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PECULIARITIES OF TEACHING THE SUBJECT "CLINICAL PHARMACOLOGY" TO STUDENTS OF DENTISTRY FACULTY UNDER MODERN REFORMATION CONDITIONS OF MEDICAL EDUCATION

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Abstract. The aim of the work is to study the effectiveness of using interactive teaching methods and practical skills in the educational process, which will help to improve the quality of training for students of the dental faculty at the Department of Internal Medicine of the Dentistry Faculty named after Professor M.N. Berezhnitsky.

The factors of personal medical student development are the acquisition of higher education, as well as the professional formation of a future doctor. The final result of a professional becoming a doctor is his professionalism, which is a component of his absolute psychological readiness to perform his duties effectively. The introduction into clinical practice of a large number of drugs, the need to determine their effectiveness and safety necessitates a unified approach to the study system of their pharmacokinetics, pharmacodynamics, interaction and side effects in patients.

Teaching clinical pharmacology is the most optimal on clinical therapeutic bases, taking into account the etiology of the disease, the main pathogenetic links of its formation, the clinical picture of the disease course, the corresponding drugs with a comparative analysis of them and the choice of the desired. This approach will help to make the training of the specialist personal-oriented, since it activates the processes of self-knowledge and self-realization, optimizes the activity and emphasizes the competence of the specialist as the main value motive of training. The Department of Internal Medicine of the Dentistry Faculty named after Professor M.N. Berezhnitsky Ivano-Frankivsk National Medical University organizes the educational process in the 4th year of the dental faculty. Measures are taken that not only help to obtain basic general training, but also to acquire the skills necessary for the practical and research work of the future dentist.

According to the curriculum of the discipline "Clinical Pharmacology", the main provisions of pharmacokinetics and pharmacodynamics are studied, clinical and pharmacological characteristics of anti-angina, anti-ischemic, anti-inflammatory, antibacterial, anti-allergic, anesthetics drugs, agents that affect vascular tone and blood clotting and are often used in dental practice and contribute to the future professional development of a medical student. The future dentist needs knowledge and understanding of human-drug interaction processes.

Based on the study of the effectiveness of using interactive teaching methods and the development of practical skills in clinical pharmacology in the educational process in the fourth year of study on the Dentistry Faculty under the medical education reform demonstrate, that only a comprehensive approach to the study of clinical pharmacology with the assimilation of modern theoretical material, the development of practical skills at the patient's bedside, and by solving situational problems, self-awareness of classroom and extracurricular work allows students to explore clinical pharmacology in accordance with the modern requirements of medical reform. The knowledge acquired at the department about pharmacokinetics, pharmacodynamics, interaction and side effects of drugs, effectiveness, safety of prescribed drugs and acquired practical skills contribute to the development of professionalism of a future specialist.

Keywords: medical education, clinical pharmacology, interactive teaching.

Introduction. The social situation in society, associated with new political and economic challenges, requires a high level of professionalism and competence of medical personnel, formation of new value priorities in the professional training of specialists [4, 8].

The main task of the Ukrainian higher education system is to train highly qualified, competent specialists, one of the important indicators of which is the professionalism that is demonstrated in the acquired knowledge and practical skills which is necessary for their successful use in practical follow-up activities. The factors behind the development of a medical student are the

acquisition of higher education, as well as the professional formation of a future doctor. The end result of the professional development of a doctor is his professionalism, which is a component of his absolute psychological readiness to perform his duties effectively [5, 6, 10].

The introduction into clinical practice of a large number of drugs, the need to determine their effectiveness and safety necessitates a unified approach to the system of studying their pharmacokinetics, pharmacodynamics, interaction and side effects in patients [1, 7]. This was the reason for the introduction of a new medical discipline - clinical pharmacology - into the training

program for physicians in the early 1970s. It teaches the doctor to select from all existing the most effective and safest preparation for individualized therapy and prevention, taking into account his comorbidities [9]. In-depth knowledge of clinical pharmacology will help to determine the correct mode of administration of drugs, its dosage form and routes of administration, to prevent and eliminate side effects and unwanted drug interactions.

The National Strategy for the Development of Education in Ukraine for the period up to 2021 and the new society demands the effectiveness of the educational process, lead a movement to form the content of education on a competent basis [11], which necessitates the improvement of assessment technology of the students knowledge and skills level [3]. For students, the problem is mastering the techniques of independent learning activities and the formation of appropriate skills and abilities. There are also a number of problems in solving this problem, in particular, the short amount of time devoted to the study of the discipline and the absence of lectures for a more in-depth study of the discipline [2].

Therefore, it is important to effectively study the use of interactive teaching methods and to develop practical skills in the educational process, which will contribute to improving the quality of students education of the dental faculty at the Department of Internal Medicine of the Dental Faculty named after Professor M.M. Berezhnitsky.

Research results. The study of clinical pharmacology is inextricably linked to practice. Teaching of clinical pharmacology subject is the most optimal on clinical therapeutic bases, taking into account the etiology of the disease, the main pathogenetic links of its formation, the clinical picture of the course, the corresponding drugs with their comparative analysis and the choice required [1]. This approach will help to make the training of the specialist really personal-oriented, since it activates the processes of self-knowledge and self-realization, optimizes the activity and emphasizes the competence of the specialist as the main value motive of training. It is from such positions at the Department of Internal Medicine of the Dentistry Faculty named after Professor M.M. Berezhnitsky Ivano-Frankivsk National Medical University organizes the educational process in the 4th year study of the dental faculty. Measures are taken that not only help to obtain basic general training, but also to acquire the skills necessary for the practical and research work of the future dentist.

The main task in teaching the subject "Clinical Pharmacology" should be to prepare a specialist with a sufficient amount of theoretical knowledge and practical skills to carry out the most rational drug therapy in a particular patient, a specialist who has a methodology of individual selection of effective and safe drugs on the basis of pharmacokinetics, pharmacodynamics, possible manifestations of side effects, features of the disease, age of the patient, optimal dosage forms, the preparation of a rational pharmacokinetic and pharmacodynamic relationship of their combinations.

According to the curriculum of the discipline "Clinical Pharmacology" the main provisions of pharmacokinetics and pharmacodynamics are studied, clinical

and pharmacological characteristics of anti-anginal, anti-ischemic, anti-inflammatory, antibacterial, anti-allergic drugs, agents that affect vascular tone, for blood clotting and antiseptics with a targeted study of drugs that are most commonly used in dental activity and contribute to the future professional development of a medical student.

An important place in clinical pharmacology course is the study of anesthetics, their pharmacodynamics and pharmacokinetics, ways of interaction with other groups of drugs, side effects when using them. The future dentist needs knowledge and understanding of human-drug interaction processes.

Developed methodological recommendations for students, on independent work of students, tests, situational tasks, stands used in practical classes, final module control is an important role in mastering the discipline. Developed according to a typical curriculum and available on the University website.

Control of students' knowledge, skills and competences is an integral part of the pedagogical process and feedback forms [3]. Therefore, at the beginning of the class, a practical tests is carried out, which involves establishing the level of individual student's success as a whole, enables the teacher to judge the quality of mastering the topic, to plan in advance the methodology and corrective work of studying the following material. This helps to improve the preparation of student's, which is manifested in the performance of tasks through repetition, systematization, refinement of material. This in turn involves expanding the student's understanding of the subject. The basis of the test tasks is elaborated and is aimed at preparing students for the licensing exam "Step-2".

Oral questioning, as a method of active learning, based on theoretical questions to the topic is used at the Department of Internal Medicine, School of Dental Medicine in the study of the discipline "Clinical Pharmacology". Clinical didactic games are widely used, analysis of a specific clinical situation, with an argument for the use of a particular drug, the solution of situational tasks, the method of generating brainstorming ideas, training in small groups.

Particular attention is paid to mastering practical skills. In practice, teachers and students model clinical situations and study the algorithm of assisting the patient with the use of medicines that have been studied for the topic. New protocols are being worked out, according to the order of the Ukraine Ministry of Health, clinical guidelines, separate nosological forms of internal medicine (protocols of providing medical care to patients with acute coronary syndrome with ST segment elevation (№455 dated 02/07/2014), without ST segment elevation (№164 dated 03/03/2016), arterial hypertension (№384 dated 24/05/2012), chronic obstructive pulmonary disease (№555 dated 27/06/2013), bronchial asthma (№868 dated 08/10/2013), bacterial and viral pneumonia (Unified Protocol 2016), urgent conditions: anaphylactic shock (№312 dated 08/05/2009), allergic urticaria and Quincke edema (№432 dated 03/07/2006), disorders in the blood system and hematopoiesis: hemophilia (№34 dated 15/01/2014), chronic myelogenous leukemia (№711 dated 2/11/2015), acute myeloid and lymphoid leukemias (№647 dated 30/07/2010), chronic lymphoid leukemia

(№449 dated 12/05/2016). It should be noted that international regulations (new ACS/AHA and ESC/ESH guidelines for the treatment of hypertension 2018, 2019AHA/ACC/HRS recommendations on atrial fibrillation, 2019 Guidelines on Diabetes, Pre-Diabetes and Cardiovascular Diseases, 2019 Guidelines on Chronic Coronary Syndromes, 2019 Guidelines on Supraventricular Tachycardia, 2019 Guidelines on Dyslipidaemias, EASL's Clinical Practice Guidelines, and others) are actively being studied and implemented.

Each practical training is accompanied by the students' independent extracurricular work. In particular, students can prepare a report for scientific meetings of the student circle and at student conferences; prepare essays for topics that are not presented for study in practical classes. Throughout the course of the discipline, students are asked to write a "Protocol of efficiency and security of medicines use", "Protocol of medicines interaction, types of side effects of medicines, complications of medicines therapy" as a variant of research work in practical classes. The topics of abstracts concerning the diversification of the content of independent work during the practical training are elaborated.

One of the stages of independent work is non-classroom work with the possibility of interactive learning. In particular, the staff of the department developed a training model "virtual patient", which simulated the clinical situation with different ways of solving it. Students have the opportunity to work on this clinical situation on the University's website. Extracurricular work also includes participation in clinical pharmacology webinars conducted at the department through collaboration with the Department of Pharmacology and Internal Medicine of Kharkiv National Medical University. Interactive learning facilitates the activation of the educational and cognitive process, the formation of deep internal motivation, provides opportunities for intellectual and creative development, expression of initiative, develops communication skills.

Conclusions. Only a comprehensive approach in the study of clinical pharmacology with the acquisition of modern theoretical material, the development of practical skills at the patient's bed and by solving situational tasks, independent awareness of the classroom and extracurricular work allows students to study clinical pharmacology in accordance with modern medicine. Knowledge of pharmacokinetics, pharmacodynamics, interaction and side effects of drugs, effectiveness, safety of prescribed drugs and acquired practical skills contribute to the professionalism of the future specialist.

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ОСОБЛИВОСТІ ВИКЛАДАННЯ ПРЕДМЕТУ «КЛІНІЧНА ФАРМАКОЛОГІЯ» СТУДЕНТАМ СТОМАТОЛОГІЧНОГО ФАКУЛЬТЕТУ В СУЧАСНИХ УМОВАХ РЕФОРМУВАННЯ МЕДИЧНОЇ ОСВІТИ

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Резюме. Метою роботи є вивчення ефективності застосування у навчальному процесі інтерактивних методик навчання та відпрацювання

практичних навиків, які сприятимуть покращенню якості навчання студентів стоматологічного факультету на кафедрі внутрішньої медицини стоматологічного факультету імені професора М.М. Бережницького.

Чинниками розвитку особистості студента-медика є набуття вищої освіти, а також професійне становлення майбутнього лікаря. Кінцевим результатом професійного становлення лікаря є його професіоналізм, складовим компонентом якого є абсолютна психологічна готовність до ефективного виконання своїх обов'язків. Впровадження в клінічну практику великої кількості лікарських засобів, необхідність визначення їх ефективності та безпеки обумовлює потребу уніфікованого підходу до системи вивчення їх фармакокінетики, фармакодинаміки, взаємодії та побічної дії у хворих.

На основі вивчення ефективності застосування у навчальному процесі інтерактивних методик навчання та відпрацювання практичних навиків з клінічної фармакології студентами 4 курсу стоматологічного факультету в умовах реформування медичної освіти доведено, що тільки комплексний підхід у вивченні клінічної фармакології із засвоєнням сучасного теоретичного матеріалу, відпрацювання практичних навиків біля ліжка хворого та шляхом розв'язання ситуаційних задач, самостійне усвідомлення аудиторної та позааудиторної роботи дозволяє студентам вивчити клінічну фармакологію відповідно до сучасних вимог реформування медицини. Набуті на кафедрі знання про фармакокінетику, фармакодинаміку, взаємодію та побічну дію лікарських засобів, ефективність, безпеку призначених препаратів та засвоєні практичні навички сприяють становленню професіоналізму майбутнього фахівця.

Ключові слова: медична освіта, клінічна фармакологія, інтерактивні методики.

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ОСОБЕННОСТИ ПРЕПОДАВАНИЯ ПРЕДМЕТА «КЛИНИЧЕСКАЯ ФАРМАКОЛОГИЯ» СТУДЕНТАМ СТОМАТОЛОГИЧЕСКОГО ФАКУЛЬТЕТА В СОВРЕМЕННЫХ УСЛОВИЯХ РЕФОРМИРОВАНИЯ МЕДИЦИНСКОГО ОБРАЗОВАНИЯ

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Резюме. Целью работы является изучение эффективности применения в учебном процессе интерактивных методик обучения и отработки практических навыков, которые будут способствовать улучшению качества обучения студентов стоматологического факультета на кафедре внутренней медицины стоматологического факультета имени профессора М.Н. Бережницького.

Факторами развития личности студента-медика является приобретение высшего образования и профессиональное становление будущего врача. Конечным результатом является профессионализм, составляющий компонент которого – психологическая готовность к эффективному выполнению своих обязанностей. Внедрение в клиническую практику большого количества лекарственных средств, необходимость определения их эффективности и безопасности обуславливает необходимость унифицированного подхода к системе изучения фармакокинетики, фармакодинамике, взаимодействия и побочного действия.

На основе изучения эффективности применения в учебном процессе интерактивных методик обучения и отработки практических навыков по клинической фармакологии студентами 4 курса стоматологического факультета в условиях реформирования медицинского образования доказано, что только комплексный подход в изучении клинической фармакологии с усвоением современного теоретического материала, отработки практических навыков у постели больного, а также путем решения ситуационных задач, самостоятельное осознание аудиторной и внеаудиторной работы позволяет студентам изучить клиническую фармакологию в соответствии с современными требованиями реформирования медицины. Приобретенные на кафедре знания о фармакокинетики, фармакодинамике, взаимодействии и побочном действии лекарственных средств, эффективности, безопасности назначенных препаратов и усвоенные практические навыки способствуют становлению профессионализма будущего специалиста.

Ключевые слова: медицинское образование, клиническая фармакология, интерактивные методики.

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