Covered self-expandable metal stent for hemostasis of ruptured pseudoaneurysm caused by partial stent-in-stent method

Placement of a covered self-expandable metal stent (CSEMS) is useful for hemostasis in patients with hemobilia [1,2]. Following SEMS placement with a partial stent-in-stent (PSIS) method, an SEMS is not generally used for hilar bile duct hemostasis as this type of stent may cause contralateral biliary obstruction. This is the first reported case of pseudoaneurysm rupture caused by PSIS, in which hemostasis was subsequently achieved using a CSEMS.

An 80-year-old man with a hilar cholangiocarcinoma underwent endoscopic retrograde cholangiopancreatography (ERCP), which revealed hilar biliary obstruction (Fig.1a). Bilateral biliary drainage using a PSIS method was planned. Following SEMS deployment into the left hepatic duct, another stent was inserted into the right hepatic duct in a stent-in-stent manner (Fig.1b). One month later, cholangitis developed and a plastic stent was placed through the SEMS into the right hepatic duct (Fig.1c).

Cholangitis developed again after 1 month and ERCP showed blood around the plastic stent; however, when the plastic stent was removed, pulsating bleeding caused loss of view (Video 1). Hemostasis by CSEMS placement, followed by its removal to prevent obstruction of the left bile duct, was planned.

A CSEMS was inserted through the SEMS in the right hepatic duct and extended from the duct to the papilla. The field of view was secured (Fig.2b). Angiography was performed and revealed a pseudo-
doaneurysm of the right hepatic artery involving the SEMS, with no further extravasation from the pseudoaneurysm noted (Fig. 3a). The angiography findings confirmed that the bleeding was from the pseudoaneurysm and that placement of the CSEMS had successfully achieved hemostasis. The pseudoaneurysm was then treated with coil embolization (Fig. 3b) and the CSEMS was removed after 2 weeks. Pseudoaneurysm rupture is a life-threatening condition, with emergency hemostasis necessary as a life-saving procedure. In the present case, primary hemostasis was achieved as planned by use of a CSEMS following a PSIS method.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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References