



**MEDICAL AND BIOLOGICAL DISCIPLINES IN THE FAIRWAY OF HIGHER EDUCATION:
FEATURES OF TEACHING METHODS**

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ABSTRACT: - The article presents the features of the methodology of teaching biomedical disciplines in the higher education system on the example of pathological anatomy. The approaches necessary for the training of future specialists in the organization of the educational process aimed at acquiring general professional competencies are shown. Integration of modern multimedia capabilities into the educational process, along with traditional forms of teaching, contributes to the synergetic effect of using a complex of various forms of teaching the discipline at the Department of Physiology and Pathology of the Tashkent State Dental Institute, Republic of Uzbekistan, Tashkent.

KEYWORDS: Pathological anatomy, methodology, traditional teaching, multimedia presentation.

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INTRODUCTION

The training and education of highly qualified doctors is the main prerogative of modern higher medical education. Biomedical disciplines play an important role in the higher education system. These include pathological anatomy, the subject of study of which is a complex of typical general pathological processes, such as dystrophy and necrosis, combined into one group of alterative changes, banal inflammation, in all its multifaceted manifestations, circulatory disorders. Of great importance are the issues of morphogenesis of compensatory and adaptive processes, pathological changes in the immune system of the body, as well as the morphogenesis of tumor transformations. Confirmation of universal interest on a global scale is the fact that the UN General Assembly on December 2, 2021, 2022 was proclaimed the International Year of Fundamental Sciences for Sustainable Development [1, 2, 3].

Private pathological anatomy includes the study of structural changes in the main groups of diseases in human body systems, their etiology, pathogenesis, pathomorphosis, complications and outcomes. Knowledge of these sections of pathological anatomy is the basis of general professional competencies that should be used in the future at the departments of clinical profile. In this regard, the peculiarities of the methodology of teaching the discipline in higher education is the focus of the educational process on the development of students' correct ability to work with educational and supplementary literature, develop their skills to analyze, summarize the information received and, most importantly, develop the ability to competently present the material in an academic style during their speeches in practical classes.

The educational process built in this way will contribute to the formation of students' creative direction in mastering the subject, the ability to use knowledge from fundamental sciences to

understand the tasks facing them at a qualitatively new, clinical level of training. In other words, there will be an integration of the theoretical knowledge obtained during the direct transition of students to the clinic and the appearance of clinical and anatomical thinking in them. As a consequence, the above allows us to talk about the formation of professional competencies [2, 3, 4], in particular, in such an important component of medicine as the establishment of a diagnosis for the subsequent choice of tactics and strategies for the treatment of patients.

The purpose of the article

Highlighting the features of teaching pathological anatomy at the Department of Physiology and Pathology of the Tashkent State Dental Institute.

RESULTS AND DISCUSSION

An objective view of pathological anatomy as a discipline requiring assimilation allows us to recognize that a very large amount of theoretical material is a very serious problem for students. The way to solve this problem may be to develop an active position of the student during training. At the same time, the educational process implies close interaction between the teacher and the future doctor. In modern realities, the relationship between them is not built as before, when the teacher was the transmitter, and the student was the receiver of knowledge, but is formed on a new paradigm, when the trained person with the help of the teacher forms his own knowledge [2, 4, 5].

On the other hand, the main result of higher medical education today is not only an increase in the amount of knowledge, but also an improvement in the quality of the educational process. This means that innovative education is presented not as the transfer of knowledge (they quickly become obsolete), but as the acquisition of basic competencies that help future specialists to master new things themselves, and subsequently apply them to successful activities in their chosen field of medicine. In fact, the acquired general

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professional competencies are the basis of serious fundamental training of a future doctor.

It should be noted that the teaching of pathological anatomy remains quite conservative and traditionally uses long-established methods of classroom teaching - lectures and practical classes. However, despite the fact that these forms have not changed, it can and should be filled with modern content. This can be illustrated by the example of teaching pathological anatomy at the Department of Physiology and Pathology of the Tashkent State Dental Institute (TSSI), Republic of Uzbekistan, Tashkent [2, 3, 5].

The peculiarities of the methodology of teaching of pathological anatomy are that any pathological process or nosological unit is studied at various levels of the structural organization of living things – from the organismic to the ultrastructural, sometimes molecular. This, on the one hand, gives the student a complete understanding of the essence of the process being studied, and, on the other hand, allows the teacher to widely use innovative methods for the formation of clinical and anatomical positions that are extremely important in his future professional activity.

So, to ensure the clarity of teaching the discipline, multimedia presentations are demonstrated at lecture classes [1, 2, 4]. At the same time, special modern equipment is fully used for their implementation, which is equipped with all the lecture halls of the TSDI. The use of information and communication capabilities during lectures makes it possible to optimize the understanding of complex issues of etiopathogenesis, varieties, classification, pathomorphosis of the studied processes, their outcomes and significance for the body.

Another positive side is the availability of timely replenishment of lecture material with up-to-date data from journals, monographs, conference materials and other sources offered by the global Internet.

It should be noted, that the problem of the success of the educational process is directly related to the

visibility of the lesson topic [1, 2, 3, 4, 5]. This thesis is valid not only for lectures, but also for practical classes. Teaching aids of various types serve as a serious help for extracurricular independent work, in preparation for practical classes [2, 3].

These manuals contain a list of the main questions for each lesson. Due to the vastness of the material, the questions structuring the topic serve as a guide for the preparation of students. In order to consolidate knowledge, the need for work on terminology is determined, which students fill out independently. The proposed test tasks and situational tasks from clinical and anatomical practice serve the same purpose.

A great interest of students takes place during a visit to the morgue, since the department is located on the basis of the pathology department of the Clinic, this allows you to feel the real situation of a fatal outcome in the medical and diagnostic work of a doctor. Participation in autopsy brings students closer to the clinic, encourages them to use their theoretical knowledge productively to solve professional problems, increases responsibility for the fate of patients, in general, contributes to the formation of clinical and morphological thinking.

It must be said, that it is not always possible to demonstrate at the autopsy exactly those general pathological processes and nosological units, that are considered in the classroom. This gap is filled by the presence of an educational museum of macropreparations. For many years, the museum fund has been replenished with new ones, careful using of the numerous exhibits is carried out. Macropreparations are presented on each topic, where you can see organs and tissues in various painful conditions.

As a demonstration, we would like to offer a method of conducting a practical lesson, which we use in the practice of teaching of the discipline of pathological anatomy on the topic: Atherosclerosis, diseases of the cardiovascular system at the Department of Physiology and

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Pathology of the Tashkent State Dental Institute. On this and other topics of the curriculum, the results of research conducted by us according to the plans of scientific research have been introduced for practical use [6, 7, 8, 9].

It is also noted, that the issues of teaching of pathological anatomy, as a discipline, that is one of the main among the fundamental sciences, attracts unquenchable attention from interested scientists and practitioners. Confirmation of universal interest on a global scale is the fact that the UN General Assembly on December 2, 2021, 2022 was proclaimed the International Year of Fundamental Sciences for Sustainable Development.

Students are offered a number of questions, concerning modern views on the pathomorphogenesis of this pathology within the framework of independent work. They prepare reports on various aspects of the pathogenesis and morphogenesis of atherosclerosis, underlying cardiovascular diseases. The issues of secondary prevention and treatment, the use of a wide range of therapeutic agents for these purposes, including those of plant origin, are being connected. The latter, in comparison with synthetic drugs, have a number of significant advantages, which makes their using very perspective [10, 11, 12, 13, 14].

It should also be mentioned, that in modern reality, young people, thanks to high-tech communication devices and the Internet, have an immense amount of information at hand. Such accessibility greatly simplifies the search for the necessary material, makes the process of self-preparation more entertaining and productive. We consider it important to note that in this process the role of the teacher is invaluable in terms of advice and hints of the necessary information "corridor", without which the search can be ineffective and fruitless, and, even more negatively, erroneous.

Undoubtedly, there is a need for an individual approach to each student in the educational

process, it is no secret that the level of training can vary greatly within the academic group. The literacy and professionalism of the teacher consists in the ability to awaken a sincere desire to acquire knowledge and increase the interest in the formation of clinical and anatomical thinking in every student, regardless of his level.

CONCLUSION

Based on the shown, we can conclude the following. The methodology of teaching of pathological anatomy at the Department of Physiology and Pathology of TSDI in modern realities, allows students to form basic professional competencies of a doctor, which are a set of acquired knowledge, skills, practical skills in the morphological diagnosis of pathological processes.

In addition to the above, it is necessary to understand that the process of training a future specialist is not limited only to obtaining professional knowledge. Along with this, the future doctor, under the influence and example of the teaching staff, should develop ethical, cultural skills, work experience in changing socio-economic conditions, psychological, deontological and a number of other competencies, that will allow him to navigate the situation independently and professionally solve complex tasks in the near future.

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