

## **Intrahepatic Cholangiocarcinoma Involving the Hepatocaval Confluence with Bile Duct Tumor Thrombus Mimicking a Klatskin Tumor: A Case Report**

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### **Abstract**

**Background:** Intrahepatic cholangiocarcinoma (ICC) is a rare malignant tumor arising from the epithelial cells of the intrahepatic bile ducts. The aim of the present paper is to report a rare case of centrally located ICC involving the hepatocaval confluence and generating a tumor thrombus in the biliary duct of segment 4 expanding into the left hepatic duct and main common duct, mimicking a type IIIB Klatskin tumor.

**Case presentation:** A 66-year old female presented for epigastric abdominal pain and weight loss, with cytolytic (ALAT= 323 U/l; normal ASAT), high GGT (618 U/L), but normal phosphatase alkaline and bilirubin levels; CA 19-9 was elevated (257 U/mL), while CEA was normal. At dual-phase multi-detector CT and magnetic resonance cholangiopancreatography, a simultaneous ICC and type IIIB perihilar cholangiocarcinoma (Klatskin tumor) were diagnosed. Intraoperatively, the ICC located in segments 1, 4 and 8, infiltrating the left and middle hepatic veins and in contact with the right hepatic vein was confirmed, while the hilar lesion proved to be a bile duct tumor thrombus originating from the ICC. Consequently, a left hepatectomy extended to segments 1 and 8 with hilar approach, with en-bloc resection of main biliary duct, and hilar lymph node dissection was performed. The right hepatic vein and an accessory middle hepatic vein were preserved, accepting 0-mm resection margin at this level. The post-operative outcome was remarkably uneventful.

**Conclusion:** Locally advanced ICC is a challenging presentation for both diagnosis and treatment, for which complex major liver resection is effective when performed in a high volume HPB center.

**Key words:** intrahepatic cholangiocarcinoma, bile duct tumor thrombus, major liver resection