

## **Effectiveness of Evidence-based Medicine in Clinical Teaching of Digestive Internal Medicine Based on Case Teaching Method**

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**Abstract:** To explore the effect of follow-up medicine in clinical teaching of digestive medicine. Through the study of the traditional clinical teaching mode of digestive medicine, and the application of evidence-based medicine teaching in the clinical teaching of digestive medicine at present. The focus of its teaching method is to use the medical case to simulate in the classroom, to let students think about the process of handling cases, to cultivate students' handling of medical problems and the ability of students to think independently. According to the specialty characteristics of digestive medicine, case teaching combined with simulation teaching method is carried out in the clinical practice of medical students, which improves the clinical practice skills of medical students and forms a good clinical thinking, which is conducive to the transformation of medical students to clinicians.

### **1. Introduction**

Case teaching; Evidence-based medicine; Clinical teaching of digestive medicine is an important part of higher medical education. It is the key stage to cultivate medical students' comprehensive abilities such as basic knowledge, basic skills and clinical thinking. In the teaching process of digestive medicine, students are allowed to study in a certain situation through a large number of cases, so that students can learn to analyze, think and deal with cases in the learning process, which can effectively combine the theoretical knowledge they have mastered with clinical thinking, and improve their practical working ability [1]. Digestive medicine is the key and difficult point in clinical teaching of digestive medicine. Eight-year medical students have a short internship time. How to make students master more clinical thinking methods in a limited time is very important. Modern clinical medicine is developing from empirical medicine to evidence-based medicine. Traditional medical education models have increasingly shown that they cannot adapt to the shortcomings of modern education [2]. Introducing the concept of evidence-based medicine into clinical teaching can strengthen the evidence-based medical thinking of medical students and lay a foundation for the formation of good medical behavior for their future clinical work [3]. In order to better adapt to the needs of medical development under the new situation, we should strengthen the teaching of evidence-based thinking, so that students can master the knowledge of evidence-based medicine professional evaluation in clinical learning process to guide clinical application. This change in the mode of medical practice also puts new demands on clinical teaching, that is, our teaching objectives can not only stay in the knowledge of simply instilling textbooks into medical students, but also teach them how to master new knowledge and track the latest scientific evidence.

### **2. Implementation of Case-based Teaching Method in Evidence-based Medicine of Digestive Medicine**

In the process of teaching digestive medicine, case teaching method is mainly used to guide students through a large number of pathological cases, so that students can analyze the pathology, etiology and clinical manifestations of the cases in the process, and then make diagnosis and treatment according to the medical knowledge they have mastered [4]. Since the evidence-based medicine education was put forward, the traditional teaching method, which only focused on basic theoretical knowledge and inertial clinical thinking mode, has been transformed into the cultivation

of students' learning ability, thinking ability, discovery and problem-solving ability at the same time [5]. In recent years, the spectrum of digestive diseases has changed, and the number of patients with malignant tumors and biliary and pancreatic diseases has gradually increased, while the number of patients with typical peptic ulcer hospitalization has decreased, due to the obvious seasonality of peptic ulcer. The teaching model of evidence-based medicine requires students to pay attention to practice, pay attention to the cultivation of independent analytical thinking ability, and pay attention to the individual characteristics of patients in the treatment, the right medicine, and improve the treatment effect [6]. In the teaching process, according to the teaching objectives and the requirements of the training objectives in the syllabus, teachers use the typical cases as the basic materials to guide students to apply the knowledge they have learned to analyze the cases and improve their comprehensive ability.

## **2.1 Application of Case-based Teaching Method in Evidence-based Medicine Teaching**

The main practice of evidence-based medicine teaching methods: students are required to exercise the ability to think independently, and to ask questions about their clinical problems. In recent years, various medical colleges have gradually developed case teaching methods in medical education, and their positive effects have become increasingly prominent. The authenticity, practicability and representativeness of case teaching can indeed achieve the role of simulation diagnosis and treatment and improvement of ability [7]. Ask students to find problems from the case data, and propose topics for discussion (such as pathogenesis of peptic ulcer, predisposing factors, diagnosis, differential diagnosis, complications, and treatment principles), so that students can enter the school with strong interest and problems. Class time learning. According to the knowledge of their own learning and accumulated experience to find the basis for appropriate clinical decision-making; to make their own evaluation and judgment on the reliability of the decision-making basis of a case provided by the previous literature [8]. After mastering the relevant abilities, the students comprehensively analyze and design the clinical cases, make correct clinical diagnosis, put forward reasonable and effective treatment design scheme and explain its reasons. Through this discussion and the form of speech, the students' ability of expression and pathological analysis can be improved. The case teaching method has effectively deepened the students' understanding of the basic knowledge of digestive medicine and improved the integrity of the knowledge of digestive medicine. Use of useful evidence in clinical practice; Evaluation of learning effectiveness. Teachers who teach in clinic should enrich themselves constantly, strengthen the study of professional knowledge and the accumulation of clinical experience, and bring them to students.

## **2.2 Steps for Students of Digestive Medicine**

Students are organized to discuss the typical cases encountered in their daily practice and list the problems that need to be solved in the treatment. Before the introduction of cases, teachers need to explain a disease first, so that students have a preliminary understanding and understanding of a disease, and then consciously introduce a large number of treatment cases. Although case teaching mode has its advantages and good operability, it should be paid more attention to in the specific implementation process, and pay attention to the problems in teaching, such as the higher requirements of case teaching for teaching resources and teaching staff, and clinical teachers need case teaching mode although it has its advantages and good operability. Finally, the teacher introduces the case into the classroom and gives a detailed explanation to train the clinical thinking. After the explanation, the teacher can answer the students' questions by discussing and other ways, so as to deepen the students' impression and understanding. In response to the questions that the groups need to solve, the students should be guided to find the latest strong evidence by consulting the materials, and students should be encouraged to read widely and increase their knowledge reserves. After mastering the relevant abilities, the students will conduct a comprehensive analysis and design of the clinical cases they have taken, make a correct clinical diagnosis, propose a reasonable and effective treatment design plan and explain the reasons. After the teacher sends the treatment case to the student, the student is required to read the case data in detail, let the students

freely organize into a discussion group, and give the students enough time for case discussion. Close observation of the treated patients and effective follow-up of the patients, and pay attention to the experience, a deep analysis and evaluation of the formed experience.

Before the case is introduced, the teacher needs to explain the disease first, let the students have a preliminary understanding and understanding of a certain disease, and then consciously introduce a large number of treatment cases. Find problems in clinical practice; effectively retrieve the most reliable evidence to answer questions; rigorously evaluate the correctness of evidence; apply the above evaluation results in clinical practice; and evaluate the effects of the application. Teachers will watch and correct, guide and supplement them in a timely manner, so that medical students can receive formal and professional training, and initially master the skills of the consultation and the ability to communicate with patients, so as to avoid unintelligible embarrassment when the patient is actually treated. And give students enough time for case discussion. Teachers play a leading role in the whole process of case teaching, and guide students in time to help students grasp the key points and knowledge points. Through this teaching form, students' self-learning and collaborative learning abilities have been improved correspondingly. By allowing students to have group discussions, students' expressive and communicative abilities can be improved. Through this system of clinical skills simulation system, the simulation exercises are really close to clinical practice, laying a solid foundation for their transformation from medical students to doctors.

### 3. Result Discussion

After practice, the students were inquired and asked. The results showed that most of the students approved the model of evidence-based medicine teaching, and expressed that the learning model could promote the combination of their theoretical knowledge and clinical practice, broaden their knowledge, and improve their ability to think independently in clinical practice. After the internship of digestive medicine, the medical students can complete the inquiry and physical examination of typical digestive tract diseases and write more standardized medical records. They can basically master the diagnosis and treatment of some common diseases such as peptic ulcer and liver cirrhosis. The first evaluation project of this study is to evaluate clinical evidence-based medicine education on this basis. The results showed that there was no significant difference between the clinical evidence-based medicine education group and the clinical traditional medicine teaching group in writing medical records and raising questions. Emphasize basic knowledge, basic theory and basic skills, and develop students' ability to discover problems, find objective evidence to solve problems, and sum up experience. Most intern medical students are able to complete the operation of abdominal puncture independently and under the guidance of the teacher, and no adverse reactions occur. The introduction of evidence-based medicine in the clinical learning stage helps to cultivate the ability of medical students to think and analyze clinical problems with new concepts, and to improve the subjective initiative of learning. Through such a combination, students can effectively improve their clinical thinking ability, enhance their ability to diagnose and treat cases, analyze medical history, diagnose symptoms, and develop treatment methods.

The teacher selects targeted cases of peptic ulcer before the lecture, especially the cases that the teacher personally experienced. Case is the starting point and destination of teaching. Choosing, applying and managing cases well is the key to the successful implementation of case teaching method in clinical teaching of digestive internal medicine. Table 1 below is a comparison of case results between traditional teaching method and case teaching method.

Table 1 Comparison of case performance between traditional teaching method and case teaching method

Group	Medical history of inquiry	Physical examination	Disease diagnosis
Traditional group	8.36	3.21	8.15
Case teaching method group	7.15	4.38	10.63

When carrying out case teaching method, teachers should stimulate students' initiative and enthusiasm in classroom teaching, and cultivate students' interest in learning. After familiarizing themselves with the whole operation process, arrange them to operate independently on the simulation model, instruct teachers throughout the process, and remind medical students to pay attention to the details of the operation until the operation is standardized. Teachers select cases according to students' knowledge, design problems carefully, and students make full use of the knowledge they have, analyze or make decisions independently, and use scientific methods to make correct judgments and decisions. In the clinical learning process, graduate students of the clinical evidence-based medicine education group will give them a review of evidence-based medicine related content and guide them to self-study. Through the case teaching method, students are provided with a platform for students to express their opinions and thinking through a large number of case studies, and effectively cultivate students' self-confidence. Intern students can understand the thoughts of superior doctors by writing a medical record, and can also reflect their own experience and views on disease treatment. At the same time, students can be freed from the boring theory. Through vivid case analysis, students can enhance the enthusiasm and enthusiasm of learning, and greatly enhance the classroom teaching effect. Therefore, in order to further improve the teaching effect, the application of this method can be further promoted.

The traditional teaching method and the case teaching method have no statistically significant differences in the evaluation of interest in learning and broadening the knowledge. The evaluation of clinical reasoning ability, self-learning ability and enhancing unity and cooperation ability, case teaching The method was higher than the traditional teaching group and there were statistically significant differences. Table 2 below compares the scores of questionnaires of traditional teaching method and case teaching method.

Table 2 Comparison of questionnaires between the unified teaching method and the case teaching method

Group	Clinical reasoning	The ability to study independently	Unity and cooperation	Learning interest	Widening knowledge
Traditional group	3.61	3.34	3.46	4.22	3.27
Case teaching method group	4.03	4.29	3.28	3.71	3.08

Practical investigation shows that evidence-based medicine education in China still needs to be further strengthened. Through investigation, it was found that the current situation of clinical medical students' understanding of evidence-based medicine was unsatisfactory, but most of them expressed interest in it. At the same time, it was found that the education of evidence-based medicine needed to be further deepened. In the course of clinical practice teaching, besides consolidating the clinical knowledge, students' basic operation skills and basic clinical thinking ability are mainly trained. The course record should reflect the participants' observation and Reflection on the patients and their evolution. As interns, they should give full play to their subjective initiative and actively participate in the process of course recording. Besides recording the opinions of doctors at higher levels, they should also take the initiative to find problems in practice and learn to analyze problems. As a new medical concept, evidence-based medicine advocates combining clinicians' individual clinical practice and experience with objective scientific research evidence to serve the most accurate diagnosis, the safest and most effective treatment, and the most accurate prognosis. Each specific patient. Active and effective control of the teaching process, on the one hand to encourage graduate students to raise questions, on the other hand, when the discussion is controversial, guide students back to the topic of discussion, so as not to undermine the entire discussion process, away from the original purpose of clinical teaching . Strengthening the training of medical students' evidence-based medicine ability in clinical practice

teaching helps to meet the society's demand for high-quality medical services.

#### 4. Conclusion

In short, the traditional, single clinical teaching model has not adapted to the development of higher medical education and the needs of clinical teaching, and to carry out case teaching and simulation teaching mode in clinical teaching practice. Evidence-based medicine is a scientific medical teaching model. The rigid and absolute teaching does not meet his requirements. In the internship stage, medical colleges should focus on cultivating students' rigorous and scientific thinking methods, consciously guiding students to discover and think about clinical specific problems, designing solutions to problem solving, and improving students' self-acquisition ability and innovative ability. Teachers can use another case to let students use the case analysis method they have learned to analyze, and submit the results of the analysis into the semester assessment, fully help students understand the knowledge of digestive medicine. Therefore, we should fully understand and correctly guide this advantage, conform to the development of medicine, teach evidence-based medicine in clinical teaching as soon as possible, and give full play to the enthusiasm of medical students in learning.

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