Metallic stent placement for malignant biliary stenosis through pancreatic duct in pancreaticobiliary maljunction

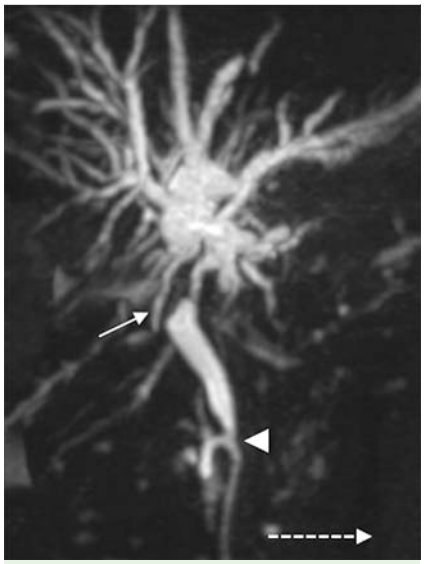

Fig. 1 Pancreaticobiliary maljunction: magnetic resonance cholangiopancreatography (MRCP) showing a short communication duct between the common bile duct and dorsal pancreatic duct (arrowhead) and a hilar biliary stricture (arrow).

Pancreaticobiliary maljunction is a congenital anomaly defined as a connection of pancreatic and biliary ducts upstream of the sphincter of Oddi.

A 66-year-old Japanese woman was referred to our department for treatment of jaundice. She had a childhood history of pancreatitis, but was otherwise healthy. Enhanced computed tomography (CT) revealed a gallbladder cancer with multiple liver metastases. Magnetic resonance imaging (MRI) showed a hilar biliary obstruction with pancreaticobiliary maljunction (**Fig. 1**). Endoscopic retrograde cholangiopancreatography (ERCP) was performed for biliary drainage prior to chemotherapy. Several attempts at biliary cannulation from the major papilla were unsuccessful, but the dorsal pancreatic duct was easily contrasted using access through the minor papilla (**Fig. 2**). The X-ray image appeared to show the dorsal pancreatic duct directly connecting with the bile duct, resembling a letter "X." Bile juice aspirated from the upper bile duct revealed high levels of pancreatic amylase (4750 U/L), while cytology of the bile aspirated from the dorsal pancreatic duct demonstrated adenocarcinoma. Despite full contrast injection, the ventral pancreatic duct was not visualized (**Fig. 3**). An uncovered metallic stent was easily placed at the hilar portion of the bile duct via the dorsal pancreatic duct (**Fig. 4**).

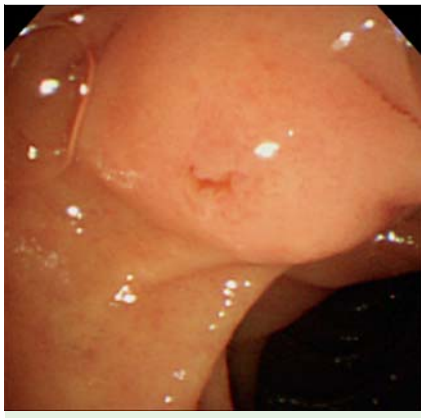

Fig. 2 Endoscopic view of the minor papilla with an opened orifice, relatively large in size.

According to the Komi classification [1], our case was diagnosed as a type IIIc anomaly with an incomplete pancreas divisum, but additionally it was unique regarding the position of the pancreaticobiliary communication, located at the proximal side and extremely close to the dorsal pancreatic duct. The dorsal pancreatic duct was also abnormally situated posteriorly to the common bile duct, suggesting a developmental anomaly such as a rotational anomaly during gestation. These features allowed easy placement of the metallic stent via the dorsal pancreatic duct. Not only is this case a rare variant of pancreaticobiliary maljunction, a PubMed literature survey indicates it is the first in which treatment has been done by placement of a metallic stent via the minor papilla [2–3].

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Competing interests: None

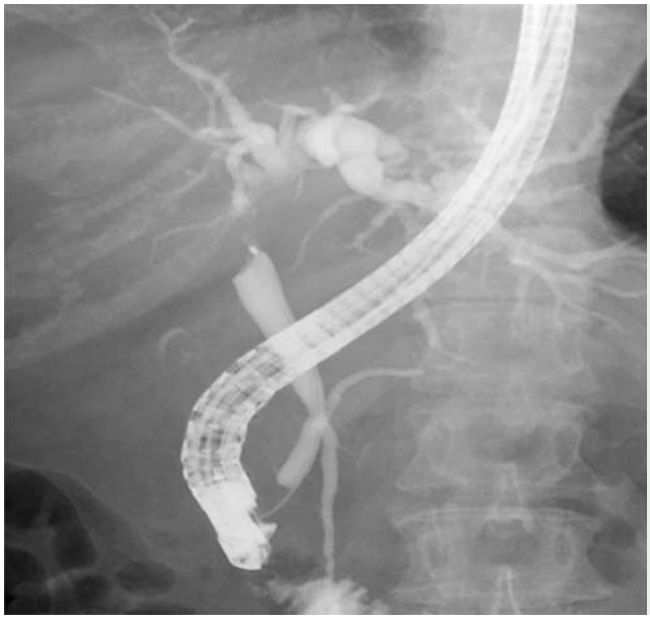

Fig. 3 Cholangiopancreatography showing deep biliary cannulation from the minor papilla and an anomalous junction between the dorsal pancreatic duct and the biliary duct, with contrast beingemitted from the major papilla.

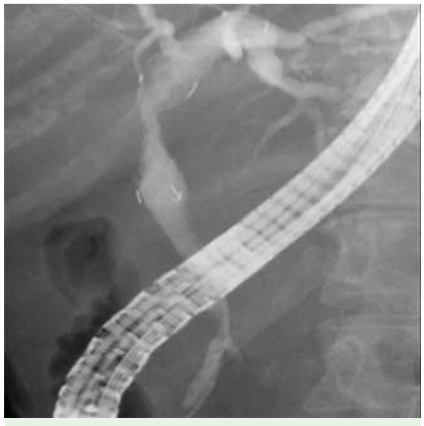

Fig. 4 Successful placement of a metallic stent at the hilar bile duct stricture, via the dorsal pancreatic duct.

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