



ORIGINAL ARTICLE – HEPATOBLIBIARY TUMORS

## Ex Situ Hepatectomy and Liver Autotransplantation for Cholangiocarcinoma

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### ABSTRACT

**Background.** Hepatic resection of tumors invading the retrohepatic vena cava and hepatic veins are a challenge for surgeons, who consider them unresectable most of the time.<sup>1,2</sup> Ex situ hepatectomy and liver autotransplantation has developed to improve resectability of these malignancies.<sup>3,4</sup>

**Methods.** The patient was a 51-year-old man who had jaundice secondary to an intrahepatic cholangiocarcinoma 7 cm in diameter in the right lobe of the liver and the caudate lobe. A volumetric scan showed a future liver remnant (segments 2 and 3) not sufficient according to the body weight. The patient was considered to be unresectable by conventional resection due to the critical invasion to the retrohepatic vena cava together with the three hepatic veins. Therefore, an ex vivo extended right hepatectomy and autotransplantation were indicated.

**Results.** The patient underwent biliary decompression through a percutaneous transhepatic catheter and right portal vein embolization for left lobe hypertrophy. During the surgery, the liver was removed with the retrohepatic vena cava, which was replaced by a prosthetic graft without a veno-venous bypass. Ex vivo extended right hepatectomy was performed, and a prosthetic graft was

used to replace the vena cava where the remaining left hepatic vein was anastomosed. The surgery duration was 9 h, and the anhepatic time was 4.5 h. The postoperative hospital stay was 19 days, and at this writing, 3 years later, the patient is disease-free.

**Conclusion.** Ex vivo hepatectomy without veno-venous bypass should be considered a valid therapeutic option for selected patients with cholangiocarcinoma invading the retrohepatic vena cava.

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