparing” strategies, especially for colon cancer liver metastasis. However, laparoscopic parenchymal-sparing resection may be difficult to apply for nonperipheral liver tumor than which on liver surface. Therefore, “Diamond technique” is presented as feasible method for this case and we want to share the experiences.

Methods : First, tumor size and location are evaluated with intraoperative ultrasonography. A square-shaped transection area is outlined for 10–20 mm tumor-free margin on each side of the lesion. The resection lines are identified as acoustic shadows on ultrasonography, allowing evaluation of the relation between the tumor. Each transection plane is run perpendicularly to the planes aside and progressively toward the deeper parenchyma, allowing the creation of a semi-diamond-shaped specimen. To achieving adequate tumor-free margins on both the lateral and basal transection planes, repeat ultrasound and readjust the dissection line.

Results : In both cases, preoperative Liver CT and MRI scan showed 2.5cm and 2cm nonperipheral liver metastases in segment VIII. They were non visible lesion and located in 1.5cm and 2cm deep. We performed laparoscopic liver resection using “diamond technique”. Postoperative recovery was uneventful and they were discharged on 7th postoperative days. Pathological reports confirmed safe surgical margin for liver lesion.

Conclusions : Diamond technique is a safe and feasible surgical method for deep-located liver tumors. It can be helpful for who want to perform laparoscopic parenchymal-sparing liver resection with low experience.

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