Direct Peroral Cholangioscopic Diagnosis of Biliary-tract Lesions by i-scan

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Background: Computed virtual chromoendoscopy (CVC) is new image-enhanced endoscopy that enhances surface structure and mucosal microvascular pattern in GI tract disease. Recently developed direct peroral cholangioscopy (D-POC) using an ultra-slim endoscope enables inspection of bile duct using white light image (WLI) combined with CVC image under standard endoscopic set-up. The aim of this study was to evaluate the usefulness of D-POC by using CVC image with i-scan for the diagnosis of biliary tract lesions.

Patients/Methods: 18 patients with biliary-tract lesions on D-POC were included this study. After detection abnormal lesion of bile duct on D-POC using an ultra-slim endoscope (EG-1690K, Pentax, Tokyo, Japan), patient underwent CVC using i-scan.

Results: Biliary tract lesions were malignant biliary strictures by cholangiocarcinoma in 6, benign biliary strictures in 3, polypoid lesions on CBD in 3, Flat elevated lesions on CBD in 2, ductal inflammations in 2, polypoid lesions on CHD in 1, and icteric hepatoma in 1. D-POC using i-scan was performed successfully in all patients. The image quality was not affected by bile during i-scan observation. Identification of the margin of lesions, the surface structures and vessels of the lesions by i-scan observation were better than with conventional WLI on D-POC.

Conclusions: D-POC by using CVC with i-scan may be helpful for the detection and detail observation of biliary-tract lesion without the influence of bile.

Key Words: Peroral cholangioscopy, Image-enhanced endoscopy