Endoscopic sphincterotomy using a stabilizer-attached sphincterotome in Billroth II anatomy

Fig. 1 A pull-type sphincterotome with a stabilizer behind the cutting wire.

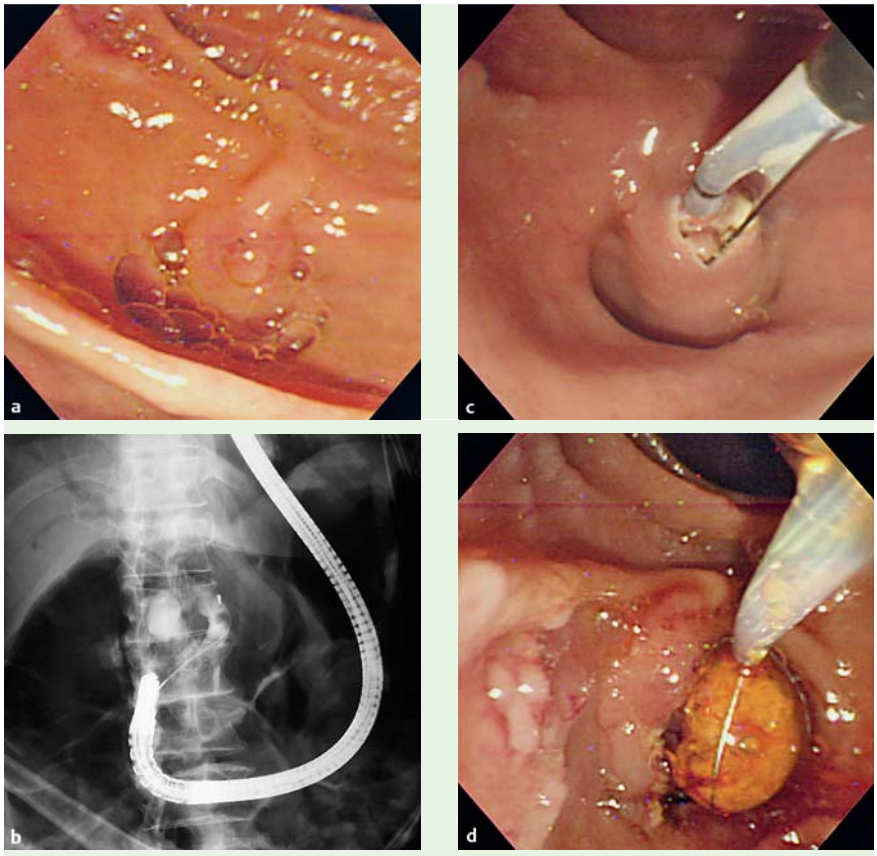

Fig. 2 **a** Endoscopic finding of the papilla of Vater in the patient with Billroth II (BII) gastrectomy when facing the papilla using a side-viewing duodenoscope. **b** Fluoroscopic findings during endoscopic retrograde cholangiopancreatography (ERCP) in this case. **c** Biliary sphincterotomy attempted under direct face-on vision employing this technique. **d** Successful stone extraction using a conventional basket catheter.

Endoscopic sphincterotomy (EST) is challenging in patients with Billroth II (BII) gastrectomy [1–4]. Recently, we have described the advantages of the stabilizer-attached sphincterotome for performing EST in BII anatomy when using a forward-viewing endoscope [5]. Here we evaluate the same device with a side-viewing duodenoscope for EST in BII gastrectomy patients.

A 73-year-old man who underwent BII gastrectomy was hospitalized because of bile duct stones. After obtaining written informed consent, we attempted EST using a side-viewing duodenoscope (JF-260V; Olympus, Tokyo, Japan) with our current sphincterotome (KD-19Q; Olympus, Tokyo, Japan). This sphincterotome has a stabilizer behind the cutting wire (▶ **Fig. 1**).

Before the procedure, the stabilizer was forced into a sigmoid shape [5]. After the duodenoscope reached the duodenal stump, with the main papilla found directly opposite, the sigmoid-shaped sphincterotome was inserted through the scope. Subsequently, it was possible to direct the cutting wire downward. EST and stone removal were successfully achieved with no adverse events during or after the procedure (▶ **Fig. 2**).

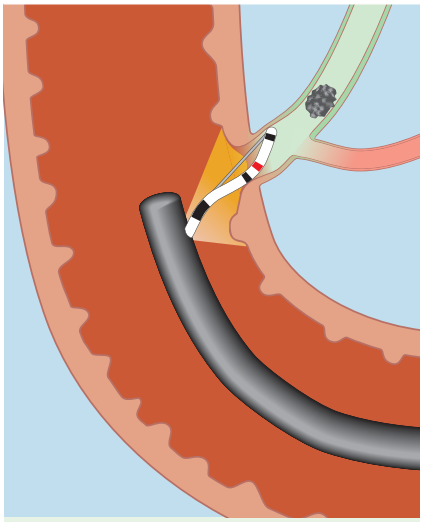

Fig. 3 Schematic representation of the technique.

We were able to perform EST in BII gastrectomy patients using a side-viewing duodenoscope as well as a forward-viewing endoscope [5]. The lateral view and elevator of a side-viewing duodenoscope could effectively fulfil their functions for EST in BII gastrectomy patients in the same way as in patients with normal gastric anatomy. Therefore, EST using a side-viewing endoscope was performed more safely with a better direct visualization of the papilla from a vertical position and a more precise control of the cutting wire by the elevator, compared with EST employing a forward-viewing endoscope (▶ **Figs. 2** and **3**).

With this sphincterotome, we can use a more appropriate endoscope according to the situation. When it is difficult to insert the scope, it is possible to select a forward-viewing endoscope [3,4]. And when the incision of the papilla is difficult, it is possible to use a side-viewing duodenoscope.

This evaluation was limited to a case report, and a further evaluation is required.

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Competing interests: None

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