

Research on the Strategy of carrying out quality Education in Immunology Test Teaching

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Abstract: Immunological laboratory as an important applied subject in the field of medicine, in the process of the change from exam-oriented education to quality-oriented education in China, the course also follows the pace of The Times, constantly optimize the teaching content and teaching form. How to explore and apply quality education scientifically and effectively in immunology laboratory teaching has become one of the most important contents in current education field. This paper analyzes the current situation of quality education in immunology laboratory teaching, and makes a strategic study and analysis on carrying out characteristic teaching of immunology laboratory and comprehensively improving academic quality.

1. Overview of immunological laboratory teaching Settings

Quality-oriented education, as a kind of sustainable development thought focusing on the whole, is gradually of great value and significance in China's medical education. As shown in figure 1, in terms of compiling the textbook and changing the mode of the course, relevant scholars have made it the main goal of talent training at the present stage to integrate immunological examination teaching and quality-oriented teaching with more scientific teaching methods and contents. In the process of immunology laboratory teaching, professional courses and professional knowledge are adopted to change the traditional focus on the improvement of students' professional skills to the cultivation of students' innovative qualities, so as to promote the development of students into compound talents with natural science literacy and humanistic literacy. Then, in future practical work, I can flexibly use my knowledge to solve difficult diseases that may be encountered in clinical medicine. It can be seen that immunology teaching has the ability to promote communication and collaboration with others in quality-oriented teaching, and continuously tests future medical workers through innovative spirit [1].

Table 1. Application of quality education in immunology curriculum

Experimental level	Experimental target	Representative course	define
Basic biological experiment	Train students' most basic biological experimental skills	Botanical experiments, zoological experiments, microbial experiments, biochemical experiments, etc.	These experiments are compulsory for students in biology, and they will The experimental skill is also the professional quality that the students of the biology specialty must possess
Exploring the Comprehensive Synthesis experiment	Cultivate students' thinking and ability of Scientific Inquiry, Analysis and The ability to solve problems, the ability to design experiments in a preliminary way.	Experiments,biochemical techniques,epidemic free experiments,genetic engineering,enzyme engineering, etc.	The emergence of this part of the content is due to the fact that the development of other science disciplines has more and more influence on the development of basic research and technology of life science in recent years. The completion of these contents needs to be based on the first two levels.

2. Improve the teaching effect through multimedia teaching

Multimedia in classroom teaching, has a clear, prominent and concise focus and other characteristics, can help the classroom atmosphere more vivid and harmonious. Multimedia teaching can better help students understand and internalize knowledge points, and while ensuring the integrity and systematicness of the teaching content, it will naturally play the role of finishing the finishing line through English. Then in the process of language balance, gradually improve the teaching effect. For example, in the process of explaining the activation of T lymphocytes, bilingual expressions can be used to help students grasp and strengthen the English expressions of professional terms such as major histocompatibility, cell receptor(TCR), interleukin(IL), molecules (MHC) through multimedia slide presentation [2]. At the same time, in the process of learning T lymphocytes, as shown in figure 2 and figure 3, the PPT courseware should help and guide students to carry out the conversion between English and Chinese through concise words, and strengthen their understanding of the activation process between T lymphocytes and B lymphocytes. Moreover, the simplest cell relationship can be listed in the PPT through multimedia slide show, as shown in figure 4, which can help students understand the antigen presentation ability between lymphocytes more intuitively, and lay a foundation for the subsequent learning of cell immunity consent through the extended related knowledge points. Thus, multimedia teaching can help students to strengthen their understanding and summary in the process of learning knowledge points[3].

1. T-lymphocyte surface molecule

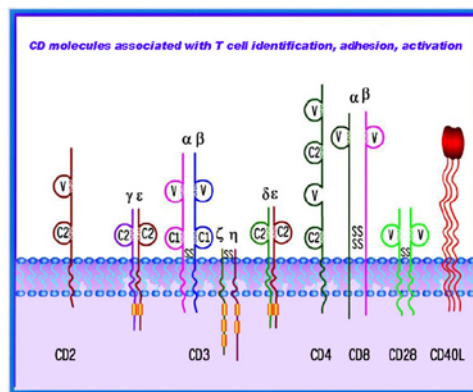


Fig. 1 T Lymphocyte Learning Courseware

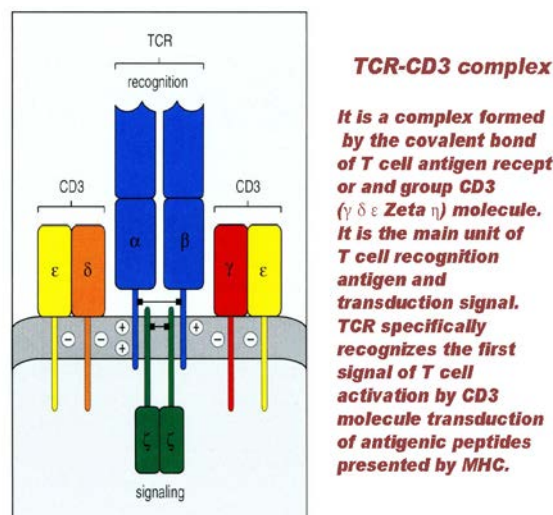


Fig. 2 display of Lymphocyte Transformation Courseware

1. CD 28 and CTLA-4

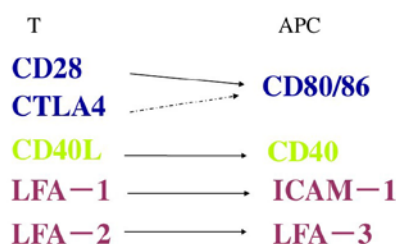


Fig. 3 PPT courseware display of cell relationship

3. Enrich the teaching content by quoting the dialectical thought of philosophy

As shown in figure 5, dialectical teaching method can help students improve the quality education level in immunology teaching through self-study and self-education through philosophical dialectical thinking, which can not only improve the teaching effect, but also enrich the teaching content. For example, the principle of unity of opposites in philosophical principles can be applied in the process of learning the 10 points of unity and conflict in immunology[4]. Knowledge points include leukocyte and erythrocyte immunity, helper T lymphocytes and inhibitory T lymphocytes, immune activation and immunosuppression, pathogenicity of normal bacteria and immune mechanism of the body. Moreover, the particularity and universality of adaptive immune consent and inherent immune consent can be explained in a targeted way through philosophical dialectical thought, and students' learning of knowledge points can be further deepened through the mutual conversion between tolerance and immunity [5].

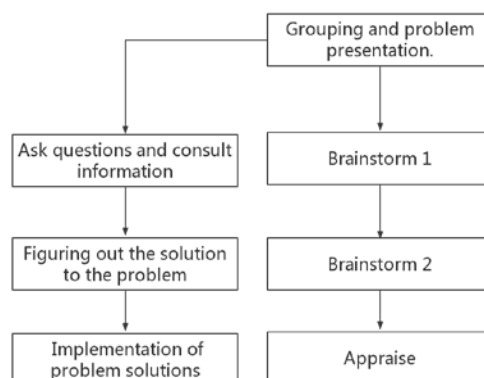


Fig. 4 Dialectical teaching method

4. Improve the learning atmosphere of immunology test with the help of stories

In the thymus, blood type, smallpox vaccine and the rabies vaccine series of knowledge learning, can be xue-tao cao, Koch, Pasteur, etc with knowledge into characters, and through the way of the story, improve classroom learning atmosphere of immunology examination, help and guide students in the knowledge of immunology principle at the same time, more stick to cultivate the spirit of the pursuit of science and innovation, which in turn will be carries out quality education to immunology test to learn[6].

5. Strengthen the training of experimental skills in immunology laboratory teaching

Manual operation ability is an effective way to carry out quality education. As shown in figure 6, the importance of the experiment can be seen in the experimental distribution evaluation of

immunology courses. Therefore, it is very important and necessary to strengthen the training of experimental skills in the strategy of carrying out quality-oriented education in immunological laboratory teaching. However, due to the limited learning hours of immunological laboratory teaching, the practical teaching and scientific research of traditional Chinese medicine will maximize the effect of experimental skills teaching. In immunology test monitoring technology, for example, in the learning process, often will sheep fight rabbit antibody as a marker of commercialization of two fight, so you need to the same rabbit on the corresponding anesthesia, heart, blood and intravenous anesthesia, and muscle injection, and other operations, and in accordance with the corresponding conduct autopsy on the steps of the operation, and then let the student to the rabbit peripheral immune organs and central immune organs to identify and distinguish. At the same time, in the process of food safety inspection and detection, ELLSA is a commonly used scientific research detection technology, which is widely used in the research of disease diagnosis, pesticide residues, environmental pollution and other subjects with ultra-high reflex immunity technology and sensitivity. In the learning of this knowledge point, relevant teachers can also deepen and exercise students' practical ability of diagnosis, solution and result analysis of immunology principles through experimental teaching based on basic theoretical knowledge[7].

Table 2. Evaluation of experimental distribution in immunology courses

Order number	Name of the experimental project	Experimental requirements	Experimental type
1	Preparation technology of antiserum.	obligatory	comprehensiveness
2	radial immunodiffusion	obligatory	Verifiability
3	double immunodiffusion test	obligatory	Verifiability
4	rocket immunoelectrophoresis	obligatory	Verifiability
5	SPA Synergistic aggregation Test	obligatory	Design property
6	Identification of human ABO blood group: red blood cell aggregation test	obligatory	Design property
7	Immunoenzyme technique and its Application	obligatory	Design property

6. Reform the traditional examination mode of immunological examination

Traditional immunology laboratory teaching classroom, often through the class content of random questions and summary, the content of knowledge points review and summary, and then according to the student's response to the usual performance records and assessment. In the process of carrying out the strategy research of quality education in immunological examination teaching, the traditional examination mode of immunological examination needs to be reformed. Problem-based learning can be referred to as PBL. As shown in figure 7, this mode can arouse students' creativity and learning enthusiasm in the process of learning assessment, and analyze and solve problems through more independent thinking. Generally speaking, in the process of application of this model, students should be given sufficient preparation time. Relevant teachers should train students' comprehensive analysis and cooperation ability of knowledge points from details through project combination. Can through the way of a group 6 people, through the multimedia PPT report form or combination of words and images, answer to submit and report, and at the end of the course, through the way of students' cooperative learning, increase the cross and interconnectedness of all learning knowledge itself, and in the course of deepening process, build a full and rich knowledge structure. Moreover, teachers of relevant courses can draw half of the main structure map centering on immune knowledge points, and take this as the homework content to guide students to draw the diagram of the context of other main line knowledge points in a bilingual way, so as to improve the value and significance of the assessment method in repeated exploration and practice[8].



Fig. 5 Diagram of Cooperative Application in PLB Teaching

7. Conclusion

To sum up, teaching as an important branch of system of medical immunology examination, bilingual teaching by multimedia, references, dialectical philosophy thought, with the help of a story as a carrier, strengthening experimental skills training, reform the examination mode, such as a variety of ways, can be in the form characteristic teaching mode on the basis of the increase in value and significance of quality education in classroom, the optimization of classroom teaching effect. Only by giving full play to the integrative function of immunology test teaching and quality education can we meet the demand of compound talents in modern society.

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