

LIST OF OUR RECENTLY PUBLISHED REVIEW PAPERS

Role of Proton Pump Inhibitors in Cardiac Patients: Guideline Recommendations Versus Practical Approach

Drhiman Kahali¹, Shaahank Desai² and Kranthi Kiran Pobbili³

Abstract
Dual antiplatelet therapy (DAPT) is a cornerstone treatment for patients diagnosed with acute coronary syndrome (ACS) and coronary artery disease (CAD). Although DAPT effectively reduces the occurrence of thrombotic events, it also substantially increases the likelihood of gastrointestinal (GI) bleeding. Proton pump inhibitors (PPIs) are essential for mitigating the GI bleeding risk, yet concerns persist regarding their prolonged use and potential adverse effects. Apart from rabeprazole, PPIs share the hepatic metabolism pathway with clopidogrel, resulting in unfavorable cardiovascular outcomes. The pairing of rabeprazole with clopidogrel emerges as a prudent recommendation, displaying superior efficacy in mitigating major adverse cardiovascular events (MACE) when juxtaposed with other PPIs. This narrative review underscores the complexity of managing PPIs in cardiac patients and emphasizes the importance of tailored approaches based on emerging evidence while providing valuable insights to clinicians navigating this challenging therapeutic landscape.

Keywords
Proton pump inhibitors, dual-antiplatelet therapy, clopidogrel, guidelines, rabeprazole

Received 08 December 2023; accepted 22 April 2024

Background
Dual antiplatelet therapy (DAPT) is recommended in a long-term treatment for patients with acute coronary syndrome (ACS) and coronary artery disease (CAD) who undergo either coronary artery bypass grafting (CABG) or percutaneous coronary intervention (PCI) to prevent thrombotic complications and stent thrombosis. DAPT typically comprises low-dose aspirin along with inhibitors of the P2Y₁₂ receptor such as prasugrel, ticagrelor, or clopidogrel which together have a synergistic anti-thrombotic effect.¹ However, these aspirin-based drugs significantly increase the risk of gastrointestinal (GI) bleeding.^{2,3} To prevent GI bleeding, proton pump inhibitors (PPIs) are advised in addition to DAPT.⁴ In addition, they are commonly utilized for the relief of gastroesophageal reflux disease (GERD) in patients with a dyspeptic upper abdominal pain and gastroesophageal reflux disease (GERD) (Table 1). For such conditions, they

Role of Proton Pump Inhibitors in cardiac patients: Guideline recommendations versus practical approach

- Indian Journal of Clinical Cardiology (SAGE)
- June 8, 2024
- Gastroenterology and Cardiology

Antibiotic associated gut dysbiosis

- Journal of Association of Physicians of India (JAPI)
- 28 June, 2023
- Gastroenterology

REVIEW ARTICLE
Antibiotic-associated Gut Dysbiosis

Balashankar S Ramasubrah¹, Roy Patanar²

Received 19 December 2022; Accepted 28 June 2023

ABSTRACT
The human gut microbiota plays a crucial role in maintaining overall health. However, the widespread use of antibiotics has raised concerns about its impact on the microbial ecosystem. This review explores the multifaceted relationships between antibiotics and gut dysbiosis, highlighting the mechanisms underlying these interactions and their implications for human health. Antibiotics, while invaluable in treating infections, disrupt the gut microbiota by indiscriminately targeting both harmful and beneficial microorganisms. This disturbance leads to a reduction in microbial diversity, altered metabolic production, and compromised immune responses, resulting in a state referred to as dysbiosis. Broad-spectrum antibiotics tend to induce more severe dysbiosis compared to narrow-spectrum agents. Antibiotic-induced dysbiosis has been linked to the onset and progression of various diseases, emphasizing the far-reaching consequences of microbial imbalance. The review highlights various strategies to mitigate the adverse effects of antibiotics on gut health, including probiotics, fecal microbiota transplantation (FMT), and phage therapy, all promising approaches to restore and maintain a balanced gut microbiota.

Journal of Association of Physicians of India (JAPI) | Volume 63 | Issue 6 | June 2023

AN OVERVIEW OF HUMAN GUT MICROBIOTA
The human gut microbiota plays a critical role in supporting the integrity and functionality of the gastrointestinal tract and immunological and metabolic systems.¹ The 10¹⁴ naturally occurring bacterial cells normally present in the human intestine and colon harbor to around 1000–1000 species that have mainly been identified using 16S rDNA techniques (human gut microbiota).² Over 90% of the total bacterial population resides in the large intestine, with the major bacterial phyla being Firmicutes, Bacteroidetes, Actinobacteria, and Proteobacteria.³ The discovery of antibiotics, which completely changed how infections and diseases were

dysbiosis has been linked to various diseases, both mental and physical.^{4,5} This review examines the role of antibiotics in inducing profound changes in the gut microbiome and the potential association of such changes with disease states.

ANTIBIOTIC-ASSOCIATED CHANGES IN THE GUT MICROBIOTA
One of the foremost achievements in medicine of the 20th century was the discovery of antibiotics, which completely changed how infections and diseases were

conditions have been investigated and shown to cause dysbiosis of the gut microbiota. The interaction between gut health and microbes is thought to have a role in the pathogenesis and outcomes of metabolic conditions, autoimmune disorders, infections, and cancer malignancies and is expected to play a role in the pathogenesis and severity of these diseases. Dysbiosis, which is an increase in the composition of antibiotic-resistant microbes, was observed between 2010 and 2015.⁶ It has been estimated that nearly 50% of the time antibiotics are prescribed unnecessarily,^{7,8} and in 2010, it is estimated that the former consumer of antibiotics to human health.⁹ Sometimes, inappropriate and prolonged use of antibiotics against infectious disease is found to be the highest in India,¹⁰ and it is considered a major driver of resistance.¹¹ In a survey by Basu et al.,¹² the doctors participating in the study identified infants and children under 5 years as the most susceptible group for potential negative effects of antibiotics stemming from disruptions in the gut microbiome.¹³ Another age group that is susceptible to developing dysbiosis is the geriatric population. In the elderly, the makeup of the gut microbiome changes, leading to a mild inflammatory state. This transformation can be further modified by various internal and external factors, including the consumption of antibiotics and dietary choices.¹⁴ The appropriate utilization of

REVIEW ARTICLE
Dysbiosis in Irritable Bowel Syndrome

Philip Abraham¹, Nitish Prasad²

Received 28 May 2022; Accepted 29 June 2023

ABSTRACT
The human gut microbiota fosters the development of a dynamic group of microorganisms impacted by diverse variables that include genetics, diet, infection, stress, ingested drugs, such as antibiotics and small intestine bacterial overgrowth (SIBO) as well as the gut microbiota itself. These factors may influence the change in microbial composition, which results in dysbiosis (microbial imbalance) and exposes the gut to pathogenic results. Dysbiosis is inherent to the etiology of inflammatory diseases such as irritable bowel syndrome (IBS) and metabolic diseases, including type 2 diabetes and obesity. IBS exhibits different symptoms: the abdominal pain or discomfort, distension/bloating, and flatulence. To treat IBS, modification of dysregulated gut microbiota can be done using treatment strategies like a low fermentable oligo-saccharides, disaccharides, monosaccharides, and polyols (FODMAP) diet, antibiotics that cannot be absorbed (like rifaximin) and non-antibiotic probiotics, and fecal microbiota transplantation (FMT). The overall imbalance in the existing literature has been demonstrated to be efficacious in the prevention and mitigation of IBS. Additionally, newer curative approaches with serum-derived bovine immunoglobulin (SBI) are an effective option. The focal point of the review paper is the pathophysiology of IBS, mainly dysbiosis and the various factors that cause dysbiosis. Here, we have also discussed the different treatment strategies targeting dysbiosis that effectively treat IBS.

Journal of Association of Physicians of India (JAPI) | Volume 63 | Issue 6 | June 2023

Key Messages
pathogenic species along with their ability to adhere to the gut wall. Dysbiosis is also intestinal microbiota is influenced by closely related to systemic inflammation.^{1,2}

Genetic Factors
Several studies on IBS have explored the

Dysbiosis in Irritable Bowel Syndrome

- Journal of Association of Physicians of India (JAPI)
- 29 June, 2023
- Gastroenterology

Management of chronic constipation in patients with diabetes mellitus

- Indian Journal of Gastroenterology
- 17 December, 2016
- Metabolic disorder

REVIEW ARTICLE
Management of chronic constipation in patients with diabetes mellitus

V. G. M. Prasad¹, Philip Abraham²

Received 24 July 2015; Accepted 27 December 2015
© Indian Journal of Gastroenterology 2016

Abstract
The aim of this review is to provide an overview of the clinical management of chronic constipation in patients with diabetes mellitus. Constipation is a common condition that can be caused by severe or resistant cases. Method: A literature search of published medical reports in English language was performed using PubMed, Scopus, PICO and the Cochrane Database of Systematic Reviews. The search was limited to 2015. A total of 40 citations were identified. Duplicate publications were removed and the abstracts that did not address the topic were excluded.

Keywords: Chronic constipation, Diabetes mellitus, Laxatives

Introduction
The prevalence of diabetes mellitus has reached epidemic proportions in a bulk developed and developing countries, affecting more than 70 million people worldwide [1]. This number