

Acid suppression in patients with GERD declines after 2 years' continuous PPI treatment

The long-term efficacy of intra-esophageal acid suppression by continuous maintenance treatment with a PPI has been shown to decrease over time for both once and twice daily regimens, even at high doses. Long-term PPI therapy has been widely adopted for the effective management of GERD complications, including Barrett's esophagus and reflux esophagitis, but relapses have been reported in patients receiving omeprazole for the treatment of reflux esophagitis. Such relapses might result from reduced acid suppression by PPIs.

In their prospective study, Frazzoni *et al.* evaluated the stability of acid suppression in 45 patients with Barrett's esophagus or severe reflux esophagitis after 2 years' continuous treatment with an unmodified PPI regimen (i.e. the same regimen that normalized their initial total percentage acid exposure time [%AET]). In 27 patients, the total %AET was higher at the 2-year follow-up than at the time of normalization. The total %AET was considered abnormally high (>5.8%) in 10 patients. Overall, the median total %AET was significantly higher at the 2-year follow-up than at normalization ($P=0.029$). None of the patients had heartburn at the 2-year follow-up, confirming that heartburn is not a reliable indicator of adequate intra-esophageal acid suppression.

Further long-term follow-up studies are required to determine whether reduced acid suppression by PPIs results from a partial loss of PPI antisecretory function. The authors say that such studies should assess treatment efficacy regularly to limit complications arising in patients with Barrett's esophagus or severe reflux esophagitis.

Original article Frazzoni M *et al.* (2007) Efficacy in intra-esophageal acid suppression may decrease after 2-year continuous treatment with proton pump inhibitors. *Dig Liver Dis* 39: 415–421

Ketamine improves sedation of difficult-to-sedate patients undergoing advanced endoscopy

Patients who undergo advanced endoscopic procedures must be adequately sedated; however, some patients are difficult to sedate and others react adversely to standard sedatives.

Varadarajulu *et al.* evaluated whether adding ketamine to a standard sedative regimen improved the sedation achieved by a standard sedative regimen alone. The study included 175 patients due to undergo endoscopic ultrasonography or endoscopic retrograde cholangiopancreatography who could not be adequately sedated by meperidine (50 mg), midazolam (5 mg) and diazepam (5 mg): 82 patients were randomly allocated to receive ketamine (20 mg every 5 min) and 93 patients to receive meperidine (25 mg) and diazepam (2.5 mg), until adequately sedated. The addition of ketamine to a standard sedative regimen had a significantly beneficial effect on sedation quality, patient discomfort and sedation-related technical difficulties (all three according to a qualitative physician's rating), as well as on depth of sedation, recovery time, sedation failure and standard sedative requirements. No significant differences were seen in sedation-associated complication rates for the two cohorts.

Despite the limitations of this study (e.g. non-blinded design, subjective outcome measures, patient satisfaction not assessed), the authors conclude that adding ketamine to a standard sedation regimen improves the quality and depth of sedation and reduces the recovery time for patients who are otherwise difficult to sedate. They now call for prospective, comparative, randomized, blinded trials to evaluate the safety and effectiveness of ketamine in patients undergoing either standard or advanced endoscopic procedures.

Original article Varadarajulu S *et al.* (2007) Prospective randomized trial evaluating ketamine for advanced endoscopic procedures in difficult to sedate patients. *Aliment Pharmacol Ther* 25: 987–997

Limitations to the association between *H. pylori* infection and risk of esophageal cancer

It has been postulated that there is a causal relationship between the decreasing prevalence of *Helicobacter pylori* infection and related diseases (e.g. gastric and duodenal ulcers) and the simultaneous increasing prevalence of esophageal adenocarcinoma in Western countries. A Swedish group now reveals that this inverse association does not always apply.

Bahmanyar *et al.* considered the histories of 61,548 and 81,379 patients from the time of