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Acute and Chronic Gastritis and the Role of Proper Nutrition

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Abstract: Acute and chronic gastritis are among the most common diseases of the digestive system and are characterized by inflammation of the gastric mucosa caused by various external and internal factors. Improper dietary habits, Helicobacter pylori infection, alcohol consumption, certain medications, and unhealthy lifestyle factors play an important role in the development and progression of these conditions. This article analyzes the clinical characteristics, etiological factors, and pathological mechanisms of acute and chronic gastritis and highlights the importance of proper nutrition in their prevention and management. Special attention is given to the role of therapeutic dietary tables, particularly Diet No.1, which is widely used in the treatment of gastritis and gastric ulcer disease. The study also discusses the impact of aggressive foods, irregular meal patterns, and nutritional deficiencies on gastric mucosal damage. Based on the analysis of scientific literature and epidemiological data, the article emphasizes that balanced nutrition and adherence to dietary recommendations significantly contribute to reducing inflammation, improving digestive function, and preventing complications associated with gastritis. The findings underline the importance of diet therapy as an essential component in the comprehensive management of gastritis and in maintaining overall gastrointestinal health.

Keywords: healthy nutrition, prevention, digestive system, acute and chronic gastritis, dietary tables.

Introduction

Gastritis is a polyetiological disease characterized by inflammation of the gastric mucosa and develops under the influence of various external and internal adverse factors. Its development is associated with the following exogenous factors: disprution of dietary habits (irregular meals; excessive quantity or poor quality of food; overeating, especially in the evening); abuse of alcoholic beverages; excessive use of spicy seasonings in food preparation; failure to follow sanitary–hygienic rules in storing food products and ingredients, leading to toxicoinfections caused by Salmonella, Shigella, Staphylococcus, and others; food allergies (to eggs, spices, fruits, raspberries, strawberries, etc.); and the effects of certain medications (acetylsalicylic acid, corticosteroids, pyrazolone derivatives, antibiotics, and cardiac glycosides)[1].

Endogenous factors also play an important role, including infections (influenza, pneumonia), autointoxication (renal and hepatic failure), and tissue breakdown in the body (burns, frostbite, radiation exposure).

The clinical manifestations of acute gastritis depend on its severity and clinical course. In acute exogenous superficial (simple) gastritis, patients commonly experience nausea; vomiting of mucus and undigested food, sometimes mixed with bile; a feeling of heaviness or indigestion in the epigastric region; abdominal pain; an unpleasant taste in the mouth; general weakness; pallor of the skin; and a coated tongue[2,3].
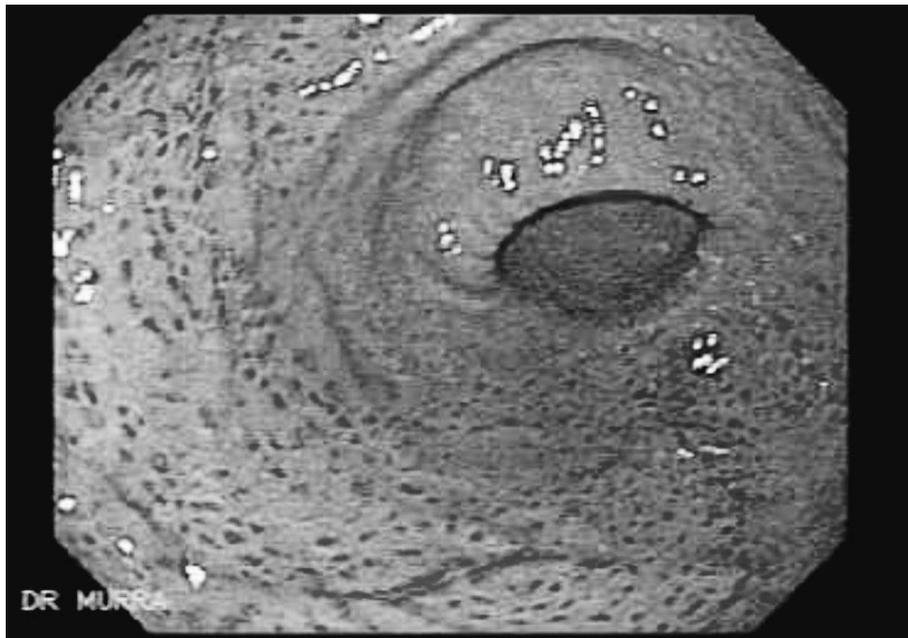
Picture 1. Endoscopy of Acute Gastritis.

A strong link has been established between H. pylori and a diverse spectrum of gastroduodenal diseases, including gastric and duodenal ulceration, gastric adenocarcinoma, mucosa-associated lymphoid tumor (MALToma), and non-Hodgkin lymphoma of the stomach.

Chronic gastritis is a chronic disease characterized by inflammation and dystrophic changes of the gastric mucosa, leading to impaired physiological regeneration, glandular atrophy, and alterations in its motor, secretory, and endocrine (incretory) functions. It is a polyetiological disease, and the following factors play an important role in its development:

1. Alimentary factors –disruption in the diet regimen and poor quality of food intake.
2. Helicobacter pylori infection (in the pyloric region).
3. Autoimmune and hereditary factors (HLA-Bg, DR3, DR4 antigens).
4. Bile reflux (duodenal motility disorders, pyloric sphincter insufficiency).
5. Certain medications (nonsteroidal anti-inflammatory drugs and rauwolfia preparations).

Currently, in clinical practice, the Sydney classification of chronic gastritis, adopted in Houston in 1996, is used.

The clinical presentation of chronic gastritis depends on its type, the morphological changes in the gastric mucosa, and the state of its secretory function.

Chronic autoimmune (Type A) gastritis is more common in middle-aged and elderly patients. The disease is characterized by atrophic processes in the fundal region of the stomach. Patients complain of epigastric pain, a feeling of heaviness after meals, belching, nausea, decreased appetite, and flatulence.

Atrophic multifocal (Type A and B) gastritis is usually associated with long-term improper nutrition or infectious factors such as Helicobacter pylori[4]. Clinically, it presents with epigastric pain, dyspeptic symptoms (a feeling of heaviness, belching, unpleasant taste in the mouth, nausea), intestinal dyspepsia (flatulence, diarrhea), and weight loss. In the early stages, symptoms may be mildly expressed. Reactive (Type C) – reflux gastritis develops as a result of bile reflux into the stomach. Patients complain of epigastric pain, heartburn, a bitter taste in the mouth, vomiting, weight loss, and signs of anemia. It is often observed after surgical procedures.

Lymphocytic gastritis is more frequently detected during endoscopic and histological examinations. Clinical manifestations are usually mild to moderate and include epigastric discomfort, dyspepsia, and sometimes erosions.

Giant hypertrophic gastritis is rare and is more commonly associated with allergic conditions. Patients complain of epigastric pain, postprandial heaviness, nausea, vomiting, diarrhea, and decreased appetite. Significant weight loss may occur[5,6]. A decrease in serum protein levels and the development of peripheral edema are also possible.

In general, the severity of clinical manifestations in chronic gastritis is closely related to decreased or increased gastric secretion, and the disease is typically characterized by a prolonged and recurrent course.

Picture 2. One of the causative factors of chronic gastritis is Helicobacter pylori (H. pylori) infection.
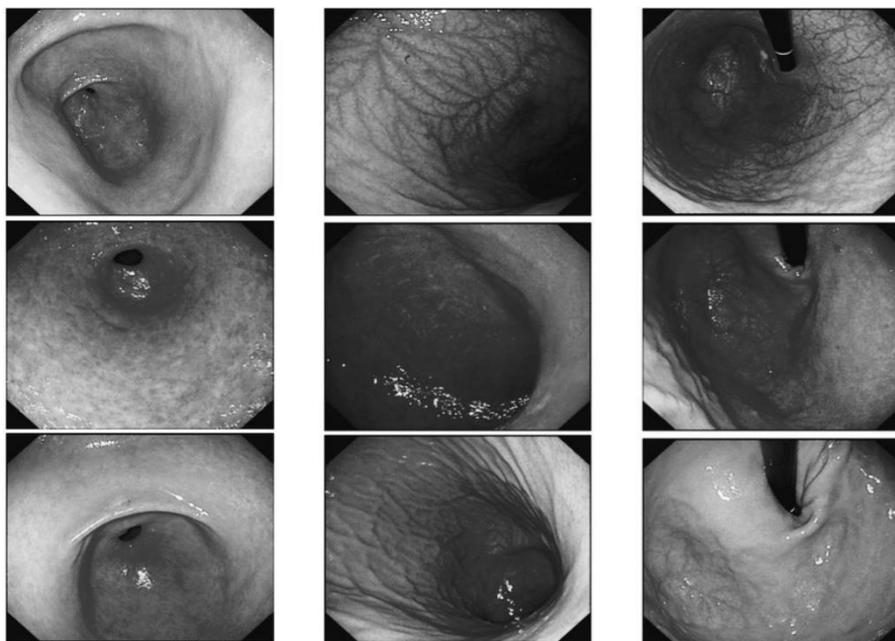
Picture 3. Endoscopy of chronic gastritis

Chronic gastritis images with white-light endoscopy. Autoimmune gastritis (AIG) images under endoscopy (top row); type B gastritis images under endoscopy (middle row); chronic non-atrophic gastritis (CNAG) images under endoscopy (bottom row). Gastric antrum images under endoscopy

(left column); gastric body images under endoscopy (middle column); gastric fundus images under endoscopy (right column)[7].

Results

A comprehensive analysis of studies conducted between 1980 and 2022 and published in the PubMed database screened a total of 16,976 articles. Of these, 1,748 articles from 111 countries were selected for the final analysis.

According to the collected data, the global crude prevalence of Helicobacter pylori infection has shown a decreasing trend over time. Before 1990, the overall prevalence among adults was 52.6% (95% confidence interval [CI], 49.6%–55.6%), whereas in 2015–2022, this figure decreased to 43.9% (95% CI, 42.3%–45.5%).

Nevertheless, during 2015–2022, the prevalence of infection among children and adolescents remained high, at 35.1% (95% CI, 30.5%–40.1%).

Analysis of secular trends and multivariable regression showed that over the last three decades, the global prevalence of H. pylori infection among adults decreased by 15.9% (95% CI, −20.5% to −11.3%). However, during the same period, no significant decrease was observed among children and adolescents.

In our country, Helicobacter pylori is also widely prevalent, with Cag-positive strains detected in 80% of patients with gastrointestinal diseases. By region, the highest prevalence was found in Khorezm region (79%), while the lowest was in Tashkent city (60%).

Discussion

The findings of this study confirm that both acute and chronic gastritis are closely associated with a variety of etiological factors, among which dietary habits play a particularly significant role. Modern lifestyles often lead to irregular meal patterns, consumption of fast food, excessive intake of spicy, fried, and fatty foods, and frequent use of alcohol and carbonated beverages. Such dietary behaviors negatively affect the gastric mucosa and weaken its protective barrier. As a result, the mucosal lining becomes more vulnerable to irritation and inflammation. In addition, overeating, eating late at night, and consuming very hot or very cold foods may further disrupt the physiological functioning of the stomach[8,9]. These harmful nutritional habits gradually contribute to the development of acute gastritis and, if persistent, may lead to chronic inflammation of the gastric mucosa. Therefore, maintaining regular meal schedules and consuming nutritionally balanced food are essential factors in preventing the onset and progression of gastritis.

In addition to dietary factors, infection with *Helicobacter pylori* is considered one of the most important causes of chronic gastritis worldwide. Numerous clinical and epidemiological studies have demonstrated that this bacterium colonizes the gastric mucosa and causes persistent inflammation. Over time, chronic infection may lead to structural damage to the gastric lining, including mucosal atrophy and intestinal metaplasia[10,11]. These pathological changes significantly increase the risk of serious complications such as peptic ulcer disease, mucosa-associated lymphoid tissue (MALT) lymphoma, and gastric cancer. Although global research indicates that the prevalence of *Helicobacter pylori* infection has gradually declined over the past decades due to improved hygiene and medical treatment, the infection remains widespread in many developing countries. Factors such as poor sanitation, overcrowding, and limited access to healthcare services contribute to the persistence of this infection. Therefore, early detection and appropriate eradication therapy are crucial for reducing the incidence of chronic gastritis and its complications.

The results of the study also emphasize the significant role of therapeutic nutrition in the management and treatment of gastritis. Diet therapy is considered one of the most effective non-

pharmacological methods for reducing gastric inflammation and improving digestive function. In clinical practice, therapeutic diets such as Diet No.1 are widely recommended for patients suffering from gastritis and gastric ulcer disease[12]. This diet focuses on providing mechanically, chemically, and thermally gentle food that does not irritate the gastric mucosa. The consumption of soft, boiled, or steamed foods helps reduce the workload of the digestive system and promotes the healing of damaged mucosal tissues. At the same time, foods that strongly stimulate gastric secretion or cause irritation—such as spicy, fried, smoked, and highly acidic products—should be avoided. Maintaining a balanced intake of proteins, fats, and carbohydrates is also essential for supporting tissue regeneration and maintaining overall metabolic balance[13].

Furthermore, adherence to proper dietary recommendations contributes not only to the treatment of gastritis but also to its prevention. Regular consumption of healthy and easily digestible foods strengthens the protective mechanisms of the stomach and improves overall gastrointestinal function. Nutritional therapy, when combined with medical treatment and lifestyle modifications, can significantly reduce the recurrence of gastritis and improve patients' quality of life[14,15. Patients who follow recommended dietary guidelines experience fewer symptoms such as abdominal pain, nausea, bloating, and dyspepsia. Therefore, raising awareness about healthy nutrition and educating patients about proper dietary habits should be considered an important component of public health strategies aimed at preventing digestive system diseases.

Conclusion

In patients with acute and chronic gastritis, dietary habits are mostly not within the recommended norms, particularly due to the consumption of aggressively acting foods such as salty, smoked, fatty, fried, and spicy dishes, as well as alcoholic beverages.

Diet No. 1 is prescribed for gastritis and stomach ulcers. In the early stages of gastric ulcer, when symptoms are mild, and also in the later stages of treatment, a mechanically gentle diet is recommended.

Chemical Characteristics: foods that do not strongly stimulate gastric secretion and are not classified as irritating or heavy foods. Purpose: to reduce inflammation of the stomach and intestines, to accelerate ulcer healing, to normalize gastric secretory and motor functions, to provide moderate chemical, mechanical, and thermal sparing while maintaining adequate nutrition

General Description of the diet should be physiologically adequate in energy value and contain sufficient proteins, fats, and carbohydrates. Reduced gastric secretion may impair digestion and absorption of food products.

Food is mainly prepared as pureed dishes, boiled in water or steamed. Some foods (for example, meat and fish) are consumed boiled. Salt intake is limited. Very cold and very hot foods should be excluded.

Chemical Composition and Energy Value: proteins: 90–100 g (60% from animal sources), fats: 80–90 g (30% from plant sources), carbohydrates: 400–420 g, energy value: 11.7–12.6 MJ (2800–3000 kcal), sodium chloride: 10–12 g, free fluids: 1.5 liters

Meal Frequency is 5–6 times per day.

Foods to Avoid: Cream-removed milk, meat and fish broths, mushroom and vegetable soups, rye bread fatty dairy products, canned duck, goose, and meat products, fatty and salted fish, highly acidic, spicy, and salty cheeses and dairy products, fried eggs, pearl barley, corn, legumes ,whole pasta, vegetables such as cabbage, radish, turnip, spinach, onion, cucumber, pickled and salted vegetables, spicy and salty snacks, sour and unripe fruits, dried fruits, chocolate, ice cream, tomato sauces, mustard and pepper, carbonated drinks, kvass, black coffee.

Healthy nutrition plays a crucial role in strengthening human health, enhancing immunobiological resistance, and supporting an active lifestyle. Therefore, studying dietary habits is important not only in healthy individuals but also in patients, as it serves as a key diagnostic indicator in the onset and progression of diseases and is essential for determining appropriate dietotherapy.

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