Review of: "Efficacy of Potassium Competitive Acid Blockers (P-CABs) versus Proton Pump Inhibitors (PPIs) in the First and Second Line Eradication Regimens for Helicobacter pylori in Egyptian Patients"

Wellington Derameau

Potential competing interests: No potential competing interests to declare.

The provided article comprehensively outlines the prevalence of Helicobacter pylori (H. pylori) infection in Egypt and compares the effectiveness of vonoprazan-based therapy versus proton pump inhibitor (PPI)-based therapy for H. pylori eradication in both treatment-naïve and treatment-experienced Egyptian patients. It details the methodology, study population, ethical considerations, study procedures, statistical analysis, and results.

Key Points:

Background: The article effectively provides an in-depth understanding of the prevalence of H. pylori infection in Egypt, emphasizing the impact of geographical location and socioeconomic status on infection rates. It also highlights the complications associated with untreated H. pylori infection, such as peptic ulcer disease and gastric cancer.

Current Challenges: The article rightly identifies the challenges associated with eradicating H. pylori infection, including increasing antibiotic resistance, lack of a gold standard diagnostic method, and limitations of current vaccines.

Rationale for Comparison: The article justifies the comparison between vonoprazan-based therapy and PPI-based therapy, citing the rapid and potent acid-suppressing effects of vonoprazan, which may enhance H. pylori eradication rates compared to PPIs.

Study Design: The study is well-structured, detailing the inclusion and exclusion criteria, ethical considerations, study procedures, and sample size calculations. The non-randomized, controlled prospective design is explicitly stated.

Treatment Arms: The article outlines the treatment arms for both treatment-naïve and treatment-experienced patients, comparing vonoprazan-based therapy and PPI-based therapy, using different antibiotic combinations.

Data Collection and Analysis: Detailed information on data collection, analysis methods, and statistical tools used for comparison between groups is provided, ensuring transparency in the assessment of treatment outcomes.

Results and Discussion: The study presents comprehensive results, including eradication rates, treatment adherence, side effects, and comparisons with previous studies conducted in Japan. It discusses the observed eradication rates in various treatment arms among both treatment-naïve and treatment-experienced groups, emphasizing the trends observed in comparison with other studies.

Conclusions: The conclusions drawn from the study outcomes are clear and supported by the evidence presented. The article notes that eradication rates in P-CABs (vonoprazan) and PPI-based groups are comparable, while treatment-experienced groups exhibit lower eradication rates, potentially indicating increased H. pylori resistance.

Limitations and Future Directions: Although the study provides valuable insights, it acknowledges certain limitations, such as high dropout rates in treatment-experienced groups and potential differences in medication efficacy over time. It suggests exploring further studies considering these aspects.

In summary, the article offers a comprehensive exploration of the effectiveness of vonoprazan-based therapy compared to PPI-based therapy for H. pylori eradication in Egyptian patients, providing valuable data and implications for future research or clinical practice in managing H. pylori infections.