

Comparison between trans abdominal ultrasound and colonoscopy in evaluating disease activity of ulcerative colitis

Taeko Wada^{1,2}, Mutsumi Nishida^{1,2}, Yusuke Kudo^{1,2}, Satomi Omotehara^{1,2}, Takahito Iwai^{1,2}, Megumi Sato^{2,3}, Takehiko Katsurada⁴, Katsuhiko Mabe⁵, Kanako Hatanaka⁶, Chikara Shimizu¹

Abstract

Purpose: The purpose of this study was to make a comparison of evaluating disease activity between transabdominal ultrasound (US) and colonoscopy (CS) in patients with ulcerative colitis (UC).

Subjects and Methods: From January, 2012 to September, 2013, 28 patients (16 men, 12 woman, age 20-73 years old) suffered with UC were examined by US and CS on the same day or within two days. Disease activity was evaluated by US and CS in each segment as follows, the cecum, the ascending colon, the right sided transverse colon, the left sided transverse colon, the descending colon, the sigmoid colon, and the rectum. Diagnosis based on CS and US were made according to Matts grade and original US grade, respectively. Disease activity was evaluated as follows; 1. Depicted rate in each colonic segment by US. 2. Rate of concordance of US and CS evaluation in each segment. 3. Coefficient of correlation between US and CS evaluation.

Results and Discussion: 1. Depicted rate of each segment was 100% except the rectum (96.4%). 2.

Rate of concordance of US and CS evaluation (ICC) was 0.67. 3. Coefficient of correlation between US and CS evaluation was 0.67. US evaluation was tended to be lower than CS.

Conclusion: Depicted rate of US in each segment was good. The rate of concordance, and coefficient of correlation between US and CS evaluation were substantial.

Vol.40No.2(2015) 141-149

Keywords

Ulcerative Colitis, Matts grade, Transabdominal ultrasound, Colonoscopy, Rate of concordance.

¹Division of Laboratory and Transfusion Medicine, Hokkaido University Hospital, ² Diagnostic Center for Sonography, Hokkaido University Hospital, ³Department of Radiology, Hokkaido University Hospital, ⁴Department of Gastroenterology and Hepatology, Hokkaido University Hospital, ⁵Division of Endoscopy, Hokkaido University Hospital, ⁶Department of Surgical Pathology, Hokkaido University Hospital

15-7, N. 14, W. 5, Kita-ku, Sapporo, Hokkaido, 060-8648, JAPAN

Received on March 31, 2014; Revision accepted on December 24, 2014