

# Clinical Analysis of Common Irrational Gastroenterology Medication Problems in The Gastroenterology Department

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**Abstract:** *Objective:* To investigate and analyze the irrational problems of common gastroenterology medications applied to gastroenterology patients during treatment, and to develop and implement countermeasures. *Methods:* This study included 60 patients admitted to the Department of Gastroenterology from January 2021 to December 2023 who were randomly divided into a control group (conventional drug management) and an observation group (targeted drug treatment), of 30 cases each. After the implementation of different management methods, the occurrence of irrational drug use and the incidence of adverse reactions between both groups were compared and statistically analyzed. *Results:* The incidence of irrational medication in the observation group (13.33%) was lower than that in the control group (40.00%) ( $P < 0.05$ ). The occurrence of adverse reactions in the observation group (10.00%) was lower than that of the control group (36.67%) after treatment ( $P < 0.05$ ). The observation group had a higher level of satisfaction after treatment (90.00%) as compared to the control group (66.67%) ( $P < 0.05$ ). *Conclusion:* Implementation of targeted drug treatment for gastroenterology patients reduced the incidence of irrational medication use, reduced adverse reactions, and improved patient satisfaction.

**Keywords:** Gastroenterology; Common; Irrational use of drugs

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## 1. Introduction

Gastroenterology diseases are common occurrences characterized by recurrent attacks and prolonged treatment. It was found that more patients were admitted to the Department of Gastroenterology, which may be related to the patient's lack of attention to diet or unhealthy lifestyles, coupled with the large number of drugs involved, thus resulting in the frequent occurrence of irrational medication use in the Department of Gastroenterology<sup>[1]</sup>. Therefore, an in-depth analysis of the root causes of irrational drug use is crucial to accurately select the type of therapeutic drugs in combination with the actual situation of the patients and clarify the drug dosage. This is to ensure that the clinical efficacy of the drug can be fully utilized<sup>[2]</sup>. Given this, our hospital included 60 patients admitted to the Department of Gastroenterology from January 2021 to December 2023 as research subjects and

summarized the irrationality of the patient's application of common gastroenterology drug therapy.

## **2. Information and methods**

### **2.1. General information**

Sixty patients admitted to the Department of Gastroenterology from January 2021 to December 2023 were randomly divided into a control group and an observation group, and the results of the comparison of the clinical data of all patients were significant ( $P > 0.05$ ). The control group consisted of 30 males and 30 females aged 25–68 years old, with an average age of  $48.22 \pm 10.25$  years. Among them, there were 8 cases of upper gastrointestinal bleeding, 5 cases of acute pancreatitis, 5 cases of cirrhosis of the liver, 4 cases of ulcerative colitis, and 8 other cases. The observation group consisted of 31 males and 19 females aged 25–68 years old, with an average age of  $48.36 \pm 10.14$  years. Among them, there were 9 cases of upper gastrointestinal bleeding, 7 cases of acute pancreatitis, 3 cases of cirrhosis of the liver, 6 cases of ulcerative colitis, and 5 other cases. Inclusion criteria: (1) Patients who were diagnosed by relevant examinations, including laboratory and imaging examinations; (2) received treatment in the Department of Gastroenterology; (3) consented. Exclusion criteria: (1) Patients with infectious diseases and malignant tumors; (2) cognitive or psychiatric disorders; (3) the combination of cardiac, renal, pulmonary, and other serious diseases.

### **2.2. Methods**

The control group received conventional drug management. The condition of the patient was clarified according to the medical prescription of drug treatment and all necessary help was provided to the patient. The observation group received targeted drug management. A team consisting of pharmacists, gastroenterology medical staff, and nursing staff was formed. Professional training was organized for team members to understand and master the knowledge of gastroenterology medication treatment and a practicable assessment system was formulated. The underlying dangers of irrational medication use or risk factors were analyzed by the team and in-depth studies were conducted. An in-depth analysis of the patient's condition was carried out, focusing on the assessment of the severity of the patient's disease. Strict testing and review of the patient's medical records were performed to detect the patient's prescription and the adverse reactions that may be induced. An in-depth analysis of the types of medications used in gastroenterology and their efficacy, such as omeprazole and domperidone, were used more frequently, and how irrational use occurred. The investigation team then analyzed the problem of irrational medication use according to the actual situation and implemented improvement measures based on the clear root causes of the problem. Patients were guided on medication and given health education to fully understand their conditions and the risks and adverse events caused by the irrational use of medication so they realize the consequences that follow. During the actual medication administration, the dosage and method of use were also clarified. The patients were advised to use the medication following the doctor's instructions. Medication training was implemented for the clinicians, integrating online and offline modes into one, so that clinicians can further master the relevant knowledge. Experts or scholars from higher levels were invited to facilitate training for clinicians in the Department of Gastroenterology and carry out publicity and promotion through online methods.

### **2.3. Observation indicators**

Firstly, the incidence of irrational use of medication of the two groups was recorded, including over-application of acid-suppressing drugs, irrational application of antibiotics, repeated use of drugs, combined application of antagonistic drugs, and non-compliance. Secondly, the occurrence of adverse reactions during treatment was

statistically analyzed for both groups, including nausea, vomiting, and dizziness. Finally, the satisfaction of the two groups of patients with the clinical effects of drug treatment was evaluated, including highly satisfied, mostly satisfied, and dissatisfied, at 80–100 points, 60–79 points, and  $\leq 59$  points, respectively. The number of patient cases was calculated according to the first two criteria for the degree of satisfaction.

## 2.4. Statistical methods

Data were processed using the SPSS 28.0 statistical software. Measurement data were expressed as mean  $\pm$  standard deviation and the count data were expressed as %. Measurement data were analyzed using a *t*-test, and count data were analyzed using a chi-squared ( $\chi^2$ ) test. Results were considered statistically significant at  $P < 0.05$ .

## 3. Results

### 3.1. Comparison of the occurrence of irrational drug use in the two groups

As shown in **Table 1**, the incidence of irrational use of medication in the observation group (13.33%) was lower than that of the control group (40.00%) ( $P < 0.05$ ).

**Table 1.** Comparison of the incidence of irrational medication uses between the two groups [*n* (%)]

Groups	Cases, <i>n</i>	Overuse of acid-suppressing drugs	Unreasonable use of antibiotics	Repeated drugtaking	Antagonist drug combinations	Pharmacology does not match the condition	Rate of occurrence
Control group	30	2 (6.67)	3 (10.00)	2 (6.67)	2 (6.67)	3 (10.00)	12 (40.00)
Observation group	30	1 (3.33)	1 (3.33)	1 (3.33)	1 (3.33)	0 (0.00)	4 (13.33)
$\chi^2$							5.455
<i>P</i>							0.020

### 3.2. Comparative analysis of the incidence of adverse reactions

As shown in **Table 2**, the incidence of adverse reactions in the observation group (10.00%) was lower than that of the control group (36.67%) ( $P < 0.05$ ).

**Table 2.** Statistical analysis of the incidence of adverse reactions between the two groups [*n* (%)]

Groups	Cases, <i>n</i>	Nauseating	Vomiting	Spin	Rate of occurrence
Control group	30	4 (13.33)	4 (13.33)	3 (10.00)	11 (36.67)
Observation group	30	1 (3.33)	1 (3.33)	1 (3.33)	3 (10.00)
$\chi^2$					5.963
<i>P</i>					0.015

### 3.3. Comparison of satisfaction with medication

As shown in **Table 3**, the satisfaction with medication after treatment in the observation group (90.00%) was higher than that of the control group (66.67%) ( $P < 0.05$ ).

**Table 3.** Statistical analysis of satisfaction with medication after treatment between the two groups [*n* (%)]

Groups	Cases, <i>n</i>	A high degree of satisfaction	Mostly satisfactory	Unsatisfactory	Job satisfaction
Control group	30	10 (33.33)	10 (33.33)	10 (33.33)	20 (66.67)
Observation group	30	15 (50.00)	12 (40.00)	3 (10.00)	27 (90.00)
$\chi^2$					4.812
<i>P</i>					0.028

### 3. Discussion

Gastroenterology includes gastritis, diarrhea, and other diseases, affecting the esophagus, duodenum, and other parts of the digestive system. Considering the pathogenesis, absorption, and metabolism, the application of clinical drugs needs to pay attention to the effectiveness and safety of treatment [3]. Acid-suppressing drugs, gastric mucosal protectants, and gastrointestinal dynamics drugs are commonly used in gastroenterology, and previous studies have shown that in the statistics of irrational use of medication in gastroenterology, repeated use and incorrect dosage of medication are common factors causing the irrational use of medication, which can cause great harm to patients [4].

In this study, the incidence of irrational medication use in the observation group (13.33%) was lower than that of the control group (40.00%) ( $P < 0.05$ ). The rate of adverse reactions in the observation group (10.00%) was lower than that of the control group (36.67%) ( $P < 0.05$ ). The results fully indicated that the gastroenterology department of our hospital still has the problem of irrational drug use, which is not conducive to the prognosis of the patients and is prone to cause adverse reactions, which will also negatively impact clinical efficacy. The factors causing irrational drug use of drugs include multiple gastric ulcers, acute gastritis, and other diseases during the treatment of patients with antacid drugs, where some patients do not understand the drug therapy, and mistakenly believe that increased drug consumption may accelerate recovery, leading to the phenomenon of overdose [5]. The combination of drugs is one of the ways to enhance clinical efficacy as confirmed by several studies. However, it is necessary for doctors to strictly grasp the indications of drugs to avoid drug repugnance. When medical prescriptions are issued, patient-targeted treatment methods are not formulated, or the names of medicines could be repeated, which leads to increased dosage and repeated use of medication [6]. In this study, patients in the observation group had a higher degree of satisfaction with the medication treatment (90.00%) than the control group (66.67%) ( $P < 0.05$ ). It shows that the implementation of targeted drug management can prevent and reduce the adverse reactions of patients after treatment and increase the degree of nursing satisfaction. An investigation team should be formed to perform supervision and management, effectively implement the targeted drug management model, and provide patients with more accurate and scientific guidance on drug therapy [7]. At the same time, the development of a corresponding system helps to timely identify and solve problems, so that the supervision and guidance of rational drug use is fully realized [8]. Focusing on drug therapy guidance for patients enables them to further understand their condition, grasp the role of drug therapy and the possible adverse reactions, and adhere to the doctor's instructions to avoid unauthorized changes in drug dosage or stopping the use of drugs [9]. Furthermore, clinicians can update their knowledge of drugs through professional training, master the characteristics and indications of various types of drugs, and ensure that they combine the patient's condition and physical and mental characteristics during drug prescription. This can then bring into full play the effects of drug therapy and improve the patient's satisfaction with the treatment [10].

## 5. Conclusion

Gastroenterology patients are prone to irrational use of medication during drug therapy, including the excessive application of acid-suppressing drugs and antibiotics, which affects the clinical efficacy and physical and mental health of patients. It is necessary to analyze the various irrational problems in-depth and put forward a variety of measures to ensure that gastroenterology achieves the goal of rational use of medication.

## Disclosure statement

The author declares no conflict of interest.

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