



Case Report

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Intraductal Hepatocellular Carcinoma Leading to Obstructive Jaundice



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Case Description

A 48-year-old man with metabolic-dysfunction associated fatty liver cirrhosis was first on the transplant waitlist. Upon hospital admission, he complained of jaundice over the past month. Laboratory: total bilirubin 31.6 mg/dL (normal range <1.2); direct bilirubin 25.7 mg/dL (<0.2); alkaline phosphatase 200 U/L (<104); international normalized ratio 1.64 (<1.25).

Serum alpha-fetoprotein was normal and all cultures were negative. Both ultrasound, tomography and magnetic resonance cholangiography (Figure 1) showed a biliary dilation of the right hepatic lobe, with no evidence of an obstructive factor. He had a normal enhanced tomography for hepatocellular carcinoma (HCC) surveillance (because of obesity) two months before. With no signs of infection, a transplantation was performed.

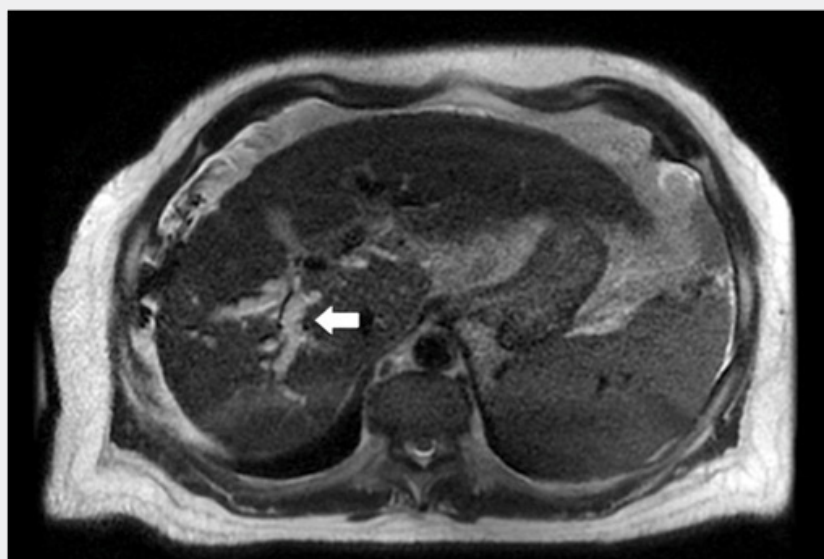


Figure 1: Axial section magnetic resonance cholangiography: dilation of intrahepatic biliary ducts in the right lobe (white arrow), with no identifiable obstructive factor.

The explant analysis evidenced a moderately differentiated HCC measuring 3.0 x 2.5 x 2.5cm in the segment VIII (Figure 2A) with an intraductal biliary invasion (Figure 2B), and liver

cirrhosis. No angiolymphatic spread was observed (Figure 3A). On immunohistochemistry, CK-7 and CD-56 marked the tumor but CK-19 was only expressed in the biliary epithelium (Figure 3B).

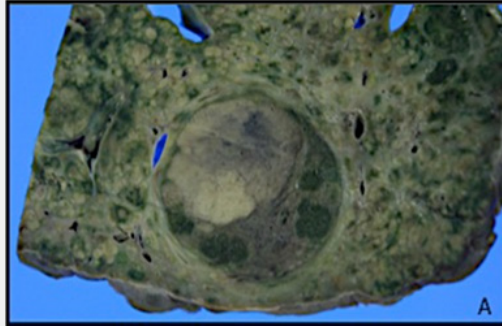


Figure 2A: Gross section of hepatocellular carcinoma in severe cirrhosis (Laennec's classification 4C) with greenish coloration of the adjacent parenchyma due to cholestasis.

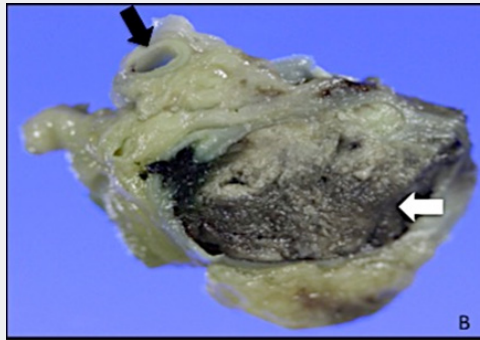


Figure 2B: Tumoral mass (white arrow), measuring 2.8 cm, occupying the common hepatic duct. Notice the vascular branches: hepatic artery (black arrow) and adipose tissue of the hilum.

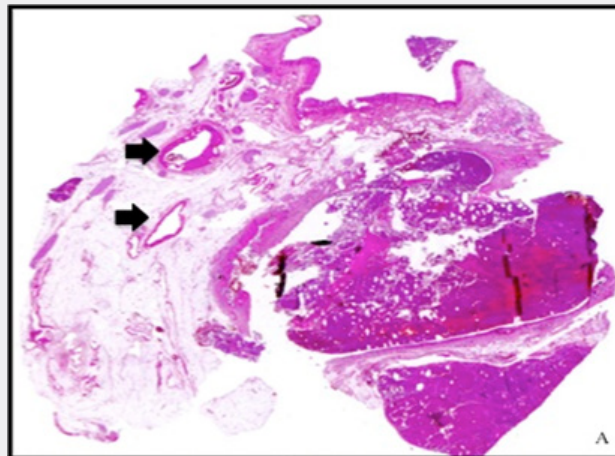


Figure 3A: Histological analysis: hepatocellular carcinoma with intraductal invasion. Vascular branches (black arrows) do not show carcinomatous emboli (hematoxylin-eosin, panoramic view of scanned image).

Obstructive jaundice as a first HCC clinical feature is uncommon (2%–8%) [1]. Some patients present liver failure or advanced

tumors [2,3]. Intraductal biliary invasion of a respectable HCC is extremely rare [4,5]. In our case, biliary obstructive hepatopathy

was present, related to the intraductal involvement of HCC—which led to MELD worsening and enabled a faster transplant.

In order to improve the assessment, physicians may prefer

to treat biliary obstruction with endoscopic prostheses, since it remains a challenge to find out whether surgical resection or transplant would be more appropriate. Our patient had a favorable outcome and is still alive 21 months later.

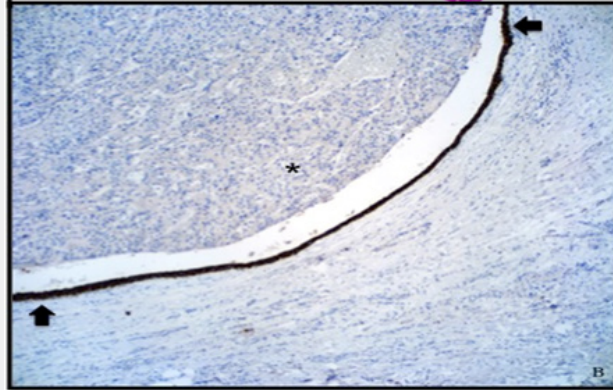


Figure 3B: Immunohistochemistry: cytokeratin-19 staining marked in the biliary epithelium (black arrow), without expression in hepatocellular carcinoma (*).

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The authors have declared that no competing interests exist.

Description of Author's Contributions

R.D.G. and M.C.S. contributed substantially to the conception and design of the study and drafting of manuscript. L.B.E.C. performed the histological examination of the liver and was a major contributor in writing the manuscript. T.S.P. and I.F.S.F.B. provided critical revision of the article and final approval of the version to be published.

Confirmation that Informed Patient Consent was Obtained for Publication of the Case Details

The study was approved by the hospital ethics committee at the University of Campinas (protocol number 28784120.4.0000.5404)

and written informed consent was obtained from the patient.

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