

The Role of PPI: IV, oral, & dosage?

Bor-Shyang Sheu

National Cheng Kung University Hospital, Taiwan

Upper gastrointestinal bleeding (UGIB) is a highly prevalent and potentially fatal condition worldwide. The incidence of UGIB has an increasing trend in elderly people with comorbid illnesses and in users of non-steroid anti-inflammatory drugs (NSAIDs) or anticoagulants for cardiovascular and neurological insult preventions. The use of intravenous proton pump inhibitors (PPI) before endoscopy for UGIB can reduce the need of endoscopic therapy at the index endoscopy, but it does not improve the clinical outcome of UGIB including rebleeding, surgery, or mortality. Nevertheless, endoscopy should generally be conducted within 24 hours for UGIB, and the pre-endoscopy administration of PPI should not delay or replace urgent endoscopy for UGIB. Patients with bleeding peptic ulcers are recommended to be treated with intravenous high-dose or non-high-dose of proton pump inhibitors, as bolus or continuous infusion for 72 hours after successful endoscopic therapy. A non-high-dose intravenous regimen can still be as efficacious as a high-dose regimen of PPI (such as esomeprazole at least 8 mg/hr intravenous infusion for 72 hr) to control the recurrent peptic ulcer bleeding. Nevertheless, a recent Cochrane review showed that low quality evidence did not exclude either a potential reduction or an increase in outcomes including re-bleeding, surgery, mortality, repeated endoscopic hemostatic treatment, with high dose compared to non-high dose proton pump inhibitor regimens. Oral proton pump inhibitors could be an alternative treatment to intravenous infusion after successful endoscopic hemostasis for low-risky peptic ulcer bleeding, such as Rockall scores <6 or American Society of Anesthesiologists (ASA) class I or II. Patients with co-morbidities (such as uremia, liver cirrhosis, chronic obstructive pulmonary disease, and poor nutrition status with hypoalbuminemia) have higher incidence of peptic ulcer diseases and recurrent bleeding even under the supply with 3-day PPI infusion after therapeutic endoscopy. This implies that more aggressive acid control is necessary for high risk patients, which can be also defined by a practical clinical approach by Rockall score ≥ 6 . Extending the duration of intravenous PPI infusion to 7 days or doubling the dose of oral PPI as twice-daily after 3-day intravenous infusion up to 2 weeks or even longer can improve the control of recurrent bleeding in such high-risk populations. The need of the 2nd prevention with PPI for such high risky patients deserves future study.