

Original Research Article

Research on Teaching of Basic Surgery

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Abstract: Doctors are scarce resources in society, so strengthening medical education and improving ability of medical staff are important contents of the whole society. Surgical training is an important part of basic surgical teaching and a way for medical students to become qualified surgeons. Therefore, this article focuses on the operation training in the teaching of basic surgical science, and discusses the teaching problems and teaching strategies.

Keywords: Basic surgery; Operation training; Medical students

Surgery is a discipline that emphasizes science, surgery and practice, of which surgical skills are the basic skills. In order to adapt to clinical trials, students majoring in surgical medicine need to strengthen basic surgical training, master relevant skills and become qualified and excellent surgeons.

1. Problems in the teaching of operation training

1.1 Ideological misunderstandings and neglect

After theoretical study, most students are curious and fresh about the actual process. However, after a short period of enthusiasm, many students ignore the basic skills education. Skill learning and practice is a long-term process, and many students lack of long-term training and expect to improve in clinical practice in the future.

1.2 Non-standard training process

Clinical surgery has different functions and corresponding responsibilities. In basic training and training courses, it is necessary to simulate the real situation. In the actual teaching process, students are often interested in the surgeon, which contradicts the role distribution of students in the exercise process. Therefore, the team work cannot be carried out smoothly. The lack of training as different roles is not conducive to the study of surgical students.

1.3 Non-standard teaching methods

Most substitute teachers in this course are surgical clinicians, who often have rich surgical experience and unique surgical knowledge, but lack teaching experience. Because teachers come from different sources, sometimes they may have different surgical operations, which may lead to students' misunderstanding. Because some teachers lack teaching experience, the teaching process and methods may be uncertain, which will greatly affect students' basic skills.

1.4 Lack of confidence and ability resisting frustration

Surgery is a discipline that emphasizes practice, which requires students to have better working ability. It requires courage and constant practice in the course of surgery. However, some students are not sure about the operation, lack

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the ability to solve problems. In the actual teaching process, some problems, such as rupture of great vessels, are encountered. Some students are confused and unable to calm down or look for bleeding spots, which leads to many mistakes in the operation. Some students always rely on teachers or classmates to help them every time they encounter problems, so they can't solve problems by themselves. The main reason of these phenomena is the lack of internal motivation, leading that they cannot connect knowledge with practice, and are unwilling to think and practice.

2. Teaching methods

2.1 Standardized training before teachers lead and teach

Teacher selection and education: The school should pay attention to the basis of surgical science and select young teachers from all over the country, who have a strong interest in this course and a strong sense of responsibility, and pay great attention to ideological teaching courses and clinical learning experience. In the early stage, teachers master the teaching contents and tasks, combine with teaching methods, formulate detailed teaching contents, standardize the learning process. They should also prepare lessons collectively before class, formulate teaching plans and make efforts to carry out teaching.

2.2 To develop guidance materials according to the syllabus

The teaching contents of surgery should be formulated combined with the actual requirements of universities. According to the law from easy to difficult, step by step, from unfamiliar to skilled, we have compiled the "General Principles of Surgery and Experimental Guidance", which mainly includes debridement and suture, phlebotomy, appendectomy imitating human body, end-to-end anastomosis of small intestine partial resection, splenectomy, and repair of gastric perforation. The content of each module is compiled according to the experimental purpose, experimental requirements, experimental contents and steps, after-class questions, etc., which is convenient for students to understand and operate the experiment.

2.3 Interactive teaching between teachers and students

Different from the basic methods of teaching courses, general surgery is a practical subject requiring positive interaction in learning. That is, taking students as the center, taking their own needs as learning guidance, and listening carefully to students' ideas and feedback. Students are self-organized, with 5 to 6 people in each group, and choose their own team leader. The team members make plans on the course contents, and complete various animal experimental surgery courses respectively. Each surgical student performs the roles of surgery, first and second assistants, anesthesia, nursing equipment and visiting nurses. After completing the project, students can change their roles, which can fully arouse students' enthusiasm and improve their interest in learning. Before the operation, each person should clean hands according to the requirements of clinical operation, clear the operating field (disinfecting sterile towels), wear surgical clothes, hats, masks and gloves. According to the actual operating procedure, each person acts as an operator, then takes turns as a duty officer, and the rest as assistants, anesthesiologists, equipment nurses and roving nurses. Teachers teach anesthesia, animal fixation, aseptic development and organize personnel cooperation, etc. The operation helps students to interact well.

Although this course emphasizes operation training as the key objective, the theoretical basis should not be neglected. The teacher has already formulated the contents, objectives and steps of the operation in the teaching stage to accurately explain the related concepts and definitions. In the further implementation stage of animal surgery experimental course, students mainly practice surgery. But because students have never seen or had surgery before, they know nothing about it, just like a blank sheet of paper. Teachers must show basic operations, such as cutting, separating, hemostasis, suture, ligation and disconnection. Then, taking students as the main body and teachers as auxiliary aspects, students can master the main operation techniques of surgery through the specific implementation of surgery. Cultivating students' aseptic concept is the focus of all animal surgery training, and it is very important to cultivate aseptic concept and habit. Teachers provide students with guidance at any time, and students work together, find problems and

solve them in time, and demonstrate surgery. In surgical experimental teaching, technical training is carried out through the concept of sterility, so as to strengthen the concept of sterility in all aspects of surgery. Students should be guided to write operation records after each animal experiment, and the teacher carefully review and corrects mistakes, so that students can make continuous progress. By writing operation records, students can enhance the impression of each operation. On the one hand, they can make good written specifications, which will lay a good foundation for future clinical medical writing. During the operation, students help each other, cooperate with each other, find irregularities and mistakes, and immediately remind each other to correct themselves. Through the student-centered teaching system, students' interest can be stimulated and their learning enthusiasm can be fully aroused.

2.4 Apply multimedia teaching

According to the content of the experimental course, the multimedia teaching material is compiled. With the help of multimedia, it not only improves students' learning enthusiasm, but also standardizes the educational process. Practice is different from theoretical teaching. With the help of multimedia, abstract content that is difficult to express in language can be expressed intuitively through images, which can simplify complex surgical procedures, thus improving the effect of surgical learning.

2.5 Pay attention to the cultivation of comprehensive ability

When studying experimental animal surgery, the study of students' complex ability should be trained. (1) Cultivate high-quality professional doctors, cultivate rigorous work style and good sense of professional responsibility, including usual discipline and standardized training. (2) Team spirit training. Surgery is a practical team cooperation activity, which requires good team spirit in the process of study and work. Students take turns to play the roles of technician, assistant, equipment nurse, roving nurse and anesthesiologist. Through cooperative training, they help to shape the sound characteristics of students' personality and cultivate their team spirit. (3) Teachers should lead by example to respect life and care for animals, and treat experimental animals with sense of responsibility and care for patients. (4) Standardized operation records should be written after operation, and the training should be rigorous and practical.

2.6 Teaching feedback and summary

In teaching, many students reflect their interest in this subject, yet the number of experimental animals that can be used for surgery is relatively insufficient, students have few opportunities to practice. The operation technology and equipment are outdated, and the classroom time is relatively short. After the expansion of the school, the number of students and the allocation of resources cannot be increased correspondingly, and students have fewer opportunities to reflect. To solve these problems, students in each group can have regular group discussions. Students in each group are required to summarize, put forward suggestions and resumes after completing the experimental operation, and then pass them on to the group leaders. According to the opinions and suggestions reflected by students, teachers can understand students' opinions and needs in time, improve teaching methods and sum up experiences and lessons. It is necessary to put forward the rectification opinions, try to solve the problem of blind spots in teaching work and improve the teaching quality.

3. Conclusion

The value of basic surgery teaching: due to the lack of medical treatment, the shortage of surgery and the low backlog of surgery in China, surgical treatment is often an open surgery, which provides more learning opportunities for doctors to improve surgical skills in surgical practice. In recent years, with the rapid development of low-invasive surgery technology and the gradual reduction of open surgery, it is difficult for young surgeons to improve their clinical combat ability in a short time due to lack of proper clinical training, and the growth cycle of young surgeons has become longer. The basic surgical skills need training and improvement. Therefore, setting up basic surgical courses is to overcome the shortage of surgical skills training, make full use of basic surgical science courses to carry out daily surgical training for students, and lay the best foundation for future clinical practice.

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