

PPIs reduce further bleeding and need for surgery in bleeding peptic ulcer disease

Clinical question Do certain subgroups of patients with bleeding peptic ulcer benefit more from proton pump inhibitors (PPIs) than others?

Bottom line In all groups, PPIs reduce bleeding and the need for surgery, particularly when used in combination with endoscopic treatment, but do not affect mortality.

Synopsis Previous meta-analyses have consistently shown that PPIs reduce the risk of further bleeding or surgery in patients with bleeding peptic ulcers, but do not reduce mortality. This meta-analysis looked at various subgroups defined by endoscopic results, the type of PPI and route by which it is given, and whether patients had endoscopic treatment. The authors began with a thorough literature search, and identified 35 relevant randomised controlled trials including 4,843 patients. Data from each study were abstracted by several authors who met to arrive at a consensus regarding the data. The analysis was appropriate and included exploration of possible reasons that the findings were heterogeneous between studies. Study quality was generally good: 16 of 35 had a score of

four or higher and 28 of 35 had a score of three or higher on the five-point Jadad scale, where a higher number indicates better study quality. The authors found that PPIs were superior to placebo and H₂-receptor antagonists, and that the combination of endoscopic treatment and PPI was better than PPI alone. No subgroup was identified in which treatment reduced mortality compared with the alternative treatment. There was no difference between continuous infusion of a PPI versus bolus, and no difference between omeprazole and pantoprazole.

Level of evidence 1a (meta-analysis of randomised controlled trials).

Reference Andriulli A, Annese V, Caruso N, et al. Proton-pump inhibitors and outcome of endoscopic hemostasis in bleeding peptic ulcers: a series of meta-analyses. *American Journal of Gastroenterology* 2005;100:207–19.

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