

The “Hepatic Core”: How to Reach It



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We read with interest the article by Hoshikawa and colleagues¹ regarding a transhepatic approach to deeply located liver tumors, focused on minimal sacrifice of the hepatic parenchyma. Based on our anatomic observations of liver casts, we would like to underline some details.

The “hepatic core,” as appropriately defined,¹ cannot be considered a proper anatomic structure, because it lacks distinct arterial, portal, biliary, and lymphatic apparatus. Rather, it has to be considered a zone inside the hepatic parenchyma where different liver segments converge. It covers a space behind the hilar plate, above segment I and the portal horizontal plane, extending to the dome of the liver. No important vascular or biliary structures are encountered inside, but only small branches of the hepatic veins. Its anatomic variability, according to the liver configuration or pathology, must be ascertained for each patient by cross-sectional imaging, and intraoperatively by ultrasound.

At operation, this region of the liver parenchyma can be reached, under ultrasound guidance, through 1 of the 3 intersegmental planes, already adopted for major hepatic resection, and after having localized the neoplastic nodule to be resected. The middle plane, traced on Cantlie’s line, leads toward its central part; the other 2 run parallel and in front of the corresponding right or left hepatic veins.² Notably, the distal parts of the hepatic veins project onto the inferior liver surface in front of segment I. In particular, the left hepatic vein corresponds to its anterior left part, the middle to its paracaval portion, and the right to the caudate process.³

In practice, operation begins with dissection of the hepatic vein, corresponding to the selected intersegmental plane, at its confluence into the vena cava; it is extended until a good exposure of the hepatic nodule is achieved, but not necessarily up to the hepatic edge. This helps to reduce the surgical trauma. The limited dissection of the intersegmental plane can be facilitated by a “hanging manoeuvre”; with the aid of bimanual palpation, a single or double tape is passed from the inferior to the superior liver surface, and used for downward and lateral traction.⁴

After removal of the nodule, the liver surface remains raw and excavated. An epiploon-plasty can be performed with a portion of the great omentum, adequately pedunculated, which obliterates any residual cavity and reduces the risk of serous or blood collection. This interposed tissue also allows an easier approximation of the 2 split liver surfaces by interrupted sutures, when indicated.

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Addressing Surgeon Burnout



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We read with great interest Elmore and colleagues’ analysis of the effects of burnout among surgical residents.¹ Together with Dimou and colleagues’² recent review of surgeon burnout, these reports found a troubling trend of increased emotional distress and exhaustion afflicting surgeons and surgical trainees. In addition, the factors contributing to surgeon burnout are often wide-ranging, multifactorial, and inextricable from the current health care landscape. We suggest that this phenomenon is a bellwether of an endangered future in which an impending demographic crisis threatens the health and vitality of the surgical workforce.