

Warning Case Combined with Mind Mapping Teaching is Applied in the Practice Teaching of Nephrology Department

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Abstract: Objective: To explore the influence effect of warning cases combined with thinking mapping in the teaching of nephrology. Methods: To select the medical students who have practiced in the department of nephrology for nearly 12 months (2022.09-2023.08), and conduct group teaching experiment observation and exploration successively according to the practice time. The conventional teaching mode is adopted for the medical students in the reference group, and the enrollment period of interns is from September 2022 to February 2023; for the medical students of the inquiry group, the enrollment period of trainees is from March 2023 to August 2023. The two groups of teaching effects were compared. Results: After comprehensive assessment of the two interns, the theoretical knowledge assessment score, practice assessment score and comprehensive score of the inquiry students are higher than the reference group, indicating that the medical students in the inquiry group have better theoretical knowledge and clinical practice ability. Compared with the satisfaction of the two interns, the satisfaction of the medical students in the inquiry group is higher than that of the reference group. Conclusion: The use of warning cases combined with mind mapping teaching in the practice of nephrology has better teaching effect, and has a more positive impact on medical students' theoretical knowledge and clinical practice ability. Moreover, medical students are more satisfied with this teaching method, which should be vigorously promoted in clinical practice.

Keywords: nephrology department, warning case, mind mapping, practice teaching

Introduction

Our department has carried out a research on the methods of teaching in nephrology practice, and specifically analyzed the actual effects and value achieved by warning cases combined with thinking mapping teaching. The detailed reports are as follows:

1. Data and methods

1.1 Information

The medical students who had practiced in the department of nephrology for nearly 12 months (2022.09-2023.08) were selected to carry out group teaching experiment observation and exploration according to the time of practice. The conventional teaching mode is adopted for the medical students in the reference group, and the enrollment period of interns is 2022.09-2023.02; for the medical students of the inquiry group, the enrollment period of trainees is 2023.03-2023.08. Among them, there were 21 medical students in the reference group, 12 males and 9 females, aged 22-24 years, average age (23.34 ± 1).

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There were 21 medical students, 11 male, 10 and 10 women, 23-25 years, average age (23.25 ± 1.54).03

1.2 Methods

1.2.1 Reference group

To this group of medical students adopt conventional teaching methods for teaching, teachers according to the syllabus lessons actively, to this group of medical students to carry out the centralized teaching, the first interpretation of theoretical knowledge, then students group, practical skills and students group field, explain and review on students operation, mutual operation and review between team members. According to the syllabus assessment standards, all students' theoretical knowledge and practical assessment. Record it, summarize the data, and analyze it^[1].

1.2.2 Inquiry group

Warning cases combined with mind mapping were used to teach medical students. The specific teaching methods are provided as follows:

① Theory training. Explain the basic theoretical knowledge of mind mapping to the interns, including the concept of mind mapping, the value applied in teaching and clinical practice, and the method of making mind mapping, etc^[1].

② Make a mind map. Interns were divided into practice groups of 3 – 5 persons, assigning different central themes to each group to ensure the maximum functionality of the team. Prepare a different color pen and A4 paper for each member of the group interns, and guide the interns to draw the mind map with the training content as the main body in the training process. The basic framework is to expand the core problems and keywords, spread the induction mechanism, disease development, diagnosis data and treatment distributed around the same time of the core theme. On this basis, the headset body is subdivided and divergent, using different color handwriting and symbols and keywords, refine the content, and then the group comb again, supplement and modify the content^[2-3].

③ practice. Select 20 teaching cases from the case base, combining etiology, epidemiology, pathogenesis, physiological pathology, clinical presentation, laboratory examination, diagnosis, treatment and prevention, and some of the most advanced nephrology medicine knowledge, setting 3-5 questions for each case. The group is divided according to the mind map to complete the patient's diagnosis, treatment plan development and emergency management. The teacher commented on the shortcomings and highlights of mind mapping and case practice^[4].

④ Summary: The teacher used multimedia courses and case bank to introduce the comprehensive knowledge of nephrology diseases to the students, and then combined the mind map made by the group with typical cases, and organized the student group to discuss and analyze again. The teacher answers the students' questions and helps to guide the discussion. Using text, table, image, animation, video and other ways to show to students, and provide vivid and intuitive content to explain in the typical warning cases, to stimulate students' interest in learning and thirst for knowledge^[5].

1.3 Statistical methods

SPSS 19.0 Software processing, X²-value test, P<0.05 indicates that the data is with statistical significance.

2. Results

2.1 Comparison of the assessment scores of the two groups of medical students

After the two groups adopted different practice teaching modes, the scores of the theoretical

knowledge and clinical practice ability in the inquiry group were higher than that of the reference group. The specific data are shown in Table 2-1:

Table 2-1 Comparison of assessment scores of two medical students ($\bar{x} \pm s$)

Observational indicators	Inquiry group	anchoring group	t	P
Number of medical students	42	45	0.112	>0.05
Theoretical nursing knowledge assessment and score	Before entering the internship 48.58±3.25	Before entering the internship 48.33±3.29	0.380	>0.05
	Six months after the internship 80.25±3.14	Six months after the internship 70.65±3.84	6.835	<0.05
Clinical practice ability assessment score	Before entering the internship 45.21±5.17	Before entering the internship 45.25±5.16	0.185	>0.05
	Six months after the internship 81.62±5.13	Six months after the internship 72.63±3.14	6.748	<0.05
Comprehensive score	Before entering the internship 46.87±6.78	Before entering the internship 46.21±6.28	0.629	>0.05
	Six months after the internship 82.28±6.43	Six months after the internship 72.21±6.28	6.569	<0.05

2.2 Comparison of medical students' satisfaction between the two groups

After the two groups adopted different practice and teaching modes, the comparison of the survey results found that the satisfaction of the inquiry group with the practice and teaching was higher than that of the reference group. The specific data are shown in Table 2-2:

Table 2-2 Comparison of Satisfaction of medical students (n,%)

Observational indicators	Inquiry group	Reference group	χ^2	P
Number of medical students	21	21	0.000	>0.05
degree of satisfaction	Very satisfied	13 61.90%	9 42.86%	\
	be basically satisfied	7 33.33%	8 38.10%	
	discontent	1 4.76%	4 19.05%	
	Total satisfaction	20 95.24%	17 80.95%	

3. Conclusion

In this study, the teaching mode of warning case combined with mind mapping teaching had excellent results. Above, it can be seen from the experimental results report that after the comprehensive assessment of the two interns, the theoretical knowledge of the medical students are higher than the reference group, which indicates that the medical students in the inquiry group have better theoretical knowledge and better clinical practice ability. Compared with the satisfaction of the two interns for practice, the satisfaction of the medical students in the inquiry group is higher than that of the reference group.

To sum up, in renal medicine practice teaching using warning case combined with mind mapping teaching has better teaching effect, the medical students' theoretical knowledge, clinical practice ability have more positive influence, and medical students more satisfied with this teaching way, this kind of practice teaching mode effect is better, can be promoted.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- [1] Wei Zhaoling, Ding Song, Bu Jun. Application and effect evaluation of mind mapping in the department of cardiology [J]. Higher Medical Education in China. 2023; (03): 63-64 + 67.
- [2] Dai Xingjun. Application of mind mapping in pharmacy Practice teaching [J]. Higher Medical Education in China. 2023; (01): 94-95.
- [3] Xu Zhouwei, Chen Weidong, Zhang Jianlin, etc. Application of symptom-based mind mapping combined with case-based teaching in acute abdomen [J]. Emergency Medicine in China. 2022; 42 (10): 915-920.
- [4] Xing Jianqiang, Shao Bin, Wang Dawei, etc. Research on the application of mind mapping combined with PBL teaching method in orthopedic clinical practice teaching [J]. Higher Medical Education in China. 2022; (07): 84-85.
- [5] Lan Pin, Pan Feng, Chen Zhaohui, etc. Research on the application effect of mind mapping in clinical practice [J]. Higher Medical Education in China. 2019; (04): 81 + 112.

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