IMAGE OF THE ISSUE

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Pseudoaneurysm after Endoscopic Biliary Radiofrequency Ablation for Malignant Biliary Stricture

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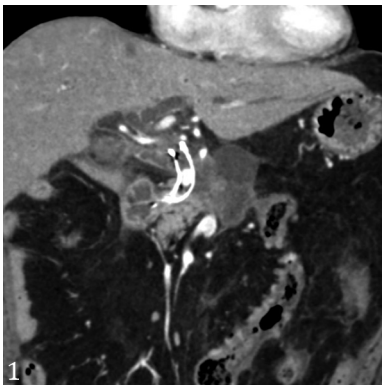
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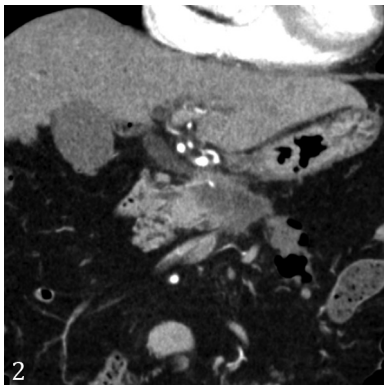
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An 82-year-old male with pancreatic head cancer and liver metastases developed obstructive jaundice secondary to lower bile duct invasion. Endoscopic biliary radiofrequency ablation (RFA) was performed at 10 W of power for 90 seconds using a Habib EndoHPB Catheter (Boston Scientific, Marlborough, Massachusetts, USA) and VIO300D generator (ERBE Elektromedizin, Tübingen, Germany). Subsequently, a 10×60 mm uncovered metal stent was deployed across the stricture. The procedure quickly improved the patient's symptoms without early adverse events. Afterwards, systemic chemotherapy was initiated.

Two months after the procedure, blood analysis revealed a low hemoglobin level (5.3 g/dL). Contrast-enhanced computed tomography demonstrated a 9x10 mm pseudoaneurysm within the biliary stent (Fig. 1). An urgent angiography detected a bleeding pseudoaneurysm localized at one branch of the gastroduodenal artery (Supplementary file, Fig. 1). Hemostasis was achieved by coil arterial embolization and no re-bleeding episodes were observed during the follow-up period. Subsequently, chemotherapy could be restarted.

Endoscopic biliary RFA is recognized as a safe procedure with very low rates of adverse bleeding events [1-3]. However, our patient presented with severe bleeding from a gastroduodenal branch pseudoaneurysm that required arterial embolization. During RFA, the electrodes of the catheter were very close to the arterial branch (Fig. 2, Fig. 3, and Supplementary file, Fig. 2). The Habib catheter is known to have an excessive deep and strong ablative effect at the contact point with the electrodes [4-5]. This case highlights the importance of a proper electrode placement, especially when an artery is running very close to the target stricture. Intraductal ultrasonography may play an important role in confirming the correct electrode position.

Although rare, our observation suggested that bleeding from a gastroduodenal branch pseudoaneurysm can occur as a late adverse event in endoscopic biliary RFA. The presence of anemia even during chemotherapy warrants investigation for a possible pseudoaneurysm.

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