ОВОЛОДІННЯ СТУДЕНТАМИ ПЕРВИНОЇ ХІРУРГІЧНОЮ ТЕХНІКОЮ НА ПРАКТИЧНИХ ЗАНЯТТЯХ З ТОПОГРАФІЧНОЇ АНАТОМІЇ

Резюме. З метою визначення шляхів оптимізації навчального процесу і освоєння практичних навичок з топографічної анатомії та оперативної хірургії у студентів проведено педагогічне дослідження з використанням критичного аналізу навчально-методичної літератури з даної проблеми, вивчення думки експертів (викладачів) і анкетування студентів на підставі сформованого переліку питань, статистичний аналіз отриманих даних. Встановлено, що 94% студентів вважають, що оволодіння елементами первинної хірургічної техніки є важливою і необхідною складовою навчального процесу з топографічної анатомії та оперативної хірургії, 78% студентів бажають брати активну участь у відпрацюванні хірургічних маніпуляцій і етапів оперативних втручань у умовах навчальної операційної, 34% студентів хотіли б працювати в студентському науковому гуртку, щоб мати можливість удосконалити свою первинну хірургічну техніку. Унаслідок дослідження визначено шляхи оптимізації та удосконалення форм і методів навчального процесу. Таким чином, відпрацювання в умовах операційної первинної хірургічної техніки є дієвим і перспективним методом передачі навчальної інформації шляхом практичних дій, коли студенти є активними генераторами ідей для пошуку нових методик. Максимально наближені до реальних умов практичні заняття і позааудиторна робота студентів підвищують їх мотивацію і зацікавленість до самостійного глибокого вивчення топографічної анатомії та оперативної хірургії.

Ключові слова: топографічна анатомія, практичні навички, практичні заняття.
Mastering practical skills, surgical manipulations in particular is an important constituent in the process of formation of physician’s professional abilities of any specialization [1, 2]. Practical skills are actions formed by means of repeated review, and they are characterized by a high level of learning, absence of conscious control and regulation of each element, i.e., this is the action practiced for second-nature by means of numerous repetitions [3]. The following factors were found to influence upon the formation of practical skills: motivation, abilities, basic knowledge and inclinations of students, purposefulness – all of them are in the centre of our attention while teaching operative surgery and topographic anatomy [4, 5].

On practical classes and scientific club meetings on topographic anatomy and operative surgery much attention is paid to primary surgical technique which is an important part in the work of future surgeon [6]. These are the classes where the majority of students clarify themselves with their inclinations concerning further specialization, they motivate and arouse students’ interest in advanced study of medicine, stimulate independent progress in learning and getting knowledge, form new professional and dynamic stereotypes [7]. The work in educational operating room, presurgical preparing and surgery on fresh dead bodies, living animals or models is a form of interactive learning – learning in cooperation, where the instructor and student are the subjects of education equal in rights and duties [8]. Mastering primary surgical technique under conditions of operating room is one of the methods to share educational information by means of practical actions.

**Objective**: to find the ways to improve educational process and mastering practical skills by the students on topographic anatomy and operative surgery.

**Methods and organization of the study.** The study was conducted in two stages using a critical analysis of educational-methodological literature on the given problem, questionnaire of the instructors and students, and statistical analysis.

During the first stage the experts’ opinion was learned: 7 instructors with the experience of teaching topographic anatomy and operative surgery of more than 5 years were interviewed with the aim to make the list of questions for the students’ poll. This interview resulted in making the questionnaire for the students suggesting them to answer the questions most often asked by their instructors.

The questionnaire of the students was made during the second stage as well as statistical analysis of the information obtained.

**Results and discussion.** 94% of students were found to consider mastering the elements of primary surgical technique important and essential constituent of the educational process on topographic anatomy and operative surgery. 78% of students wish to take an active part in mastering surgical manipulations and stages of surgical procedures under conditions of an educational operating theatre, 34% of students expressed their desire to work at students’ scientific club having the opportunity to improve their primary surgical technique.

The teaching staff of the Department of Anatomy, Topographic Anatomy and Operative Surgery continues to improve the forms and methods of educational process, and mastering practical skills in particular. Mastering various elements of primary surgical technique requires appropriate equipment and devices (equipped operating room and surgical instruments). More problems appear concerning the material for performing surgical manipulations and procedures. Among them there is a limited choice of animals allowed to be utilized for educational purpose and experiments. That is why, certain surgical procedures are performed on autopsied specimens, soft tissues and fragments of limbs of domestic animals.

The following surgical procedures and manipulations are possible to be performed: osseous-plastic and decompressive craniotomy (heads of domestic animals), removal of myoma, lipoma (pig ham), ligation, mastering skills on applying continuous sutures (mattress/quilted, blanket, cosmetic intradermal), technique of layer-by-layer separation and closure of tissues (at the same time the names of surgical instruments are memorized), tracheotomy and tracheostomy, stripping the vascular-nervous bundles of the neck, laparotomy, appendectomy, applying intestinal anastomosis (performing surgery on rabbits in corpore), mastering various kinds of intestinal sutures (Lembert, Shmid, Plakhkin-Sadovsky etc.) on intestinal material of domestic animals, performing operations of the fragment of a pig vertebral column (laminctomy), operations on the stomach (resection with applying anastomosis, gastrostomy, duodenoplasty), applying sutures on the liver (Kuznetsov-Pensky), learning peculiarities of the structure of the heart, kidneys with their resection (organs of domestic animals), performing amputations, exarticulation, applying sutures on the tendons. This list of operations can be constantly added. Students are active generators of ideas and searching new methods, which proves their self-motivation and importance of practical component of work that can hardly be overestimated in the educational process.

Usually during educational surgical procedures two surgical teams are appointed (according to the availability of operating tables), every one consisting of an operator, two assistants, operating nurse, junior nurse and anaesthesiologist. The rest of the students observe the operation, and the instructor comments
on the actions of surgeons and give necessary aid, as well as he/she can demonstrate a certain surgical manipulation on different stage in case it is needed. Thus, the communication between the instructor and students under conditions maximum close to reality of their future professional conditions continuous and is supplemented with visual aids. In these conditions new information is accepted by the students through all the sensory organs and is fixed in newly acquired motor stereotypes.

**Conclusions.** 1. Educational surgical manipulations on fresh dead bodies, living animals or models are effective form of interactive learning – learning in cooperation, where the instructor and student are equal parties in the process of education.

2. Mastering surgical technique in the operating room is an effective and perspective method to share educational information by means of practical work, where students are active generators of ideas to find new methods. Practical classes and individual students’ work after classes maximum close to the real life increase their motivation and interest in independent advanced self-learning of topographic anatomy and operative surgery.

**Prospects of further study.** Introducing new methods and forms of teaching primary surgical technique and mastering practical skills on topographic anatomy and operative surgery into the practical work after classes and scientific-cognitive activity of students.
ОВЛАДЕННЯ СТУДЕНТАМИ ПЕРВИЧНОЙ ХІРУРГІЧНОЇ ТЕХНІКИ НА ПРАКТИЧНИХ ЗАНЯТИЯХ ПО ТОПОГРАФІЧНОЙ АНАТОМІИ

Резюме. С целью определения путей оптимизации учебного процесса и освоения практических навыков по топографической анатомии и оперативной хирургии у студентов проведено педагогическое исследование с использованием критического анализа учебно-методической литературы по данной проблеме, изучение мнения экспертов (преподавателей) и анкетирования студентов на основании сформированного перечня вопросов, статистический анализ полученных данных. Установлено, что 94% студентов считают, что овладение элементами первичной хирургической техники является важной и необходимой составляющей учебного процесса по топографической анатомии и оперативной хирургии, 78% студентов желают активно участвовать в отрабатывании хирургических манипуляций и этапов оперативных вмешательств в условиях учебной операционной, 34% студентов хотели бы работать в студенческом научном кружке, чтобы иметь возможность усовершенствовать свою первичную хирургическую технику. В результате исследования определены пути оптимизации и усовершенствования форм и методов учебного процесса. Таким образом, отрабатывание в условиях операционной первичной хирургической техники является действенным и перспективным методом передачи учебной информации путем практических действий, когда студенты являются активными генераторами идей для поиска новых методик. Максимально приближенные к реальным условиям практические занятия и внеаудиторная работа студентов повышают их мотивацию и заинтересованность к самостоятельному углубленному изучению топографической анатомии и оперативной хирургии.

Ключевые слова: топографическая анатомия, практические навыки, практические занятия.

MASTERING PRIMARY SURGICAL TECHNIQUE BY STUDENTS DURING PRACTICAL CLASSES ON TOPOGRAPHIC ANATOMY

Abstract. With the aim to find the ways to improve the educational process and mastering practical skills on topographic anatomy and operative surgery by the students, a pedagogical research has been conducted with the use of a critical analysis of educational-methodological literature on the given problem, learning experts’ opinion (instructors), and questionnaire of the students on the basis of the list of questions made, and statistical analysis of the information obtained. 94% of students were found to consider mastering the elements of primary surgical technique important and essential constituent of the educational process on topographic anatomy and operative surgery, 78% of students wish to take an active part in mastering surgical manipulations and stages of surgical procedures under conditions of an educational operating theatre, 34% of students expressed their desire to work at students’ scientific club having the opportunity to improve their primary surgical technique. The research resulted in finding the ways to optimize and improve the forms and methods of educational process. Thereby, working under conditions of an operating room and mastering primary surgical technique is an effective and
perspective method to share educational information by means of practical actions, where students are generators of ideas to look for new methods. Practical classes maximum close to real conditions and individual students’ work after classes increase their motivation and interest in independent advanced learning of topographic anatomy and operative surgery. **Key words:** topographic anatomy, practical skills, practical classes.
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