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Teaching Reform and Practical Research of Surgery by the Qualification Examination for Practicing Physician

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ABSTRACT
The qualification examination of medical practitioners is not only the industry admission examination for students, but also the standard to test the educational level of medical college. Be aimed at the new challenges posed by the medical education by the qualification examination of medical practitioners, it is necessary to realize the effective connection between the qualification examination of medical practitioners and surgery. Due to the seriousness, rigor and objectivity of surgery teaching, the teaching content is boring and complicated, students' low learning enthusiasm and their professional skills need to be improved. In this regard, under the guidance of the medical practitioner qualification examination, this article combines the theory and practical teaching of surgery, and propose relevant opinion and suggestions, aiming to promote teaching and improve students' comprehensive quality.

KEYWORDS
Medical qualification examination; Surgery; Teaching reform

The Practicing Physician Qualification Examination is an industry admission qualification examination that every medical student who graduates from clinical medicine majors takes one year after graduation, It is the minimum standard to become a legitimate clinical doctor. In September 2020, Our country release of relevant documents, clearly require the establishment and improvement of a medical education quality evaluation and certification system[1].The passing rate of the physician qualification examination is taken as an important part of evaluating the quality of medical talent cultivation, and the enrollment of universities with the passing rate of the qualification examination that is less than 50% for three consecutive years will be reduced. Surgery, as one of the core courses, accounts for about 16%. Surgery is not only an important subject in the practicing physician qualification examination, but also a compulsory subject for becoming a clinician.The effective connection between surgery teaching and practicing physician qualification examination is the direction of surgery teaching reform, which plays an important role for medical students to become qualified clinicians. To this end, we closely integrate our unique characteristics, analyze the current status of medical practitioner qualification examinations and the issues in general clinical medicine education and teaching, enhance students' relevant knowledge and skills training based on examination requirements.

1 Issues with the instructional approaches in surgical education

First of all, the traditional surgery teaching mode mainly focuses on classroom teaching[2], and students passively accept knowledge without active participation, which cannot stimulate students'

learning interest and motivation. Secondly, surgery is the core course in clinical medicine, but the current teaching is often divorced from clinical practice. When students learn surgery knowledge, they lack the connection with clinical practice and cannot combine theoretical knowledge with practice, which affects the cultivation of students' clinical thinking and practical ability. Finally, the evaluation system of surgery teaching is mainly based on examination results and neglects the evaluation of students' comprehensive ability. This memorization and exam-oriented evaluation system can not fully reflect the students' learning situation and mastery of surgical knowledge, which limits the development space of students.

2 The necessity of connection between surgery and practicing physician qualification examination

Surgery is one of the required subjects in the qualification examination of medical practitioners[3]. According to relevant statistics, the passing rate of the examination of physician qualification shows a downward trend, and the scores of the medical practitioner qualification examination are positively correlated with the scores of relevant subjects in school. Therefore, it is very important to effectively link the medical practitioner qualification examination with surgical teaching.

First of all, surgery is the core course of the examination for medical practitioners. Mastering the knowledge of surgery can help doctors better understand the relationship between human body structure, tissues and organs and the occurrence and development of diseases, provide accurate basis for clinical diagnosis and treatment, and avoid misdiagnosis and mistreatment. Secondly, the study of surgery is closely related to the professional quality of medical practitioners. Through study can help medic better understand the relationship between diseases and human beings, deepen their professional identity and sense of mission, enhance their reverence of life, and cultivate their correct professional values and moral concepts.

3 Surgical teaching reform strategy based on practicing physician qualification examination

3.1 Reform the teaching syllabus and optimize the teaching content

The consistency of the surgery syllabus and the medical practitioner qualification examination syllabus is helpful to improve the passing rate of the medical practitioner qualification examination. Therefore, by combining the latest outline of medical practitioner qualification examination, the surgery teaching syllabus is appropriately adjusted, and a reasonable teaching plan should be formulated to optimize the teaching content of surgery[4]. According to the outline of the qualification examination in recent years,through analyzing the change of its content, the teaching content is reasonably increased or decreased, and the chapter class hours of surgery are reassigned. In addition to the study of knowledge, attention should also be paid to the cultivation of students 'comprehensive ability. The syllabus can increase the cross content with other disciplines, such as physiology, pathology, anatomy, etc., so as to cultivate students' interdisciplinary thinking and comprehensive analysis ability.

3.2 Collective lesson preparation, mastering clinical needs

In the reform of surgery teaching, the system of joint collective lesson preparation is

implemented[5]. According to the specific content, the collective lesson preparation of each semester, and each teaching and research section, each major coordinated lesson preparation. In the concrete implementation, the teaching and research section all the teachers, affiliated teaching hospital senior physicians, clinical frontline doctors involved, in view of the teaching content, methods, and by the clinicians combined with the syllabus and clinical practical situation, points out that the close contact with clinical knowledge, and then in the form of case sharing, deepen students' understanding and mastery of surgical knowledge. Under the guidance of physician qualification examination, it is an effective teaching mode to promote collective lesson preparation in surgical teaching. Surgery is a comprehensive discipline, involving knowledge of multiple disciplines. Through the combination of disciplines and collective lesson preparation, the knowledge of different disciplines can be integrated to help students better understand and master the content of surgery. The collective lesson preparation of disciplines can break the traditional one-to-many teaching mode and allow teachers of different disciplines to participate in the teaching process, which can increase the interaction between teachers and students, so that students can timely raise questions and get answers in the learning process, and improve the learning effect. Surgery is a highly practical subject, and surgical experiment is an important part of learning. Collective lesson preparation of disciplines can enable teachers of different disciplines to participate in the teaching of surgical experiment, providing more practical opportunities to help students improve their operational skills.

3.3 Enrich the teaching methods, and master the knowledge content in all aspects

Surgical teaching can use various ways, such as flipped classroom, mind mapping, case-and problem-based teaching, to effectively stimulate students' interest in learning[6]. Through the learning platform, teachers can record and share the videos of experiments to help students to understand and master knowledge more intuitively; use the Internet platform to establish a virtual operating room to allow students to operate in the virtual environment and improve the practical ability; students can communicate and share surgical learning experience with teachers and other students; during the preparation of medical physician qualification examination, use the Internet to provide rich examination materials and simulation questions to help students better prepare for the exam. Browse the high-quality course resources on the learning platform to find more suitable teaching methods for students, establish learning communication groups in advance, upload e-books and other resources before class for students to preview . Based on the teaching content, publish corresponding tasks to gradually promote implementation. Students can watch it repeatedly according to their own learning progress, and complete the task through the pass mode. Teachers can also understand the students' learning progress and effect. In online teaching scenarios, teachers can stimulate students' interest in learning and increase the interest of the classroom. After class, teachers can set up course assignments to test students' learning effect, and set up a special discussion area to guide students to discuss the surgical related content of this study. In order to cultivate the practical application ability of practicing physicians, the time and opportunities for clinical practice teaching should be increased. Students can improve the practical application ability of surgery knowledge by participating in the diagnosis and treatment of real cases.

3.4 Improve teaching methods by relying on the Internet platform

In traditional classroom teaching, teachers are mainly responsible for giving lectures, but in the limited teaching time, students have obviously insufficient time to think and digest knowledge.

Therefore, teachers should follow the trend of The Times, actively build online courses, shoot professional surgical experiment teaching videos, combine online and offline to better guide students and improve their practical ability; realize the real-time communication and interaction between students and teachers, help students solve problems and raise questions[7]. At the same time, the platform can provide opportunities for independent learning, and students can choose appropriate learning resources based on their own learning progress and needs.

In addition, teachers can also organize a variety of social practice activities, such as organizing students to carry out common diseases, frequently-occurring diseases of free diagnosis, hospital outpatient volunteer activities, or carry out some competitions with a high degree of student participation, to fully mobilize students 'learning enthusiasm and promote the cultivation of students' innovative thinking.

3.5 Optimize the assessment method, implement the multi-dimensional assessment, and improve the teaching quality

The traditional examination method of surgery is mainly closed book examination, which pays attention to the students' memory ability and the mastery of theoretical knowledge. There are obvious problems in this way, students only pay attention to rote memorization, lack of in-depth understanding of knowledge and application ability training; The content of assessment is mainly limited to book knowledge, ignoring the needs of practical application; The single assessment method can not fully assess the level and ability of students in surgery. With the reform of the medical practitioner qualification examination, the requirements for medical education and training of qualified doctors are also increasing. Therefore, teachers need to reform the assessment methods in teaching to better adapt to the new needs. In order to enhance the assessment of students, we have organized clinicians and surgical teachers to jointly build a self-thesis and set up a surgical question bank closely related to clinical application. In the past, we have only focused on examining students' grasp of theoretical knowledge, and gradually changed to examining students' clinical application ability and analytical ability. In the course of classroom teaching, after the completion of each chapter of teaching, the corresponding simulation exercises are arranged to test students' knowledge mastery and deepen their knowledge mastery.Throughout the entire teaching process, process assessment should always be integrated into the teaching process. Based on the information collected from online platforms regarding students' attendance, classroom performance, completion of exercises, and online test scores, a comprehensive evaluation of their learning situation for the semester should be conducted[8].

In order to train qualified medical practitioners, we not only need to master theoretical knowledge, but also need to have practical operation ability. Therefore, practical operation assessment, including anatomical experiments and simulated surgery, can be introduced to evaluate students' practical application ability and operational skills. In order to comprehensively evaluate the level and ability, comprehensive ability assessment can be carried out, including surgical case analysis, case discussion, etc. Through these assessment methods, students' problem-solving ability, teamwork ability and innovative thinking ability can be examined.

4 Conclusion

Under the guidance of the medical practitioner qualification examination, this paper combines the theoretical and experimental teaching of surgery as the breakthrough point of medical education reform, takes the examination outline as the guidance, optimizes the teaching content of

surgery, reforms the teaching methods, adjusts the assessment methods, arouses the enthusiasm of students, promotes the comprehensive quality of teachers, and ensures the continuous improvement of teaching quality. Through the optimization and reform of surgical course, build a curriculum knowledge system that is more closely aligned with clinical practice, make the students understand clinical in advance, deepen their understanding and mastery of surgical knowledge, improve students' clinical problem analysis ability, innovation ability, and successfully pass the medical practitioner qualification examination, laying a solid foundation for their future growth as qualified medical workers,effectively improve the comprehensive quality and ability of medic.

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