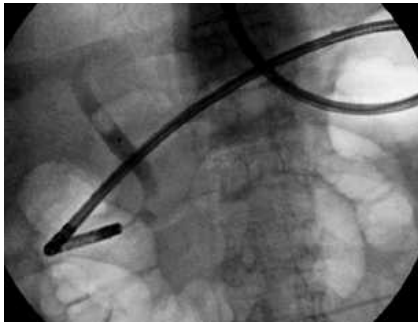


## Successful biliary stenting and sphincterotomy using an ultrathin forward-viewing endoscope



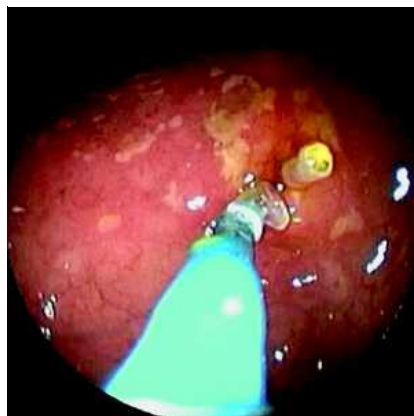
**Fig. 1** Endoscopic retrograde cholangiopancreatography (ERCP) image showing common bile duct (CBD) dilatation with multiple filling defects.

Some complications of endoscopic retrograde cholangiopancreatography (ERCP) including cardiovascular stress may be related to the use of large-caliber endoscopes [1,2]. Procedures with the ultrathin endoscope have been shown to be better tolerated and require less sedation than conventional esophagogastroduodenoscopy [3]. Furthermore, transnasal ERCP utilizing an ultrathin endoscope has been shown to cause less cardiovascular stress [4]. ERCP using the ultrathin endoscope seems to be a promising alternative method, especially for those with a high risk of cardiovascular events. However, therapeutic ERCP procedures, such as biliary stenting or sphincterotomy, via an ultrathin forward-viewing endoscope have not been currently reported. We present here a first case report of successful biliary stenting and sphincterotomy using an ultrathin forward-viewing endoscope.

A 57-year-old man presented at our institution with acute cholangitis and obstructive jaundice. Cardiopulmonary assessment revealed tachypnea and inspiratory crackles over the lower lung fields. He underwent emergency ERCP for biliary decompression. A standard side-viewing duodenoscope was utilized at first. However, after repeated failed attempts at biliary cannulation, we decided to use a small-caliber forward-viewing endoscope (EG-530N; Fujinon Corporation, Saitama, Japan) transorally. The major papilla was seen after retroflexion of the endoscopic tip at the second portion

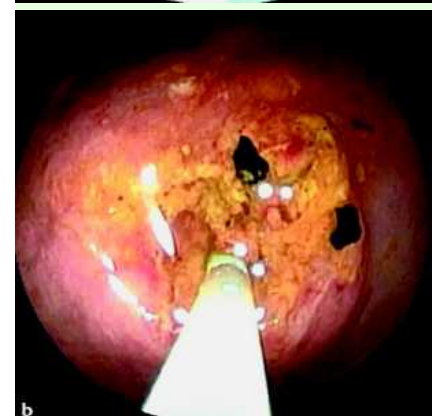
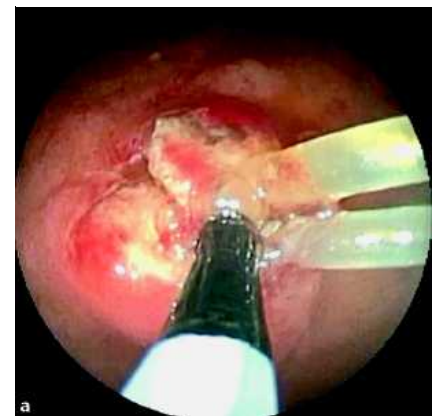


**Fig. 2** Accessories used in this patient: biliary drainage tube of our own design with outer diameter 5 Fr and length 7 cm (a), needle knife (b), and retrieval basket (c).



**Fig. 3** Two self-designed biliary drainage tubes were inserted subsequently to attain adequate drainage.

of the duodenum. The ERCP image showed common bile duct (CBD) dilatation with multiple filling defects (● Fig. 1). Two drainage tubes of our own design (7 cm length, outer diameter 5 Fr; ● Fig. 2) were inserted subsequently to attain adequate biliary drainage (● Fig. 3). The patient was afebrile after biliary stenting. On the fifth hospital day, a Huibregtse single-lumen needle knife (HPC-2; Cook Endoscopy, North Carolina, USA; ● Fig. 2) was used for precut



**Fig. 4** a Endoscopic image showing precut sphincterotomy with a needle knife. b Removal of CBD stones with a retrieval basket.

sphincterotomy (● Fig. 4a). The drainage tubes were removed and a retrieval basket (FG-18Q-1; Olympus Medical Systems Corporation, Tokyo, Japan; ● Fig. 2) was used to remove CBD stones (● Fig. 4b). The clinical course was uneventful and the patient was discharged 3 days after sphincterotomy.

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