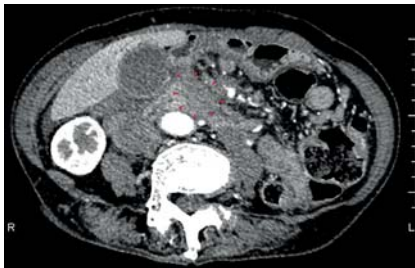
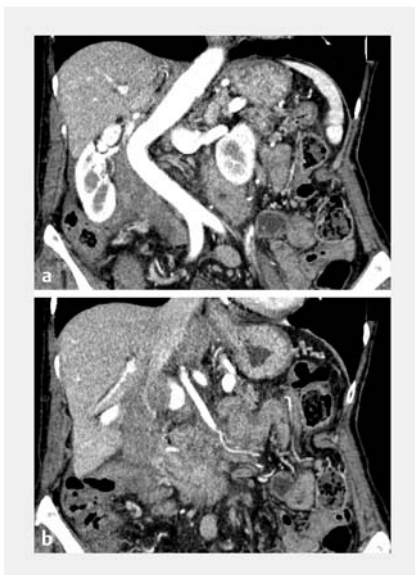


## Arterial cannulation during endoscopic retrograde cholangiopancreatography

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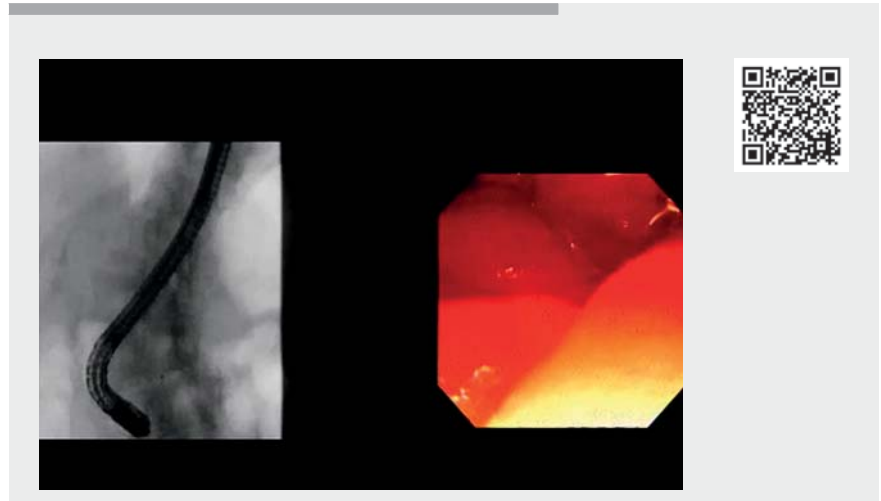


► **Fig. 1** Contrast-enhanced computed tomographic image (axial view). A mass (arrowheads) is seen in the head of pancreas.



► **Fig. 2** Contrast-enhanced computed tomographic images (coronal view). **a** The aorta is distorted to the right due to severe scoliosis. **b** The inferior mesenteric artery (arrow) runs close to the tumor (arrowheads) and papilla of Vater (circle).

A 77-year-old woman was admitted to our hospital with jaundice. Contrast-enhanced computed tomography revealed a tumor in the pancreatic head with distal biliary obstruction (► **Fig. 1**). The aorta and inferior mesenteric artery (IMA) were distorted to the right by severe scoliosis, which caused the IMA to run close



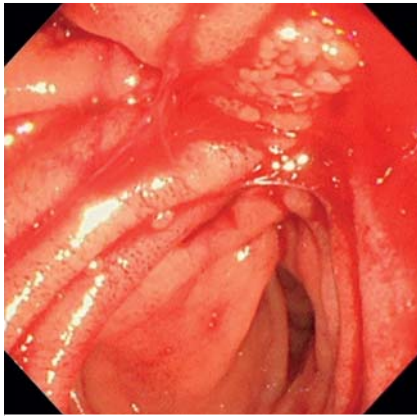
► **Video 1** Endoscopic retrograde cholangiopancreatography during which unintentional arterial cannulation across the papilla occurred.

to the tumor and the papilla of Vater (► **Fig. 2**). Endoscopic retrograde cholangiopancreatography (ERCP) was performed for biliary drainage (► **Video 1**). On ERCP, a guidewire was unintentionally inserted into the IMA and the aorta (► **Fig. 3**). However, we were unable to recognize the insertion of the guidewire into the artery because of the similarity between the course of the aorta and the bile duct (► **Fig. 2**, ► **Fig. 3**). The passage of the catheter across the papilla along the guidewire was difficult because of the resisting force of the arterial wall, and was finally achieved by pushing the catheter repeatedly. Arterial blood, in which the partial pressure of oxygen was 151 mmHg, was collected using syringe suction via the catheter lumen. Pulsatile bleeding from the papilla was observed immediately after the catheter was removed (► **Fig. 4**). Hemostasis was successfully achieved by compression for a few minutes using a balloon catheter. Seven days later, the patient underwent biliary drainage with endoscopic ultrasound-guided choledochoduodenostomy.



► **Fig. 3** Fluoroscopic image showing the catheter and guidewire located in the aorta, whose course is similar to that of the bile duct.

Although arterial cannulation is a very rare complication of ERCP [1, 2], it can be critical because of the massive bleeding. In the present case, for example, if we



► **Fig. 4** Endoscopic image showing active bleeding from the papilla.


had performed papillary dilation using an ultrathin-tipped balloon catheter for biliary stricture [3] to overcome the difficult catheter passage across the papilla, endoscopic hemostasis would have been impossible. Since guidewire insertion into the artery can occur, especially in cases of malignancy with biliary invasion, as in our patient, it is essential to confirm fluoroscopically whether the guidewire is in the bile duct before inserting the catheter along the guidewire.

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### Competing interests

The authors declare that they have no conflict of interest.

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