

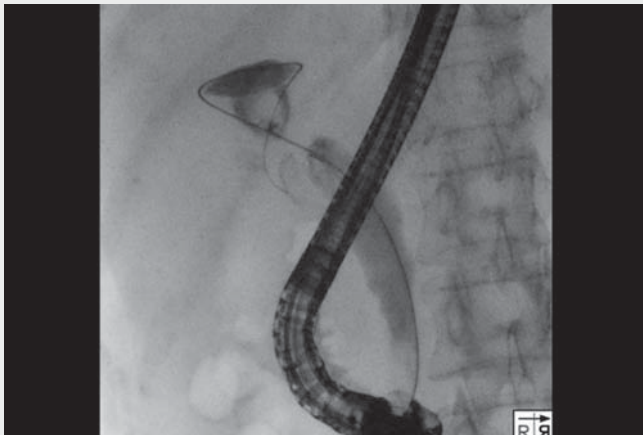
## Endoscopic management of a special case of “stone-basket impaction” during ERCP

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A 57-year-old woman suspected of common bile duct stones (CBDSs), who underwent cholecystectomy, choledocholithotomy, and biliary-enteric Roux-en-Y anastomosis for “gallbladder and common bile duct stones” 20 years ago, was referred to our hospital for CBDS extraction (▶ **Video 1**). Preoperative magnetic resonance cholangiopancreatography (MRCP) revealed dilation of the common bile duct and a filling defect in the lower common bile duct (▶ **Fig. 1**).

During endoscopic retrograde cholangiopancreatography (ERCP), pus was seen flowing out of the opening of the papilla, and cholangiograms revealed a filling defect in the lower common bile duct and the site of anastomosis, respectively (▶ **Fig. 2**). Anastomotic stenosis was also found, and an extraction basket (FG-22Q-1; Olympus, Tokyo, Japan) was then used for stone removal after endoscopic balloon dilatation of the duodenal papilla (▶ **Fig. 2**). After the CBDS was

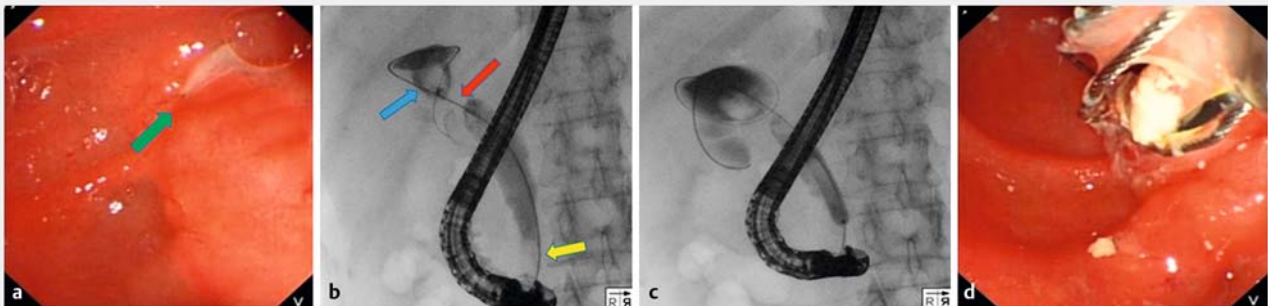
removed, we continued to attempt to remove the stone at the site of anastomosis. However, the basket was found to be impacted and could not be disengaged (▶ **Fig. 3**). To avoid the potential complications associated with an emergency lithotripter, a single-balloon enteroscopy was then attempted to further resolve the impaction (▶ **Fig. 4**). However, when the enteroscope reached the biliary-enteric anastomosis, it turned out the filling defect was not a CBDS but a 20-mm muco-



▶ **Video 1** Endoscopic management of a special case of “stone-basket impaction” during endoscopic retrograde cholangiopancreatography (ERCP).



▶ **Fig. 1** Preoperative magnetic resonance cholangiopancreatography (MRCP) revealed dilation of the common bile duct and a filling defect in the lower common bile duct (indicated by the blue arrow).



▶ **Fig. 2** **a** Pus was seen flowing out of the opening of the papilla (indicated by the green arrow). **b** Cholangiograms revealed a filling defect in the lower common bile duct and the site of anastomosis (indicated by the blue and yellow arrow), respectively. Anastomotic stenosis was also found (indicated by the red arrow). **c, d** An extraction basket was then used for stone removal.

sal bulge with surface congestion located at the anastomosis (► **Fig. 4**). Finally, the basket impaction was retrieved by a foreign body forceps, and the biopsy revealed the mucosal bulge was chronic inflammation.

There are various techniques to solve basket impaction, such as a Soehendra mechanical lithotripter, extracorporeal shock-wave lithotripsy (ESWL), and surgery [1–3]. However, enteroscopy used for the management of a basket impaction has never been reported. In this study, careful analysis of the patient's medical history, preoperative imaging, and intraoperative findings helped not only to clarify the diagnosis but also successfully resolve the basket impaction by performing enteroscopy without any procedure-related complications.

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## Competing interests

The authors declare that they have no conflict of interest.

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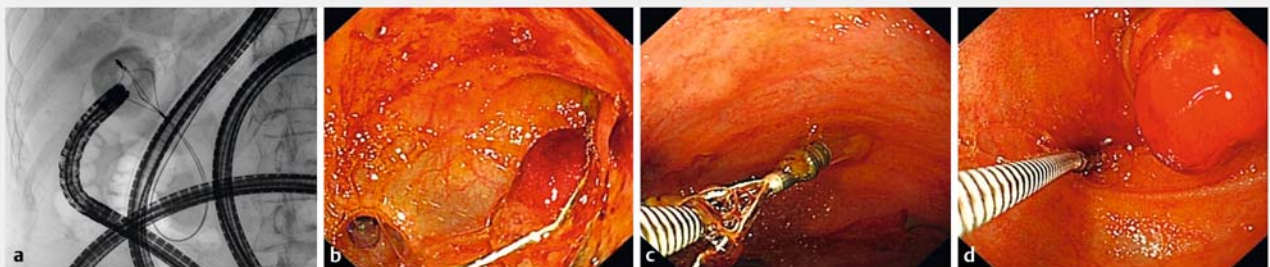
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► **Fig. 3 a, b** The basket was found to be impacted and could not be disengaged.



► **Fig. 4 a** A single-balloon enteroscopy was then attempted to further resolve the impaction. **b** Enteroscopy showed the stone-basket impaction was not a common bile duct stone but a 20-mm mucosal bulge with surface congestion located at the anastomosis. **c, d** The basket impaction was retrieved by a foreign body forceps.

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