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Capsule Endoscopy in Gastrointestinal Graft-Versus-Host Disease in Post Allogeneic Haematopoietic Stem Cell Transplantation Patients

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Background: Standard endoscopy does not allow complete visualization of the small bowel for the investigation of gastrointestinal graft-versus-host disease (GI-GVHD). Capsule endoscopy (CE) may identify disease extent and severity, which would be otherwise inaccessible to endoscopy. Aims: To assess the role of CE for the diagnosis and assessment of severity of GI-GVHD following allogeneic haematopoietic stem cell transplantation (HSCT) compared with histology as the gold standard. Methods: 40 post allogeneic HSCT patients with suspected GI-GVHD were recruited for CE. All (bar one) patients had endoscopy with biopsies for comparison with CE which were read independently by 2 capsule endoscopists blinded to the other diagnostic modalities. Results: In the 39 patients who had standard endoscopy with biopsies, 25 had histologically proven GI-GVHD, of which 23 had assessable CE studies (2 capsules were retained in the stomach); 18 were positive for GI-GVHD, 4 were negative, and in 1, the diagnosis was discrepant between readers. In the 14 patients without histologically proven GI-GVHD, there were 13 assessable CE studies (1 stomach retention); 2 were positive, 10 were negative and 1 was discrepant. In 6 cases, CE observed greater than expected severity in the small bowel as compared to endoscopy and histology results. The sensitivity, specificity, positive and negative predictive value were 81.8% (95% Confidence Interval [CI], 59.0-94.0), 83.3% (95%CI, 50.9-97.1), 90.0% (95%CI, 66.9-98.2) and 71.4% (95%CI, 42.0-90.4), respectively. Agreement between capsule endoscopists on the diagnosis of GI-GVHD was good (kappa score of 0.75; weighted kappa score of 0.84). Conclusion: CE is a safe and non-invasive investigative method for the diagnosis of GI-GVHD in post allogeneic HSCT patients with acceptable sensitivity to inform therapeutic decisions, provided cytomegalovirus (CMV) is excluded. Where clinical suspicion is high, a negative study should be supported with endoscopy to confirm absence of GI GVHD. CE can provide striking evidence of disease severity and small bowel extent, otherwise not evident from the limited sampling available through conventional endoscopy.

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Small Intestinal Mucosal Adaptation in the Long-Term Administration of a NSAID and the Efficacy of Irsogladine Maleate, a Gastroprotective Drug, and Omeprazole in Healthy Volunteers: A Prospective Randomized Trial

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Background: Recently, the serious problem of NSAIDs-induced small intestinal

damage has become a topic of great interest to gastroenterologists. Previously we reported that irsogladine significantly inhibited small intestinal mucosal injuries by two weeks' treatment with diclofenac sodium in healthy volunteers compared to omeprazole (AGA 2011). Although some studies show that short-term administration of NSAIDs induces intestinal mucosal injuries, whether a longer-term administration of NSAIDs exacerbates the injuries or not is still unclear. Aim: We investigated whether a continuous NSAID administration cause further damage or not and the efficacy of irsogladine and omeprazole on such lesions. Method: Thirty-two healthy subjects were randomly assigned to two study groups: the omeprazole group (N = 16), which received NSAID (diclofenac sodium, 75mg/day) and omeprazole (10mg/day) treatment; and the irsogladine group (N=16), which received NSAID and irsogladine (4mg/day). Capsule endoscopy was administered before the treatment and 2 and 6 weeks after treatment. Furthermore for an omeprazole group, irsogladine (4mg/day) was added and treated for another 4 weeks (total 10 weeks) and capsule endoscopy was made in the 10th week. Results: The increase in the number of mucosal injuries (bleeding, mucosal break, ulcer, edema and stenosis) in an omeprazole group at week 2 was significantly greater than at week 0. In contrast, there were no significant changes in the number of these mucosal breaks before and after irsogladine co-treatment. Although the number of mucosal injuries in the omeprazole group at week 6 was significantly larger than that of week 0, the number of mucosal injuries at week 6 decreased from week 2. Furthermore in an irsogladine group the increase number of mucosal injuries was significantly smaller than in an omeprazole group at week 6. Moreover addition of irsogladine to an omeprazole treatment significantly decreased the median number of mucosal injuries. Conclusions: In the omeprazole group, the number of mucosal injuries at week 6 decreased from week 2, probably due to the small intestinal mucosal adaptation for a NSAID. On the contrary, irsogladine may be useful for patients with long-term administration of a NSAID since this drug suppressed small intestinal lesions more remarkably than omeprazole.

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Risk of Wireless Capsule Endoscopy Retention Among Patients With Previous Intestinal Resection

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Introduction: Wireless Capsule Endoscopy (WCE) is a valid non invasive tool for evaluating the small bowel. The most common complication is capsule retention that may require endoscopic or surgical removal. Recent studies performed on large unselected populations showed that incidence of capsule retention ranges from 1% to 2.5%. Aim: Our study aims at evaluating the rate of capsule retention among patients at high risk for intestinal adhesions and/or strictures following surgical resections. Methods: From Feb 2003 thru Oct 2011, 118 individuals were studied at the IRCCS Istituto Nazionale dei Tumori Foundation using WCE. IBD patients were excluded. In 40 cases (mean age 47 years; M/F: 23/17; BMI 24) clinical indication was searching for lesions in hereditary polyposis or NET syndrome. Eight pts had also anemia and positive FOBT. In all 40 cases WCE followed colon (31 pts) or small bowel (9 pts) resection; 6/40 had received multiple intestinal resections. The remaining 78/118 cases, without previous intestinal operations, were considered as control. Results: WCE provided good visualization of the small bowel in 36 subjects (90%). Intestinal preparation was judged optimal in 32 examinations (80%). In one pt (2.5%) with desmoid tumor and pelvic adhesions capsule impaction occurred in the ileal pouch; the capsule was extracted endoscopically. Among the control population, capsule retention was observed in 1 case with fibrotic stenosis of the small bowel not due to IBD. Difference between the two groups was not statistically significant. Conclusions: In our preliminary experience, incidence of capsule retention (2.5 %) in subjects with previous intestinal resection was not significantly different from that observed in control group. Complication was managed endoscopically. Major abdominal surgery does not seem to represent a possible contraindication for WCE examination.

Sa1731

Usefulness of Capsule Endoscopy and Lewis Score in Japanese Patients With Crohn's Disease

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Background and Aim: Small bowel capsule endoscopy (CE) is an invaluable imaging method for the small bowel. The Lewis score (LS) was developed to