

Esomeprazole in Gastroesophageal Reflux Disease and Nocturnal Acid Breakthrough: Clinical Advances

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Abstract

Gastroesophageal reflux disease (GERD) is one of the most common gastrointestinal disorders worldwide, with a significant impact on patient quality of life, healthcare utilization, and economic burden. Despite the widespread use of proton pump inhibitors (PPIs) as the cornerstone of therapy, many patients continue to experience unresolved symptoms, nocturnal acid breakthrough (NAB), and treatment failure. These limitations highlight the need for a PPI with improved pharmacological properties that can provide more reliable and sustained acid suppression. Esomeprazole, the S-isomer of omeprazole, was developed to overcome variability associated with conventional PPIs. Pharmacologically, it demonstrates higher bioavailability, reduced interpatient variability, and more consistent inhibition of gastric acid secretion. Clinical studies have shown that esomeprazole 40 mg maintains intragastric pH >4 for more than 16 h, thereby offering superior acid control over a 24-h period compared to other PPIs, including pantoprazole. These pharmacodynamic advantages lead to faster symptom relief, higher rates of esophageal healing, and improved patient-reported outcomes. Comparative trials further confirm the superior efficacy of esomeprazole in controlling gastric acidity, reducing NAB and improving symptom resolution in patients with GERD. Importantly, these benefits are achieved without compromising tolerability, as esomeprazole exhibits a favorable safety profile consistent with the PPI class. By addressing the limitations of current therapy, Esomeprazole represents a significant advancement in the pharmacological management of GERD. Its ability to provide more sustained acid suppression makes it particularly valuable in patients with unresolved symptoms and those requiring consistent intragastric pH control for optimal disease management.

Key words: Esomeprazole, Gastroesophageal reflux disease, Intragastric pH control, Nocturnal acid breakthrough, Proton pump inhibitors

INTRODUCTION

Gastroesophageal reflux disease (GERD) is a chronic condition caused by the reflux of stomach contents into the esophagus, leading to symptoms such as heartburn and regurgitation, as well as complications such as esophagitis and Barrett's esophagus. It may also cause extraesophageal symptoms, such as cough and hoarseness.^[1] While proton

pump inhibitors (PPIs) are the established treatment of choice for adults and are increasingly recommended for children, a critical knowledge gap exists regarding the safety of specific agents such as esomeprazole in young children aged 1–11 years, despite their known pharmacokinetic profile and proven efficacy in adolescents and adults.^[2]

PPIs are the cornerstone treatment for acid-related diseases. They work by irreversibly inhibiting the gastric proton pump (H⁺/K⁺ ATPase), effectively suppressing both basal and stimulated acid secretion. Key pharmacological characteristics include their metabolism by the cytochrome P450 system (specifically CYP2C19), where genetic polymorphisms can significantly affect an individual's response to the drug, leading to variations in efficacy.^[3]

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Clinically, PPIs are the first-line therapy for a wide range of conditions, including peptic ulcers, GERD, NSAID-induced gastrointestinal damage, Zollinger–Ellison syndrome, and *Helicobacter pylori* eradication regimens. Although they have a well-established safety profile with generally minor and non-specific adverse events (e.g., headache and diarrhea), the primary concerns are associated with the long-term consequences of induced gastric hypochlorhydria (low acid).^[4]

PPIs are among the world's most commonly prescribed drugs and have revolutionized the treatment of gastric acid-related diseases by fulfilling unmet needs in managing conditions such as GERD and peptic ulcers.^[4]

BURDEN ON CLINICAL OUTCOMES, ECONOMIC COSTS, AND QUALITY OF LIFE (QOL)

The analysis revealed that individuals with weekly GERD reported significantly lower, clinically relevant scores across most SF-36 domains compared to those with no GERD, indicating a substantial impairment in QoL. However, logistic regression identified only the physical functioning (PF) domain as independently associated with GERD (OR = 0.98, 95% CI: 0.97–0.99, $P = 0.006$). When examining symptom severity (both heartburn and acid regurgitation), QoL scores progressively worsened with increasing severity. Patients with moderate to very severe symptoms scored significantly worse in domains such as PF, bodily pain, vitality, and social function than those with no symptoms. Although the frequency of symptoms also negatively impacted QoL, the severity of symptoms demonstrated a stronger correlation with poorer QoL scores than symptom frequency alone.^[5]

GERD places a considerable clinical and economic burden through persistent symptoms, reduced QoL, frequent healthcare use, and productivity loss. Globally, refractory GERD is associated with up to 70% higher annual healthcare costs and indirect losses per week. Although comparable cost data are limited in India, the impact remains significant due to ongoing symptoms, work loss, and long-term treatment needs, despite lower drug costs. Optimized therapy can improve symptom control, enhance adherence, and reduce relapse, delivering both clinical and economic gains.^[6]

GERD negatively affects both physical and psychological well-being, contributing to higher absenteeism, greater healthcare utilization, and reduced work productivity. The impact on QoL becomes more pronounced with advancing age and the presence of obesity, which further exacerbates symptom severity. Beyond the individual level, GERD

represents a growing public health concern. Data from the Global Burden of Disease Study (2019) highlight this trend, showing a 77.53% increase in disability-adjusted life years attributable to GERD between 1990 and 2019.^[7]

ESOMEPRAZOLE: CHEMISTRY AND PHARMACOKINETICS^[8]

Omeprazole is a racemic mixture containing both (R)- and (S)-isomers, with esomeprazole representing the pure (S)-isomer. Like other PPIs, omeprazole is metabolized by the polymorphic CYP2C19 enzyme. Poor metabolizers ($\approx 3\%$ of Caucasians and 15% of Asians) show several-fold higher drug exposure (area under the curve [AUC]).

The metabolism of omeprazole is stereoselective: the (S)-isomer is metabolized more slowly and consistently than the (R)-isomer, leading to higher plasma concentrations of esomeprazole. Both omeprazole and esomeprazole are converted into the same active sulfenamide within parietal cells, which inhibits the gastric H⁺, K⁺-ATPase.

Clinical relevance lies in pharmacokinetics: AUC correlates strongly with acid suppression. Esomeprazole produces nearly double the AUC compared with an equivalent dose of omeprazole, resulting in stronger and more sustained acid suppression, reflected in a longer duration of intragastric pH >4. In addition, esomeprazole 40 mg maintains gastric pH >4 significantly longer than the 20 mg dose.

The pharmacokinetics of esomeprazole have been evaluated in both healthy volunteers and patients with symptomatic GERD, including after single and repeated dosing. Studies have also examined its profile in special populations, such as individuals with hepatic impairment and the elderly.

DOSE

Inadequate suppression of gastric acid may explain persistent GERD symptoms in some patients, prompting consideration of adjusted PPI dosing regimens. Expert recommendations suggest escalating therapy to twice-daily dosing for non-responders, though supporting evidence remains limited. Studies in Barrett's esophagus have shown dose-dependent improvements in intragastric pH with higher esomeprazole doses, though without corresponding gains in esophageal pH. Alternative strategies to optimize therapy include split dosing, higher doses, and varied timing of administration.^[9]

In a study by Orlando *et al.*, esomeprazole demonstrated effectiveness for heartburn relief in GERD patients

selected based on prior symptom relief with antacids/acid suppression and a positive acid perfusion test. At week 4, sustained resolution rates ranged from 41% to 48%, with relief rates of 52–59%. Although the study population was enriched for potential responders, outcomes with esomeprazole 20 mg and 40 mg once daily were comparable to previous trials without such selection, indicating that dosage adjustments may be necessary for improved symptom control in certain patients.^[9]

IDEAL PROPERTIES OF PPI FOR NOCTURNAL ACID BREAKTHROUGH (NAB) AND GERD MANAGEMENT

- Clinical efficacy**
 A meta-analysis found that esomeprazole, the active enantiomer of omeprazole, provided superior healing rates in erosive esophagitis at 8 weeks, particularly with the 40 mg dose. Although the difference compared to omeprazole was statistically significant, the clinical benefit was modest. At 20 mg, esomeprazole did not demonstrate a distinct advantage at 4 weeks, suggesting limited short-term efficacy. The benefit was more pronounced in patients with moderate-to-severe esophagitis. In *H. pylori* eradication regimens, esomeprazole 40 mg offered some improvement, though outcomes varied and were influenced by study heterogeneity.^[10] Esomeprazole shows minimal CYP interactions, with mild effects on CYP2C19 substrates such as diazepam and phenytoin. It has little impact on CYP3A4 drugs, though clarithromycin can increase its levels without clinical relevance. Its acid suppression may affect the absorption of pH-sensitive drugs such as digoxin and ketoconazole.^[11]
- Safety and tolerability**
 Esomeprazole is well tolerated, but long-term use, particularly in elderly patients, raises safety concerns. Prolonged or high-dose therapy (>1 year) has been linked to impaired calcium absorption, altered bone metabolism, and increased fracture risk. In patients with osteoporosis or other risk factors, extended use should be avoided, and calcium with vitamin D supplementation may be advisable.^[12] PPIs are linked to a higher risk of infections such as *Clostridium difficile*, enteric infections and possibly pneumonia, especially soon after initiation.^[13] In patients with cirrhosis, their use has also been associated with an increased risk of spontaneous bacterial peritonitis. Hence, PPIs should be prescribed with caution in high-risk populations.^[14] Long-term PPI use may cause nutrient malabsorption, leading to vitamin B12 deficiency and hypomagnesemia, particularly in the elderly or patients on diuretics.^[12,15] It can also impair the absorption of drugs such as thyroxine, requiring dose adjustments.

In *H. pylori*-infected individuals, chronic use has been linked to higher risks of atrophic gastritis and gastric cancer, making eradication advisable before prolonged therapy in high-prevalence areas.^[12]

INTRAGASTRIC pH CONTROL

In GERD, symptom severity and mucosal injury are directly linked to esophageal acid exposure, making sustained intragastric pH ≥ 4 critical for healing and symptom relief. A study by Ohss *et al.* showed that esomeprazole 40 mg maintains intragastric pH ≥ 4 for significantly longer than omeprazole 40 mg, both after single and repeated dosing. On day 1, esomeprazole kept pH ≥ 4 for ~ 2 h longer, and on day 5, for ~ 1.5 h longer. Importantly, esomeprazole demonstrated less interpatient variability in acid control compared with omeprazole.^[16]

Overall, esomeprazole (40 mg) maintained pH ≥ 4 for $\sim 68\%$ of the 24-h period, consistent with prior studies ($\sim 70\%$), and superior to standard doses of lansoprazole, pantoprazole, and rabeprazole. Since longer intragastric pH control correlates with better symptom relief and esophagitis healing, esomeprazole's pharmacodynamic advantage provides a strong rationale for its use in GERD and acid-related disorders.^[16]

ESOMEPRAZOLE VS. OTHER PPIs IN GASTRIC ACID CONTROL

Esomeprazole achieved the longest duration of intragastric pH >4.0 over 24 h and demonstrated a significantly greater proportion of patients maintaining pH >4 for more than 12 h. Pantoprazole showed consistently lower efficacy, whereas omeprazole, lansoprazole, and rabeprazole exhibited no notable differences. These results align with earlier studies confirming the superior acid suppression of esomeprazole on both day 1 and day 5 of treatment.^[16] In a study by Miner *et al.*, esomeprazole maintained intragastric pH >4 for 58.4% of the day, consistent with previous reports ranging between 57.7% and 69.8%. This reproducible efficacy is attributed to its favorable pharmacokinetic profile and lower interpatient variability.^[17] Figure 1 shows the proportion of patients maintaining intragastric pH ≥ 4 for at least 12 and 16 h during a 24-h period after 5 days of once-daily treatment with esomeprazole 40 mg compared with omeprazole 40 mg.^[16]

In patients with mild (Child–Pugh A) or moderate (Child–Pugh B) hepatic impairment, esomeprazole metabolism may be slightly reduced, but AUC values remain within the range observed in individuals with normal liver function, and no dose adjustment is required. In contrast, severe hepatic

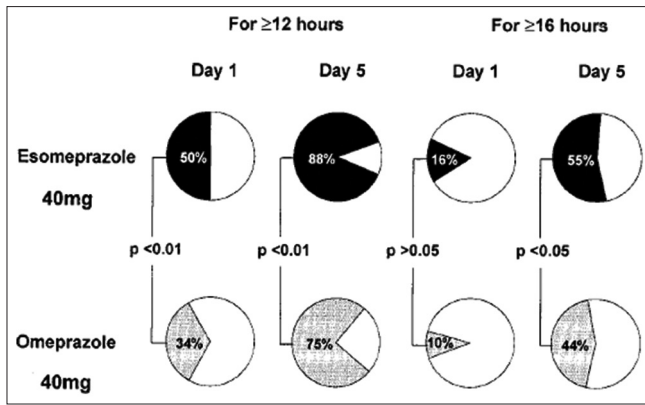


Figure 1: Proportion of patients maintaining intragastric pH ≥ 4 for ≥ 12 h and ≥ 16 h after 5 days of treatment (esomeprazole 40 mg vs. omeprazole 40 mg)

impairment (Child–Pugh C) results in a 2–3-fold increase in AUC, indicating significantly reduced metabolism. Therefore, the maximum recommended dose in such patients is 20 mg once daily. Esomeprazole and its primary metabolites do not accumulate with once-daily dosing.^[18]

In a clinical trial by ElBohy *et al.*, the enrolled participants were randomized into two groups, who received either esomeprazole or pantoprazole at the same dose (40 mg once daily). Renal function was measured at baseline and monthly for 6 months. The study was conducted between January and September 2016. Main outcome measures clinical signs of rejection reflected by renal function decline, assessed by elevated levels of serum creatinine. The mean serum creatinine level was significantly lower in the 6th month than at baseline in the esomeprazole group ($P = 0.004$); interestingly, there was a continuous decrease in serum creatinine levels in the esomeprazole group and nearly constant values in the pantoprazole group. There was no significant difference in serum creatinine levels between the two groups. From this study, it could be concluded that esomeprazole may be preferred over pantoprazole in renal transplant recipients because it decreased serum creatinine, which is one of the markers of chronic allograft rejection in stable renal transplantation recipients.^[19]

ESOMEPRAZOLE VS. OTHER PPIs IN SYMPTOM RELIEF

In a randomized controlled trial by Zheng, 274 patients with endoscopically confirmed reflux esophagitis were assigned to receive daily morning doses of omeprazole 20 mg, lansoprazole 30 mg, pantoprazole 40 mg, or esomeprazole 40 mg for 8 weeks. At the end of treatment, all four PPIs demonstrated comparable rates of endoscopic healing, confirming their overall efficacy in mucosal recovery. However, important differences emerged in symptom control.

Esomeprazole achieved significantly faster relief of heartburn during the 1st week of therapy, with patients reporting a sharper decline in mean heartburn scores compared with the other treatment groups. Notably, complete symptom resolution was observed by day 5 in the esomeprazole arm, underscoring its superior onset of action.^[20]

Although all PPIs show similar healing rates over 8 weeks, esomeprazole offers faster symptom relief, improving comfort, QoL, and adherence. It is therefore a preferred option for patients needing rapid heartburn control, especially those with severe symptoms or impaired daily functioning.^[20]

CONCLUSION

GERD remains a prevalent and burdensome condition with significant clinical, economic, and QoL implications. The current PPI therapy is limited by variable dosing requirements, NAB and interpatient pharmacokinetic differences, which often compromise sustained symptom control. The ideal PPI for GERD and NAB management should provide consistent acid suppression, maintain intragastric pH above 4 for prolonged durations, minimize variability, and offer reliable efficacy across diverse patient groups. Esomeprazole, with its pharmacological advances such as improved bioavailability and stereoselective metabolism, addresses several of these limitations. Clinical studies have shown that esomeprazole achieves superior acid control, faster symptom relief, and more consistent intragastric pH maintenance compared with other PPIs, translating into better clinical outcomes. Together, these attributes establish esomeprazole as a preferred option in optimizing GERD management while mitigating the shortcomings of conventional PPI therapy.

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EXPERT OPINION

1. According to your clinical practice, what percentage of patients with GERD complain of heartburn and nighttime acid reflux despite treatment with pantoprazole twice daily?

Among the 289 healthcare professionals (HCPs) surveyed, the majority, 142 HCPs (49.1%), indicated that 40–60% of their GERD patients continue to complain of heartburn and nighttime acid reflux despite pantoprazole twice daily. In addition, 79 HCPs (27.3%) stated that 60%–80% of their patients remain symptomatic, whereas 67 HCPs

(23.2%) reported that 20–40% of their patients experience persistent symptoms. Furthermore, 1 HCP (0.3%) did not provide a response. These results highlight that a substantial proportion of patients remains symptomatic despite standard PPI therapy.

2. Do you concur that insufficient gastric acid control or prolonged esophageal acid exposure may contribute to the development of mucosal damage, ranging from mild inflammation to erosive esophagitis or ulceration?

In clinical practice, 284 HCPs (98.3%) agreed that insufficient gastric acid control or prolonged esophageal acid exposure may contribute to the development of mucosal damage, ranging from mild inflammation to erosive esophagitis or ulceration. In contrast, 4 HCPs (1.4%) did not concur with this view, whereas 1 HCP (0.3%) did not respond. These findings indicate a strong consensus among HCPs regarding the link between inadequate acid suppression and mucosal injury.

3. Do you agree that the frequent dosing of PPIs is a major factor leading to treatment failure?

According to the responses, 236 HCPs (81.7%) agreed that frequent dosing of PPIs is a major factor leading to treatment failure, whereas 53 HCPs (18.3%) did not share this view. These insights suggest that dosing frequency is widely perceived as a contributor to suboptimal treatment outcomes, as in Figure 2.

4. Based on your clinical practice, what percentage of patients miss taking PPIs due to twice daily dosing, resulting in treatment failure?

Among the 289 HCPs surveyed, the majority, 106 (36.7%), indicated that more than 40% of their patients miss taking

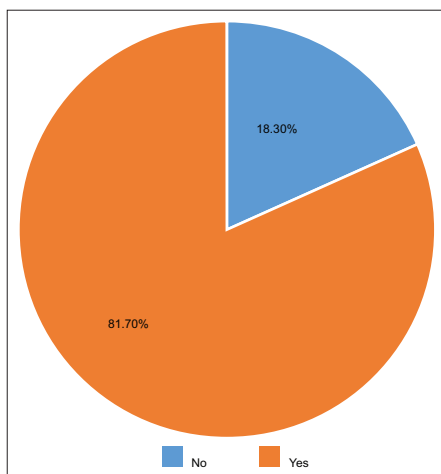


Figure 2: Perceived impact of frequent proton pump inhibitor dosing on treatment failure

PPIs due to twice daily dosing, resulting in treatment failure. In addition, 87 (30.1%) reported that 30–40% of patients miss doses, whereas 73 (25.3%) stated that 20–30% of their patients are non-adherent. Furthermore, 22 (7.6%) indicated that 10–20% of patients fail treatment due to missed doses and 1 (0.3%) did not provide a response. These results emphasize that twice-daily dosing significantly contributes to non-adherence and treatment failure in GERD patients.

5. According to you, what are the ideal properties of a PPI that can help in preventing NAB?

The majority, 245 HCPs (84.8%), selected “All of the above,” which included providing effective and sustained inhibition of 24-h intragastric pH, a low incidence of NAB, high systemic bioavailability, and once-daily dosing to improve compliance. Smaller groups highlighted effective and sustained inhibition of 24-h intragastric pH, 21 HCPs (7.3%); once-daily dosing to improve compliance, 13 HCPs (4.5%); high systemic bioavailability, 5 HCPs (1.7%); and a low incidence of NAB, 4 HCPs (1.4%). One HCP (0.3%) did not provide a response.

6. Although pantoprazole is frequently considered the PPI of choice in GERD management, what are its potential limitations or pharmacological drawbacks that might contribute to NAB in patients?

The majority, 236 HCPs (81.7%), considered all of the above as potential drawbacks, which included a standard dose of pantoprazole 40 mg once daily usually being ineffective compared to 40 mg twice daily, intragastric pH >4 maintained for only about 10 h with pantoprazole 40 mg OD, NAB occurring in more than 70% of patients despite twice daily dosing, and only about 50% of patients achieving intragastric pH >4 for more than 16 h with pantoprazole twice daily. In addition, 20 HCPs (6.9%) stated that intragastric pH >4 is maintained for only about 10 h with pantoprazole 40 mg once daily, 13 HCPs (4.5%) reported that only about 50% of patients achieve pH >4 for more than 16 h with pantoprazole twice daily, 9 HCPs (3.1%) noted that a standard dose once daily is usually ineffective, and 8 HCPs (2.8%) observed NAB in more than 70% of patients despite twice daily dosing. Furthermore, 3 HCPs (1.0%) did not provide a response.

7. In your opinion, which of the following properties of esomeprazole offer(s) consistent acid control?

Among the 289 HCPs surveyed, the vast majority, 243 HCPs (84.1%), indicated that all the listed properties of esomeprazole contribute to its consistent acid control. In addition, 31 HCPs (10.7%) believed that effective and

sustained 24-h gastric acid control is the key property, whereas 7 HCPs (2.4%) cited once-daily dosing as improving compliance. Furthermore, 3 HCPs (1.0%) selected higher systemic bioavailability, 2 HCPs (0.7%) selected less first-pass hepatic metabolism, and 1 HCP (0.3%) selected a lower incidence of NAB. Only 2 HCPs (0.7%) did not provide a response. These results highlight that a comprehensive set of pharmacological benefits is considered most important for ensuring consistent acid control.

8. Esomeprazole 40 mg maintains intragastric pH >4 for more than 16 h. What is your opinion on this?

The survey of 289 HCPs revealed that a significant majority, 185 HCPs (64.0%), strongly agreed with the statement that “Esomeprazole 40 mg maintains intragastric pH >4 for more than 16 h.” In addition, 93 HCPs (32.2%) agreed with the statement, whereas 7 HCPs (2.4%) somewhat agreed. Furthermore, 2 HCPs (0.7%) disagreed. Only 2 HCPs (0.7%) did not provide a response. These results demonstrate strong consensus among HCPs regarding the efficacy of Esomeprazole 40 mg in providing prolonged acid control, as shown in Figure 3.

9. Why would you prefer esomeprazole over pantoprazole?

This survey of 289 HCPs found that a decisive majority, 246 HCPs (85.1%), would prefer esomeprazole over pantoprazole for a combination of reasons, including better compliance, improved adherence, 24-h symptom relief, and a lower incidence of NAB. Furthermore, 18 HCPs (6.2%) cited better compliance with once-daily dosing as their primary reason, whereas an equal number, 18 HCPs (6.2%), preferred it for 24-h symptom relief. In addition, 4 HCPs (1.4%) selected a lower incidence of NAB, and 2 HCPs (0.7%) selected improved adherence. Only 1 HCP (0.3%) did not provide a response. These results underscore that a comprehensive suite of advantages is the principal driver for the preference of esomeprazole as represented in Figure 4.

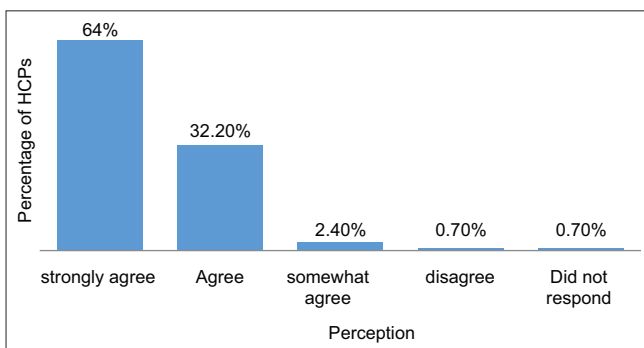


Figure 3: Perceptions on esomeprazole’s ability to sustain pH control

10. Esomeprazole 40 mg is more effective than pantoprazole 40 mg in resolving NAB and providing 24-h symptom control. What is your opinion on this?

Based on their clinical experience, a commanding majority of HCPs, 182 HCPs (63.0%), strongly agreed that esomeprazole 40 mg is more effective than pantoprazole 40 mg in resolving NAB and providing 24-h symptom control. In addition, 102 HCPs (35.3%) agreed with the statement, whereas 3 HCPs (1.0%) somewhat agreed. Furthermore, 2 HCPs (0.7%) did not provide a response. This collective experience underscores a strong professional consensus on the superior efficacy of Esomeprazole 40 mg.

11. According to you, which of the following are the ideal properties for the effective management of GERD?

Among the surveyed HCPs, 144 HCPs (49.8%) identified attaining and sustaining intragastric pH > 4 for most of the time as the ideal property for effective GERD management. In addition, 78 HCPs (27.0%) selected once-daily dosing, while 34 HCPs (11.8%) indicated that bioavailability not being affected by food was the key property. Furthermore, 32 HCPs (11.1%) selected none of the listed options. Only 1 HCP (0.3%) did not provide a response. These results highlight that sustained acid control is considered the most critical factor by HCPs for managing GERD effectively.

12. Do you agree that esomeprazole provides more effective gastric acid control over a 24-h period compared to pantoprazole?

Among the 289 HCPs surveyed, 284 (98.3%) confirmed that esomeprazole provides more effective 24-h gastric acid control compared to pantoprazole. Furthermore, 2 HCPs (0.7%) disagreed with this statement. Only 3 HCPs (1.0%) did not provide a response. These findings demonstrate strong professional consensus on esomeprazole’s superior efficacy, as shown in Figure 5.

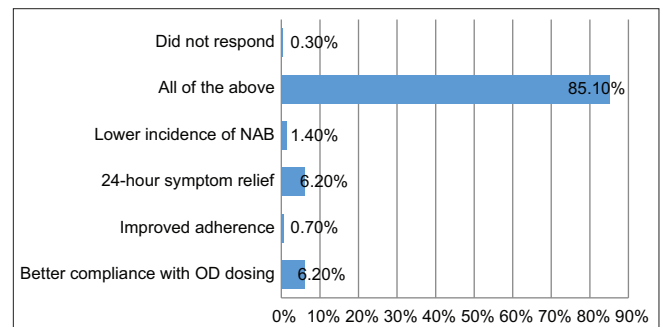


Figure 4: Esomeprazole preference factors

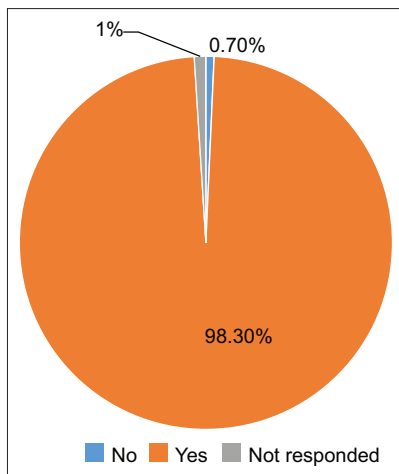


Figure 5: Esomeprazole versus pantoprazole: 24-h acid control

13. Postprandial administration of esomeprazole does not deteriorate reflux symptoms. What is your opinion on this?

From their clinical experience, 152 HCPs (52.6%) agreed that postprandial administration of esomeprazole does not deteriorate reflux symptoms. In addition, 95 HCPs (32.9%) strongly agreed with this statement, while 39 HCPs (13.5%) disagreed. Only 3 HCPs (1.0%) did not provide a response. These results indicate that most HCPs believe that esomeprazole maintains its efficacy even when administered after food.

14. Do you agree that for inpatients with GERD, esomeprazole once daily 40 mg is more efficacious in managing the gastric acid at a steady state compared to standard doses of lansoprazole, omeprazole, pantoprazole, and rabeprazole?

Among the 289 HCPs surveyed, 276 (95.5%) agreed that for inpatients with GERD, esomeprazole once daily 40 mg is more efficacious in managing gastric acid at a steady state compared to standard doses of lansoprazole, omeprazole, pantoprazole, and rabeprazole. Furthermore, 11 HCPs (3.8%) did not agree with this statement. Only 2 HCPs (0.7%) did not provide a response. This demonstrates a strong professional consensus on the superior efficacy of esomeprazole 40 mg in an inpatient setting.

15. Adjusting the dosage and timing of esomeprazole administration may help achieve optimal acid suppression based on the symptom patterns of individual patients with GERD. What are your thoughts on this approach?

In clinical practice, 152 HCPs (52.6%) agreed that adjusting the dosage and timing of esomeprazole administration

may help achieve optimal acid suppression based on individual patient symptom patterns. In addition, 131 HCPs (45.3%) strongly agreed with this approach, while 4 HCPs (1.4%) somewhat agreed. Only 2 HCPs (0.7%) did not provide a response. These results show strong professional endorsement for personalized esomeprazole dosing strategies in GERD management.

16. Why would you prefer esomeprazole over pantoprazole?

In this survey of 289 HCPs, 278 HCPs (96.2%) stated that they prefer esomeprazole over pantoprazole due to its 24-h symptom relief. In addition, 5 HCPs (1.7%) selected improved adherence, whereas 3 HCPs (1.0%) preferred it for being effective after meals and 2 HCPs (0.7%) for being an anytime PPI. Only 1 HCP (0.3%) did not provide a response. These results demonstrate that round-the-clock symptom control is the predominant reason for preferring esomeprazole.

With all these, HCPs conclude that esomeprazole offers stronger 24-h acid control and more reliable symptom relief than pantoprazole.

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