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Editorial: moving toward appropriate use of proton pump inhibitors

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Proton pump inhibitors (PPIs) are distinct from nearly any other medication class by virtue of their wide range of indications. They have legitimate uses for both intermittent symptoms (*i.e*., gastro-oesophageal reflux disease [GERD]) and for the prevention of a life-threating condition (*i.e*., gastrointestinal bleeding). In this respect, only aspirin might be comparable. Nevertheless, in the minds of both patients and clinicians, PPIs tend to be associated overwhelmingly with GERD. In clinical practice and research, adequate attention to PPI indication will be the key to future efforts to improve appropriate use.

Ghosh *et al*, explored how patients and physicians, both in general and specialty medical clinics, perceived the harms associated with PPIs, and whether either group had changed their use of these drugs[1]. They found that nearly half of patients reported knowledge of PPI adverse effects, and that 38% had changed their PPI use as a result. Furthermore, 60% of physicians had familiarity with PPI adverse effects, and 37% had changed their practice. These findings are in general agreement with other surveys on this topic[2,3], and highlight that concerns about adverse effects have drawn the attention of both parties. Yet, PPI indication was not a topic of either survey.

With a constantly growing number of observational studies demonstrating associations of PPIs with multiple adverse effects, it can be easy to lose sight of the potential life-saving benefits of PPIs. Notwithstanding the results of a recent study among patients on low-dose rivaroxaban and/or aspirin[4], in a meta-analysis of randomised controlled trials, PPIs reduced the risk of bleeding peptic ulcers by nearly 80%[5]. They may be especially beneficial to older patients, who are at greater risk for peptic ulcer disease and its sequelae[6]. It also increasingly appears that PPIs have a vital role in the treatment of Barrett's oesophagus. In the AspECT trial, a randomised factorial trial of esomeprazole and aspirin for patients with Barrett's oesophagus, high-dose PPI compared with low-dose PPI was associated with a delay in the composite outcome of all-cause mortality, oesophageal adenocarcinoma, or high-grade dysplasia[7]. It should be noted that the clinical upshot of these studies continues to be debated, but they underscore that PPIs have a crucial role in the treatment of patients with conditions perpetuated by gastric acid.

Our goal should be to get the right patients on PPIs, and it is safe to say that we have much room for improvement. While PPIs have been overused for GERD or in patients without any indication at all[8], PPIs have also long been underused for the prevention of peptic ulcer disease[9]. Without due attention to PPI indications, risks and benefits, efforts by patients and physicians to stop the drugs could cause unintended harm[10]. Given a now abundant body of evidence on PPI use, it time to move on to development of clinically nuanced interventions to help clinicians (and their patients) make the right choices about PPIs.

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