



Right Hepatic Vein Reconstruction with an Autologous Jugular Vein Graft to Expand the Surgical Indications for Liver Tumors

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Abstract

Purpose We herein report 3 cases in which the right hepatic vein (RHV) involved with a liver tumor was reconstructed using an autologous jugular vein graft to raise the curability and to increase the functional volume of the liver remnant (LR).

Case 1 Cholangiocellular carcinoma (diameter 6.0 cm) in the left lobe invaded the RHV, the branch of the RHV which drains segment 7 (V7) and the middle hepatic vein (MHV). Because the ratio of the LR drained by the inferior right hepatic vein (IRHV) was 26.7%, extended left lobectomy including MHV with RHV and V7 reconstruction was carried out, resulting in a good outcome and an uneventful operative course. Surgical margins on the liver resection plane and at the IVC were 5 mm and partially zero, respectively.

Case 2 Cholangiolocellular carcinoma (diameter 9.0 cm) in the left lobe and the anterior segment invaded the RHV, V7, IVC and bile duct. In this case, the IRHV was present and not involved with the tumor. Because the ratio of the LR drained by the IRHV was 26.1%, left hepatic trisectionectomy with RHV, V7, IVC, and bile duct reconstruction was performed, leading to a good operative course. Surgical margins on the liver resection plane and at the IVC were 8 mm and partially zero, respectively.

Case 3 Hepatocellular carcinoma (diameter 2.7 cm) in segment 7 invaded the RHV. Because the hepatic functional reserve had decreased due to the presence of hepatitis C virus, extended subsegmentectomy (segment 7) with RHV reconstruction was performed, thus resulting in a sufficiently maintained LR function. Surgical margin on the liver resection plane was 7 mm.

Conclusion RHV reconstruction with an autologous jugular vein graft is considered to be useful for safely expanding the surgical indications for liver tumors.

Keywords This data is mandatory. Please provide. · Liver resection · Liver tumor · Hepatic vein · reconstruction · Vein graft · Cholangiocellular carcinoma

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Compliance with Ethical Standards

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