CLINICAL AND DIAGNOSTIC FEATURES OF GASTROESOPHAGEAL REFLUX DISEASE IN PATIENTS WITH ISCHEMIC HEART DISEAS

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Abstract. *Gastroesophageal reflux disease (GERD) and ischemic heart disease (IHD) are common conditions that often coexist, especially in elderly patients. The similarity of clinical symptoms, particularly chest pain, makes differential diagnosis challenging. This study aims to evaluate the clinical manifestations and diagnostic features of GERD in patients with IHD. A comprehensive assessment including clinical evaluation, instrumental diagnostics, and laboratory methods was performed. The results showed that GERD symptoms may mimic angina pectoris, leading to misdiagnosis and inappropriate treatment. Early recognition and accurate diagnosis are essential for effective management and improved patient outcomes. The present study explores the relationship between gastroesophageal reflux disease and ischemic heart disease, with a focus on clinical manifestations and diagnostic challenges. It was found that reflux-related symptoms are frequently observed in patients with cardiac pathology and may imitate or overlap with angina-like pain. In addition, commonly prescribed cardiovascular drugs appear to influence the development of reflux. These findings emphasize the necessity of careful diagnostic differentiation and tailored management strategies.*

Keywords: *ischemic heart disease, gastroesophageal reflux disease, NERD, chest pain, omeprazole test, GERD-Q.*

Introduction.

Ischemic heart disease continues to be one of the most prevalent conditions in modern cardiology. At the same time, gastroesophageal reflux disease is increasingly recognized as a coexisting disorder in these patients. The coexistence of these two conditions creates a complex clinical picture, particularly due to the similarity of chest pain syndromes. As a result, distinguishing between cardiac and esophageal origins of pain becomes a significant clinical challenge.

Gastroesophageal reflux disease (GERD) is a chronic condition characterized by the reflux of gastric contents into the esophagus, leading to symptoms such as heartburn and regurgitation. Ischemic heart disease (IHD) remains one of the leading causes of morbidity and mortality worldwide.

The coexistence of GERD and IHD presents a diagnostic challenge due to overlapping clinical symptoms, especially chest pain. In some cases, GERD may mimic cardiac pain, leading to unnecessary cardiac interventions, while in others, cardiac conditions may be underestimated.

Therefore, studying the clinical and diagnostic features of GERD in patients with IHD is essential for improving diagnostic accuracy and treatment strategies.

Objective.

This study was conducted to identify and analyze the specific clinical and diagnostic features of GERD in individuals diagnosed with ischemic heart disease.

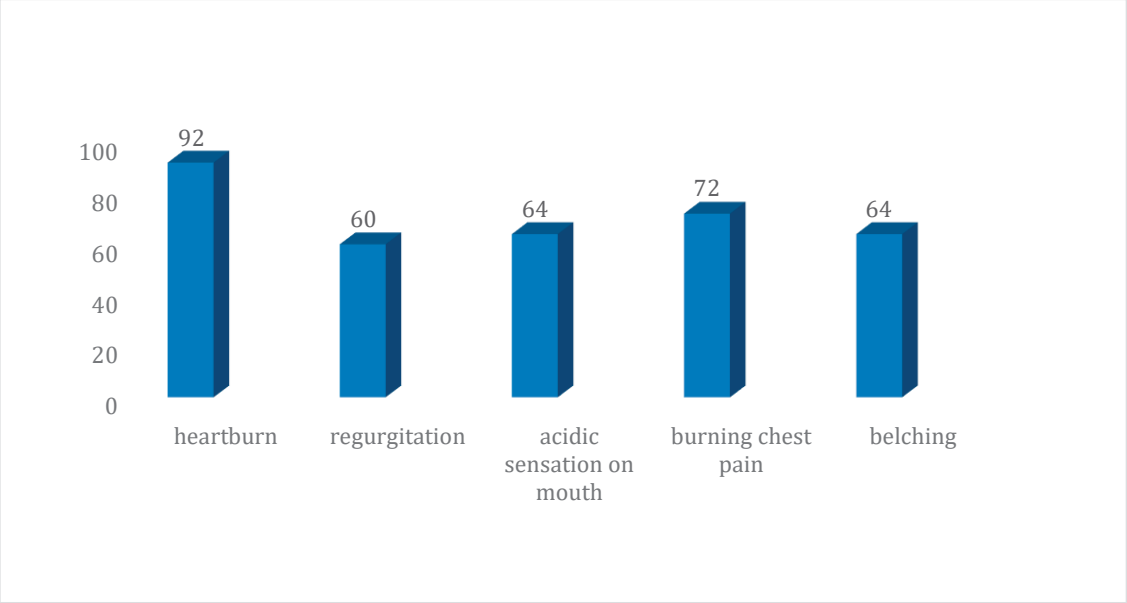
Materials and methods.

The investigation included 50 patients with confirmed ischemic heart disease. For comparative analysis, participants were divided into two groups: those with concomitant GERD and those without reflux pathology.

Each patient underwent a comprehensive assessment, including symptom evaluation, GERD-Q questionnaire, electrocardiographic examination, endoscopic assessment when indicated, and a proton pump inhibitor (omeprazole) test. The results were processed using appropriate statistical methods.

Results.

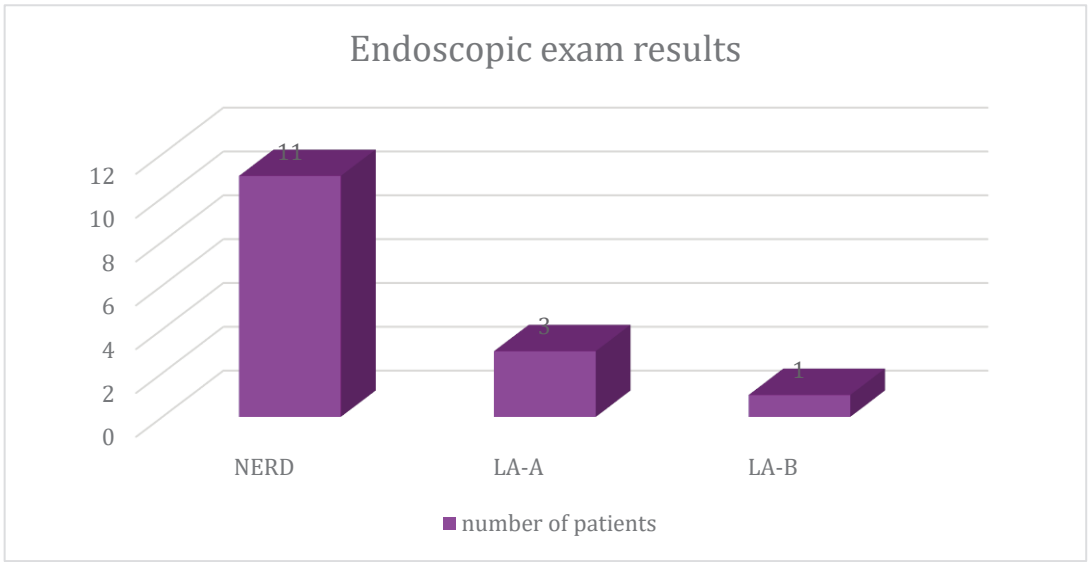
Clinical evaluation revealed that reflux-associated complaints were present in a substantial proportion of patients with ischemic heart disease. Individuals with combined pathology more frequently reported burning-type chest discomfort, persistent heartburn, regurgitation, and nocturnal exacerbation of symptoms.



In contrast, patients without GERD more commonly experienced pain radiating to typical cardiac regions such as the arm or jaw, often triggered by physical or emotional stress.

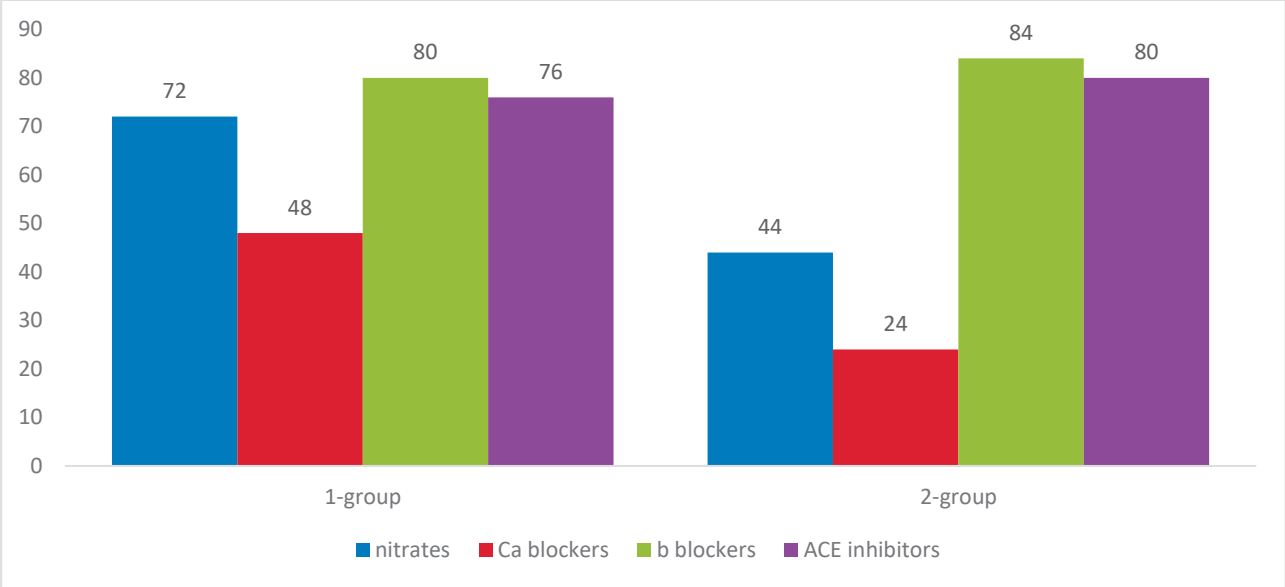
GERD-Q scores confirmed the presence of reflux disease in the first group, whereas no clinically relevant reflux was identified in the control group.

Endoscopic findings demonstrated that most cases were classified as non-erosive reflux disease, while erosive lesions were relatively uncommon and generally mild.



The omeprazole test supported acid-related symptom origin in the majority of cases; however, a subset of patients did not respond, suggesting a multifactorial nature of chest pain.

Additionally, it was observed that the use of nitrates and calcium channel blockers was more common among patients with GERD, indicating a possible pharmacological contribution to reflux development.



Discussion.

The findings suggest that GERD in patients with ischemic heart disease often presents without pronounced endoscopic changes, which may complicate timely diagnosis. The characteristic features of reflux-related pain, including its burning nature and positional dependence, are important clinical indicators.

Nevertheless, incomplete response to acid-suppressive therapy in some cases highlights the persistence of cardiac mechanisms contributing to symptom development.

The overlap between GERD and IHD symptoms poses a significant diagnostic challenge. Chest pain of esophageal origin can closely resemble angina pectoris, leading to diagnostic confusion.

Instrumental methods such as endoscopy and pH monitoring play a crucial role in distinguishing between these conditions. In addition, careful analysis of symptom patterns can aid in differential diagnosis.

Failure to correctly diagnose GERD in IHD patients may lead to persistent symptoms and reduced quality of life.

Conclusion.

The coexistence of GERD and ischemic heart disease represents a clinically important condition characterized by overlapping symptoms. Accurate differentiation between cardiac and non-cardiac chest pain is essential for appropriate management.

Diagnostic tools such as the GERD-Q questionnaire and proton pump inhibitor testing play a key role in identifying reflux-related pathology. Moreover, attention should be paid to the potential impact of cardiovascular medications on esophageal function. GERD is common among patients with ischemic heart disease and may mimic cardiac symptoms. Accurate diagnosis using a combination of clinical and instrumental methods is essential to differentiate between these conditions. Early identification of GERD in IHD patients improves treatment outcomes and prevents unnecessary cardiac interventions. A personalized and multidisciplinary approach is recommended for optimal patient care.

REFERENCES

1. De Giorgi F., Palmiero M., Esposito I., Mosca F., Cuomo R. Pathophysiology of gastroesophageal reflux disease. Acta Otorhinolaryngol Ital. 2006;26(5):241–246.
2. Dent J., El-Serag H.B., Wallander M.A., Johansson S. Epidemiology of gastro-oesophageal reflux disease: a systematic review. Gut. 2005;54(5):710–717.
3. Fass R. Empirical proton pump inhibitor therapy in patients with noncardiac chest pain. Am J Gastroenterol. 2002;97(3):542–548.
4. Fass R., Achem S.R. Noncardiac chest pain: epidemiology, natural course and pathogenesis. J Neurogastroenterol Motil. 2011;17(2):110–123.
5. Fass R., Dickman R. Non-cardiac chest pain: an update. Neurogastroenterol Motil. 2006;18(6):408–417.
6. Flook N., Jones R. Guidelines for the diagnosis and management of gastroesophageal reflux disease. Can J Gastroenterol. 2008;22(1):1–24.
7. Gerson L.B., Fass R. A systematic review of the definitions, prevalence, and response to treatment of nocturnal gastroesophageal reflux disease. Clin Gastroenterol Hepatol. 2009;7(4):372–378.
8. Gyawali C.P., Fass R. Management of gastroesophageal reflux disease. Gastroenterology. 2018;154(2):302–318.
9. Kahrilas P.J., Shaheen N.J., Vaezi M.F. American Gastroenterological Association medical position statement on the management of gastroesophageal reflux disease. Gastroenterology. 2008;135(4):1383–1391.
10. Katz P.O., Gerson L.B., Vela M.F. Guidelines for the diagnosis and management of gastroesophageal reflux disease. Am J Gastroenterol. 2013;108(3):308–328.
11. Kusano M., Shimoyama Y., Sugimoto S. Development of GERD symptoms in patients with ischemic heart disease. J Gastroenterol. 2012;47(6):593–600.
12. Liu Y., Sun X., Li Y. Association between gastroesophageal reflux disease and ischemic heart disease: a systematic review and meta-analysis. Medicine (Baltimore). 2019;98(24):e15845.
13. Pandak W.M., Arezo S., Everett S. Gastroesophageal reflux disease and coronary artery disease: clinical implications. Am J Med. 2002;112(4):292–298.
14. Richter J.E. Chest pain and gastroesophageal reflux disease. J Clin Gastroenterol. 2000;30(3 Suppl):S39–S41.
15. Shaker R., Castell D.O., Schoenfeld P.S., Spechler S.J. Nighttime gastroesophageal reflux disease. Gastroenterology. 2003;124(4):1088–1092.
16. Sifrim D., Zerbib F. Diagnosis and management of patients with reflux symptoms refractory to proton pump inhibitors. Gut. 2012;61(9):1340–1354.
17. Vaezi M.F., Schroeder P.L., Richter J.E. Reproducibility of proximal pH parameters in 24-hour ambulatory esophageal pH monitoring. Am J Gastroenterol. 1997;92(5):825–829.
18. Vakil N., van Zanten S.V., Kahrilas P., Dent J., Jones R. The GERD questionnaire (GERDQ): a tool for the diagnosis of gastroesophageal reflux disease. Clin Gastroenterol Hepatol. 2010;8(8):722–727.
19. Vakil R., van Zanten S.V., Kahrilas P. The Montreal definition and classification of gastroesophageal reflux disease. Am J Gastroenterol. 2006;101(8):1900–1920.
20. Wang W.H., Huang J.Q., Zheng G.F., Xia H.H., Wong W.M., Lam S.K. Head-to-head comparison of H2-receptor antagonists and proton pump inhibitors in the treatment of erosive esophagitis. Am J Gastroenterol. 2005;100(10):2190–2197.