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Exploring the Influence of Clinical Trainee in the Teaching Practice of Neurology for International Students

Huili Tang

Department of Neurology, The First Affiliated Hospital of Yangtze University, China

Abstract

Objective: To enhance active learning ability and promote applied learning in neurology with clinical trainee as the core. Methods: The teaching practice data of clinical neurology for international students in 2014 were collected. Teaching preparation: basic textbook., hospitals and clinicians responsible for teaching, mode of group study and evaluation. Teaching methods: Focusing on clinical trainee, combined with classrooms, neurology teaching were carried out. Results: The number of active participants in classroom communication is greater than the number of active participants in clinical trainee. Scores on Basic and Comprehensive tests Correlated with Student Emotions. Post-course surveys showed that some students' attitudes towards clinical thinking training around clinical trainee were not yet clear. Conclusions: During the clinical trainee, international students had enhanced their understanding of neurology and their ability to learn actively. With the resolution of clinical problems, the neurological system of international students had been gradually established. At the same time, not only the ability to ask medical history and neurological examination had been improved, but also the ability of clinical thinking.

Keywords

International Students; Teaching Practice; Neurology; Clinical Trainee.

1. Introduction

In the teaching of neurology, teachers usually guide students to study with the help of clinical cases in the classroom, and clinical thinking training is relatively passive[1]. In 2014, for the neurology teaching of international students, the evaluation mode was adjusted to encourage students to increase their time and energy for clinical trainee. Focusing on clinical trainee, international students actively trained clinical thinking to solve clinical problems, improved the ability of medical history inquiry and neurological examination, and gradually established a neurological system [2].

2. Preparation for Teaching

2.1. Basic Textbook

Select "Clinical Neurology" fifth edition as the basic textbook. The basic idea of this book is that careful history taking and neurological examination are the base of neurological disease diagnosis, and neurology is learned by solving clinical problems.

2.2. Hospital and Clinicians Responsible for Teaching

Department of Neurology, Jingzhou First People's Hospital, included general ward, NCU, and mental health ward. An attending neurology physician was responsible for instructional design and teaching. A number of resident physicians were responsible for the guidance of clinical trainee.

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2.3. Mode of Group Study

International students from the School of Medicine of Changjiang University. There were 47 students in the class. According to the learning content, the whole class was randomly divided into 12 groups, each group had 3-4 students.

2.4. Evaluation Mode

Taking basic test accounted for 40%. Participating in class communication accounted for 10%. Clinical trainee accounted for 20%. Students analyzed clinical cases, presented the results, and improved after class. This score accounted for 30% [3]

3. Teaching Methods

3.1. Clinical Trainee

Every weekend, 2 study groups were arranged to go to the hospital for clinical practice.

3.1.1. Neurology Trainee

The first part, clinicians guided students to identify neurological symptoms and signs, also selected a typical case for bedside teaching which included taking medical history and physical examination.

The second part, in the clinical classroom, teacher briefly introduced the diagnostic principles of neurological diseases. The trainee group summarized case characteristics, made diagnosis, selected appropriate auxiliary examinations and treatments, and judged the prognosis.

3.1.2. Mental Health Trainee

The first part, in the mental health ward, international students followed the psychiatrist to observe the patient's status, including general appearance, speech, motor activity, attention, memory and judgment, etc.

The second part, in the doctor-patient communication office, teacher guided students to assess emotions. Subsequently, patients with anxiety and depression were invited to describe the impact of mood disorders on daily learning, life, work, and social interactions.

3.2. Classroom Communication

For each content, 4 classroom communication were arranged. Class teachers guide students to solve clinical problems.

The first time, the trainee group reported the characteristics of the case, performed neurological examinations, and showed videos of related diseases. Other groups identified the location based on the accompanying symptoms and signs.

The second time, each group was asked to map surface features, anatomical paths, and localization. Teacher guided students to understand the relationship between anatomical location and clinical features.

The third time, the trainee team described the occurrence and development of the case. Other groups described the onset and progression of the disease with similar symptoms and signs. Teacher guided students to discuss the difference.

The fourth time, teacher guided students to explore pathogenesis and expanded connections between different disciplines. Finally, students reviewed the key and difficult points of knowledge in the classroom test.

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4. Teaching Results

4.1. Clinical Trainee and Classroom Attendance

All international students had completed clinical trainee and classroom communication. The number of active participants in classroom communication is greater than the number of active participants in clinical trainee. There was no significant relationship between participation and content of clinical trainee. Through caring and communication, a small number of students completed clinical trainee and classroom communication. See Table 1.

4.2. Basic and Comprehensive Tests

There was a certain correlation between emotional state and grades. Confident students did better than anxious students. The distribution of scores in the basic test and comprehensive test was basically the same, and it was like the attendance rate of clinical trainee. See Table 2.

4.3. Post-Course Surveys

Teaching philosophy and teaching methods were accepted by most students. A small number of students had unclear attitudes towards clinical trainee, daily tasks and ability training. See Table 3.

Table 1. Attendance for clinical trainee and classroom communication

	Active	Passive
Neurosurgery trainee	70%	30%
Mental health trainee	72%	27%
Classroom communication	97%	3%

Table 2. Relationship between emotion and test scores

Emotion	Proportion	Basic test	Proportion	Comprehensive test	Proportion
No matter	3%	40 point	0%	100 point	0%
Confidence	65%	30-39 point	70%	90-99 point	66%
Anxiety	32%	20-29 point	30%	80-89 point	34%

Table 3. Attitudes towards teaching philosophy and methods

	Uncertain	Approval
Learning around clinical trainee	35%	65%
High percentage of daily grades	43%	57%
clinical thinking training	26%	73%
Show trainee results	6%	93%

5. Conclusion

5.1. Clinical Application of Knowledge

During the clinical trainee, clinicians guide students to identify signs and symptoms, and further guide students to determine a differential diagnosis. For example: hemiplegic limb paralysis combined with ipsilateral central facial paralysis or contralateral peripheral facial paralysis, with different lesions; acute or chronic onset, with different etiologies. By exploring the lesions and pathogenesis, the international students enhanced their understanding and memory of neurology.

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5.2. Improvement of Clinical Practice Ability

At the patient's bedside, clinicians demonstrated history taking and physical examination. Medical history inquiry included main symptoms and accompanying symptoms, onset form and development, triggering and aggravating factors, diagnosis and treatment process, general conditions such as diet and sleep, past medical history, personal history, family life history, family history, etc. Physical examination included vital signs, neurological examination, other physical examination, etc.

In the case summary, the teacher demonstrated the selection of medical information, highlighting the logic of clinical thinking. In the diagnosis and treatment, the teacher demonstrated how to use auxiliary examinations to verify the diagnosis, guide the treatment and judge the prognosis. In clinical practice, international students not only trained clinical thinking, but also gradually improved their ability to take medical history and neurological examination.

5.3. Discover Problems, Solve Problems, and Explore the Unknown

Learning never ends. In real clinical scenarios, international students understood the discomfort of patients by listening to the communication between clinicians and patients. Under the encouragement and inspiration of teachers, the students obtained medical information and trained clinical thinking. In the process of solving clinical problems, more and more unknowns emerged [4], and students had an increasing need for teacher guidance.

5.4. Establish a Neurological System

During college, international students gradually determined their future professional direction. In addition, neurological diseases had diverse manifestations and complex anatomical basis. Neurology learning was influenced by the degree of professional relevance and the difficulty of the discipline.

Teachers needed to adapt their teaching methods to guide neurological learning [5]. First, teachers improved the status of clinical trainee, guided students to identify symptoms and signs. During this process, the difficulty of learning was reduced through perceptual cognition, and the connection between neurology and other profession was established through the analysis of pathogenesis.

5.5. Adjust the Learning Status

In clinical trainee, the study of international students was transferred from the school to the hospital. Learning burnout reduced learning efficiency. This phenomenon had to be noticed. In addition to the teaching method, whether agreeing with medicine and neurology [6], whether there was anxiety and stress, also caused study burnout.

During the Mental Health trainee, international students not only identified abnormal psychological behaviors and cognitive dysfunctions, but also experienced the impact of emotional disorders on daily study, life, work and social interaction. Students adjusted their learning status by reflecting on motivation to learn and the causes of emotional disorders.

6. Closing Remarks

Clinical trainee was the bridge between school learning and hospital practice. During the trainee, the international students gradually formed the basic literacy of clinicians, interested in human nature, caring for patients, and caring for patients. The completion of clinical tasks helped students gain a comprehensive understanding of neurology, and helped students improve their active learning and personal management skills. The study of clinical neurology enhanced students' ability to apply theory to practice, helping students understand the

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connections between neurology and other disciplines. In addition, it is necessary to pay attention to the cultivation of scientific research quality of medical students [7].

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References

[1] Guo Yanjun. Discussion on clinical teaching practice of neurology for international students [J]. Journal of Clinical and Experimental Medicine,2012 ,11(22):1835.

[2] Xie Ying. Discussion on the application of new teaching mode in the teaching reform of neurology[J]. Chinese Journal of Clinicians, 2013, 7 (10): 4647-4648.

[3] Lu Shan. Exploration and practice of teaching management for international medical students in China [J]. World Latest Medicine Information .2015,15 (71):190-191.

[4] Yang Lianhong. Application of"research style"teaching method to eight-year program medical students in neurology clinical teaching[J]. Higher medical education in China, 2013,11: 111-112.

[5] Wang Huan. On How to Improve the Efficiency of College Students' Classroom[J].Science & Technology Information, 2021,36: 115-118.

[6] Huang Wen. Combined with the Charateristics of Neurology Disciplines Strengthen Humanisty Quality Education [J]. Northwestern Medicine Education, 2013,21(1): 89-91.

[7] Qin Ying, Xiao Zhi. The role of university scientific research centers in the cultivation of medical students' scientific research quality[J]. Modern Medicine,2018,34(5): 773-775.