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Arterio-biliary fistula after TIPS placement: a rare but serious complication

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CASE REPORT

A 54-year-old male with cirrhosis and portal hypertension developed recurrent upper gastrointestinal (GI) bleeding and underwent urgent transjugular intrahepatic portosystemic shunt (TIPS) placement. The following day, he presented with severe anemia, hypotension, and massive GI bleeding. Computed tomography angiography

(CTA) revealed a pseudoaneurysm in a hepatic artery branch, which was embolized. However, he experienced recurrent bleeding and biliary hemobilia. A second CTA demonstrated active arterial bleeding within the hepatocholedochal duct [Fig. 1, 2], suggesting an arterio-biliary fistula [Fig. 3]. Despite further embolization, he was prioritized for liver transplantation and underwent surgery five days later.

DISCUSSION

Arterio-biliary fistulas are rare but serious complications, often resulting from trauma, iatrogenic injury, or vascular erosion (1). This case highlights an underrecognized complication of TIPS (2). Clinical presentation includes GI bleeding and hemobilia, requiring high suspicion in post-hepatobiliary intervention patients. CTA is valuable for initial diagnosis, while angiography remains the gold standard (3). Early recognition is crucial to prevent catastrophic hemorrhage or sepsis. While embolization is the first-line treatment, complex cases may require surgical intervention or liver transplantation (2,3). This case underscores the need for vigilance in high-risk patients undergoing invasive hepatic procedures.

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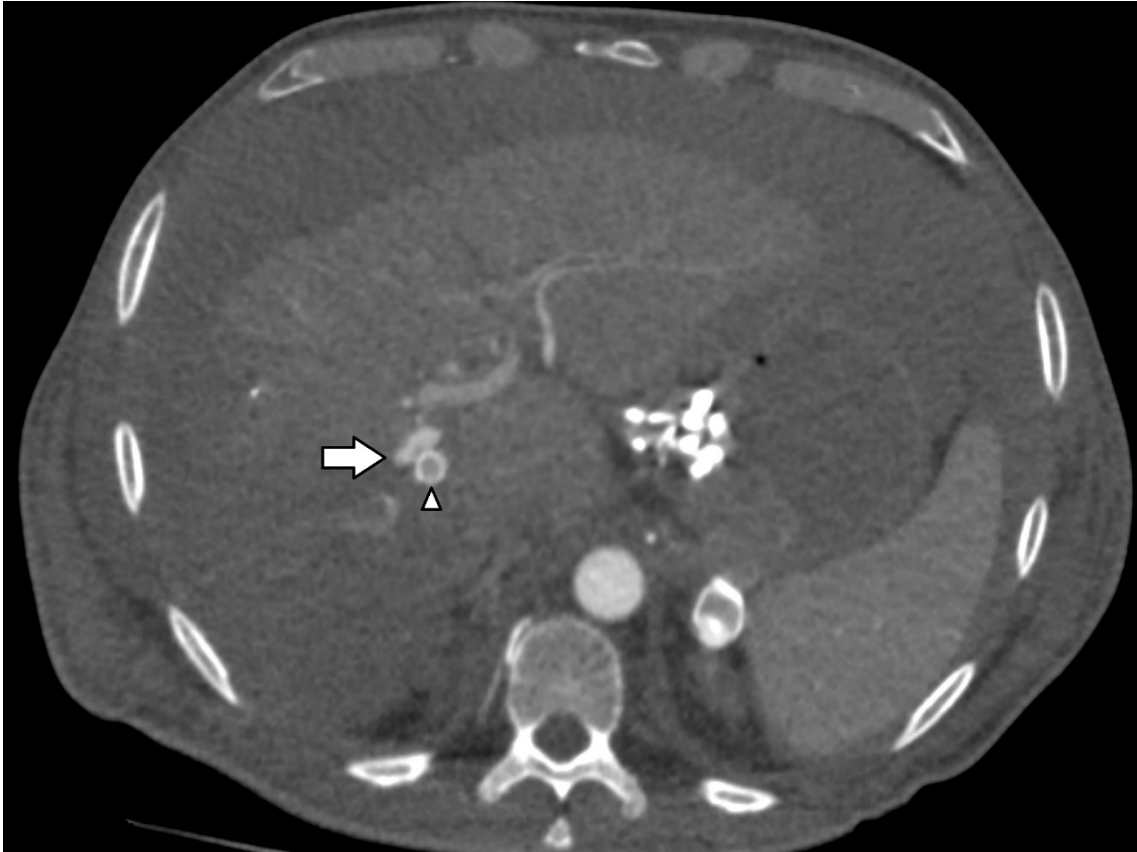


Figure 1. Abdominal CT angiography in the arterial phase, axial cut. Hepatic pseudoaneurysm (thick arrow) is in close contact with the recently placed TIPS (arrow tip).



Figure 2. Abdominal CT angiography in the portal venous phase, coronal reconstruction. Marked opacification of the entire hepatocholedochus (thick arrow) from its intrahepatic course to the duodenum, also opacified (star).



Figure 3. Abdominal CT angiography in the arterial phase, sagittal reconstruction. Communication between the pseudoaneurysm (thick arrow) and the contrast-filled biliary tract (thin arrow).