The Development of Teaching Methods of Clinical Anatomy and Operative Surgery at the Peoples' Friendship University of Russia

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Abstract. The work presents the analysis of a historical way of teaching methods development of "Topographic anatomy and operative surgery" discipline at Peoples' Friendship University of Russia. The technique is based on the classical principles of the study of human anatomy, laid down by Professor Pirogov Nikolay Ivanovich [1,2].

Introduction

Currently, clinical anatomy is a scientific product of a unique worldwide discipline "topographic anatomy and operative surgery", created in the middle of the XIX century by Nikolay Ivanovich Pirogov as a Russian priority. It should be noted that modern computer tomographic data are constructed on the basis of N.I. Pirogov’s "frozen human anatomy". The Medical Higher School of the Russian Federation has a professional scientific and methodological educational base for teaching clinical anatomy in the departments of operative surgery and topographic anatomy [3,4]. Whereas in Western universities, clinical anatomy was singled out as an independent discipline only at the First European Congress of Clinical Anatomy (Brussels, 1991).

Professor Igor Dmitrievich Kirpatovsky established the Department of Topographic Anatomy and Operative Surgery of Peoples’ Friendship University of Russia in 1963. At the very beginning of the department's formation, priority directions of the development of this discipline were laid by him. Kirpatovsky I.D. was one of the first in Russia who offered to teach operative surgery with detailed analysis of the stages of surgical intervention at the clinical base (at the patient's bed), substantiating the necessity and expediency of this technique. Obviously, students should already be familiar with the normal anatomy of a person, with the basic nosological forms of the diseases and their symptoms. In this case, students have the opportunity to study not only operative surgery, but also the clinical anatomy of a "living person" at the patient's bedside [5]. Students get acquainted with such medical terms such as fascial compartment, cellular space and pathways of purulent processes. Clinical transplantation of the anterior hypothalamus on vascular bonds and orthotopic transplantation of the male sexual gland with androgen deficiency are successfully carried out. To improve the pedagogical competence of the professors-clinicians and to unify the educational process at the clinical bases, the training and methodological manuals were prepared: "Operations on the organs of the reproductive tract and the anterior abdominal wall", "Operations on the arteries, veins and lymphatic vessels". In 1974, to help students, Professor Kirpatovsky Igor Dmotrievich published a monograph "Relief Human Anatomy" which became a reference book for many generations of young doctors.
Later, the opportunities and methods of teaching the discipline expanded and had become multi-staged: the first stage—the anatomical room and the forensic medical morgue; the second stage—training and experimental operation; the third stage—surgical departments at clinics. In our opinion, it is the three-stage scheme for studying the subject of an in-depth program using modern multimedia techniques that fosters the development of students' analytical capabilities.

Today, criticism is often heard about the use of biological material for educational purposes, especially carrying out operational manipulation on laboratory animals as a method of training. There are requests for the complete replacement of traditional teaching methods with electronic video materials and computer Robot models, referring to the experience of Western European medical schools in the successful use of computer simulators. It should be noted that the era of virtual anatomy and surgery has almost passed and anatomical dissection is the main type of laboratory practice of students. The surgical skills have to be acquired through repeated training - long exercises by hands. Working in the anatomical room or in the forensic medical morgue, students develop manual skills necessary for their further professional activities. Student "clinical surgical" experience increases their motivation and sense of preparedness for work in clinics [1,4].

In parallel with the modernization of the educational process, the scientific directions of the department were formed: clinical transplantology and surgical andrology. Clinical results of the study were also included in the educational process. There are prepared and published as teaching aids "Selected lectures on andrology", "Essays on surgical andrology" and "Pathology of sex and its correction". It should be noted that it was the Medical Faculty of the Russian University of People's Friendship that became the first higher educational institution of the Russian Federation, where the clinical andrology is officially taught to students as a new medical discipline [5]. Courses on clinical transplantology of endocrine organs and surgical andrology for students of the medical faculty have been prepared [5,6]. Initially, these courses were optional, and later were included in the educational process in the form of mandatory elective courses. To date, elective courses for students of the medical faculty are conducted with the involvement of leading scientists of the city of Moscow who have made a significant contribution to all areas of modern surgery. The department has established an active cooperation with the well-known clinical centers of the city of Moscow, which allows to tie the educational process closer to the tasks of practical medicine.

Rapidly developing innovative scientific technologies have not bypassed our department. For many years, endoscopic surgery has been taught to students at the clinical base of the department. Students get acquainted with endoscopic surgery, analyzing the basic parameters of the apparatus and the requirements for them. General questions of endoscopic surgery on such surgical interventions as cholecystectomy, appendectomy and hernioplasty are discussed. Members of the department have published teaching aids on laparoscopic surgery for the third and fourth year students of the medical faculty in the specialty called "medical case" [7,8].

Certain successes have been achieved in the educational and upbringing activities of the department, aimed at improving the quality of training by developing students' creative abilities and independence. For many years, the student scientific group at the Department of Operative Surgery has been very successful. The professional work of the student group is acknowledged by students and the administration of the university. This testifies to the pedagogical talent of the leaders who managed to reasonably outline the main priorities for the development of the scientific directions of the department and gain students’ interest in such a way that 20 to 30 people are engaged in student group at the same time. For many years students of the scientific student group of the department have been participating actively in surgical competitions of different levels. The effectiveness of their work is confirmed by numerous Russian and International diplomas. In the future, almost 80% of club member graduates choose a surgical specialty. Every year the Department of Operative Surgery conducts one-week courses for young specialists, residents and post-graduate students in clinical anatomy.
The Department is constantly updating the teaching methods of the theoretical material: all lecture courses and seminars are held in the form of presentations and using video materials and 3D technologies. There are electronic educational and scientific materials at the department, which allows students to acquire skills of mastering modern technical means and information processing technologies.

The Department uses computer tests to access students' knowledge of clinical anatomy and objectively evaluate the results. However, tests, although updated annually, are still considered to be "one-dimensional" indicator. Tests show and assess only the percentage of “absorption” of the content elements of the material, therefore, knowledge control is carried out in a complex manner using classical methodological methods.

Unfortunately, overall some graduates of medical universities have rather modest skills in their chosen specialty. Perhaps this is due to the methodological drawbacks of the educational process or the lack of clear prospects for students in the future specialization, as many students decide on specialization sometime after graduation. Therefore, the priority is to teach in our department in-depth program of clinical anatomy to senior students, at least in the format of elective courses, but mandatory. The courses should reflect the issues of clinical anatomy, the achievement of modern surgery and the "base" of certain practical skills (techniques for assisting in extreme conditions), which is necessary for any specialist at the stage of basic training.

Summary

In our opinion, such way of the organization of the educational process described above helps to form a holistic view of the achievements of modern medicine among students [9,10]. At the same time, it encourages them to activate their creative potential and independently seek solutions to new scientific and practical issues of modern medicine.

References

