

Review of Research

ISSN: 2249-894X Impact Factor: 5.7631(UIF)

Volume - 12 | Issue - 10 | July - 2023



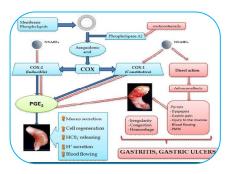
PATHOPHYSIOLOGY OF GASTRITIS, ACUTE AND CHRONIC GASTRITIS, SYMPTOMS, DIAGNOSIS, TREATMENT, COMPLICATIONS, PREVENTION OF GASTRITIS.

Mohan Naidu. K.1, Murali Nath E.1 Sundeep A.2, Ramadevi K.1, Venkat Naveen A.1
Vamsi Krishna P.1 and Mythri P.3

¹College of veterinary science, Proddatur, Andhra Pradesh, India
²Staff, IVRI, Uttar Pradesh, India
³College of veterinary science, Tirupati, andhra Pradesh, India
Email of Corresponding author
muralinathennamuri@gmail.com

ABSTRACT

Gastritis is a common gastrointestinal condition characterized by inflammation of the gastric mucosa. It can manifest as acute or chronic gastritis, with various etiological factors contributing to its development. This review article aims to provide a comprehensive overview of gastritis, including its pathophysiology, classification, clinical features, diagnosis, and management. By understanding the underlying mechanisms and appropriate treatment strategies, healthcare professionals can effectively manage and alleviate the symptoms associated with gastritis.



KEYWORDS: Gastritis, gastric mucosa, inflammation, etiology, pathophysiology, classification, clinical features, diagnosis, management.

INTRODUCTION

Gastritis refers to the inflammation of the gastric mucosa, which lines the stomach's inner surface. It is a prevalent gastrointestinal disorder that can lead to a range of symptoms, including abdominal pain, nausea, vomiting, and indigestion. This article explores the underlying causes, pathophysiological mechanisms, clinical presentations, diagnostic approaches, and treatment modalities associated with gastritis.

Pathophysiology:

The pathophysiology of gastritis involves a complex interplay of various factors, including infection, autoimmune reactions, chemical irritants, and lifestyle choices. Helicobacter pylori infection is the primary cause of gastritis, leading to chronic inflammation. Additionally, nonsteroidal anti-inflammatory drugs (NSAIDs), alcohol, smoking, stress, and certain medical conditions can contribute to gastritis development.

Classification of Gastritis:

Gastritis can be classified into different subtypes based on its etiology and histopathological characteristics. The two main classifications include:

- 1.Acute gastritis
- 2.Chronic gastritis.

1.Acute Gastritis:

Acute gastritis refers to inflammation of the stomach lining that develops suddenly and lasts for a short duration. Here are some key points about acute gastritis from a medical perspective:

Causes:

Acute gastritis can be caused by various factors, including the use of certain medications (such as nonsteroidal anti-inflammatory drugs or NSAIDs), excessive alcohol consumption, bacterial or viral infections (such as Helicobacter pylori or norovirus), stress, autoimmune disorders, and ingestion of corrosive substances.

Symptoms:

Common symptoms of acute gastritis include abdominal pain or discomfort, nausea, vomiting (sometimes containing blood), loss of appetite, bloating, indigestion, and a feeling of fullness.

Diagnosis:

A diagnosis of acute gastritis is typically made based on a combination of the patient's medical history, physical examination, and diagnostic tests. These may include blood tests to check for infection or anemia, stool tests to identify any presence of blood, upper endoscopy (a procedure to examine the stomach lining using a flexible tube with a camera), or a breath test to detect the presence of H. pylori.

Treatment:

The treatment approach for acute gastritis aims to relieve symptoms, promote healing of the stomach lining, and address the underlying cause. This may involve lifestyle modifications such as avoiding irritants (such as alcohol and certain medications), consuming smaller and more frequent meals, and managing stress. Medications like proton pump inhibitors (PPIs) or H2 blockers may be prescribed to reduce stomach acid production and promote healing. In cases of H. pylori infection, antibiotics may be prescribed.

Complications:

Acute gastritis, if left untreated or if the underlying cause persists, can lead to complications such as gastric ulcers, bleeding, or even stomach perforation. These complications may require additional treatment, including endoscopic procedures or surgery.

Prevention:

To prevent acute gastritis, it is important to avoid or minimize known risk factors such as excessive alcohol consumption, prolonged use of NSAIDs without medical supervision, and exposure to irritants or corrosive substances. Maintaining a healthy lifestyle, managing stress, and practicing good hygiene can also help reduce the risk of gastritis.

2.Chronic gastritis:

Chronic gastritis is a long-term inflammation of the stomach lining that can lead to various symptoms and complications.

Chronic gastritis refers to inflammation of the stomach lining that persists for an extended period, usually months or years.

Causes:

The most common causes of chronic gastritis include infection with the bacterium Helicobacter pylori (H. pylori), long-term use of nonsteroidal anti-inflammatory drugs (NSAIDs), excessive alcohol consumption, autoimmune disorders, bile reflux, and certain diseases or medical conditions.

Symptoms:

Chronic gastritis may be asymptomatic in some cases. However, common symptoms include a gnawing or burning pain in the abdomen, bloating, nausea, vomiting, loss of appetite, weight loss, and a feeling of fullness after eating.

Diagnosis:

Diagnosis of chronic gastritis involves a combination of medical history, physical examination, and diagnostic tests such as blood tests, stool tests, breath tests, endoscopy, and biopsy of the stomach lining.

Types:

Chronic gastritis is classified into different types based on the underlying cause. These include H. pylori-associated gastritis, autoimmune gastritis, chemical gastritis (caused by substances like alcohol or NSAIDs), and reactive gastritis (due to underlying diseases or conditions).

Complications:

If left untreated, chronic gastritis can lead to complications such as gastric ulcers, stomach bleeding, anemia (due to chronic blood loss), gastric polyps, and an increased risk of stomach cancer (especially in cases of H. pylori infection).

Treatment:

Treatment for chronic gastritis aims to alleviate symptoms, promote healing of the stomach lining, and eradicate or manage the underlying cause. This may involve lifestyle modifications (such as avoiding trigger foods, reducing alcohol consumption, and quitting smoking), medications (such as proton pump inhibitors, antibiotics, and antacids), and treating any underlying conditions.

Prevention:

Some preventive measures for chronic gastritis include practicing good hygiene to prevent H. pylori infection, avoiding prolonged use of NSAIDs, limiting alcohol consumption, and managing stress levels.

Clinical Features:

The clinical presentation of gastritis can vary depending on the underlying cause and the individual patient. Common symptoms include epigastric pain, nausea, vomiting, bloating, loss of appetite, and indigestion. In severe cases, gastritis may lead to complications such as gastric ulcers, bleeding, or even gastric cancer.

Diagnosis:

Accurate diagnosis of gastritis involves a combination of clinical assessment, patient history, laboratory tests, endoscopic evaluation, and histopathological examination. Tests to identify H. pylori infection, such as serological tests, urea breath tests, and stool antigen tests, are crucial in diagnosing H. pylori-associated gastritis.

Management:

The management of gastritis aims to relieve symptoms, promote healing, and prevent complications. Treatment strategies may include lifestyle modifications, such as dietary changes,

smoking cessation, and alcohol moderation. In H. pylori-associated gastritis, eradication therapy with a combination of antibiotics and proton pump inhibitors is the mainstay of treatment. Symptomatic relief can be achieved through the use of antacids, H2-receptor antagonists, or proton pump inhibitors.

Prevention:

Preventive measures play a vital role in reducing the risk of gastritis. Strategies include practicing good hygiene, avoiding known irritants such as NSAIDs and alcohol, and maintaining a healthy lifestyle. Early detection and treatment of H. pylori infection can also help prevent the development of chronic gastritis and its associated complications.

CONCLUSION:

Gastritis is a common gastrointestinal disorder that can significantly impact a patient's quality of life. Understanding the underlying pathophysiology, accurately diagnosing the condition, and implementing appropriate management strategies are crucial in providing effective care for individuals with gastritis. Further research is necessary to explore emerging treatment options and preventive measures to minimize the burden of gastritis.

REFERENCES:

- 1. Watari J, Chen N, Amenta PS, Fukui H, Oshima T, Tomita T, Miwa H, Lim KJ, Das KM. Helicobacter pylori associated chronic gastritis, clinical syndromes, precancerous lesions, and pathogenesis of gastric cancer development. World J Gastroenterol. 2014 May 14;20(18):5461-73.
- 2. Kulnigg-Dabsch S. Autoimmune gastritis. Wien Med Wochenschr. 2016 Oct;166(13-14):424-430.
- 3. Sugano K, Tack J, Kuipers EJ, Graham DY, El-Omar EM, Miura S, Haruma K, Asaka M, Uemura N, Malfertheiner P., faculty members of Kyoto Global Consensus Conference. Kyoto global consensus report on Helicobacter pylori gastritis. Gut. 2015 Sep;64(9):1353-67.
- 4. Kamimura K, Kobayashi M, Sato Y, Aoyagi Y, Terai S. Collagenous gastritis: Review. World J Gastrointest Endosc. 2015 Mar 16;7(3):265-73.
- 5. Nayak VH, Engin NY, Burns JJ, Ameta P. Hypereosinophilic Syndrome With Eosinophilic Gastritis. Glob Pediatr Health. 2017;4:2333794X17705239.
- 6. Lambrecht NW. Ménétrier's disease of the stomach: a clinical challenge. Curr Gastroenterol Rep. 2011 Dec;13(6):513-7.
- 7. Coati I, Fassan M, Farinati F, Graham DY, Genta RM, Rugge M. Autoimmune gastritis: Pathologist's viewpoint. World J Gastroenterol. 2015 Nov 14;21(42):12179-89.
- 8. Carmel R. Prevalence of undiagnosed pernicious anemia in the elderly. Arch Intern Med. 1996 May 27;156(10):1097-100.
- 9. Mana F, Vandebosch S, Miendje Deyi V, Haentjens P, Urbain D. Prevalence of and risk factors for H. pylori infection in healthy children and young adults in Belgium anno 2010/2011. Acta Gastroenterol Belg. 2013 Dec;76(4):381-5.
- 10. Goh KL, Chan WK, Shiota S, Yamaoka Y. Epidemiology of Helicobacter pylori infection and public health implications. Helicobacter. 2011 Sep;16 Suppl 1(0 1):1-9.
- 11. Sipponen P, Maaroos HI. Chronic gastritis. Scand J Gastroenterol. 2015 Jun; 50(6):657-67.
- 12. Azuma T, Yamakawa A, Yamazaki S, Fukuta K, Ohtani M, Ito Y, Dojo M, Yamazaki Y, Kuriyama M. Correlation between variation of the 3' region of the cagA gene in Helicobacter pylori and disease outcome in Japan. J Infect Dis. 2002 Dec 01;186(11):1621-30.
- 13. Dixon MF, Genta RM, Yardley JH, Correa P. Classification and grading of gastritis. The updated Sydney System. International Workshop on the Histopathology of Gastritis, Houston 1994. Am J Surg Pathol. 1996 Oct;20(10):1161-81.
- 14. Del Moral-Hernández O, Castañón-Sánchez CA, Reyes-Navarrete S, Martínez-Carrillo DN, Betancourt-Linares R, Jiménez-Wences H, de la Peña S, Román-Román A, Hernández-Sotelo D, Fernández-Tilapa G. Multiple infections by EBV, HCMV and Helicobacter pylori are highly frequent

Medicine (Baltimore). 2019 Jan;98(3):e14124.

in patients with chronic gastritis and gastric cancer from Southwest Mexico: An observational study.

- 15. de Souza CRT, Almeida MCA, Khayat AS, da Silva EL, Soares PC, Chaves LC, Burbano RMR. Association between *Helicobacter pylori*, Epstein-Barr virus, human papillomavirus and gastric adenocarcinomas. World J Gastroenterol. 2018 Nov 21;24(43):4928-4938.
- 16. Rugge M, Genta RM. Staging and grading of chronic gastritis. Hum Pathol. 2005 Mar;36(3):228-33.
- 17. Varbanova M, Frauenschläger K, Malfertheiner P. Chronic gastritis an update. Best Pract Res Clin Gastroenterol. 2014 Dec;28(6):1031-42.
- 18. Rodriguez-Castro KI, Franceschi M, Miraglia C, Russo M, Nouvenne A, Leandro G, Meschi T, De' Angelis GL, Di Mario F. Autoimmune diseases in autoimmune atrophic gastritis. Acta Biomed. 2018 Dec 17;89(8-S):100-103.
- 19. Neumann WL, Coss E, Rugge M, Genta RM. Autoimmune atrophic gastritis--pathogenesis, pathology and management. Nat Rev Gastroenterol Hepatol. 2013 Sep;10(9):529-41.
- 20. Hershko C, lanculovich M, Souroujon M. A hematologist's view of unexplained iron deficiency anemia in males: impact of Helicobacter pylori eradication. Blood Cells Mol Dis. 2007 Jan-Feb;38(1):45-53.
- 21. Ricci C, Holton J, Vaira D. Diagnosis of Helicobacter pylori: invasive and non-invasive tests. Best Pract Res Clin Gastroenterol. 2007;21(2):299-313.
- 22. Venerito M, Varbanova M, Röhl FW, Reinhold D, Frauenschläger K, Jechorek D, Weigt J, Link A, Malfertheiner P. Oxyntic gastric atrophy in Helicobacter pylori gastritis is distinct from autoimmune gastritis. J Clin Pathol. 2016 Aug;69(8):677-85.
- 23. Alonso N, Granada ML, Soldevila B, Salinas I, Joaquin C, Reverter JL, Juncà J, Martínez Cáceres EM, Sanmartí A. Serum autoimmune gastritis markers, pepsinogen I and parietal cell antibodies, in patients with type 1 diabetes mellitus: a 5-year prospective study. J Endocrinol Invest. 2011 May;34(5):340-4.
- 24. di Mario F, Cavallaro LG. Non-invasive tests in gastric diseases. Dig Liver Dis. 2008 Jul;40(7):523-30.
- 25. Yang JC, Lu CW, Lin CJ. Treatment of Helicobacter pylori infection: current status and future concepts. World J Gastroenterol. 2014 May 14;20(18):5283-93.
- 26. Chen WC, Warner RRP, Harpaz N, Zhu H, Roayaie S, Kim MK. Gastric Neuroendocrine Tumor and Duodenal Gastrinoma With Chronic Autoimmune Atrophic Gastritis. Pancreas. 2019 Jan;48(1):131-134.
- 27. Haruma K, Kamada T, Manabe N, Suehiro M, Kawamoto H, Shiotani A. Old and New Gut Hormone, Gastrin and Acid Suppressive Therapy. Digestion. 2018;97(4):340-344.