

Peroral cholangioscopy in a patient with a Billroth II gastrectomy using the SpyGlass Direct Visualization System

Peroral cholangioscopy in patients with altered gastrointestinal anatomy is challenging because of the technical difficulties associated with accessing the papilla and the high rate of complications experienced when using a side-viewing duodenoscope [1]. The recently developed SpyGlass Direct Visualization System (Microvasive Endoscopy, Boston Scientific, Natick, Massachusetts, USA) can be passed through a forward-viewing endoscope because its diameter is 10 Fr [2–4]. We describe a case of cholangiocarcinoma that was successfully visualized using a SpyGlass cholangioscope in a patient with a Billroth II gastrectomy.

An 81-year-old man presented to our institution for evaluation of obstructive jaundice. His medical history included a Billroth II gastrectomy for gastric cancer 10 years previously. A front-viewing endoscope was passed through the afferent limb reaching the papilla without difficulty. A cholangiogram showed a severe stricture at the lower end of the bile duct (● Fig. 1).

Following endoscopic papillary balloon dilation, a SpyGlass cholangioscope was passed into the bile duct without difficulty (● Fig. 2).

Cholangioscopy showed an irregular, fine granular lesion at the upper end of the stricture and normal mucosa at the hilar bile duct (● Fig. 3), both of which were biopsied under cholangioscopic imaging using a 3-Fr SpyBite forceps (Boston Scientific; ● Video 1).

The biopsy specimens taken from the irregular lesion showed adenocarcinoma, whereas those from the hilar bile duct showed no malignancy. He was diagnosed as having a lower bile duct carcinoma without intraepithelial spread of tumor to the hilar bile duct and underwent pancreaticoduodenectomy at our hospital.

Peroral cholangioscopy with mapping biopsies has been shown to be effective for the diagnosis of intraepithelial tumor spread in cholangiocarcinoma [5]. Although SpyGlass cholangioscopy through a colonoscope has been reported in patients with a Roux-en-Y anastomosis [3,4], to our knowledge, this is the first case of bile duct biopsy under direct visualization



Fig. 1 Cholangiogram showing a stricture at the lower end of the bile duct.



Fig. 2 Fluoroscopy showing the SpyGlass cholangioscope inside the bile duct, having been passed through the forward-viewing endoscope.

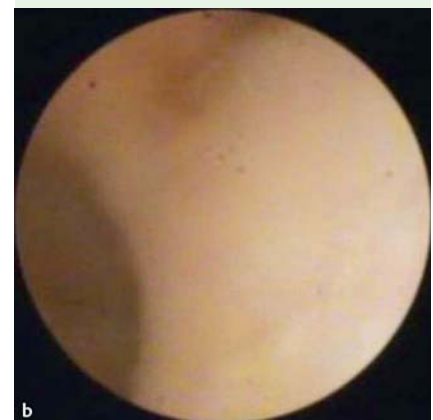
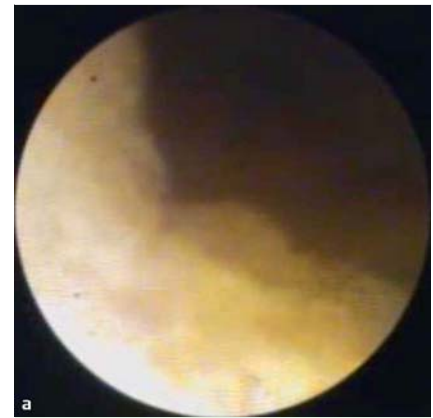


Fig. 3 Cholangioscopy showing: **a** an irregular, fine granular lesion at the upper end of the stricture; **b** normal mucosa at the hilar bile duct.

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Competing interests: None

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Video 1

SpyGlass cholangioscopy showing the lesion at the upper end of the stricture and the normal hilar bile duct followed by a biopsy being taken with the SpyBite forceps.

References

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Bibliography

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