

Atypical Hepatic Resection Technique for Hepatocellular Carcinoma Using Radiofrequency Habib™ 4X Device

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Abstract

Introduction: The number of liver resections significantly increased worldwide in the last 20 years. In many hepatic tumours, liver resection remains the best therapeutic option. A difficult intraoperative goal is to obtain a safe haemostasis on the transection plane. Technological innovation in recent decades allowed the development of different tools that allow better control of bleeding, faster and easier haemostasis.

Methods: We prospectively reviewed the patients diagnosed with hepatocellular carcinoma who underwent an atypical liver resection using a radio frequency (RF) ablation.

Surgical technique: We used a Habib™ 4X bipolar, handheld, disposable RF ablation device. The technique is similar to parenchymal approach, but after the operative ultrasound exam to confirm the tumour and resection plane and liver mobilisation, we perform a plane of coagulative necrosis around the tumour using Habib™ 4X. The parenchyme is then sectioned using the scalpel.

Results: 19 patients with hepatocellular carcinoma were included in this study. The mean operative blood loss volume was 170±90.7 ml. The mean operation time was 118±58 min. The postoperative morbidity rate was 32% (n=6) and the reintervention rate was 5.3% (n=1). We encountered no postoperative deaths. The overall mean postoperative stay was 11.6±5.1 days.

Conclusion: Bipolar radiofrequency device Habib™ 4X allows a shorter operative time with minimal blood loss and low rate of morbidity and mortality.

Key words: liver resection, hepatocellular carcinoma; Habib 4X device, radiofrequency ablation device, bloodless hepatectomy technique

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