

## Risk Factors of Bleeding Following Colonoscopic Polypectomy in Patients with Liver Cirrhosis

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**Background:** Colonoscopic polypectomy in adenomatous polyp is deemed as treatment of choice as it reduces incidence and mortality of colorectal cancer. Yet the procedure involves severe complications including bleeding and perforation. As liver cirrhosis patients are vulnerable to bleeding, the aim of this study is to evaluate the bleeding incidence and risk factors in liver cirrhosis compared to chronic liver disease patients. **Methods:** We reviewed 955 patients with chronic liver disease receiving colonoscopic polypectomy from January 2011 to December 2014 at Seoul National University Hospital. We analyzed the association between post-polypectomy bleeding with patient data including sex, age, presence of cirrhosis, blood tests results, number and size of polyps, etc. **Results:** Total number of 955 chronic liver disease patients were enrolled. The study population comprised 675 males (70.7%) and 280 females (29.3%) with mean age of 62.4±8.81 years. Of chronic liver disease patients, 502 (52.6%) were diagnosed liver cirrhosis. There were 63 (6.6%) bleeding events after polypectomy. Among bleeding and non-bleeding group, there were each 41 (65.1%) and 461 (51.7%) liver cirrhosis patients, and 22 (34.9%) and 431 (48.3%) chronic liver disease patients respectively ( $p=0.026$ ). Considering Child-Pugh class, there were each 22 (34.9%) and 431 (48.3%) chronic liver disease patients, while class A were 29 (46.0%) and 406 (45.5%), and class B/C 12 (19.0%) and 55 (6.2%) respectively ( $p<0.01$ ). Also 7 patients (11.1%) in bleeding and 25 patients (2.8%) in non-bleeding group had varix bleeding history ( $p<0.01$ ). Amount of ascites ( $p<0.01$ ), presence of hepatic encephalopathy ( $p<0.01$ ), hepatocellular carcinoma ( $p=0.038$ ), average size ( $p=0.02$ ) and number of polyps ( $p=0.028$ ) were also associated with bleeding. **Conclusions:** Liver cirrhosis patients have higher bleeding risk after colonoscopic polypectomy compared to chronic liver disease patients. The risk of bleeding may also be associated with Child-Pugh class, presence of ascites, hepatic encephalopathy, hepatocellular carcinoma, and history of varix bleeding.

## Efficacy and Safety of Ramosetron on Functional Dyspepsia and Irritable Bowel Syndrome with Diarrhea

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**Background/Aim:** Ramosetron, a 5-HT<sub>3</sub> receptor antagonist, is effective in the treatment of irritable bowel syndrome with diarrhea (IBS-D). However, the therapeutic efficacy of ramosetron in patients with functional dyspepsia (FD) has not been evaluated yet. The aim of this study was to assess the efficacy and safety of ramosetron in patients with FD and IBS-D. **Methods:** We conducted a prospective, single arm, open-label study of 30 male patients with FD and IBS-D at Seoul National University Hospital. After a 3-day washout period, the all patients received 5 µg of ramosetron once daily for 4 weeks. The primary endpoint was the change in upper abdominal pain scores from baseline after 4 weeks of medication. The secondary endpoints were changes in overall severity score of IBS, severity score of diarrhea, abdominal discomfort, urgency, incomplete evacuation, Bristol Stool Form Scale (BSFS) and number of stools from baseline after 4 weeks of medication. **Results:** A total of 29 male patients with FD and IBS-D were enrolled in this study. Mean age was 46.0 years. Among them, 24 patients (82.8%) completed the study. After the 4 weeks of medication, mean upper abdominal pain scores (1.9±0.7) tended to be lower than those at baseline (2.2±0.8;  $p=0.176$ ). Ramosetron treatment significantly improved overall severity scores of IBS (1.9±0.78 vs. 2.8±0.9;  $p=0.001$ ), severity scores of diarrhea (1.8±1.0 vs. 2.5±1.1;  $p=0.001$ ), urgency (1.8±0.7 vs. 2.2±1.1;  $p=0.03$ ), incomplete evacuation (1.8±0.8 vs. 2.3±1.0;  $p=0.005$ ), BSFS (3.8±1.4 vs. 4.8±1.1;  $p=0.003$ ) and the number of stools (2.5±1.1 vs. 3.6±1.52;  $p=0.002$ ). None had serious adverse effects. **Conclusions:** Ramosetron might be effective for the management of upper abdominal pain, and well-tolerated in male patients with FD and IBS-D.