## Digestive Endoscopic Corner

## Achievement in Selective Biliary Cannulation of the Intradiverticular Ampulla by a Combined Technique

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## Achievement in selective biliary cannulation of the intradiverticular ampulla by a combined technique

Although selective biliary cannulation of the ampulla that located nearby duodenal diverticulum was reported as "not too difficult"<sup>(1)</sup>. However, the ampulla that sits inside the duodenal diverticulum may cause a very difficult bilairy access due to the awkward angle of the opening, especially the one that faces laterally or backward. There have been many recommended techniques to encounter this problem. Fogel et al suggested placement of a pancreatic stent to keep the papilla out from the diverticulum<sup>(2)</sup>. However, using this technique alone to access the laterally faced ampullary orifice, the cannulation may still not be successful. The two-devices-in-one-channel method was also recommended but the success can not be ensured in all<sup>(3)</sup>.

We herein report a combination of many techniques to achieve selective biliary cannulation.

A 67-year-old female with a history of possible common duct stones presented for an endoscopic retrogradecholangiopancreatography (ERCP). The duodenoscopic exam discoverd an intradiverticular ampulla with the orifice faced laterally (Figure 1). An attempted biliary cannulation with a regular ERCP catheter and a standard sphincterotome was unsuccessful. To adjust the ampullary orifice to be enfaced with the duodenoscope, 3mL of normal saline was injected at the deeper area of the diverticulum (Figure 2). However, only pancreatic cannulation was possible. Therefore a jagwire (Boston Scientific, Natick, Mass) was



Figure 1 The laterally faced intradiverticular ampulla



Figure 2 After saline injection, the ampulla appeared more enfaced

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Figure 3 A wire was left temporary before pancreatic stent placement



Figure 4 Pancreatic stent maintained the ampullary position and aided the selective biliary cannulation



Figure 5 Without precutting, selective biliary cannulation was achieved (yellow bile inside the catheter)



Figure 6 Stones were removed by a balloon catheter

left in the pancreatic duct (Figure 3) and then a 5  $Fr \times$  7 cm single pigtail (Wilson-Cook, Winston-Salem, NC) was placed with the proximal tip of the stent left at the genu (Figure 4). Then a wire guided biliary cannulation was performed. This ultimately made a successful selective biliary cannulation without a need for precut sphicteromy (Figure 5). Subsequently, biliary stones were removed with standard technique (Figure 6).

## REFERENCES

- Tham TC, Kelly M. Association of periampullary duodenal diverticula with bile duct stones and with technical success of endoscopic retrograde cholangiopancreatography. Endoscopy 2004; 36: 1050-3.
- Fogel EL, Sherman S, Lehman GA. Increased selective biliary cannulation rates in the setting of periampullary diverticula: main pancreatic duct stent placement followed by pre-cut biliary sphincterotomy. Gastrointest Endosc 1998; 47: 396-400.
- Fujita N, Noda Y, Kobayashi G, *et al.* ERCP for intradiverticular papilla: two-devices-in-one-channel method. Endoscopic Retrograde Cholangiopancreatography. Gastrointest Endosc 1998; 48: 517-20.