

Clinical Diagnosis and Treatment of Lower Gastrointestinal Bleeding in Gastroenterology

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Abstract: This study aims to explore the clinical diagnostic methods and treatment strategies for lower gastrointestinal bleeding in gastroenterology. Through a retrospective analysis of clinical data from patients, the common causes, diagnostic methods, and treatment outcomes of gastrointestinal bleeding were summarized. The study found that endoscopic examination is the primary method for diagnosing lower gastrointestinal bleeding, while pharmacological and endoscopic therapies are effective treatments for lower gastrointestinal bleeding.

Keywords: Gastroenterology; Lower gastrointestinal bleeding; Diagnosis; Treatment

Introduction: Lower gastrointestinal bleeding, as a common disease in the field of gastroenterology, is characterized by the difficulty of diagnosis and the complexity of the condition. With the continuous progress of medical technology, the discussion on its diagnostic and treatment strategies has also received increasing attention. This article aims to conduct a retrospective analysis of clinical data from patients with lower gastrointestinal bleeding in gastroenterology, further clarify its clinical diagnostic methods and treatment strategies, and provide references for clinical practice. By collecting and analyzing relevant case data, common causes, diagnostic methods, and treatment options for lower gastrointestinal bleeding were summarized, aiming to improve the understanding and diagnosis and treatment levels of this disease.

1. Overview of Lower Gastrointestinal Bleeding in Gastroenterology

Lower gastrointestinal bleeding in gastroenterology

is a common clinical syndrome, primarily referring to bleeding caused by lesions in the small intestine, colon, and rectum below the ligament of Treitz. Its etiology is diverse, including inflammation, tumors, diverticula, vascular abnormalities, and can also result from systemic diseases affecting the intestines. Clinically, when lower gastrointestinal bleeding is less than 400ml, it may be quickly compensated by the body without causing obvious symptoms. However, when the bleeding exceeds 800-1000ml, patients may experience symptoms such as dizziness, fatigue, palpitations, rapid pulse, hypotension, and pallor, and in severe cases, shock may occur. The diagnosis of lower gastrointestinal bleeding mainly relies on the patient's clinical presentation and necessary laboratory tests. Endoscopic examination is an important means of diagnosing lower gastrointestinal bleeding, as it can help identify the cause and assess the location and severity of the lesion. Treatment for lower gastrointestinal bleeding includes general supportive



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therapy, volume expansion, vasoactive substances, as well as surgical and endoscopic interventions. Surgical treatment is mainly used to control massive bleeding and severe lesions, while endoscopic treatment is suitable for active bleeding or visible bleeding points under endoscopy. In conclusion, lower gastrointestinal bleeding in gastroenterology is a condition that requires urgent management. Timely diagnosis and treatment can effectively control the disease, reduce the occurrence of complications, and improve patient survival rates and quality of life.

2. Materials and Methods

2.1 Study Population

This study included a total of 50 patients with lower gastrointestinal bleeding, comprising 27 males and 23 females, with ages ranging from 35 to 78 years old. To ensure the fairness and objectivity of the study, these patients were randomly divided into two groups of equal size: a control group and a treatment group, each consisting of 25 cases. The control group received conventional treatment, primarily including hemostasis and anti-inflammatory measures. Throughout this process, researchers regularly recorded the patients' condition, symptom improvements, and changes in vital signs. These data were used to evaluate changes in the control group before and after treatment to assess the efficacy of conventional treatment. In addition to receiving conventional treatment, patients in the treatment group also underwent specific treatment protocols. Similar to the control group, the condition, symptom improvements, and changes in vital signs of patients in the treatment group were also recorded regularly. These pieces of information were not only used to evaluate the effects of treatment in the treatment group before and after treatment but also compared and analyzed with the control group to further understand whether specific treatment protocols could improve the treatment outcomes of lower gastrointestinal bleeding.

2.2 Methods

This study employed a retrospective analysis approach to systematically collect clinical data from 50 patients with lower gastrointestinal bleeding. These data included patients' age, gender, medical history, symptoms, signs, laboratory tests, and imaging examination results. Through in-depth analysis of these data, the study aimed to explore the etiology, diagnostic

methods, treatment strategies, and nursing outcomes of lower gastrointestinal bleeding. For data processing and analysis, SPSS 23.0 statistical software was utilized. This software provides powerful data processing and statistical analysis functions, serving as a scientific basis for the study's analysis. To facilitate statistical analysis, the study used the following indicators for data description: categorical data were presented as rates or composition ratios, while continuous data were expressed as mean \pm standard deviation ($\bar{x} \pm s$). When comparing whether there were statistical differences between the two groups of data, the study used chi-square tests and t-tests. The chi-square test was mainly used to compare the differences in categorical data between the two groups, while the t-test was used to compare the differences in continuous data between the two groups. Statistical significance was considered when the P-value was less than 0.05, indicating that the observed differences might be due to factors other than random error. Through a retrospective analysis approach, this study systematically collected clinical data from patients with lower gastrointestinal bleeding and processed and analyzed the data using SPSS 23.0 statistical software. Through scientific statistical methods, the study aimed to provide valuable reference information for the etiology, diagnosis, treatment, and nursing of lower gastrointestinal bleeding.

3. Results

3.1 Etiological Analysis

Etiology	Number of Cases	Percentage (%)
Inflammatory Diseases	23	46%
Tumors	14	28%
Vascular Disorders	9	18%
Others	4	8%

According to this table, we can clearly see that inflammatory diseases are the primary cause of lower gastrointestinal bleeding. Through the analysis of clinical data from 50 cases of lower gastrointestinal bleeding, it was found that common causes include inflammatory diseases, tumors, and vascular disorders, with inflammatory diseases accounting for a significant 46%. Tumors were the next most common cause, accounting for 28%, followed by vascular disorders at 18%. Other causes of lower gastrointestinal bleeding accounted for 8%. This table helps understand the

distribution of major etiologies of lower gastrointestinal bleeding and provides data support for formulating appropriate treatment strategies and preventive measures.

3.2 Comparison of Diagnostic Methods

In diagnosing lower gastrointestinal bleeding, colonoscopy is currently the most commonly used and has a higher accuracy rate compared to other imaging examinations. Unlike other imaging modalities, colonoscopy not only provides a visual assessment of the interior of the intestines but also allows for the retrieval of tissue samples for histological examination during the procedure, thereby enabling a more accurate diagnosis of the disease. The advantages of colonoscopy are particularly evident in detecting smaller lesions, allowing for early detection and diagnosis, thus providing valuable time for subsequent treatment. Apart from colonoscopy, barium enema was once a traditional and convenient diagnostic method, but it has gradually been phased out in practical application. This is because barium enema requires the use of radioactive substances, posing certain health risks. Additionally, modern medical technological advancements and updates have limited the diagnostic value of barium enema. With the progress of medical imaging technology, imaging modalities such as CT scans have played an important role in diagnosing lower gastrointestinal bleeding. These imaging methods provide a visual display of the intestinal morphology and are effective in detecting larger lesions such as intestinal tumors. However, their diagnostic value for smaller lesions is limited, as smaller lesions may be difficult to discern on imaging. In actual practice, doctors should select appropriate diagnostic methods based on the specific circumstances of the patient to improve the accuracy and timeliness of diagnosis.

3.3 Comparison of Treatment Methods

In the treatment of lower gastrointestinal bleeding, pharmacological therapy is a commonly used approach. Hemostatic and anti-inflammatory drugs can effectively control bleeding and reduce inflammatory responses, especially for smaller bleeding lesions. However, for larger bleeding lesions or severe conditions such as vascular disorders, pharmacological therapy may not suffice, necessitating other methods. Interventional therapy is a more advanced treatment method, utilizing

vascular imaging techniques to locate the site of bleeding and employing embolization or injecting hemostatic drugs to control bleeding. Compared to traditional surgical treatment, interventional therapy has the advantages of minimal trauma and quick recovery but has a relatively narrow scope of application, requiring surgical treatment for certain severe conditions. Surgical treatment is the ultimate treatment method for lower gastrointestinal bleeding, primarily used in cases where pharmacological and interventional therapies fail to control bleeding. Surgical procedures may include bowel resection or repair, and the specific choice of surgery depends on the individual patient's condition. While surgical treatment yields good outcomes, it entails greater trauma and longer recovery times. Pharmacological therapy is the commonly used basic treatment, interventional therapy is suitable for specific conditions, and surgical treatment is the final option. When selecting treatment methods, doctors need to assess and decide based on the individual patient's circumstances to ensure the best treatment outcomes.

3.4 Evaluation of Nursing Before and After in Two Groups

By assessing the patient's physiological, psychological, and social functioning, a comprehensive score is obtained. A higher score indicates better nursing effectiveness. In the specific evaluation process, the evaluation scale is personalized based on the patient's specific circumstances and needs. Patients in the control group and the experimental group respectively received routine nursing and experimental nursing methods, and the evaluation scale was applied before and after nursing. In the evaluation scale, each indicator has specific standards and methods to ensure the objectivity and accuracy of the assessment results. By comparing the scores of the evaluation scales before and after nursing in the control group and the experimental group, the advantages and effectiveness of experimental nursing methods compared to routine nursing methods can be assessed.

Indicator	Control Group	Treatment Group
Physiological	80±8	82±6
Psychological	76±10	84±8
Social Function	78±9	86±7

Through the evaluation scale, the control group scored 80 ± 8 in physiological indicators, 76 ± 10 in psychological indicators, and 78 ± 9 in social function indicators after routine nursing. In contrast, the treatment group scored 82 ± 6 in physiological indicators, 84 ± 8 in psychological indicators, and 86 ± 7 in social function indicators after receiving specific nursing. In each group, higher scores indicate better nursing outcomes. Comparatively, it was found that after receiving specific nursing, the treatment group scored higher in all indicators compared to the control group, indicating that specific nursing methods have better effects compared to routine nursing methods.

4. Discussion

Lower gastrointestinal bleeding is a common digestive system disorder that can be caused by various factors such as inflammation, tumors, and vascular abnormalities. The correct selection of diagnostic methods is crucial to improve the accuracy of treatment for this condition. Commonly used diagnostic methods include colonoscopy, barium enema, CT scans, and other imaging techniques. Pharmacological therapy is a commonly used foundational treatment approach, suitable for stopping bleeding in smaller lesions. Interventional therapy is appropriate for smaller vascular abnormalities or larger lesions, while surgical treatment is reserved for severe conditions or cases where other methods fail to control bleeding. When selecting treatment methods, physicians need to assess and decide based on the specific circumstances of the patient to ensure the best treatment outcome. In addition to conventional treatment, enhancing patient observation and nursing care is also an important aspect of treatment. For example, patients who use non-steroidal anti-inflammatory drugs for a prolonged period should be vigilant about the risk of intestinal damage. Patients undergoing intestinal surgery need to be monitored for postoperative complications, while elderly patients require enhanced care and monitoring to prevent accidents. In clinical practice, physicians should enhance their understanding and diagnostic abilities regarding lower gastrointestinal bleeding to provide patients with more accurate and personalized treatment plans. Strengthening patient education and lifestyle guidance is also a crucial measure for preventing lower gastrointestinal bleeding. Patients

should develop good lifestyle habits and dietary practices, avoid prolonged consumption of irritating foods, maintain good mental health and emotional stability, enhance personal and environmental hygiene, avoid the misuse of medications and health supplements, and seek timely medical treatment for chronic intestinal diseases. Through the implementation of these measures, the incidence and recurrence rates of lower gastrointestinal bleeding can be effectively reduced, thereby improving patients' quality of life.

Conclusion

Lower gastrointestinal bleeding is a common disease in gastroenterology, and its diagnosis and treatment require consideration of multiple factors. Through scientific diagnostic methods, the underlying causes can be accurately identified, providing essential guidance for subsequent treatment. During the treatment process, various methods such as pharmacological therapy, interventional therapy, and surgical treatment can be selected based on the specific circumstances of the patient to achieve the best treatment outcomes. In clinical practice, it is crucial to enhance understanding and diagnostic abilities regarding lower gastrointestinal bleeding to provide patients with more accurate and personalized treatment plans. By comprehensively applying various approaches, we can effectively reduce the incidence and recurrence rates of lower gastrointestinal bleeding, thereby improving the quality of life for patients.

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