



## Accurate biopsy of bile duct without destroying duodenal papilla

To the Editor,

Although surgeons can distinguish between benign and malignant stricture in the proximal region of the bile duct, resolution in most cases still depends on surgical procedures (1). Severe edema of the hepatoduodenal ligament after endoscopic retrograde cholangiopancreatography (ERCP) traumatic movements, such as endoscopic sphincterotomy (EST) or endoscopic papillary balloon dilation (EPBD) (2), leads to increase in the level of anxiety in surgeons, which would render the resection difficult. Here we present a novel and easier technique of transpapillary bile duct biopsy under fluoroscopy. It can get equal volume of tissue to usual forceps (1.8 mm) and Spyglass (3,4) as well as decreases edema of the hepatoduodenal ligament without destroying major papilla.

A 75-year-old male patient who had undergone cholecystectomy 2 years ago presented with painless jaundice. Magnetic resonance cholangiopancreatography (MRCP) shows a stricture in hilar region which was presumed to be a malignancy. Diagnostic ERCP was consequently implemented after obtaining written informed consent from the patient. Cholangiography revealed a 1-cm long hepatic portal stricture (Figure 1). A 7-Fr dilatation catheter (COOK, Winston-Salem, North Carolina, USA) was inserted into the bile duct and across the stenosis along the guidewire. Withdrawal of the guidewire was followed by insertion of a 1-mm SpyBite™ forceps (Boston Scientific, El Cuyol, Alajuela, Costa Rica) through a dilatation catheter. When the tip of SpyBite™ passed the top, the tissue was grasped (Figure 2, 3). Repeat that three times can easily reach the volume of histology. A single plastic stent was temporarily placed after the biopsy.

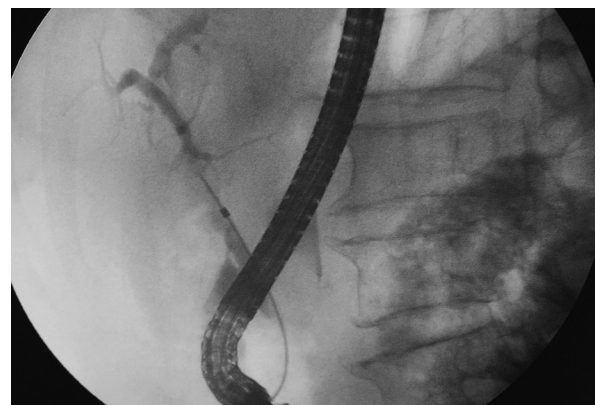
The patient's CA19-9 serum level was 144 U/mL, whereas it was >1000 U/mL in the bile juice. Pathological findings revealed a moderately differentiated adenocarcinoma (Figure 4). Radical resection of the hilar cholangiocarcinoma was then suggested.



**Figure 1.** A 1-cm long hepatic portal stricture revealed by cholangiography



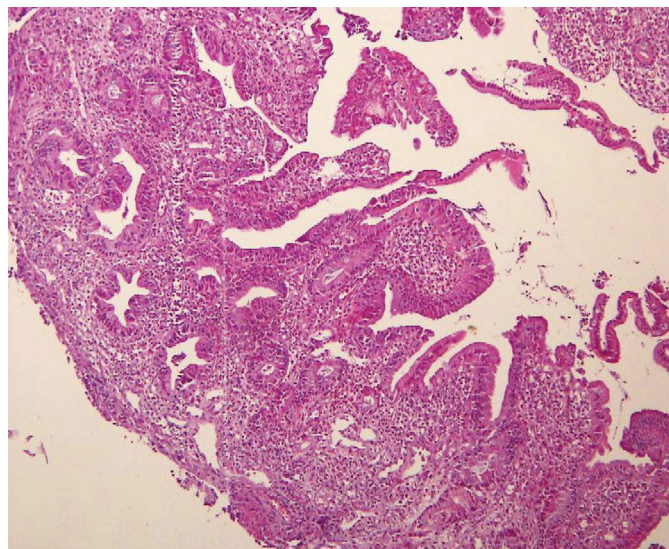
**Figure 2.** SpyBite™ was inserted in the dilatation catheter



**Figure 3.** SpyBite™ reaching the top of the dilatation catheter to grasp tissues of the stenotic area

**Ethics Committee Approval:** The report of this case was approved by the ethical committee of the first hospital of Lanzhou university.

**Informed Consent:** Written informed consent was obtained from the patient before the procedure.



**Figure 4.** Pathological findings revealed a moderately differentiated adenocarcinoma

**Author Contributions:** Concept – W.M., X.L.; Design – W.M., X.L.; Supervision – X.L.; Data Collection and/or Processing – W.M., P.Y.; Analysis and/or Interpretation – W.M., P.Y.; Literature Review – P.Y.; Writer – W.M., P.Y.; Critical Review – X.L.

**Acknowledgements:** The authors express their gratitude to the four nurses Ms. Qiong Li, Ms. Fangzhao Wang, Mr. Lingen Zhang and Mr. Xiyan Wang who have assisted with the procedure.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study has received no financial support.

Wenbo Meng<sup>1,2</sup>, Ping Yue<sup>1,2</sup>, Xun Li<sup>2,3</sup>

<sup>1</sup>Special Minimally Invasive Surgery, The First Hospital of Lanzhou University, Lanzhou, China

<sup>2</sup>Hepatopancreatobiliary Surgery Institute of Gansu Province, Clinical Medical College Cancer Center of Lanzhou University, Lanzhou, China

<sup>3</sup>The Second General Surgery Department, The First Hospital of Lanzhou University, Lanzhou, China

## REFERENCES

1. Scheuermann U, Widyaningsih R, Hoppe-Lotichius M, Heise M, Otto G. Detection of benign hilar bile duct stenoses - A retrospective analysis in 250 patients with suspicion of Klatskin tumour. *Ann Med Surg (Lond)* 2016; 8: 43-9. [\[CrossRef\]](#)
2. Rajab MA, Go J, Silverman WB. Clinical outcome of single plastic stent treatment of benign iatrogenic biliary strictures: is the outcome predetermined? *Surg Laparosc Endosc Percutan Tech* 2014; 24: e221-3.
3. Tamada K, Tomiyama T, Wada S, et al. Endoscopic transpapillary bile duct biopsy with the combination of intraductal ultrasonography in the diagnosis of biliary strictures. *Gut* 2002; 50: 326-31.
4. Lee SJ, Lee YS, Lee MG, Lee SH, Shin E, Hwang JH. Triple-tissue sampling during endoscopic retrograde cholangiopancreatography increases the overall diagnostic sensitivity for cholangiocarcinoma. *Gut Liver* 2014; 8: 669-73. [\[CrossRef\]](#)

**Address for Correspondence:** Xun Li E-mail: drlixun@163.com

**Received:** July 20, 2016

**Accepted:** November 13, 2016

© Copyright 2017 by The Turkish Society of Gastroenterology • Available online at [www.turkjgastroenterol.org](http://www.turkjgastroenterol.org) • DOI: 10.5152/tjg.2016.0411