The Efficacy of Amisulpride Injection in Postoperative Nausea Management

(North Zone)

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INTRODUCTION

Postoperative nausea and vomiting (PONV) is a significant concern in surgical practice, posing challenges to patient comfort, recovery, and overall satisfaction. This complication is not only distressing for patients but also has implications for healthcare systems, contributing to prolonged hospital stays and increased medical costs. In India, the prevalence of PONV can be particularly high, with studies indicating that up to 30% of patients may experience this condition following various types of surgical interventions (1, 2). Given the diverse range of surgeries performed across the country, from minor outpatient procedures to complex major surgeries, understanding and effectively managing PONV is crucial in enhancing patient care.

Several factors contribute to the risk of PONV. These include patient demographics such as age, gender, and medical history, as well as the specific anesthetic agents used and the nature of the surgical procedure itself. For instance, patients who are female, non-smokers, or have a prior history of PONV or motion sickness are often identified as being at higher risk (3). Additionally, surgical techniques involving opioid analgesics and general anesthesia have been associated with increased rates of PONV (4). The multifaceted nature of this complication necessitates a comprehensive approach to its management, tailored to individual patient needs and circumstances.

Current Management Strategies

Traditional management strategies for PONV include a combination of pharmacological and non-pharmacological approaches. The commonly used antiemetic agents include ondansetron, metoclopramide, and dexamethasone, among others. While these medications have proven effective for many patients, their use is not without limitations. Some patients may experience side effects, and others may not respond adequately to standard treatments (5, 6). This

variability in response underscores the need for alternative treatment options that can provide effective relief for a broader range of patients.

Amisulpride as a Potential Treatment

Amisulpride, an atypical antipsychotic medication primarily indicated for schizophrenia and depressive disorders, has garnered attention for its potential efficacy in managing PONV. Its mechanism of action involves selective antagonism of dopamine D2 and D3 receptors in the central nervous system, which may play a critical role in the emetic response (7, 8). Emerging clinical evidence suggests that amisulpride can effectively reduce the incidence of nausea and vomiting in postoperative patients, especially in those classified as high-risk for PONV due to their surgical and anesthetic profiles (9, 10).

The pharmacokinetics of amisulpride also offer advantages in clinical settings. The availability of amisulpride in injectable form allows for rapid administration, which can be particularly beneficial in the acute postoperative setting. This ability to provide quick relief aligns with the goals of enhancing patient comfort and facilitating smoother recoveries. However, despite the promising data, the adoption of amisulpride in routine clinical practice for PONV management in India remains limited.

RATIONALE OF THE STUDY

The need for effective antiemetic therapies in the postoperative setting is underscored by the high prevalence of postoperative nausea and vomiting (PONV), which can affect up to 30% of surgical patients (1). PONV not only leads to increased patient discomfort but also prolongs hospital stays and raises healthcare costs, emphasizing the necessity for reliable treatment options. While current antiemetic therapies are effective for some patients, they may not suffice

for all, revealing a significant gap in effective management strategies. Amisulpride, a dopamine antagonist with unique pharmacological properties, presents a potential alternative for managing PONV, yet its familiarity and clinical application among practitioners remain limited.

Understanding clinicians' perceptions of Amisulpride's efficacy and safety is essential for enhancing clinical practices and informing future research. Gathering insights on its use can identify barriers to implementation and highlight areas for education and training. Moreover, this survey aims to improve postoperative care by assessing Amisulpride's role in managing PONV and enhancing patient outcomes. By addressing these gaps, we can foster a better understanding of Amisulpride, ultimately contributing to improved management of PONV and increased patient satisfaction in surgical settings.

STUDY OBJECTIVE

The primary objective of this study is to evaluate the awareness, efficacy, and clinical use of Amisulpride injection among healthcare professionals for managing postoperative nausea. Specific aims include:

- Assessing familiarity with Amisulpride injection among clinicians.
- Evaluating the perceived effectiveness of Amisulpride compared to other antiemetics.
- Understanding preferred dosing regimens and barriers to its use.
- Identifying factors influencing the recommendation of Amisulpride to colleagues.

METHODS

The study employed a survey-based method, utilizing a structured questionnaire distributed among healthcare professionals involved in the management of postoperative nausea and vomiting (PONV). The aim was to gather data from north zone of india on the efficacy of amisulpride injection in PONV management. The methodology includes the following components:

Survey Design

- Clinician familiarity with amisulpride and its application in PONV management.
- Current prescribing patterns for amisulpride in postoperative care.
- Perceived effectiveness of amisulpride in alleviating PONV.
- Safety and side effects reported during its use.
- Patient demographics and characteristics influencing treatment decisions.

The questionnaire was reviewed and validated by experts in anesthesiology and postoperative care to ensure its relevance, accuracy, and comprehensiveness.

Participant Recruitment: The survey was distributed to a targeted sample of healthcare professionals from North Zone of India, including anesthesiologists, surgeons, and nursing staff across multiple hospitals and surgical centers in India. Participants were selected based on their experience in managing PONV and their willingness to provide insights regarding the use of amisulpride in clinical practice.

Data Collection: Responses were collected through a booklet over a three-month period from north zone. The survey was designed to be user-friendly to encourage participation and maximize response rates. Data were anonymized to ensure confidentiality, thus promoting honest and unbiased feedback from participants.

The collected data were analyzed using quantitative methods to identify trends and patterns in prescribing practices, perceived effectiveness ratings, and safety concerns related to amisulpride. Descriptive statistics were employed to summarize the data, while comparative analyses were conducted to assess variations based on clinician specialty, patient demographics, and treatment settings.

Ethical Considerations: The study was conducted in accordance with ethical guidelines for research involving Informed consent was obtained from all participants clinicians for the study.

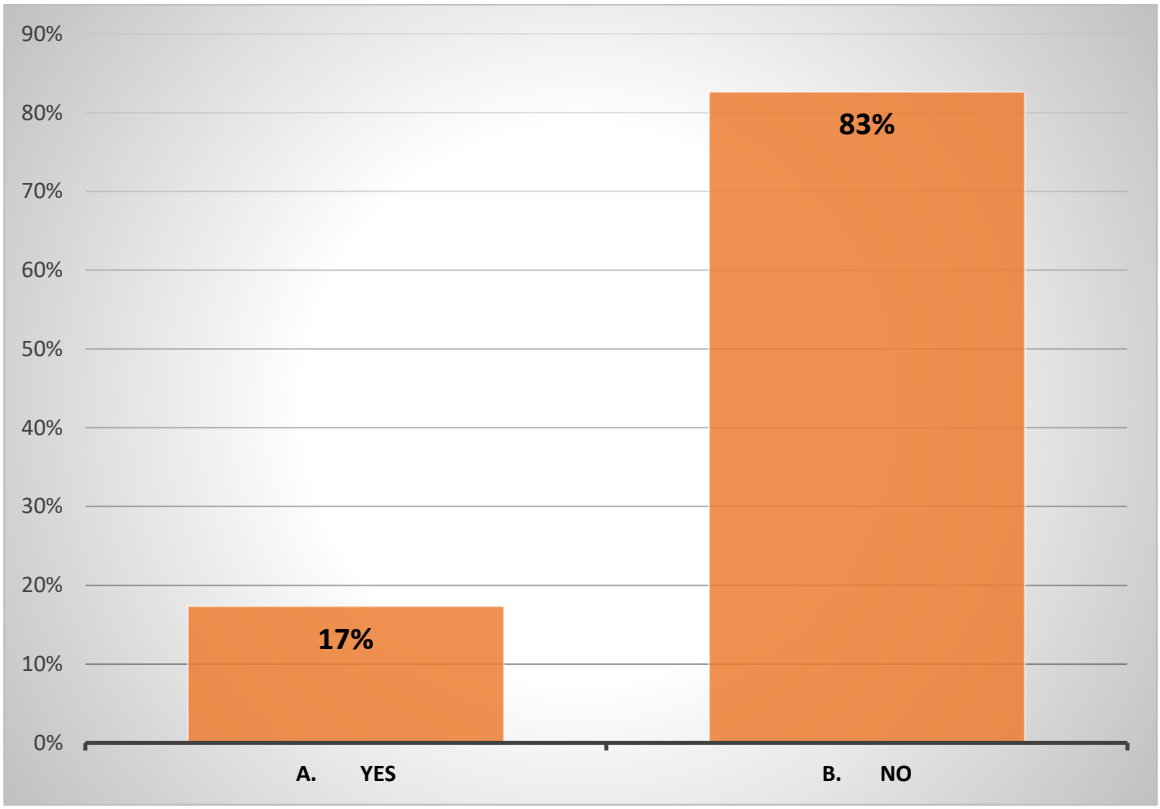
RESULTS

A total of 100 HCPs from north zone participated in the survey. Below is the summary of the responses.

1. Are you familiar with the use of Amisulpride Injection for the prevention and treatment of nausea and vomiting in surgical settings?

A. Yes

B. No

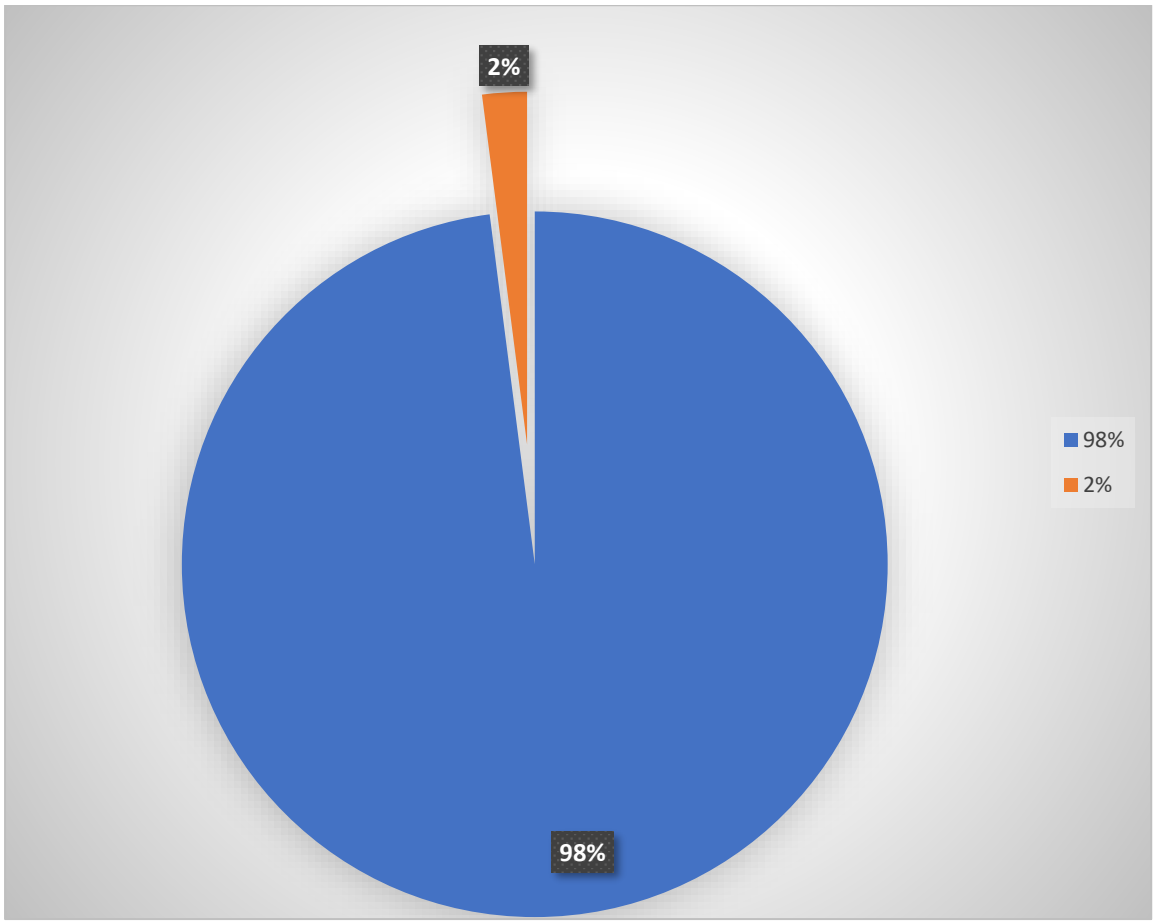


- **No (83%):** A significant majority are not familiar with Amisulpride for nausea management in surgical settings.
- **Yes (17%):** Only a small portion are aware of its use.

2. **Do you believe that the currently available therapies are effective for prevention and management nausea and vomiting in clinical settings?**

A. Yes

B. No

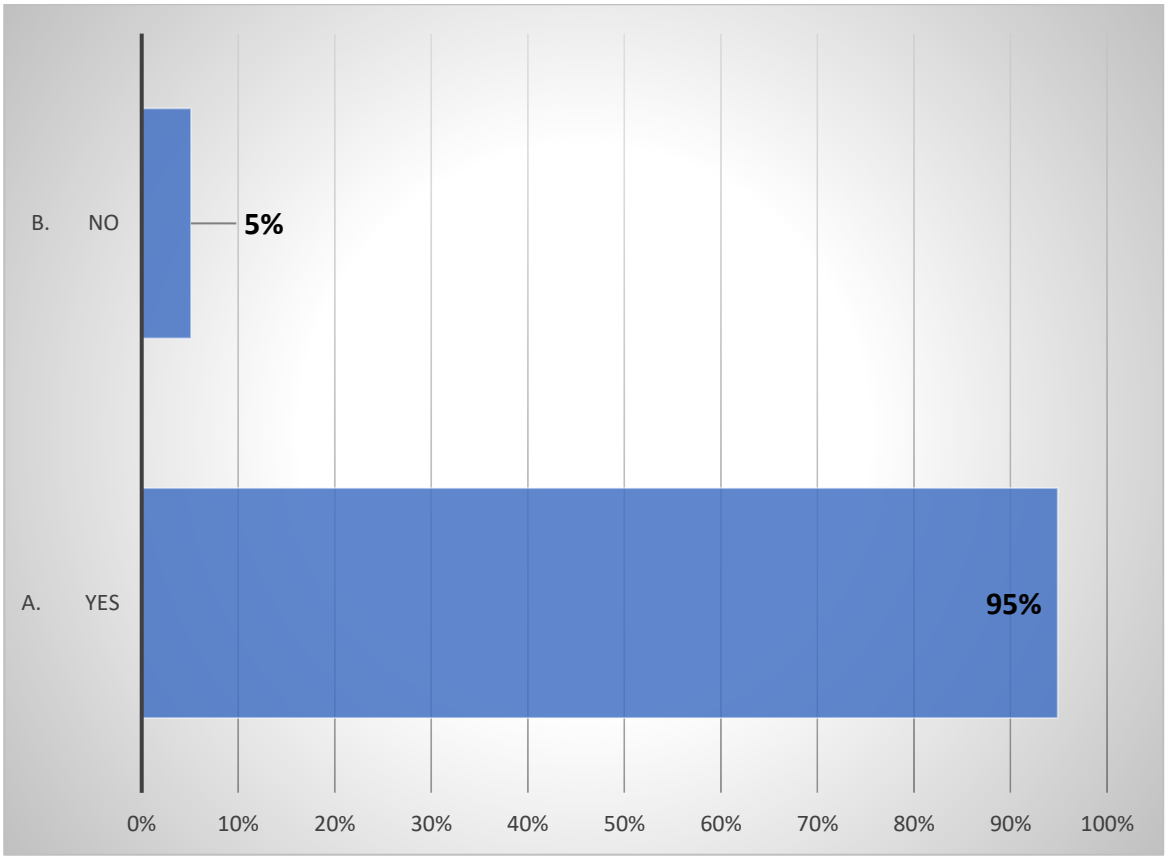


- **Yes (98%):** Almost all clinicians believe current therapies are effective for managing nausea and vomiting.
- **No (2%):** Very few doubt their effectiveness.

3. **Do you agree that no single class of drug is effective in management of nausea and vomiting in surgical settings?**

A. Yes

B. No

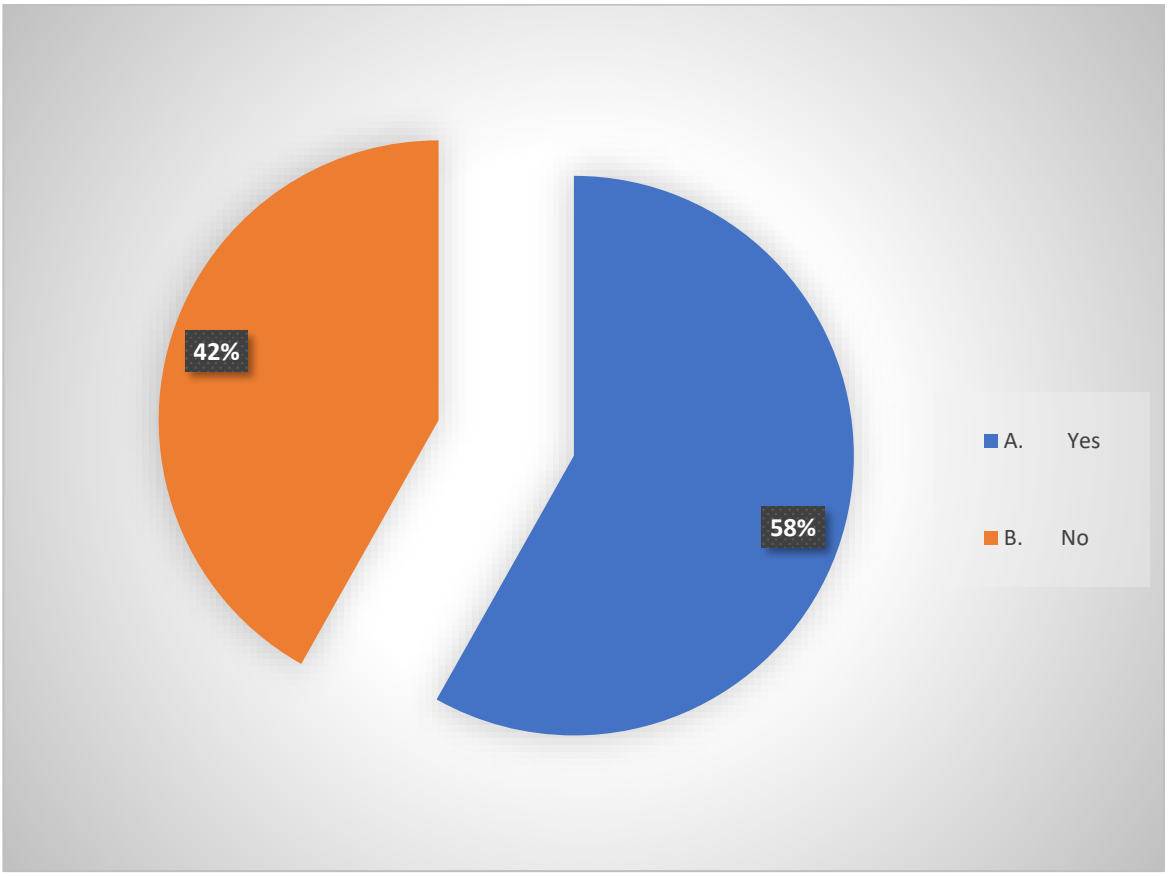


- **Yes (95%):** Most agree that no single drug class is sufficient for managing nausea and vomiting in surgical contexts.
- **No (5%):** A minor fraction disagrees.

4. **Do you agree that Amisulpride Injection possesses unique pharmacological properties and favorable safety profile as compared to other dopamine antagonists?**

A. Yes

B. No

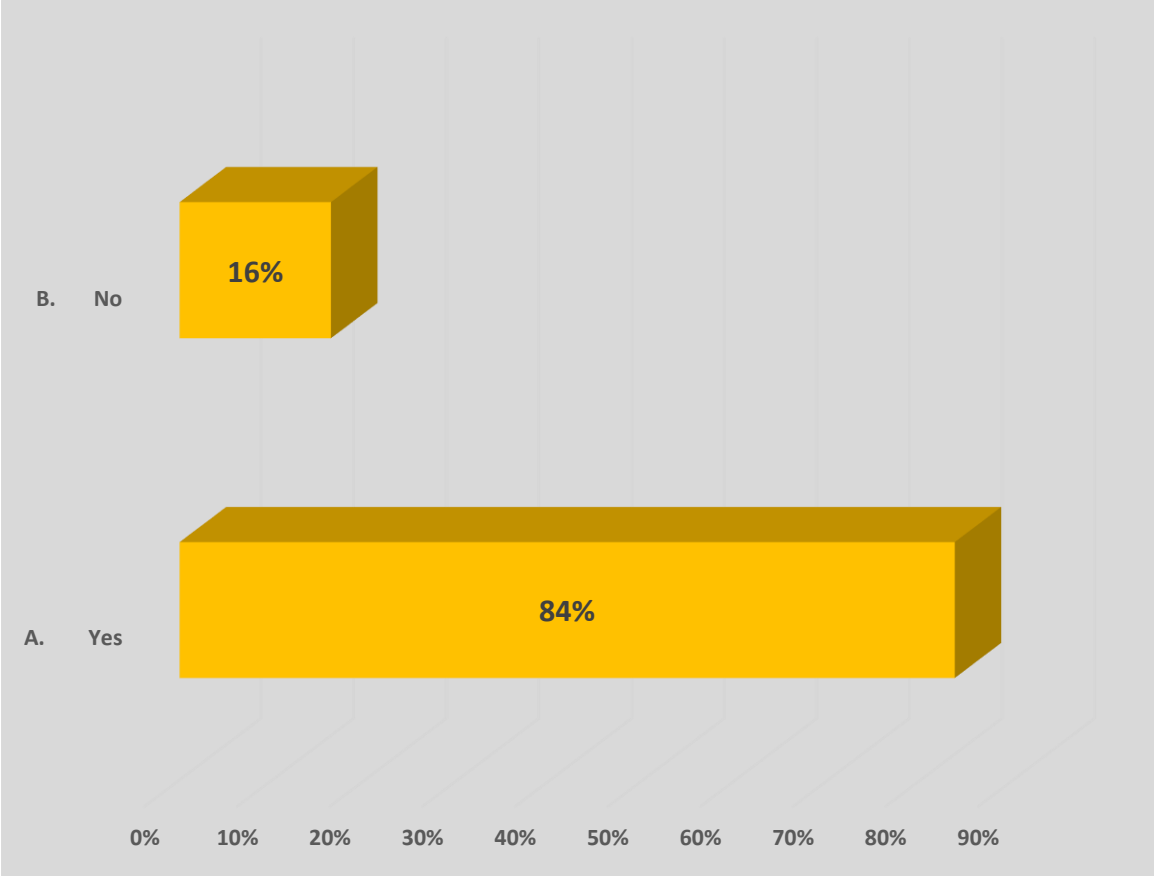


- **Yes (58%):** A majority recognize its unique pharmacological properties compared to other dopamine antagonists.
- **No (42%):** A substantial minority do not agree.

5. In your clinical practice, have you used Amisulpride Injection in your practice for preventing or treating nausea and vomiting in surgical settings?

A. Yes

B. No



- **Yes (84%)**: Most clinicians have used Amisulpride in practice for managing postoperative nausea.
- **No (16%)**: A small group has not used it.

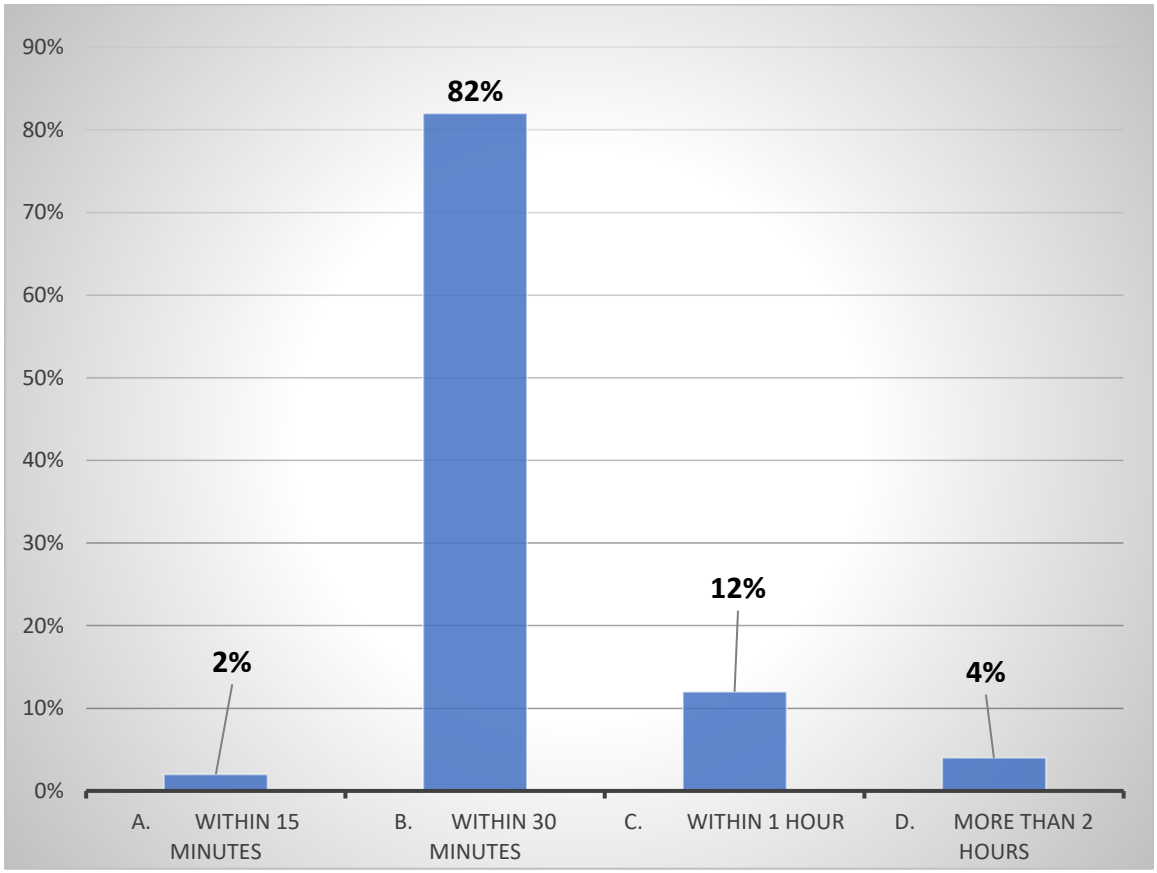
6. In your clinical practice, how quickly do you observe the onset of action of Amisulpride Injection in preventing or treating nausea and vomiting in surgical settings?

A. Within 15 minutes

B. Within 30 minutes

C. Within 1 hour

D. More than 2 hours



- **Within 30 minutes (82%):** Most clinicians observe action within this timeframe.
- **Within 1 hour (12%), More than 2 hours (4%), Within 15 minutes (2%):** Fewer expect a quicker or longer onset.

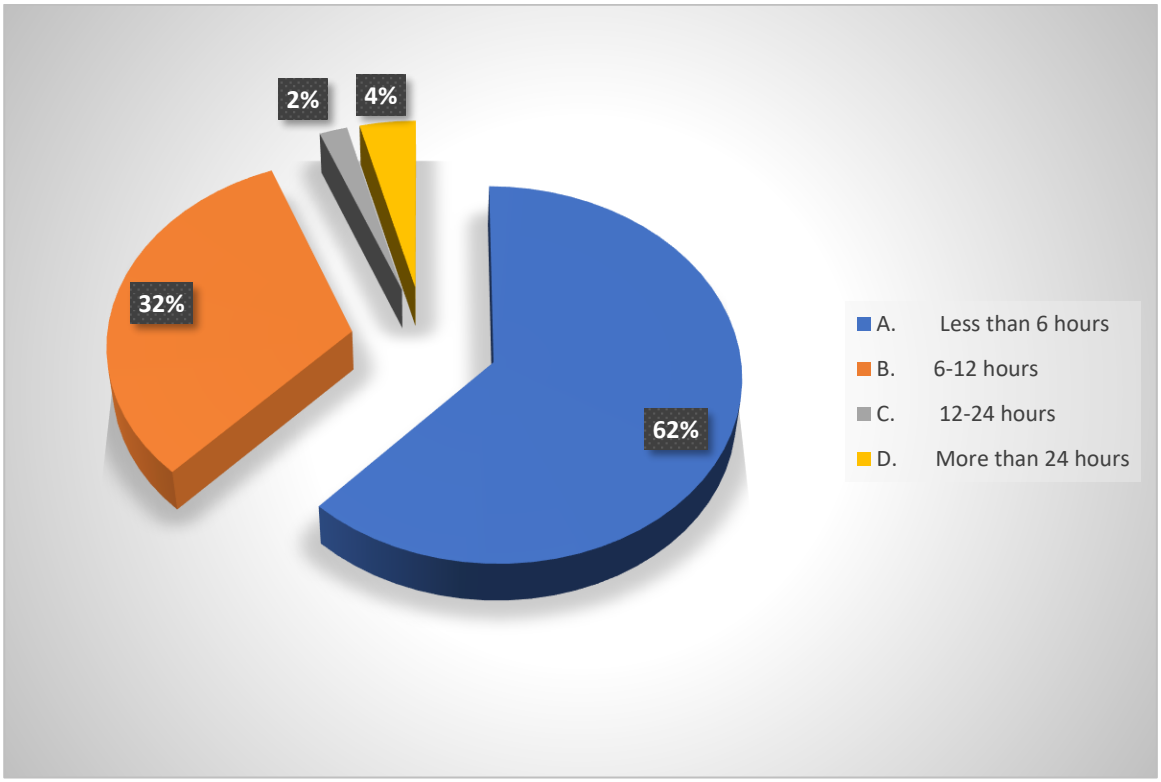
7. In your clinical experience, how long does the antiemetic effect of Amisulpride Injection last?

A. Less than 6 hours

B. 6-12 hours

C. 12-24 hours

D. More than 24 hours



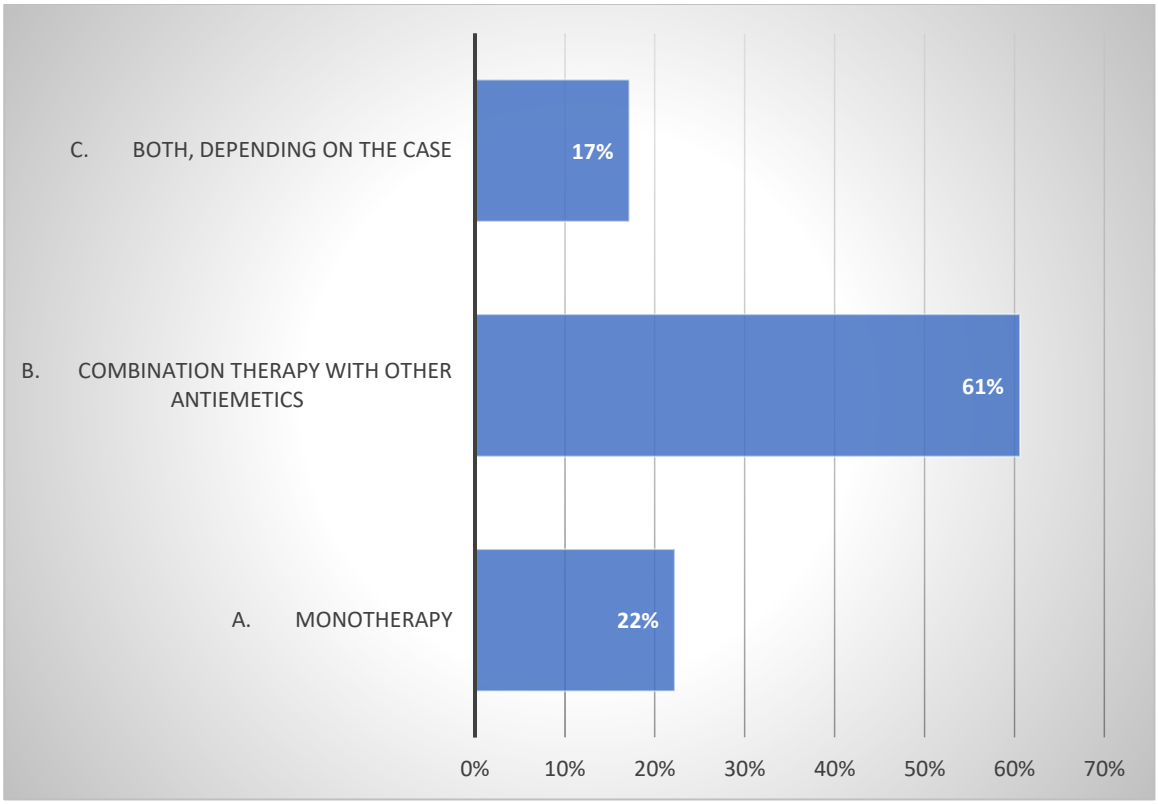
- **Patients with Episodic Migraines (100%): Less than 6 hours (62%)**: Most believe the effect lasts under 6 hours.
- **6-12 hours (32%)**, **12-24 hours (2%)**, **More than 24 hours (4%)**: Fewer expect longer durations.

8. n your clinical practice, how would you prefer using Amisulpride Injection in management of nausea and vomiting in surgical settings?

A. Monotherapy

B. Combination therapy with other antiemetics

C. Both, depending on the case



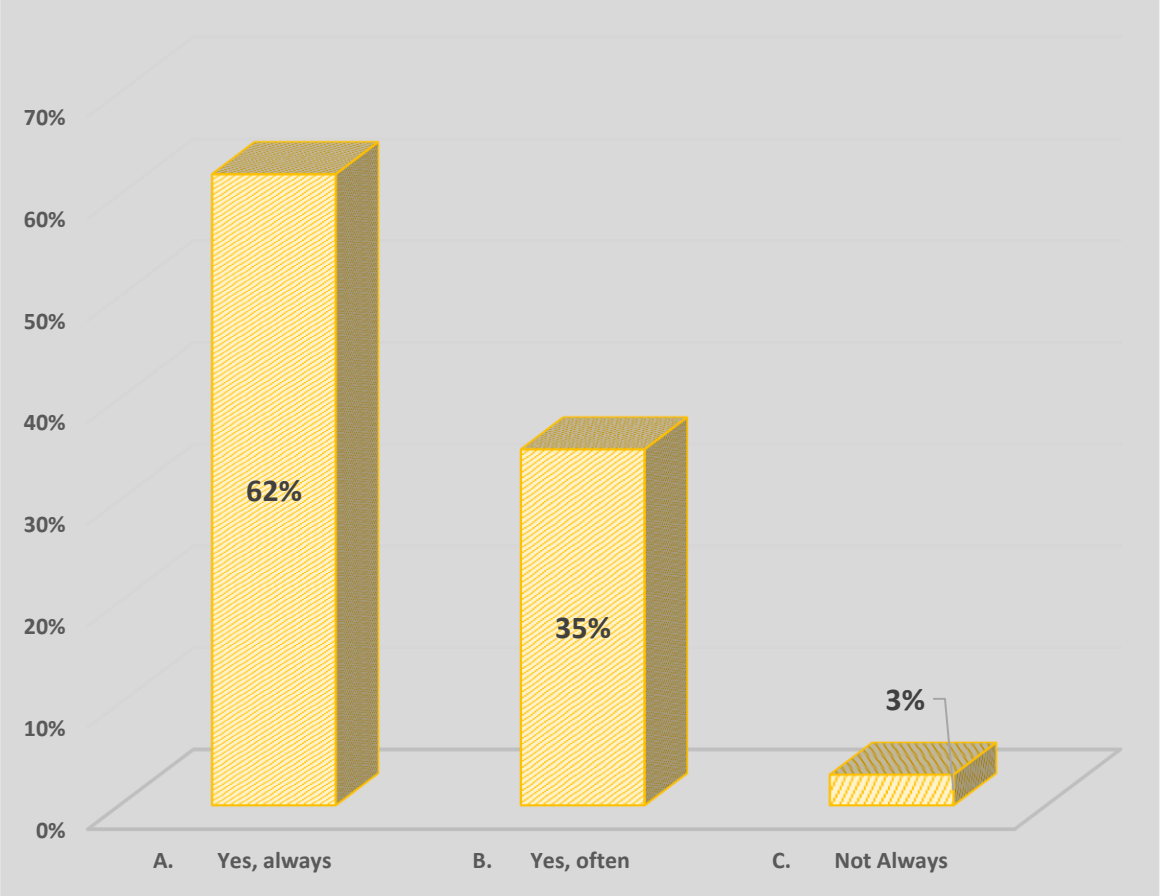
- **Combination therapy with other antiemetics (61%)**: Most prefer using it in combination with other treatments.
- **Monotherapy (22%)**, **Both, depending on the case (17%)**: Some use it alone or based on circumstances.

9. **In your clinical practice, do you use Amisulpride Injection in combination with other antiemetics for management of nausea and vomiting in surgical settings?**

A. Yes, always

B. Yes, often

C. Not Always



- **Yes, always (62%)**: Many clinicians consistently combine it with other antiemetics.
- **Yes, often (35%)**, **Not always (3%)**: A smaller portion uses it regularly or selectively.

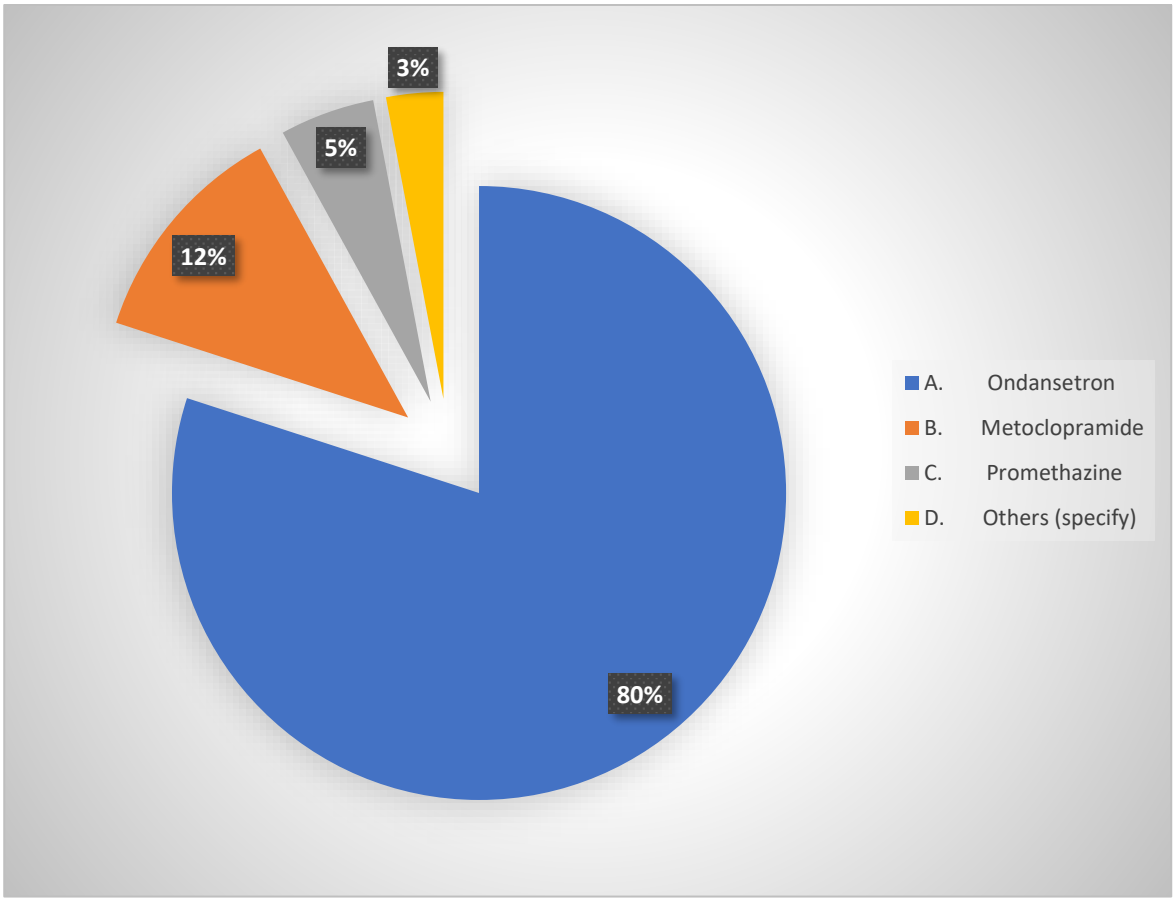
10. In your practice, if you use Amisulpride Injection in combination therapy, which other antiemetics do you typically combine it with?

A. Ondansetron

B. Metoclopramide

C. Promethazine

D. Others (specify)



- **Ondansetron (80%)**: The most frequent combination.
- **Metoclopramide (12%)**, **Promethazine (5%)**, **Others (3%)**: Less commonly combined medications.

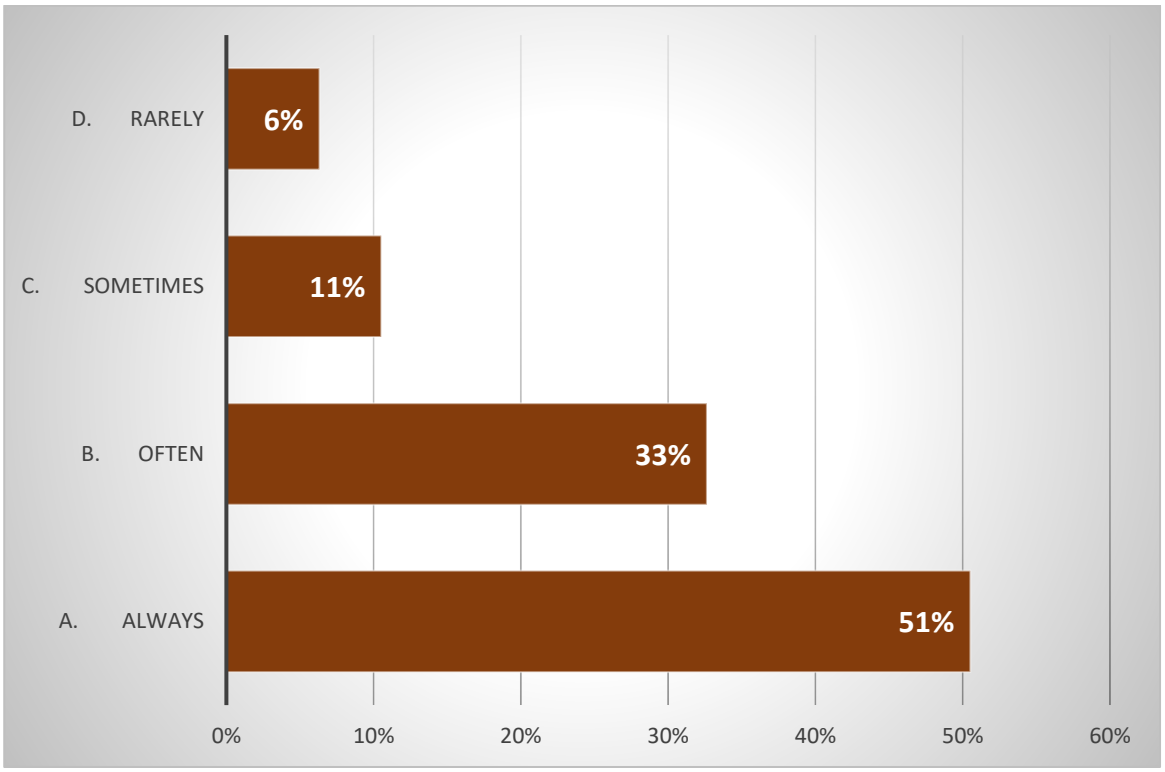
11. In your clinical practice, how often do you use Amisulpride Inejction as first line treatment for management of nausea and vomiting in surgical settings?

A. Always

B. Often

C. Sometimes

D. Rarely



- **Always (51%)**: Just over half use it as first-line therapy.
- **Often (33%)**, **Sometimes (11%)**, **Rarely (6%)**: Others use it with varying frequency.

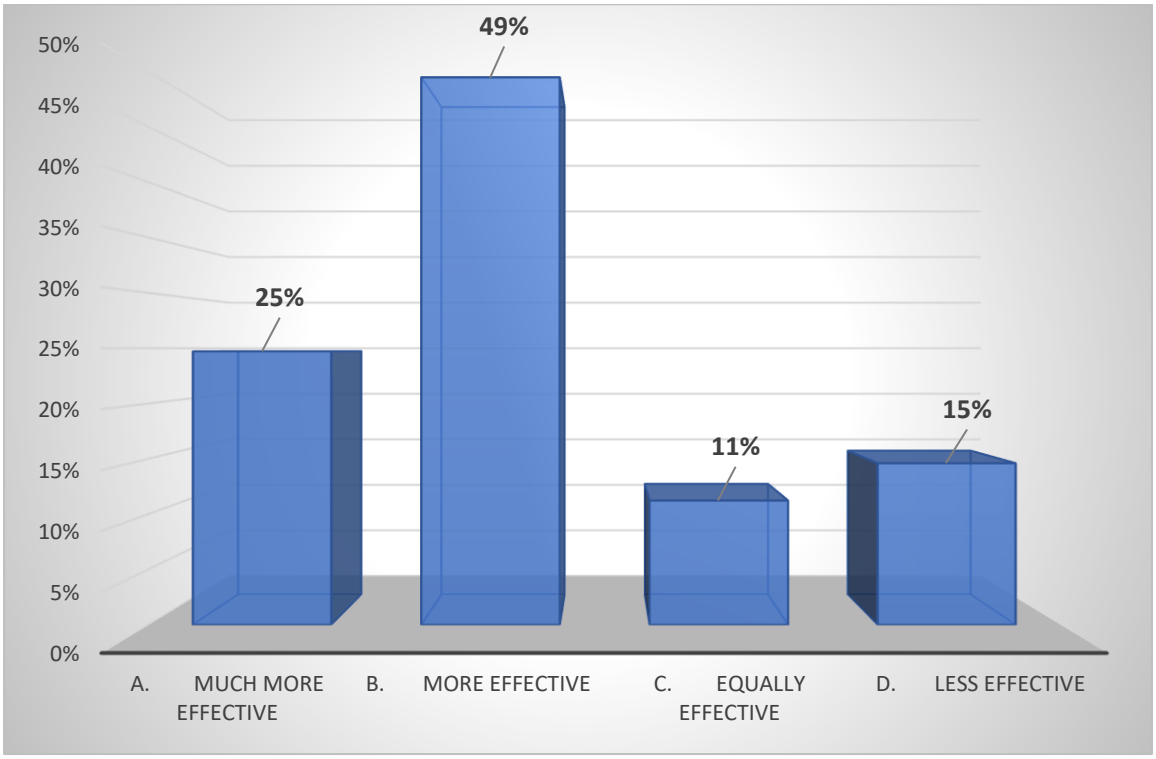
12. According to your opinion, how would you rate the overall efficacy of Amisulpride Injection compared to other antiemetics you have used in your clinical practice?

A. Much more effective

B. More effective

C. Equally effective

D. Less effective



- **More Effective (85%):** A large majority find Lasmiditan more effective than traditional triptans.
- **Efficacy Varies by Patient (8%):** Some think its efficacy varies by patient population.
- **Equally Effective (8%):** A small group finds it equally effective compared to triptans.

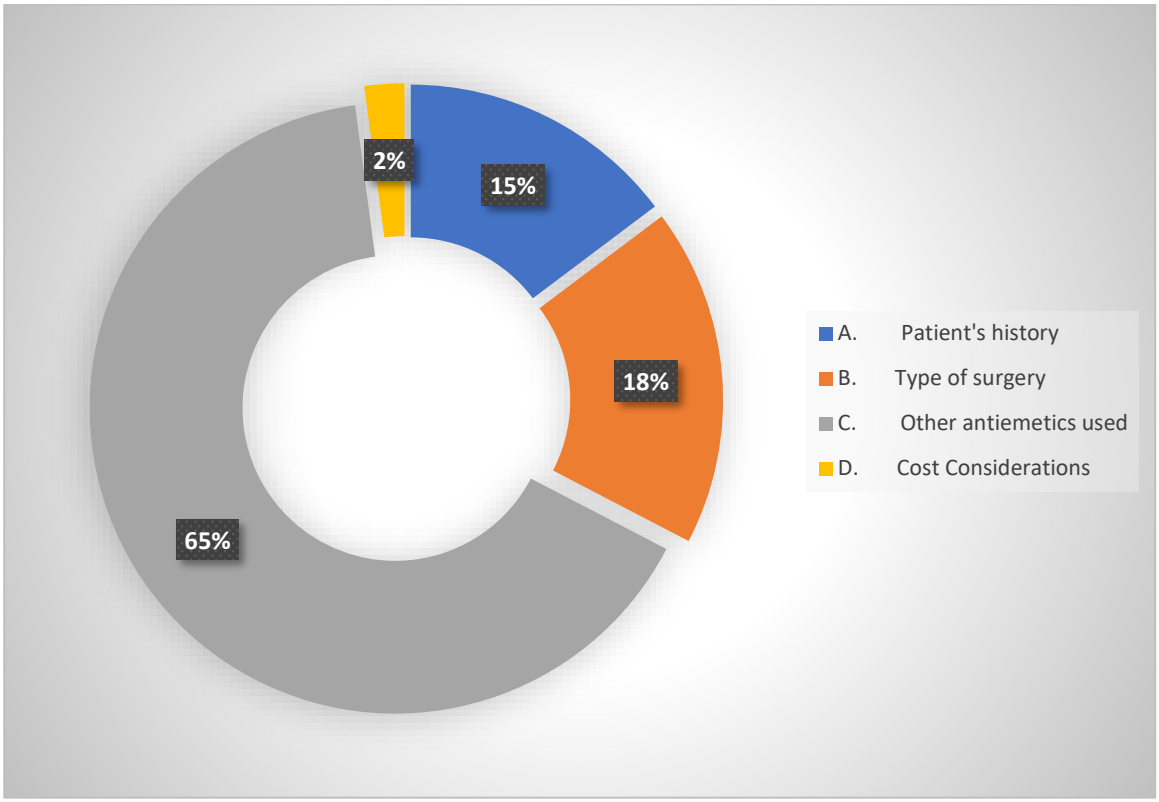
13. According to your opinion, what factors influence your decision to use Amisulpride Injection for management of nausea and vomiting in surgical settings?

A. Patient's history

B. Type of surgery

C. Other antiemetics used

D. Cost Considerations



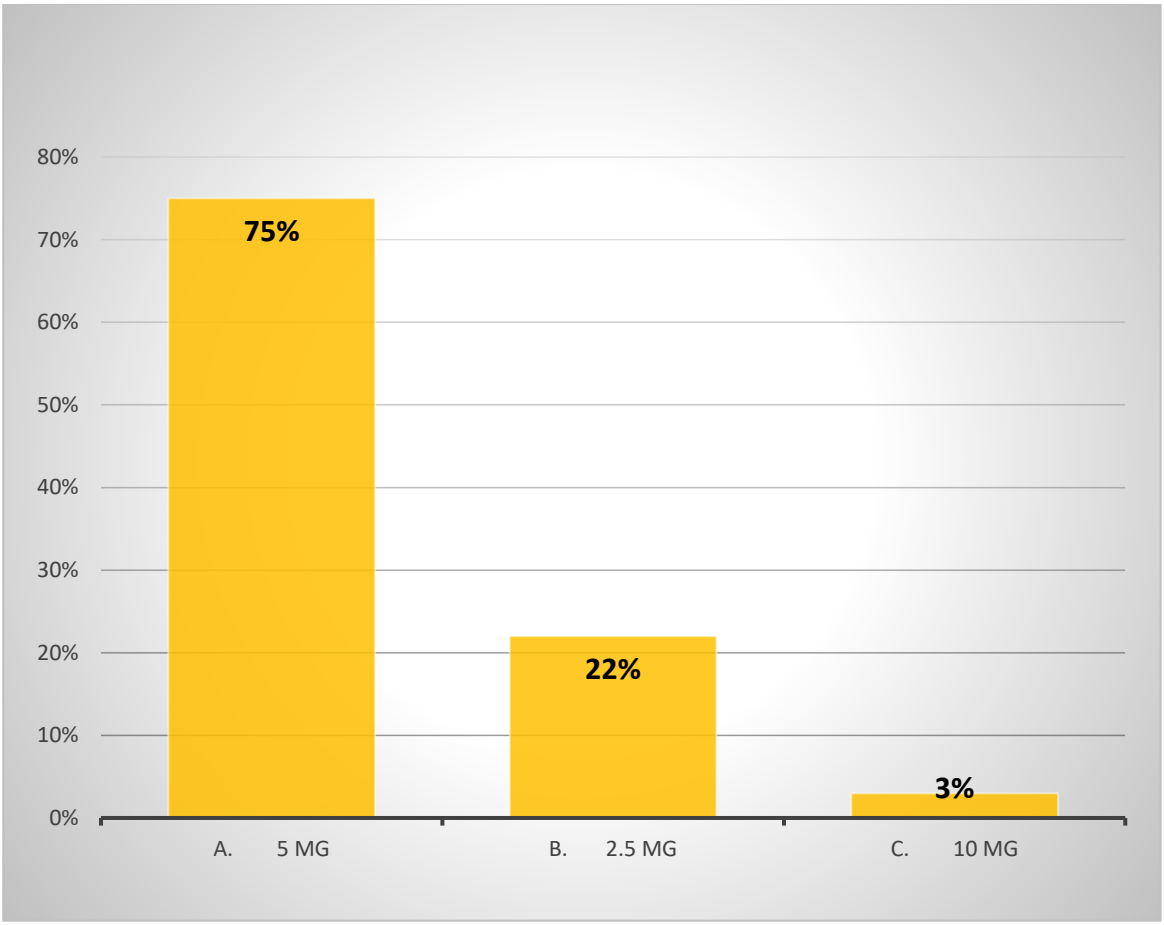
- **Other antiemetics used (65%)**: This is the primary factor influencing decisions.
- **Type of surgery (18%)**, **Patient's history (15%)**, **Cost Considerations (2%)**: Other factors are less significant.

14. In your clinical practice, what dose of Amisulpride Injection do you prefer for prevention of nausea and vomiting in surgical settings?

A. 5 mg

B. 2.5 mg

C. 10 mg



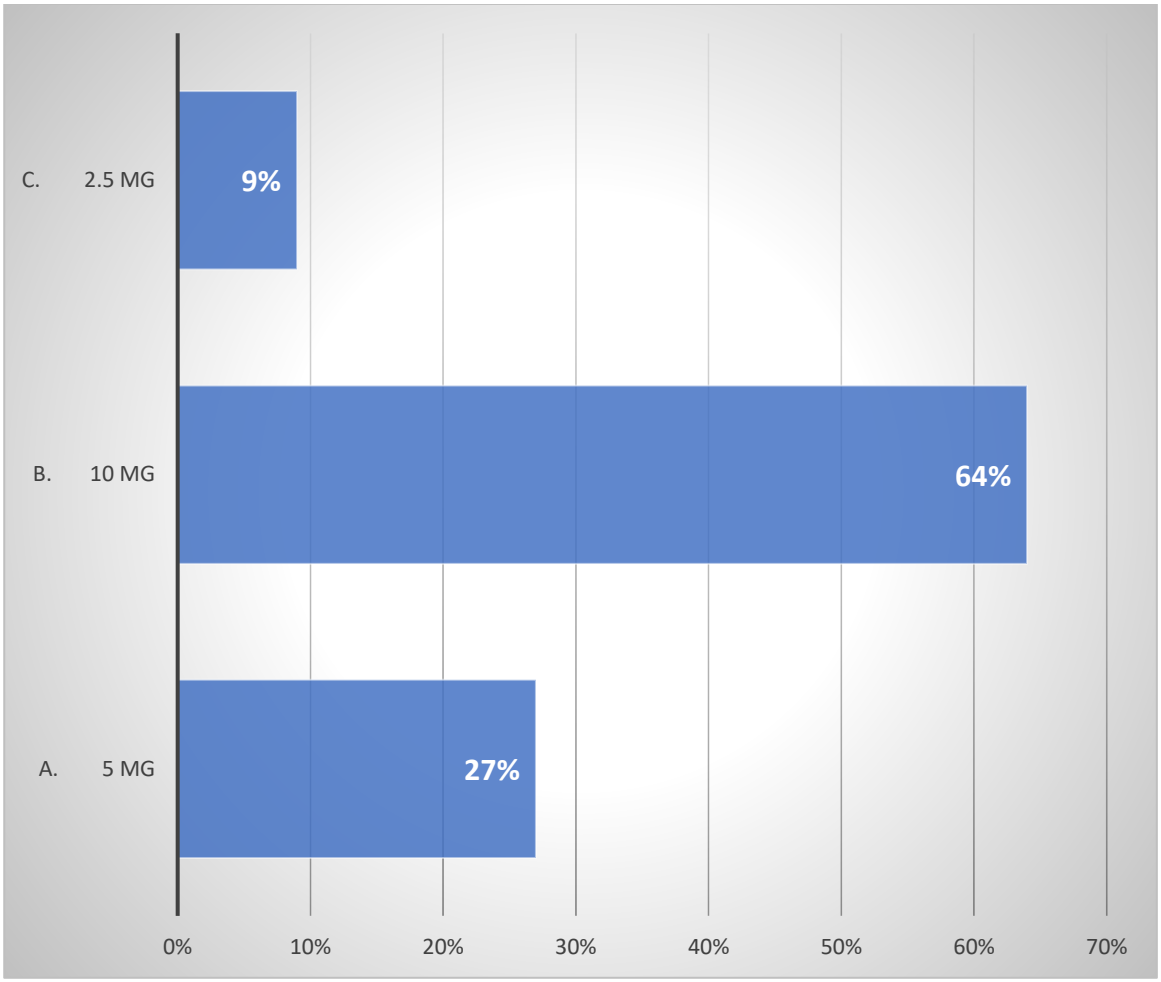
- **5 mg (75%)**: Most clinicians prefer this dose for prevention.
- **2.5 mg (22%)**, **10 mg (3%)**: Fewer select lower or higher doses.

15. In your clinical practice, what dose of Amisulpride Injection do you prefer for treatment of nausea and vomiting in surgical settings?

A. 5 mg

B. 10 mg

C. 2.5 mg



- **10 mg (64%)**: The most common dose for treatment.
- **5 mg (27%)**, **2.5 mg (9%)**: Less common choices.

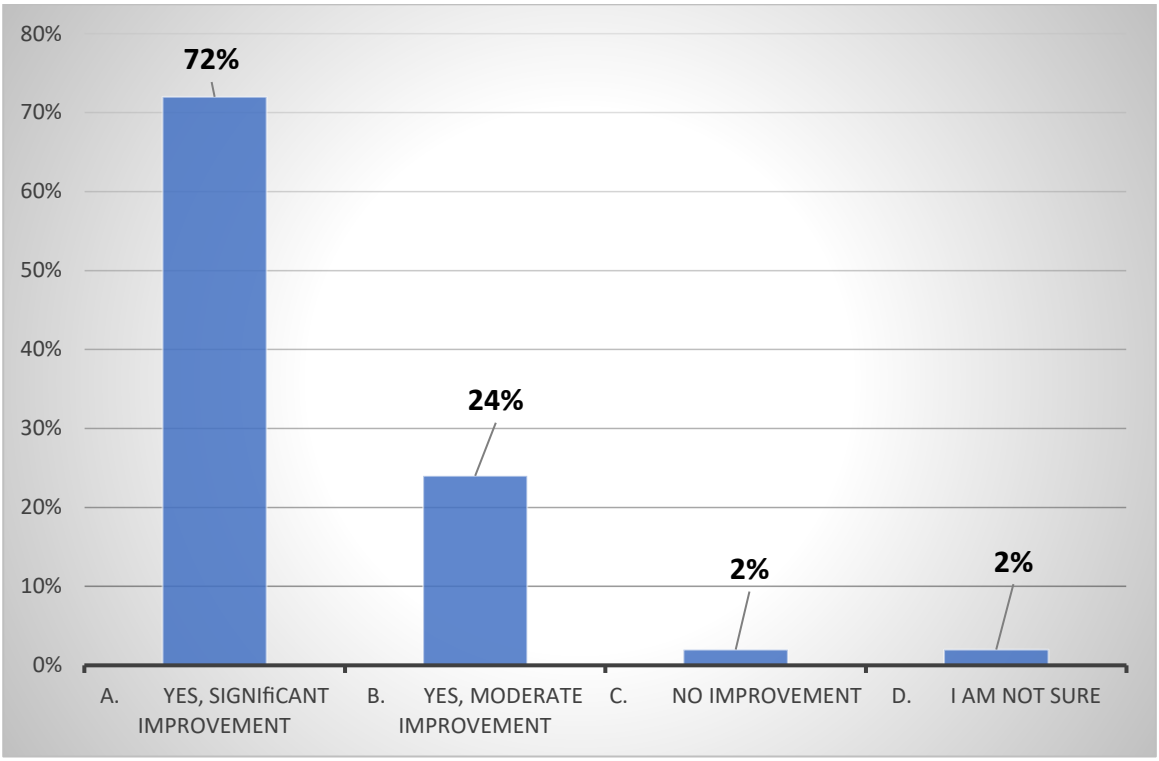
16. In your clinical practice, have you noticed any improvement in patient recovery times with the use of Amisulpride Injection for PONV?

A. Yes, significant improvement

B. Yes, moderate improvement

C. No improvement

D. I am not sure



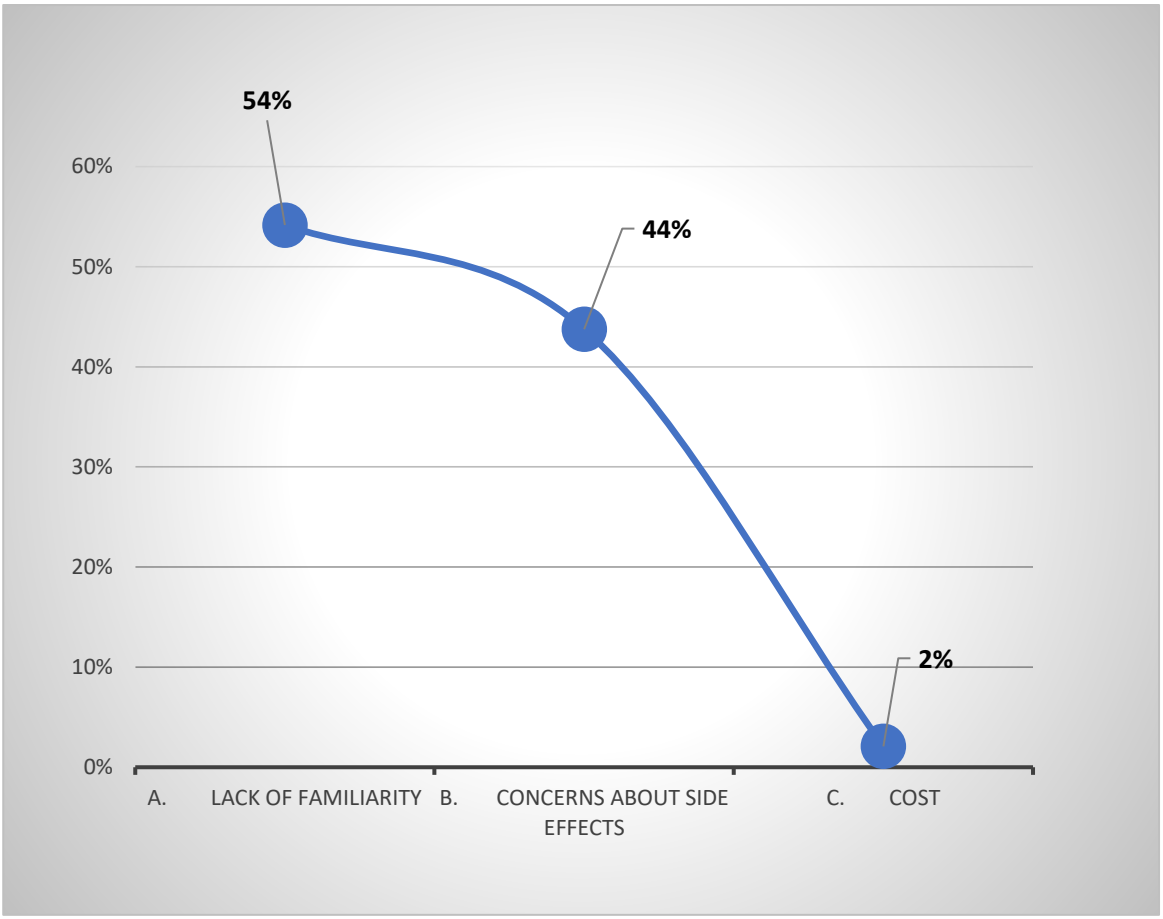
- **Yes, significant improvement (72%)**: Most have observed notable recovery benefits.
- **Yes, moderate improvement (24%), No improvement (2%), Not sure (2%)**: A small number see less impact.

17. In your opinion, what are the main barriers to the use of Amisulpride Injection in your practice?

A. Lack of familiarity

B. Concerns about side effects

C. Cost

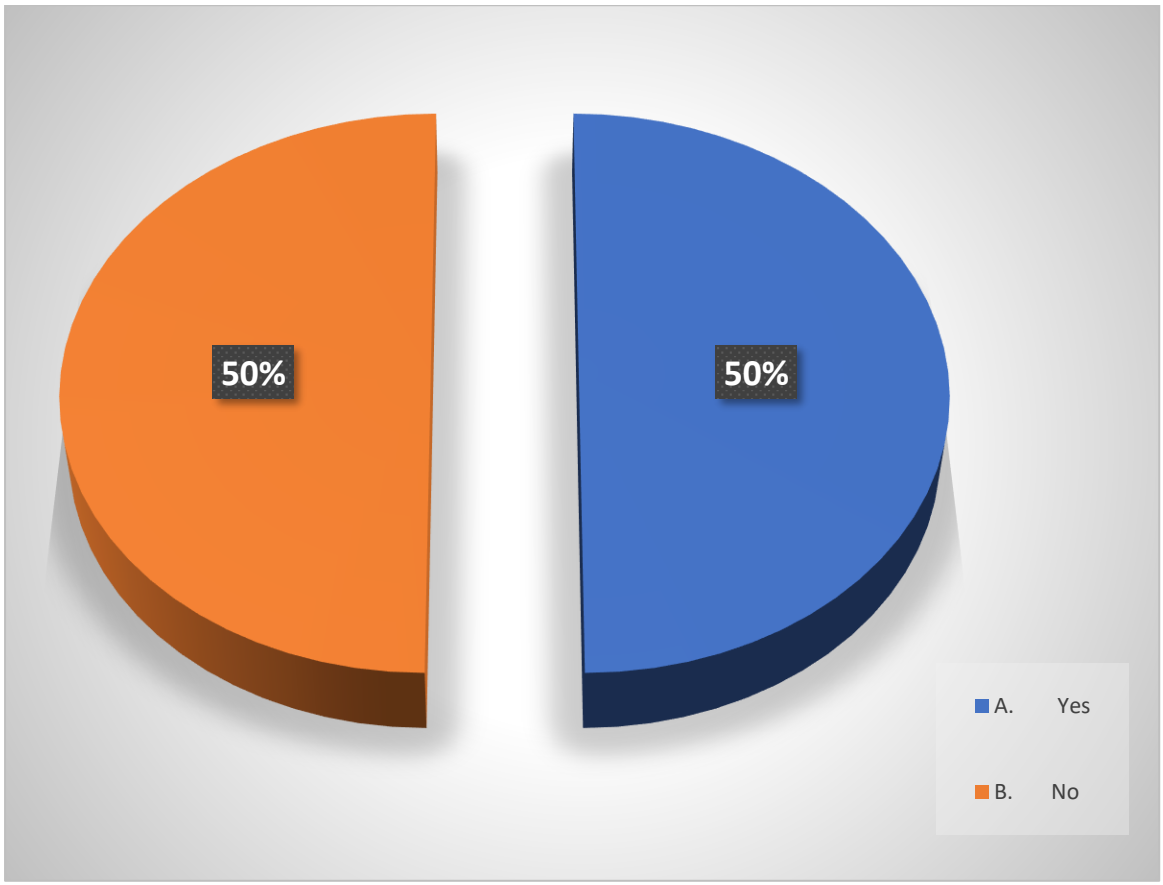


- **Lack of familiarity (54%)**: The main barrier cited.
- **Concerns about side effects (44%)**, **Cost (2%)**: Other barriers are less significant.

18. Are you aware that intravenous amisulpride does not meaningfully prolong the Qtc interval at effective doses?

A. Yes

B. No



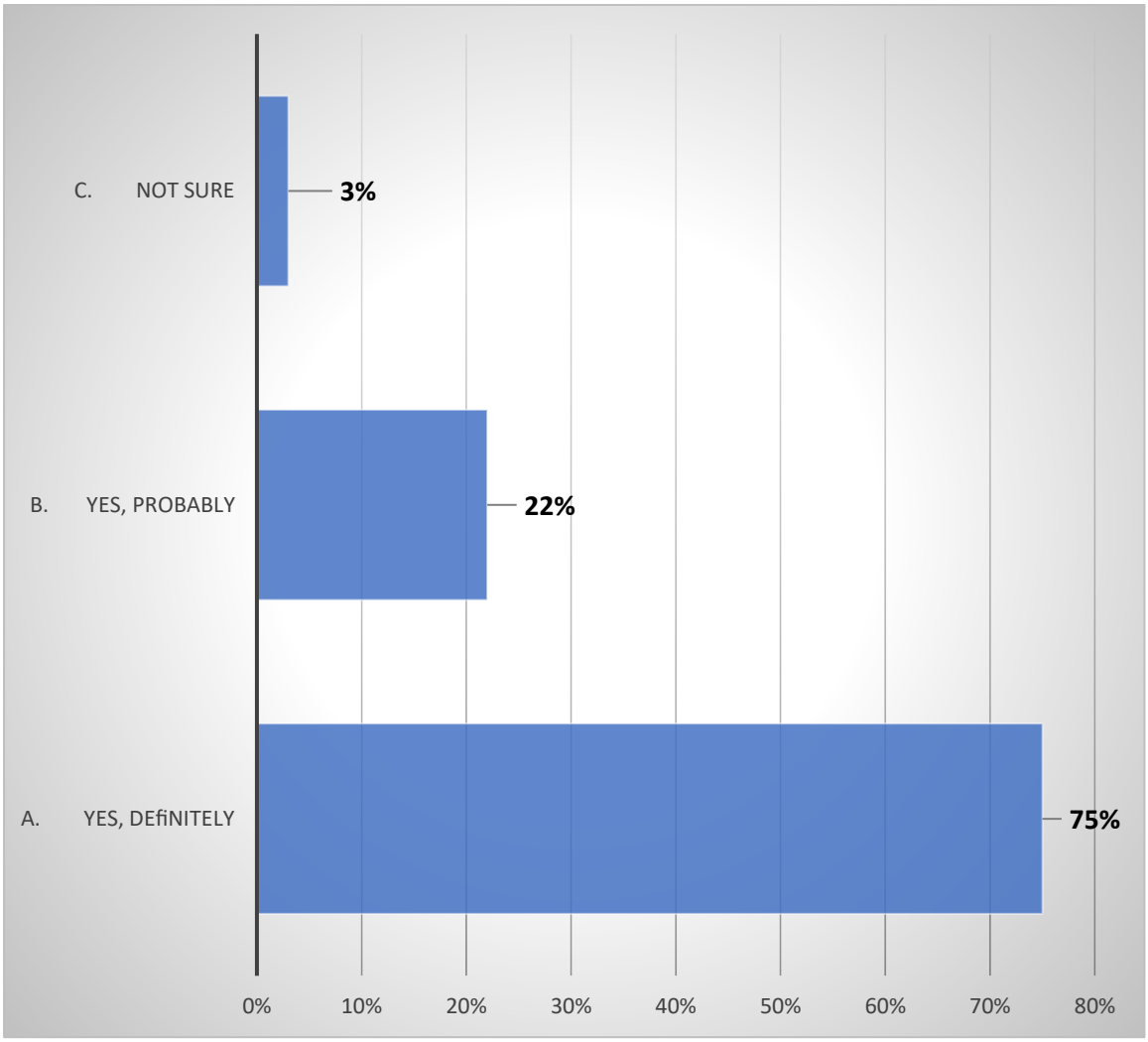
- **Yes (50%)**: Half of clinicians are aware that it does not meaningfully prolong the QTc interval.
- **No (50%)**: The other half are not aware.

19. Do you foresee increasing your use of Amisulpride Injection for management of nausea and vomiting in surgical settings?

A. Yes, definitely

B. Yes, probably

C. Not sure



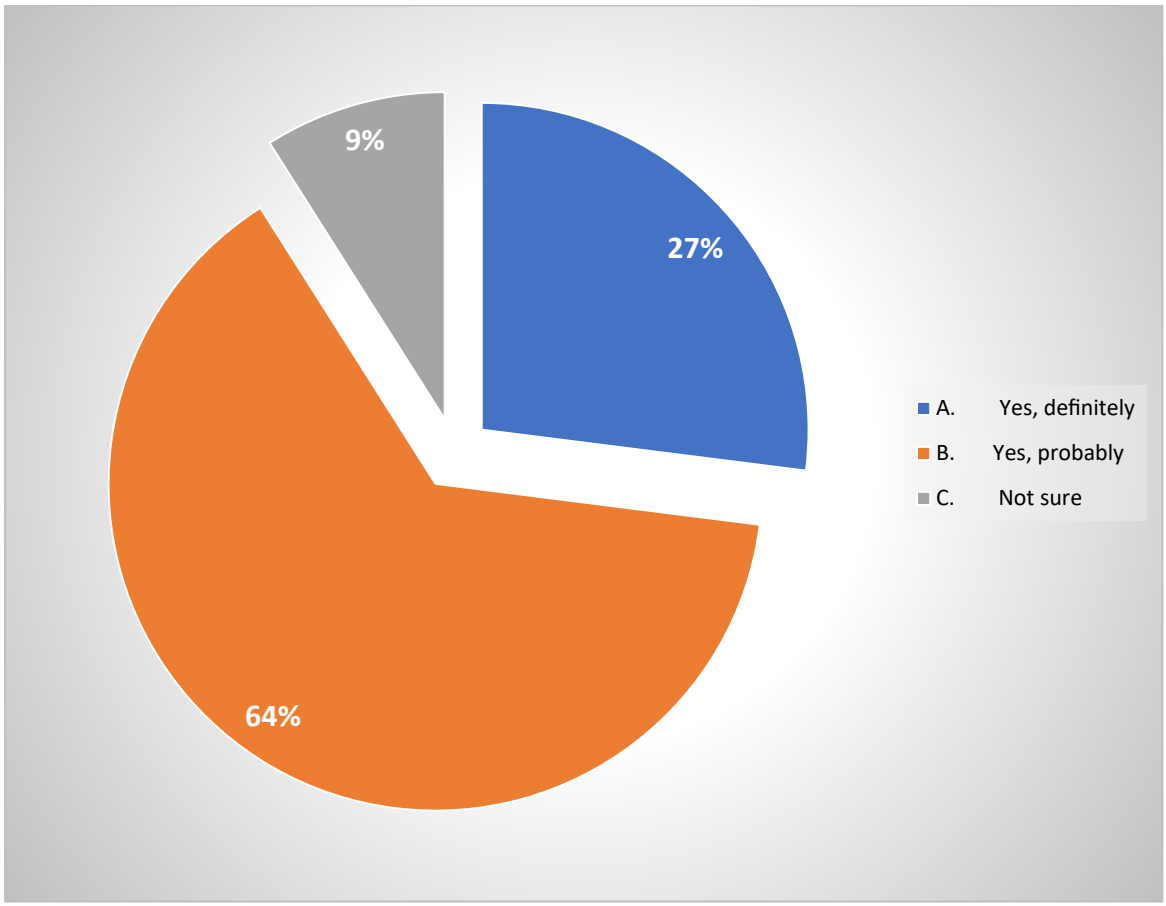
- **Yes, definitely (75%)**: Most foresee increasing its use.
- **Yes, probably (22%)**, **Not sure (3%)**: A few are uncertain.

20. Would you recommend the use of Amisulpride Injection to your colleagues for the prevention and treatment of nausea and vomiting in surgical settings?

A. Yes, definitely

B. Yes, probably

C. Not sure



- **Yes, probably (64%):** A significant majority would recommend it to colleagues.
- **Yes, definitely (27%), Not sure (9%):** Few are unsure about recommendations.

SUMMARY

This study provides valuable insights into the clinical practice of prescribing experiences and opinions on Amisulpride Injection in Postoperative Nausea Management. The majority of clinicians frequently encounter Nausea patients and prescribe this dietary intervention.

- **Familiarity with Amisulpride Injection:** A notable 83% of clinicians reported a lack of familiarity with Amisulpride for managing nausea in surgical contexts, indicating a significant knowledge gap.
- **Effectiveness of Available Therapies:** An overwhelming 98% believe current therapies are effective, showcasing confidence in existing treatment modalities for nausea and vomiting.
- **Single Class of Drug Efficacy:** A consensus exists among 95% of respondents that no single drug class can adequately manage postoperative nausea, underscoring the need for multimodal approaches.
- **Unique Properties of Amisulpride Injection:** 58% of clinicians recognize Amisulpride's unique pharmacological characteristics compared to other dopamine antagonists, suggesting some awareness of its potential benefits.
- **Clinical Use of Amisulpride Injection:** 84% of clinicians have used Amisulpride in practice for postoperative nausea, reflecting its application in clinical settings despite the lack of familiarity.
- **Onset of Action:** Most clinicians (82%) expect Amisulpride to take effect within 30 minutes, aligning with its intended rapid action.
- **Duration of Antiemetic Effect:** 62% believe the antiemetic effect lasts less than 6 hours, with fewer expecting longer durations.

- **Preferred Use of Amisulpride Injection:** 61% prefer using Amisulpride in combination with other antiemetics, while 22% opt for it as monotherapy.
- **Use of Amisulpride Injection with Other Antiemetics:** 62% of clinicians consistently combine Amisulpride with other antiemetics, indicating a trend toward combination therapy.
- **Commonly Combined Antiemetics:** Ondansetron is the most commonly combined antiemetic (80%), followed by metoclopramide and promethazine.
- **First-Line Treatment Frequency:** 51% use Amisulpride as a first-line therapy, while others employ it with varying frequency.
- **Overall Efficacy Rating of Amisulpride Injection:** 49% rate Amisulpride as more effective than other antiemetics, with 25% considering it much more effective.
- **Factors Influencing Use:** The primary influence on Amisulpride's use (65%) is the presence of other antiemetics, followed by type of surgery and patient history.
- **Preferred Dose for Prevention:** The most common preferred dose for prevention is 5 mg (75%).
- **Preferred Dose for Treatment:** For treatment, 10 mg is the most favored dose (64%).
- **Improvement in Patient Recovery Times:** 72% of clinicians observe significant improvements in recovery times with Amisulpride.
- **Barriers to Use of Amisulpride Injection:** The main barrier to use is a lack of familiarity (54%), followed by concerns about side effects (44%).

- **Awareness of QTc Interval Prolongation:** 50% of clinicians are aware that Amisulpride does not significantly prolong the QTc interval.
- **Future Use of Amisulpride Injection:** A promising 75% foresee an increase in the use of Amisulpride in the future.
- **Recommendation to Colleagues:** A substantial 64% would likely recommend Amisulpride to colleagues, indicating potential for wider acceptance and use.

Overall, while Amisulpride shows promise as an effective option for managing postoperative nausea, a significant number of clinicians remain unfamiliar with it. The findings highlight the need for increased education and awareness regarding its efficacy and applications in clinical practice.

DISCUSSION

The survey results highlight a significant gap in familiarity with Amisulpride injection among clinicians, with 83% reporting they are unaware of its use in managing postoperative nausea. Despite this, an overwhelming 98% of respondents believe current therapies are effective, suggesting a strong reliance on established antiemetic treatments. The consensus that no single drug class suffices for nausea management indicates a need for combination therapies, further supported by the majority recognizing the unique properties of Amisulpride compared to other dopamine antagonists.

The clinical use of Amisulpride is promising, with 84% of clinicians having utilized it in practice. However, there remains a perception that its onset of action (within 30 minutes for 82% of respondents) and duration of effect (under 6 hours for 62%) may limit its effectiveness in certain surgical contexts. The preference for combination therapy indicates a trend towards comprehensive approaches in managing postoperative nausea.

CLINICAL RECOMMENDATIONS

- **Increase Awareness:** Educational initiatives should be implemented to enhance clinicians' understanding of Amisulpride and its benefits in nausea management.
- **Promote Combination Therapy:** Encourage the use of Amisulpride in combination with other antiemetics to improve overall efficacy and patient outcomes.
- **Standardize Dosing Protocols:** Develop guidelines for preferred dosages based on survey findings, especially the 5 mg dose for prevention and 10 mg for treatment.
- **Monitor Recovery Times:** Clinicians should document recovery times to further establish the efficacy of Amisulpride in practice.

CONSULTANT OPINION

Expert Consultants generally view Lasmiditan favorably as an effective and safe option for migraine treatment. Its unique action mechanism and non-vasoconstrictor nature are particularly appreciated. Consultants recommend continued research and monitoring to further establish its role in migraine management and to address any emerging concerns.

MARKET OPPORTUNITIES

The landscape for managing postoperative nausea is evolving, with increasing recognition of the need for effective treatment options. Amisulpride injection offers significant market potential due to the following factors:

- **Growing Surgical Volume**: With the rise in elective surgeries, the demand for effective antiemetics is surging.
- **Efficacy and Safety Profile**: Clinicians are seeking alternatives that provide rapid onset and sustained relief without significant side effects, positioning Amisulpride favorably.
- **Awareness and Education**: Increased focus on educating healthcare providers about Amisulpride can enhance its acceptance and usage in clinical practice.
- **Combination Therapy Trends**: The growing trend towards combination therapy in managing nausea allows for better patient outcomes, making Amisulpride an attractive option when paired with other antiemetics.

MARKET POSITIONING

To successfully position Amisulpride injection in the market, the following strategies are essential:

- **Highlight Unique Benefits:** Emphasize Amisulpride's unique pharmacological properties and its efficacy in managing postoperative nausea compared to traditional antiemetics.
- **Target Key Segments:** Focus on surgical departments and anesthesiologists who are looking for reliable antiemetic options, particularly in high-risk surgical settings.

- **Educational Initiatives:** Implement targeted educational campaigns to inform clinicians about the advantages of using Amisulpride, supported by clinical evidence and case studies.
- **Branding and Accessibility:** Establish a strong brand presence that promotes Amisulpride as a leading choice for postoperative nausea management, making it readily accessible to healthcare providers.

REFERENCES

1. Vos T, et al. "Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: A systematic analysis for the Global Burden of Disease Study 2017." Lancet 2018.
2. Lipton RB, Bigal ME, et al. "Migraine prevalence, disease burden, and the need for preventive therapy." Neurology 2007.
3. Ferrari MD, Goadsby PJ. "Triptans and migraine: 25 years of progress." Brain 2017.
4. Tfelt-Hansen P, De Vries P, Saxena PR. "Triptans in migraine: A comparative review of pharmacology, pharmacokinetics and efficacy." Drugs 2000.
5. Kuca B, Silberstein SD, Wietecha L, et al. "Lasmiditan is an oral, centrally acting, selective 5-HT1F receptor agonist for acute treatment of migraine." Cephalalgia 2018.
6. Goadsby PJ, et al. "Advances in understanding the role of serotonin in migraine." Neurology 2017.
7. U.S. Food and Drug Administration (FDA). "FDA approves Lasmiditan for acute treatment of migraine." FDA Press Release, 2019.
8. Brandes JL, Klise S, Krege JH, et al. "Real-world use of Lasmiditan in clinical practice: Findings from early adopters." Headache 2020.
9. Goadsby PJ, Ferrari MD, Lipton RB, et al. "Efficacy of Lasmiditan for the acute treatment of migraine: A phase 3 randomized study." Lancet Neurology 2018.
10. Lipton RB, et al. "Challenges in migraine treatment: Real-world experiences with new therapies." Headache 2021.

11. Tepper SJ, et al. "Understanding the practical challenges in prescribing Lasmiditan." Current Pain and Headache Reports 2020.
12. Dodick DW, Ailani J. "The evolving role of Lasmiditan in the treatment of migraine." Expert Review of Neurotherapeutics 2021.
13. Lipton RB, et al. "Patient perspectives on the use of Lasmiditan for acute migraine relief: A survey study." Headache 2021.
14. Dodick DW, Ailani J. "Real-world evidence on Lasmiditan: Implications for future migraine management." Pain Reports 2021.

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