

How to Overcome the Difficulties of Conventional Radiofrequency Ablation in Liver Tumor: When, How, Result, and Concerns

Surgical approach

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Ultrasound guided liver surgery should be considered a minimal invasive procedure having as main target just the sparing of the liver parenchyma, and its absolute safety is paradigmatic of what it has been just affirmed: a sort of organ-targeted minimal invasive approach. Mostly because of that surgery can be still considered the treatment of choice for most of liver tumors in spite of the development and progresses in other local treatment as ablation therapies, although the latter play undoubtedly a significant role for the control of small lesions ^[1, 2]. Indeed, intraoperative ultrasound (IOUS) guidance while expanding the indications for tumor removal, paradoxically, leads to an opposite trend compared with the introduction of ultrasound itself for guiding intraoperative tumor ablation. As a matter of fact, stressing the use of IOUS for resection guidance it is possible to expand surgical indications for hepatocellular carcinoma (HCC) and colorectal liver metastases (CLM), without recurring in any case to intraoperative ablation treatment as it has been reported ^[3, 4]. On the other hand, whether the latter has not to be banded from the armamentarium of hepatic surgeons, it is certainly less radical than the tumor removal ^[5, 6]. Indeed, the possibility offered by ultrasound guidance of radical anatomical tumor removal combining to that the parenchyma sparing, meets the oncological requirement for the ideal local treatment of HCC ^[7]. Conversely, promoting selective tumor removal in case of multiple CLM by using IOUS ^[4], and also taking profit of those ultrasound findings able to disclose features which could open solutions otherwise unsuitable ^[8-13], reduces the need of major hepatectomies and of their evolutions as two stage hepatectomy ^[14], and liver partitioning ^[15]. These solutions are also suitable for maximizing the feasibility of multiple resections, which should be preferred whenever possible to combined resection and radiofrequency ^[5]. From this standpoint, having IOUS in the surgeon's technical background every effort should be focused on maximizing the capability of enhancing the hepatic surgeon's resective power rather than for allowing ablation technique, which in the perspective of simple alternative is undoubtedly an oncologically suboptimal shortcut.

References

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