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 pancreatoduodenectomy 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 by SpyGlass cholangioscopy in a patient with a Billroth II gastrectomy. In summary, SpyGlass cholangioscopy through a forward-viewing endoscope was very useful for the diagnosis of cholangiocarcinoma in a patient with a Billroth II gastrectomy.
References

1. Hintze RE, Adler A, Veltzke W, Abou-Rebyeh H. Endoscopic access to the papilla of Vater for endoscopic retrograde cholangiopancreato

2. Chen YK, Pleskow DK. SpyGlass single-operator peroral cholangiopancreatocopy sys
tem for the diagnosis and therapy of bile
duct disorders: a clinical feasibility study (with video). Gastrointest Endosc 2007; 65: 832–841

3. Mou S, Waxman I, Chennat J. Peroral cholangi
coscopy in Roux-en-Y hepaticojejunostomy anatomy by using the SpyGlass Direct Visualiza
tion System (with video). Gastrointest Endosc 2010; 72: 458–460

4. Baron TH, Saleem A. Intraductal electro
ydraulic lithotripsy by using SpyGlass cholangioscopy through a colonoscope in a patient with Roux-en-Y hepaticojejunos
tomy. Gastrointest Endosc 2010; 71: 650–651

5. Kawakami H, Kawatani M, Etoh K et al. En
doscopic retrograde cholangiography versus peroral cholangioscopy to evaluate intraepi
thelial tumor spread in biliary cancer. En
doscopy 2009; 41: 959–964

Bibliography

Endoscopy 2011; 43: E241–E242
© Georg Thieme Verlag KG Stuttgart · New York · ISSN 0013-726X

Corresponding author

K. Kawakubo, MD
Department of Gastroenterology,
Graduate School of Medicine
The University of Tokyo
7-3-1 Hongo Bunkyo-ku
Tokyo 113-8655
Japan
Fax: +81-33-8140021
kkawakubo-gi@umin.ac.jp

Kawakubo K et al. Peroral cholangioscopy following Billroth II gastrectomy, using the SpyGlass Direct Visualization System... Endoscopy 2011; 43: E241–E242