

Progress of Research on the Effect of Dietary Care on Patients with Gastritis and Gastric Ulcers

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Abstract: Gastritis gastric ulcer is a common disease of the digestive system, which has a serious impact on the quality of life and health of affected individuals. Dietary care is one of the important measures to treat and prevent gastritis gastric ulcers. This paper reviews the research progress on the impact of dietary care on patients with gastritis and gastric ulcers, including dietary behavioral intervention, dietary habit cultivation, dietary hygiene education, and nutritional support. Studies have shown that rational dietary care was able to improve the clinical symptoms of patients, regulate the intestinal microbial community, anti-inflammatory, antioxidant, and other pathways to improve the pathophysiological state of patients with gastritis and gastric ulcer and prevent recurrence. Therefore, dietary care is of great significance to patients with gastritis and gastric ulcers.

Keywords: Dietary care; Gastritis; Gastric ulcer; Research progress

Online publication: February 26, 2024

1. Introduction

Gastritis gastric ulcer is a common disease of the digestive system, which has a serious impact on the quality of life and health of affected individuals^[1]. With the constant evolution and lifestyle changes, the incidence of gastritis and gastric ulcers is increasing yearly, and dietary care has garnered attention as one of the most important measures for the treatment and prevention of gastritis and gastric ulcers^[2]. In this paper, we reviewed the research progress on the effect of dietary care on patients with gastritis and gastric ulcers, to provide a reference for clinical treatment and prevention.

2. Pathogenesis and symptoms of gastritis and gastric ulcers

Gastritis refers to inflammation of the gastric mucosa caused by different etiologic factors, often accompanied by epithelial damage and cell proliferation. It is one of the most common diseases of the digestive tract and is generally divided into two categories: acute gastritis and chronic gastritis^[3].

The pathogenesis of acute gastritis mainly includes (1) biological factors including various pathogenic

bacteria and toxins, such as Salmonella, *Escherichia coli*, halophilic bacteria, as well as *Staphylococcus aureus* toxin and botulinum toxin; (2) physical and chemical factors including strong tea, strong coffee, spicy food, alcohol, extreme food temperatures and textures etc. can damage the gastric mucosa, destroying the mucosal barrier and resulting in gastric mucosal inflammation. The main symptoms of acute gastritis include epigastric pain, bloating, nausea, vomiting, and appetite loss. In severe cases, symptoms such as vomiting blood, dehydration, and shock may occur. The pathogenesis of chronic gastritis mainly includes (1) *Helicobacter pylori* (HP) infection; (2) dietary and environmental factors such as high concentrations of ethanol can directly damage the gastric mucosal barrier, causing epithelial cell damage, mucosal hemorrhage, and erosion, leading to acute gastritis. Symptoms of chronic gastritis are the same as acute gastritis. It may also be accompanied by indigestion, belching, and acid reflux. In severe cases, symptoms such as anemia, emaciation, dyspepsia, and even malignancy may occur.

The causes of gastric ulcers mainly include HP infection ^[4], long-term use of non-steroidal anti-inflammatory drugs, and long-term smoking. In addition, gastric mucosal damage caused by irregular diet, consumption of spicy and irritating foods, long-term alcohol consumption, or medication may also result in gastric ulcers. Symptoms of gastric ulcer mainly include (1) epigastric pain that mostly appears within one hour after a meal and is gradually relieved after one to two hours; (2) stomach acidity, acid reflux, and gastric distension; (3) loss of appetite, anorexia of greasiness, nausea, and vomiting; (4) weight loss due to appetite loss, gastrointestinal dyspepsia maldigestion, and malabsorption; (5) gastric bleeding and gastric perforation in severe cases.

3. Dietary care

3.1. Dietary habit cultivation

Dietary habit cultivation refers to maintaining physical health by consciously adjusting one's eating habits and nutrition intake to adapt to the body's needs and preferences while avoiding bad eating habits.

Eating at regular intervals is not only a simple habit but also an important way to induce regular peristalsis in the stomach, thus effectively preventing excessive fatigue of the gastric mucosa ^[5]. This regular peristaltic movement helps to maintain the normal function of the stomach and ensures that food is adequately decomposed and absorbed in the digestive process. In addition to eating at regular intervals, maintaining a regular diet is also a key factor in maintaining gastric health. Rationing is important to ensure an adequate amount of food is consumed to avoid an upset stomach due to over or under-intake. This dietary philosophy emphasizes the moderate intake of nutrients during each meal to ensure that the body receives the necessary energy and nutrients while reducing the burden on the stomach. It is especially important to emphasize this point in modern times, where people are often faced with fast-paced lifestyles and often tend to neglect the rationing of their diet. In addition, eating smaller meals more frequently is considered an effective dietary habit that not only reduces the burden of a regular single meal on the stomach but also helps to maintain stable blood sugar levels and improve metabolic efficiency. By spreading out daily food intake into multiple small portions, this eating pattern better aligns with the digestive and absorptive capacity of the stomach and intestines, providing the body with a balanced and consistent energy source.

3.2. Dietary hygiene education

Dietary hygiene is one of the key measures for preventing gastritis and gastric ulcers and an important part of maintaining good health. Dietary hygiene education aims to help patients recognize the necessity of dietary hygiene and adopt correct dietary behaviors to prevent the occurrence and spread of disease.

The role of dietary hygiene education is crucial in the prevention of gastritis and gastric ulcers. To effectively prevent gastritis and gastric ulcers, dietary hygiene education needs to start from several aspects^[6]. Maintaining food hygiene is the first step. It is important to ensure that the food is prepared and thoroughly cleaned to avoid residual bacteria, pesticides, and other harmful substances from entering the body. For example, fruits and vegetables should be rinsed with water, and meat should be thoroughly washed and cut to remove surface dirt and bacteria. Also, food should be stored in an airtight container to avoid contamination. Food should be stored in a clean, hygienic, and dry environment to avoid contact with harmful substances. This is one of the basic requirements for preventing gastritis and gastric ulcers and is an important prerequisite for maintaining good health.

Besides paying attention to dietary modifications, special emphasis should be placed on the cleaning and sterilization of tableware. Tableware may retain various bacteria, viruses, or other pathogens during use, so it should be thoroughly cleaned before use and after contact with raw ingredients. This is to ensure that there is no residual food or grease on the surface of the tableware that could promote the growth of harmful bacteria. Sterilization can effectively kill microorganisms left on dishes and reduce the risk of diseases spreading. Hot water disinfection and ultraviolet sterilizers can be utilized to ensure that the cleaned tableware meets hygiene standards to the greatest extent possible. In addition, it is important to maintain personal hygiene and wash your hands thoroughly before meals to reduce the incidence of food poisoning and stomach infections.

3.3. Nutritional support

Patients with gastritis and gastric ulcers are often at risk of malnutrition, which not only slows down the repair process of gastric mucosa but also negatively affects the patient's physical condition and immunity. Therefore, nutritional support has become an integral part of dietary care.

The main purpose of nutritional support is to provide patients with the required nutrients to promote the repair of gastric mucosa and enhance the body's immunity^[7]. Protein is an important component of body cells and plays a key role in repairing the gastric mucosa. Protein can promote the regeneration and repair of gastric mucosa cells, thus alleviating the symptoms of gastritis and gastric ulcers. By consuming protein-rich foods, such as fish, meat, eggs, beans, etc., patients can be provided with enough protein to promote the repair of gastric mucosa. Secondly, vitamins and minerals are also important nutrients. They play an important role in promoting normal physiological functions, enhancing the immune system, and promoting tissue repair. For example, vitamin C can promote the synthesis of collagen and enhance the elasticity and resistance of the gastric mucosa; vitamin B₁₂ can promote the formation of red blood cells and improve symptoms such as anemia; and mineral zinc can promote cellular metabolism and tissue repair, which helps to enhance the body's immunity.

Before implementing nutritional support, a comprehensive assessment of the patient's nutritional status should be conducted. This helps healthcare professionals understand the patient's specific needs and preferences so that they can develop a personalized diet plan. During the assessment, healthcare professionals can learn about the patient's nutritional status by obtaining information regarding the patient's eating habits, physical condition, medical history, and laboratory test results. By analyzing this information, the healthcare provider can determine if the patient is at risk for malnutrition and supply any lacking nutrients. When formulating a diet plan, healthcare professionals should provide patients with sufficient high-quality proteins, vitamins, and minerals based on the assessment results. These nutrients are important for promoting gastric mucosal repair and strengthening the body's immunity.

4. The importance of dietary care for patients with gastritis and gastric ulcers

Dietary care can regulate the intestinal microbial community, improve the intestinal microecological balance, improve intestinal barrier function, and further enhance the body's immunity ^[8]. The harmonious balance of the intestinal microbial community positively impacts the treatment and recovery of patients with gastritis and gastric ulcers. Through reasonable dietary care, the balance of the intestinal microbial community can be promoted and the intestinal barrier function can be strengthened, thus promoting recovery and preventing recurrence. To achieve this effect, probiotic-rich foods such as yogurt and kimchi can be consumed.

By cultivating healthy eating habits and dietary hygiene habits, the stimulation of gastric mucosa by external factors can be reduced, and the recurrence of gastritis and gastric ulcers can be prevented. Patients can make moderate preparations before meals, such as having proper rest before eating, ensuring a relaxing dining environment, as well as consuming food slowly. This can help reduce the burden on the digestive system and improve the absorption of food. Different patients have different physical conditions and living habits, hence formulating a personalized dietary plan can better meet the nutritional needs of the patient and improve the therapeutic effect. A more precise dietary plan based on the patient's physical condition, symptoms, and lifestyle can be formulated. For example, for patients with excessive stomach acid, acidic foods such as lemons and oranges should be avoided; while for patients with cold stomachs, raw and cold foods such as ice cream and raw fish should be avoided.

Chinese medicine practitioners have also formulated personalized dietary plans according to traditional Chinese medicine (TCM) body identification and clinical manifestations, which can help to strengthen the therapeutic effect and promote recovery ^[9]. For gastric ulcer patients with spleen deficiency, stomach deficiency, and cold stomach, Chinese medicine practitioners recommend food that warms the body to disperse the cold and strengthen the spleen. Such foods include lamb, yam, and jujube which are required to be cooked at high temperatures until soft. At the same time, cold foods should be avoided to effectively regulate the cold symptoms in the body, and promote the recovery of spleen and stomach functions; for gastric ulcer patients with gastric yin insufficiency, foods that benefit the stomach and promote the generation of fluids are recommended, including fruits, salvia and lily soup, and turtle soup. For patients with constipation, patients can consider consuming honey and laxatives. Foods should be cooked until soft and raw, and meaty foods should be avoided. This can help balance the yin and yang in the body and maintain a stable state of the stomach. For patients with gastric ulcers of the liver, stomach depression, and stomach burning, traditional Chinese practitioners suggest consuming foods that regulate qi and purify the liver, such as watermelon juice, sugar cane juice, lotus seeds, carrots, hawthorn, oranges.

5. Conclusion

Through reasonable dietary arrangements and nutritional support, dietary care can improve the clinical symptoms of patients, and regulate the intestinal microbial community, anti-inflammatory, antioxidant, and other pathways to improve the pathophysiological status of patients with gastritis and gastric ulcer to prevent its recurrence ^[10]. Although there are still some shortcomings in this area, dietary care will no doubt become one of the most important measures in the clinical treatment and prevention of gastritis and gastric ulcers. Future directions include further research on the mechanism of action of dietary care, developing standardized dietary care protocols, and conducting large-scale clinical trials. Continuous and extensive research will increase the positive impact of dietary care on the treatment and prevention of gastritis and gastric ulcers.

Disclosure statement

The author declares no conflict of interest.

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