

## Use of an ultrathin gastroscope to locate a papilla hidden within a duodenal diverticulum

A 67-year-old-woman was referred because of failure to locate the papilla of Vater on endoscopic retrograde cholangiopancreatography (ERCP). The patient had undergone cholecystectomy several years ago, and presently she had been diagnosed as having common bile duct stones that were causing colicky pain. A repeat ERCP revealed a duodenal diverticulum in the region where the papilla was expected to be (● Fig. 1).

It was thought that the papillary orifice was hidden within the diverticulum. Several maneuvers were tried to evert the papilla, such as using two devices simultaneously [1] around the entire rim of the diverticulum, but without success. Thus the duodenoscope was withdrawn and an ultrathin gastroscope inserted (Pentax EG-1870K, Pentax, Tokyo, Japan) with an outer diameter of 6 mm. The diverticulum was carefully intubated and explored (● Fig. 2) but the papillary orifice was still not found.

Consequently, the inner surface of the diverticulum border was thoroughly examined. The ultrathin gastroscope was passed several times around the border of the diverticulum toward the duodenal lumen in an attempt to evert the rim and locate the papillary orifice. Finally the orifice was found on the left side of the diverticulum border in the endoscopic view. The ultrathin gastroscope was withdrawn and the duodenoscope reinserted. Biliary cannulation was accomplished in a standard fashion (● Fig. 3).

ERCP confirmed the presence of stones in the common bile duct (● Fig. 4).

Because of the altered regional anatomy, only a small biliary sphincterotomy could be carried out and balloon dilatation up to 18 mm was done, and the stones extracted. No complications occurred after the intervention.

Ultrathin endoscopes are increasingly used for many purposes [2] besides unseated upper endoscopy [3]; their use in ERCP and biliary procedures has been also reported [4,5]. In the present case, the ultrathin endoscope allowed thorough and safe inspection from within the duodenal diverticulum as well as therapeutic ERCP.

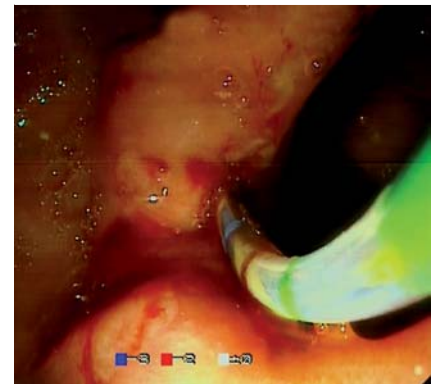
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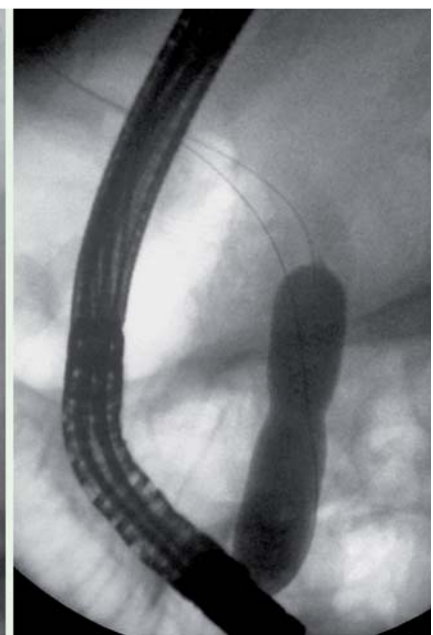
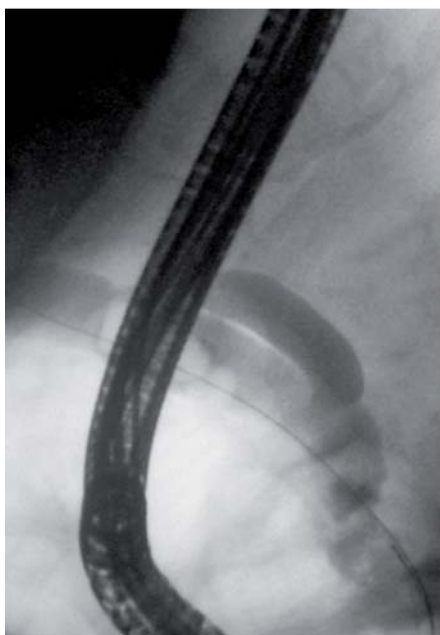
**Fig. 1** The diverticulum in the expected papillary area. The papillary orifice was thought to be present within the diverticulum.



**Fig. 2** Radiograph of the ultrathin endoscope inside the duodenal diverticulum. The patient was in left lateral decubitus.



**Fig. 3** Use of the ultrathin gastroscope allowed locating the papilla of Vater. Common bile duct cannulation was carried out by using the duodenoscope in a standard fashion.



**Fig. 4** Endoscopic retrograde cholangiopancreatography (ERCP) showing stones in the common bile duct.

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