

Application of Cbl and Pbl in Oncology Teaching Reform to Cultivate Students' Comprehensive Ability

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Abstract: Objective: To explore and analyze the effect of CBL and PBL on the comprehensive ability of students in oncology teaching reform. Methods: 60 interns in oncology department of our hospital from July 2019 to June 2020 were selected as examples to carry out this study; 30 interns were randomly selected as the research group to receive CBL and PBL joint teaching, and the other 30 interns were set as the reference group to receive traditional teaching mode. The comprehensive scores and satisfaction of the two groups were compared. Results: the average score and final score of the study group were (90.75 ± 5.87) and (86.34 ± 6.56) respectively, which were significantly higher than those of the reference group ($P < 0.05$). In addition, the satisfaction of 76.7% interns in the study group was also significantly higher, $P < 0.05$. Conclusion: in the process of oncology teaching, the combination of CBL and PBL is conducive to the cultivation of students' comprehensive ability, which can be used as an important direction of teaching reform.

1. Introduction

In recent years, the degree of concern about malignant tumor has been increasing in the society, and its incidence rate and mortality rate have increased significantly. So in medical education, the importance of oncology teaching is also increasing. However, oncology teaching has a certain particularity, which is highly practical and applied in the process of education. Therefore, we should not only cultivate students' relevant theory and treatment knowledge, but also cultivate students' pioneering ability and innovation ability. However, in the current oncology teaching, most of the traditional teaching methods are used, with teachers as the main body and teaching in the way of teaching. This teaching mode is not conducive to the cultivation of students' comprehensive ability. In recent years, PBL (problem-based learning) method and Cbl (case-based learning) method are gradually widely used [1]. In order to further explore the effect of combined use of CBL and PBL in oncology teaching reform on the cultivation of students' comprehensive ability, our hospital launched this study.

2. Data and Methods

2.1 General Information

Methods: from July 2019 to June 2020, 60 interns in the oncology department of our hospital, who are all oncology students of Inner Mongolia University for nationalities, were selected for this study; 30 interns were randomly selected as the study group, and the other 30 interns were set as the reference group. There were 16 male and 14 female interns in the study group, with an average age of (21.5 ± 1.9) years. There were 17 male and 13 female interns in the reference group, and the average age was (21.7 ± 1.7) years. There was no significant difference in general information between the two groups.

2.2 Method

The two groups were divided into different groups and received different teaching modes.

The interns in the reference group received the traditional teaching mode in the process of learning oncology. Specifically, teachers are the main body of teaching, combined with blackboard writing, slides and other tools to carry out classroom teaching, teaching, combined with clinical observation and other activities.

The interns in the research group accepted the CBL + PBL joint teaching method, specifically for the following process. First of all, the students in the internship are divided into groups, with 6 students in each group. Ten days before the knowledge learning, the contents of the course to be learned will be sent to the students in advance; at the same time, three days before the learning, the teacher must select the appropriate case according to the teaching content, and send the relevant information of the case to the students for preview; after receiving these information, the students will carry out the study, preview and preview in advance by means of self-study, literature review, group discussion, etc Research [2]. We set up the following nasopharyngeal carcinoma cases, and the patient complained of “sucking back blood for more than two months”. The following conclusions were drawn from the special examination: the patient received nasopharyngeal endoscopy, and the results showed that the nasal cavity was unobstructed; however, new organisms were extracted from the posterior wall for biopsy; lymph nodes with a diameter of 3.5cm appeared in the left upper neck; the hearing and visual acuity of the patient were normal. And set up the following questions: which tests the patient needs to accept, how to make further diagnosis, staging of the patient's disease, staging standards, differential diagnosis, treatment principles and so on. Students learn and understand through various ways. During the internship, under the guidance and help of the teacher, medical history inquiry, symptom identification, preliminary diagnosis, etc. are carried out. In this process, the teacher gives necessary supplement and inspiration. Then, group discussion (CBL) will continue to be conducted based on the changed cases. At the same time, deeper and broader questions (PBL) will continue to be raised. Students will continue to carry out in-depth exploration, such as: the pathogenesis of the disease, whether the disease has geographical characteristics, whether it is related to diet; whether the pathological classification of nasopharyngeal carcinoma in eastern and Western countries is completely the same; and the staging of the disease The theoretical treatment principles of different stages: the implementation of radiotherapy and chemotherapy, targeted treatment for patients, the possible manifestations of various toxic and side effects, how to implement targeted treatment, and so on [3]. For these questions, students continue to get answers through self-study, discussion and literature review. And in the follow-up internship time to carry out further discussion and research, and finally by the teacher for all the knowledge to do a summary of the induction, and the students' discussion, learning status to carry out comments.

The oncology syllabus and teaching contents of the two groups were the same. After class, the students were given the same case analysis questions, and the homework scores were the usual scores. In addition, after the study, the comprehensive assessment was implemented.

2.3 Observation Indexes

(1) The comprehensive scores of the two groups were compared, including final scores and usual scores. The normal score is the average score of the normal homework; the homework is the same, the students' names and groups are hidden, and the same teacher will score them. The final score is the same paper, the same hidden name and group, the same teacher grading mode. (2) The two groups of students to carry out teaching satisfaction survey, compared with the satisfaction of the two groups of students.

2.4 Statistical Methods

Spss20.0 was used to analyze the related indicators of the two groups. T test was used for the measurement data, and chi square test was used for the count data. $P < 0.05$ was used as the judgment standard of statistically significant difference.

3. Results

3.1 Comparison of Comprehensive Results

According to the data in Table 1 below, the average score of the interns in the study group receiving CBL combined with PBL teaching was (90.75 ± 5.87) , and the final score was (86.34 ± 6.56) , which were significantly higher than those in the reference group receiving traditional teaching, $P < 0.05$.

Table 1 Comparison of Comprehensive Results

Group	n	usual results	final results
Research Group	30	90.75±5.87	86.34±6.56
Reference group	30	71.65±8.43	75.43±9.23
P		<0.05	<0.05

3.2 Comparison of Satisfaction

According to the data in Table 1, 96.7% of the interns in the study group who received CBL combined with PBL teaching were significantly higher than 70.0% in the reference group, $P < 0.05$.

Table 2 Comparison of Satisfaction with Teaching Methods

Group	n	very satisfied	satisfied	dissatisfaction	satisfaction
Research Group	30	17(56.7)	12(40.0)	1(3.3)	29(96.7)
Reference group	30	11(36.7)	10(33.3)	9(30.0)	21(70.0%)
P					<0.05

4. Discussion

With the increasingly obvious disadvantages of traditional teaching methods in oncology teaching, oncology teaching reform has been continuously promoted in recent years, among which CBL, PBL and other emerging teaching methods are important contents of the Reform [4]. In terms of the specific application effect, these two methods have their significant advantages, but also have obvious disadvantages. The combination of the two methods can achieve a good effect of learning from each other. CBL joint PBL teaching, close contact with specific cases, on this basis, based on the problem oriented, let students carry out exploratory learning. This kind of joint mode can

overcome the problems of using CBL alone is difficult to go deep, and using PBL alone is easy to deviate from the topic, and truly achieve the effect of complementary advantages [5]. In the whole learning process, students' autonomous learning and exploration are the main tasks, and teachers give necessary guidance and solutions, which not only effectively stimulate students' learning enthusiasm, but also have a very significant effect on cultivating students' comprehensive ability.

In this study, we can clearly see that the interns who accept CBL combined with PBL teaching have significantly higher scores in both usual and final grades; at the same time, they have higher satisfaction with teaching. Therefore, we can draw the following conclusions: the combination of CBL and PBL is beneficial to improve students' comprehensive ability, which is the right direction of oncology teaching reform.

References

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