Purpose: By meta-analysis of RCTs, to investigate the effect of PPIs on outcomes of peptic ulcer bleeding.

Methods: Recursive literature search in Medline and of major conference proceedings until February 2003 for RCTs of PPI (oral or IV) in peptic ulcer bleeding. Control treatment was placebo or an H2-receptor antagonist. Search was supplemented by requests for unpublished data from PPI pharmaceutical companies. Software used was the Cochrane Collaboration’s RevMan version 4.1. Outcomes studied were re-bleeding, surgical intervention and mortality. Protocol is published in the Cochrane Collaboration database library.

Results: 20 RCTs (2768 patients) were included. Pooled rates for re-bleeding, surgery and mortality were, respectively, 11.5%, 8.1% and 4.8% for PPI treatment and 21%, 12.5% and 4.3% for control. Pooled ORs [95% CI, random effect model] were 0.44 [0.32–0.60; P<0.001; NNT=9] for re-bleeding, 0.57 [0.40–0.79; P<0.001; NNT=25] for surgery, and 1.0 [0.6–1.65; P=1.0] for mortality. When RCTs were stratified according to route of PPI administration, pooled ORs for RCTs using IV PPI were 0.46 [0.31–0.69; P<0.001] for re-bleeding, 0.71 [0.52–0.97; P=0.03] for surgery and 1.10 [0.54–2.23; P=0.8] for mortality. Pooled ORs for RCTs using oral PPI therapy were 0.38 [0.23–0.61; P<0.001] for re-bleeding, 0.36 [0.19–0.66; P=0.001] for surgery and 0.70 [0.30–1.64; P=0.4] for mortality. For RCTs that used appropriate endoscopic therapy pre-randomization, pooled ORs were 0.45 [0.32–0.64; P<0.001] for re-bleeding, 0.55 [0.36–0.86; P=0.08] for surgery and 0.94 [0.49–1.82; P=0.9] for mortality. Finally, when the meta-analysis was confined to 6 RCTs that used appropriate endoscopic therapy pre-randomization and a high-dose IV infusion of a PPI, pooled ORs were 0.40 [0.24–0.67; P<0.001] for re-bleeding, 0.50 [0.30–0.84; P=0.008] for surgery and 0.95 [0.56–1.61; P=0.8] for mortality.

Conclusions: PPI treatment reduces rates of re-bleeding and surgical intervention in patients with bleeding peptic ulcer but has no demonstrable effect on mortality.

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TEMPORARY GASTRIC ELECTRICAL STIMULATION IMPROVES SYMPTOMS OF NAUSEA AND VOMITING IN PATIENTS WITH BOTH DELAYED AND NON-DELAYED GASTRIC EMPTYING

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Purpose: We have previously demonstrated that short term gastric electrical stimulation (GES) can be performed with electrodes placed thru PEG tubes or via an upper endoscope (Neurogastronenterol Motil 14: 422, 2002) and that delayed gastric emptying (GET) is improved with GES. We now examine whether GES improves GI symptoms in patients with delayed or non-delayed GET.

Methods: 19 patients with the symptoms of gastroparesis and documented disordered gastric emptying (GET) underwent endoscopic placement of electrodes. 14 patients had delayed GET and 5 patients had non-delayed (normal or rapid) GET. Patients were 5 m, 14 f with a diagnosis of 14 Idiopathic, 2 Diabetes Mellitus, 3 Post Surgical, mean age 43 years. Endoscopic placement was performed as previously reported above, using an upper endoscope, a 7F gastric stimulation electrode, and several endoscopically placed clips, fixing the electrode at the antral-body junction. Symptoms of nausea, vomiting, (0–4), Total GI Symptom Score (TSS 0–20), were quantified and reported as mean ± SE. GET was performed as previously reported (Am J Gastroenterol 95: 1456–1462, 2000) as % remaining at 2 and 4 hours.

Results: GI symptoms improved in both groups of patients although the results were not always statistically significant. GET improved (accelerated toward normal) in the delayed GET patients and also improved (slowed toward normal) in the non-delayed patients.

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INTRAGASTRIC CARBON MONOXIDE IN PATIENTS WITH CHRONIC GASTRITIS

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Purpose: Measurements of exhaled carbon monoxide (CO) in humans have been used as an indicator of smoking habit or CO poisoning. CO is made in many tissues of the body by an enzyme called heme oxygenase and has been reported to have biologic actions such as smooth muscle relaxation or inhibition of platelet aggregation. Recently, increased CO in exhaled air of asthmatic patients, reflecting inflammation in the lung, was reported. Many cytokines are involved in inflammation induced by Helicobacter pylori (H.pylori), including IL-1, IL-6, and TNF-α, which can upregulate heme oxygenase-1 (HO-1) activity. We therefore examined whether patients with chronic gastritis have more CO in the stomach than do H.pylori-negative subjects.

Methods: Studies were performed in 51 consecutive patients undergoing esophagastroduodenoscopy. At the time of endoscopic examination, we intubated the stomach without inflation by air, and 2 ml of intragastric gas was collected through the biopsy channel using a 5ml syringe. Intragastric CO concentrations were immediately measured by CO analyzer (Sensor Tech Inc., Shiga, Japan). H.pylori status was determined by 13C-urea breath test.

Results: Intragastric CO was detectable in all subjects and the mean value was 2.95±1.92 (0.6–7.7) ppm. Intragastric CO concentrations were similar in H.pylori-positive patients (3.0±1.89 ppm) compared with those in H.pylori-negative subjects (3.1±2.10 ppm). Smoking subjects had higher levels of intragastric CO concentration (3.36±1.74 ppm) than non-smoking subjects (2.78±0.09 ppm) but there was no significant difference.

Conclusions: In the present study there was a negligible difference between H.pylori-positive and H.pylori-negative groups. Exhaled CO seems to be derived from an endogeneous source, whereas intragastric CO concentrations may be affected by other factors such as fermentation.

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EFFECT OF ADDITION OF IV RANITIDINE TO IV PANTOPRAZOLE ON 24 HOUR INTRAGASTRIC PH AND ITS ROLE IN CONTROL OF NON-VARICEAL UPPER GI BLEED


Purpose: Acid in the stomach inhibits haemostasis and promotes clot lysis by activating pepsin. Proton pump inhibitors (PPIs) are very useful in preventing recurrence of non-variceal upper gastrointestinal (NVUGI) bleeding following endotheraphy. Efficacy of PPIs in the initial control of bleeding may be lower due to inherent delay in their onset of action. H2 blockers have faster onset of action and can overcome this delay if combined with PPIs. We evaluated the usefulness of addition of ranitidine to