

Rare anatomic variation of the hepatic arterial blood supply: case report and literature review.

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Abstract

PURPOSE: Our aim is to present a rare case of anatomic variation of the arterial blood supply to the liver because preoperative knowledge of hepatic vascular variations is mandatory in hepatic surgery and liver transplantation.

METHODS: We present a case of unusual arterial blood supply to the liver, a right hepatic artery coming from the splenic artery, associated to a classical common hepatic artery and a left hepatic artery from the left gastric artery. Preoperative diagnosis was made using CT-scan and 3D reconstruction.

RESULTS: The right hepatic artery was found behind the portal vein and its diameter showed its importance in the vascularisation of the liver. To our knowledge this type of variation has only twice been described before. The accuracy of the 3D reconstruction allowed us to adopt the best surgical strategy to avoid lesions of the two accessory arteries which proved important sources of blood supply.

CONCLUSIONS: Precise preoperative evaluation of liver blood supply has great importance on surgical, transplantation strategy and outcome and rare anatomic variations have to be known to avoid lesions of potentially important arteries. New techniques of 3D reconstruction can ease the preoperative recognition of such difficult anatomic variations.

KEYWORDS: Anatomic variations; Arterial supply; Liver anatomy; Liver surgery

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