Strengthening the role of comprehensive management of multidisciplinary and case teaching in pathological diagnosis

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Abstract: Case-based learning (CBL) is a case-based teaching method. Cases formed by real situations or events can fully mobilize students' initiative, connect theory with practice, and improve students' analysis in clinical diagnosis. The multidisciplinary treatment (MDT) model is another effective way to improve the efficiency of pathological diagnosis and treatment, and is the most effective mode for different tumors in countries around the world. This paper combines the above two teaching modes and studies the role of two combined comprehensive management in pathological diagnosis. Studies have shown that this method is conducive to improving students' clinical thinking ability, analyzing problems, problem-solving ability and comprehensive quality, so that pathology can truly play its role as a bridge between basic medicine and clinical medicine.

1. Introduction

Diagnostics is a highly practical, highly speculative course with the inherent advantages of introducing CBL. Especially in the current medical education pattern, the contradiction between the lack of clinically available teaching resources and the continuous improvement of clinical skills requirements has become increasingly prominent, so the application of CBL is becoming more and more urgent [1].

Multidisciplinary treatment (MDT) is often composed of a number of relevant departmental expert members, usually including internal medicine, surgery, radiotherapy, oncology, pathology, nuclear medicine, etc., in order to more accurately propose the most appropriate disease for a disease. Good treatment plan. At present, the diagnosis and treatment of many diseases are difficult, especially the diagnosis and treatment of tumor diseases determines the survival and prognosis of patients to some extent. Pathological diagnosis is particularly important as the gold standard for tumor diagnosis [2]. Pathologists participate in the diagnosis and treatment activities as MDT members. It helps clinicians to develop better treatment plans, and is also conducive to pathological diagnosis and scientific research [3].

At the moment of the rapid development of life sciences, the traditional diagnostic teaching mode can no longer meet the current medical students' curiosity about clinical knowledge. In view of this, this study actively carries out the teaching reform of diagnostics, uses existing conditions, and explores different teaching methods, aiming to improve the quality of clinical teaching. This study combines CBL and MDT to solve the problems encountered in the course of clinical pathological diagnosis teaching. Improve students' clinical thinking ability, analyze problems and solve problems.

2. The role of CBL teaching method in pathological diagnosis

2.1. Teaching mode

According to the five-year clinical medicine program, the trainee enters the clinic in the first semester of the fourth year and begins to contact clinical cases. The textbook was selected from the Internal Medicine published by the People's Health Publishing House (7th edition for professional use in 5-year or 7-year clinical medicine). Teaching content to choose urinary system disease -

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nephrotic syndrome. Through the calculation of the effective sample size, the author selected the 2016-grade clinical medicine five-year system (60 cases) for the 2016-2019 school year as the research object. The subjects were randomly divided into 3 groups, and 20 patients in each group were taught LBL, PBL and CBL. All selected subjects volunteered to participate in the study [4].

2.1.1. CBL group

According to the syllabus requirements and teaching plan, considering the teaching focus and teaching difficulties, select 5 typical cases, organize students to read, think, and consult the literature, and then organize students to simulate clinical patients and doctors to simulate the clinical situation. Completely reflect the diagnosis of nephrotic syndrome cases (including doctor-patient communication) and the whole process of treatment. The instructor is responsible for guiding the trainee's analytical ability and corresponding professional knowledge.

2.1.2. LBL group

The LBL group is a teaching-based teaching model. According to the requirements of the Internal Medicine Syllabus (Revised 7th Edition) and the teaching plan (understand the classification and pathogenesis of nephrotic syndrome, familiar with the pathophysiology and complications of nephrotic syndrome, master the nephrotic syndrome and nephritic nephropathy) Identify and master the treatment principles of nephrotic syndrome and hormone treatment programs, etc.) Develop teaching slides to explain the lectures directly by the instructor.

2.1.3. PBL group

The PBL group is a teaching model centered on problem-solving. According to the syllabus requirements and teaching plan, the instructor is required to be the moderator to submit the relevant professional issues to be discussed one week in advance (such as the diagnostic criteria and other diagnostic methods of nephrotic syndrome, the pathophysiological mechanism of nephrotic syndrome, the treatment principles and hormones). Treatment plan, etc.). PBL group trainees consult professional materials, discuss outlines for the purpose of solving professional problems, and make teaching slides for classroom lectures. Other students supplement or correct them. The instructor will focus on answering and answering the questions that the trainees have in the course of learning. Finally, they will use the teaching method to summarize the teaching priorities and difficulties of the students [5].

2.2. Result

The results of one-way analysis of variance showed that there was a statistically significant difference between the PBL group, the CBL group and the LBL group in terms of consultation content, consultation skills and total scores ($P < 0.05$) (see Table 1). The PBL group and the CBL group had higher scores, consultation skills, and total scores than the LBL group. The difference was statistically significant (PBL group vs LBL group: $t = 6.23$, 6.44, and 6.97, $P = 0.000$; CBL group) Vs LBL group: $t = 7.67$, 11.23 and 9.56, $P = 0.000$). Compared with the PBL group, the CBL group had higher scores in consultation skills and total scores ($t = 5.15$ and 2.67, $P = 0.000$ and0.003).

Table 1 Comparison of assessment scores

Group	Inquiry content	Consultation skills	Total score of the consultation	Basic knowledge	Case analysis	Theoretical achievement
LBL	51.22±4.45	12.45±1.49	67.89±7.23	31.78±2.65	32.23±6.66	65.81±4.45
PBL	60.23±6.11	15.66±2.31	79.04±7.23	36.99±5.01	45.56±4.22	78.23±6.45
CBL	66.89±5.12	17.89±1.52	84.56±6.12	43.00±4.18	42.16±4.89	79.89±7.89
F	31.67	62.23	49.07	51.63	22.87	66.77
P	0.000	0.000	0.000	0.000	0.000	0.000

The study used nephrotic syndrome as the carrier, evaluation and theoretical knowledge assessment as the evaluation system, compared the teaching modes of three different modes, and

found the contents of the consultation, consultation skills, basic knowledge and case analysis of the PBL group and the CBL group. The scores were higher than the LBL group, suggesting that the two teaching methods of the PBL group and the CBL group can improve the teaching quality and facilitate the students to receive professional knowledge. The study also found that the CBL group's consultation skills and case analysis were higher than the PBL group, indicating that the CBL group's teaching method is better than improving the clinical skills (including consultation, case analysis) and consolidating memory expertise. PBL group. It is confirmed that the CBL teaching mode has obvious advantages in improving clinical skills and theoretical knowledge [6].

3. MDT consultation mode

As an important part of the MDT model, the entire MDT consultation process can make doctors more professional and optimize the overall diagnosis and treatment process based on the effective use of limited medical resources and better serve the needs of different needs. The final result is better diagnosis and treatment, lower hospital costs, and reduced patient medical expenses, thus benefiting more patients. However, it should be noted that because patients with different medical conditions have different requirements and requirements for consultation services, one of the important purposes of using MDT is to implement a menu-based medical service system that reflects the overall process of MDT diagnosis and treatment. At the same time, MDT consultation can also promote more The development of the discipline and the advancement of the diagnosis and treatment system. Figure 1 shows the process of MDT consultation. After the patient is diagnosed by the competent physician and is considered to need multidisciplinary collaboration for diagnosis and treatment, the patient will be reported to the coordinator, who will inform the relevant experts to discuss the case and visit the patient. Check, develop a personalized treatment plan for the patient, and follow up to understand the outcome [7].

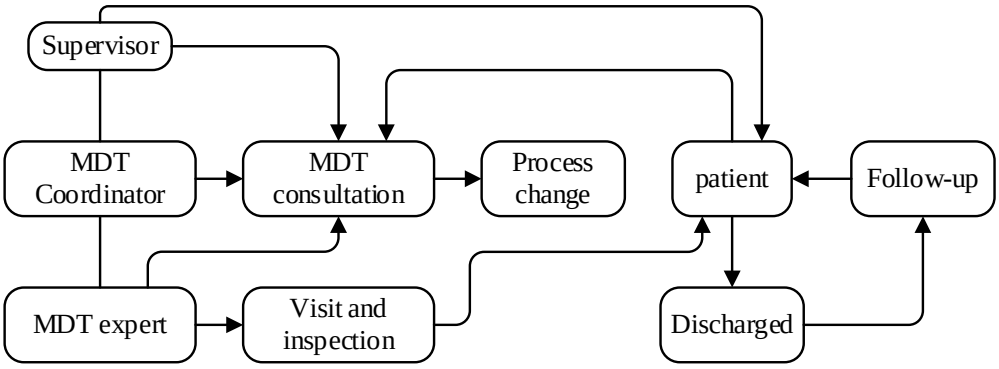

Fig. 1. MDT consultation process

Guided by the purpose of the consultation process, the MDT consultation mode has five characteristics of “professional, hierarchical, interactive, optimized and fast” under the framework of the MDT overall model. Specifically in:

(1) Professional---The normal operation of the MDT consultation process requires the cooperation of different undergraduates in similar sub-disciplines, showing obvious professional characteristics in the content and participants of the consultation process, and making the consultation process multi-disciplinary in the platform. The comprehensive characteristics are more obvious and are the basis of all the characteristics;

(2) Grading---Different patient treatment plans may have different clinical needs. Therefore, on the basis of the MDT model, through the consultation mode, the medical model is processed hierarchically, and different processes are used to deal with various Hierarchical needs, the consultation process shows different process links in this process layer, but does not change the basic purpose of the consultation medical model;

(3) Interaction---In the consultation process, there is great interactivity in the whole process. Usually, every MDT consultation needs to solve a variety of contents such as patient problems,

medical problems, interdisciplinary problems, etc., and there are corresponding before and after the consultation. Evaluation and feedback, the operation of specific problems is more integrated with the information interaction of various disciplines, communication between different disciplines has become a key factor affecting the quality of consultation, and comprehensively strengthens the interaction of consultation;

(4) Optimization - Through the MDT mode adjustment of the personnel structure and organizational structure, the optimization of the MDT consultation process is synchronized with the overall optimization of the MDT mode. On the basis of interactive information communication, an effective performance evaluation and feedback system constantly fine-tunes the treatment consultation process, and also affects the overall process of MDT consultation, and promotes continuous improvement of medical quality;

(5) Fast---”Time is life” is particularly prominent in critical care. Due to the synergy of professional, grading, interaction and optimization features, the rapid medical model is an important component of the overall process, in line with modern and efficient medical concepts.

4. Analysis on the Teaching Effect of CBL and MDT

With the continuous development of medical technology, people's understanding of diseases is also constantly deepening. At present, the division of departments in our hospitals is becoming more and more detailed, which makes patients often need several departments to diagnose and treat, and specialists are often used to simply This professional point of view to deal with complex clinical conditions, so as to avoid the limitations of diagnosis, is extremely unfavorable to patients; at the same time, the medical students who receive specialist education have narrow thinking and have a serious impact on the cultivation of medical talents. At this stage, more and more doctors recognize the shortcomings of departmental subdivision in the diagnosis and treatment of clinical complex diseases. Therefore, the diagnostic mode combining MDT and CBL has gradually become an ineviTable choice.

4.1. Research method

The teaching cases are all clinical digestive medicine patients. The control group adopts the traditional case teaching mode, which is carried out around the digestive system diseases. It is led by the unilateral explanation and analysis of the teacher, and is taught once a week. The MDT+CBL group adopts multi-disciplinary comprehensive teaching and treatment methods: it consists of 4 departments: Department of Gastroenterology, Radiology, Pathology, and Department of Oncology. For each patient who is hospitalized, the students are invited to participate in at least one discussion per week. It is required to consult the students before each multidisciplinary diagnosis and treatment: 1 Check the relevant information for each case and master the latest research progress of the disease; 2 Prepare the problem, including the patient's clinical diagnosis and treatment plan selection; 3 Slides, report cases. After the discussion, the patient's condition diagnosis results and related treatment opinions were recorded. Under the participation of the director and the teacher, the students will organize themselves and hold a seminar every 2 weeks. The secretary of the meeting will be responsible for recording the work of the meeting. When the seminar is held, the teacher will listen to the lecture and give it if necessary.

Efficacy evaluation: All the students were given theoretical examinations and clinical assessments 3 months after admission, and questionnaires were conducted. There was no difference between the theoretical and clinical assessments of the control group and the MDT+CBL group. The clinical examination is mainly for patients with superficial gastritis, and the choice of each patient's understanding of the disease, the standard process of diagnosis, and the choice of treatment plan. The questionnaire survey is mainly to evaluate the comprehensive ability of the disciplined students after standardized training and the satisfaction of the students in the teaching model. The comprehensive ability evaluation mainly includes the following aspects: 1 Whether it can improve self-learning ability by participating in training; 2 Whether it can deepen the understanding of theoretical knowledge by participating in training; 3 Whether it can improve practical ability by

participating in training; 4 Can it be improved by participating in training? Comprehensive thinking ability. Each of the above 4 items has a score of 1 to 25 points. Regulatory students' satisfaction with the teaching model includes teaching methods, training content and time, teachers' teaching ability, and is divided into satisfaction, basic satisfaction, dissatisfaction, satisfaction is the percentage of satisfied and basically satisfied.

4.2. Results

Comparison of theoretical examinations and clinical examinations between the two groups: This study showed that the theoretical test scores of the MDT+CBL group were 90.3±5.1, and the clinical examination scores (88.5±3.9) were significantly higher. The difference between the control group was (81.3±4.8) and (82.1±3.3), and the difference was statistically significant (P<0.01). See Table 2.

Table 2 Comparison of clinical examination results of theoretical examinations of two groups of tube culture students

index	Control group	MDT group	t
Number of cases	33	33	
Theoretical examination	88.2±5.8	92.4±6.1	-3.33
Clinical examination	83.1±4.3	87.8±4.5	-5.14

Comparison of the comprehensive ability of the two groups of discipline students: This study shows that MDT+CBL group training students have better performance in improving self-learning ability, deepening knowledge understanding, improving practical ability and improving comprehensive thinking, and the score is significantly higher than that. In the control group, the difference was statistically significant (P<0.01), as shown in Table 3.

Table 3 Comparison of comprehensive ability of two groups of tube culture

Evaluation index	Control group	MDT+CBL Group	t
Number of cases	33	33	
Improve self-learning ability	17.71±1.8	19.66±2.1	-4.56
Deepen knowledge understanding	16.7±2.3	20.25±2.8	-5.45
Improve practical ability	19.23±3.2	22.67±3.6	-5.01
Improve comprehensive thinking	21.22±5.6	23.22±3.6	-3.23
Total score	81.06±7.9	88.24±7.4	-2.99

5. Conclusion

In the past clinical teaching, teachers with teaching often used traditional teaching methods, that is, theoretical explanations and ward rounds. However, it does not meet the various needs of specific case analysis, that is, the traditional teaching methods are out of line with the clinical practice of digestive medicine. In this paper, the roles and advantages of CBL and MDT in pathological diagnosis were studied by setting up a controlled trial group, and CBL and MDT were combined for teaching diagnosis. Guided by the concept of evidence-based medicine, with the participation of multiple departments. To develop a treatment plan that is most suiTable for the patient. Through comparative experiments, it was found that both the theoretical level and the clinical practice ability, the regulation of the MDT+CBL group was significantly better than that of the control group, and the comprehensive ability of the MDT+CBL group and the satisfaction with

the teaching model were also significant. Better than the control group. In short, the application of MDT+CBL in the clinical teaching of digestive medicine has significantly improved the theoretical and clinical practice level of the discipline students, and it is worth promoting.

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