

Liver Transplantation for Perihilar Cholangiocarcinoma in the Era of Transplant Oncology: Urgent Need for a Common Definition of Resectability, Transplantability, and Curability

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Abstract

The indications for liver transplantation in hepatobiliary malignancies have been carefully expanded, giving rise to a new era of “Transplant Oncology,” the fusion of transplantation medicine and oncology. Curative resection is the only curative therapy for perihilar cholangiocarcinoma. Liver transplantation may achieve a complete resection with adequate negative margins in patients with locally advanced, unresectable disease due to bilateral invasion of second-order biliary radicals, portal vein and/or hepatic artery involvement, or insufficient hepatic reserve. An aggressive multidisciplinary approach which consists of neoadjuvant chemoradiotherapy, followed by liver transplantation, was introduced by the Mayo Clinic group for selected patients with unresectable perihilar cholangiocarcinoma. This treatment strategy has become increasingly accepted in the U.S., with acceptable results. However, the definition of “unresectable disease” is not universal and therefore, the true survival benefit of liver transplantation, over extended liver resection combined with portal vein/hepatic arterial reconstruction, remains unclear. This review describes the history current controversies and future directions that need to be taken liver transplantation for perihilar cholangiocarcinoma.

Key words: perihilar cholangiocarcinoma, liver transplantation, neoadjuvant chemotherapy, transplant oncology