

**Odesa National Medical University Department
of General and Military Surgery**

Silabus course

“Combat abdominal trauma”

Volume	4 credits 120 hours
Semester, year, study	graduate school
Days, time, place	According to the schedule in the classroom of the Department of General and Military surgery, Valikhovsky lane 3
Teacher(s)	Kashtalian Mikhail Arsenievich MD, PhD, Professor, Head departments Vitaliy Vansovych, MD, PhD, Professor Kvasnievski Oleksandr Anatoliiovych, MD, PhD, Associate Professor of the Department of General and Military Surgery
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Address	Study room of the Department of General and Military Surgery
Consultations	Thursday - from 14.00 to 16.00; Saturday - from 9.00 to 13.00 <i>Online consultations:</i> Thursday - from 14.00 to 16.00; Saturday - from 9.00 to 13.00 <i>Microsoft Teams</i> or via <i>Telegram/Viber</i>

COMMUNICATION

Communication with postgraduate students is carried out through face-to-face meetings. In case of transition to distance learning, communication with graduate students will be carried out through e-mail and programs: Microsoft Teams, Moodle, Telegram and Viber.

COURSE SUMMARY

The subject of study of the discipline

The program of the elective discipline "Combat abdominal trauma" is devoted to the problem of surgical treatment of combat abdominal trauma with colon damage at the stages of medical evacuation of the medical support system of troops.

Prerequisites and co-requisites (Place of the discipline in the educational program)

Interdisciplinary connections are based on the study of normal and pathological clinical anatomy, histology, general and clinical pathological physiology, microbiology, virology and immunology, pharmacology, propaedeutics of internal diseases and therapy, infectious diseases, family medicine, internal medicine, which involves integration with these disciplines and the formation of the ability to apply knowledge in the process of further education and professional activity.

Course objective:

The purpose of the elective discipline is to train specialists who are able to competently solve complex problems in the field of professional and research innovation in the planning and implementation of their own research and training of doctors of philosophy for the quality performance of functional duties related to the rational choice of surgical tactics with colon damage, which should reduce the frequency or prevent complications and mortality of the wounded.

The task of discipline:

1) providing PhD students with knowledge on the clinical and nosological structure of combat colon trauma in the wounded, taking into account the peculiarities of surgical care during the anti-terrorist operation in eastern Ukraine

2) to provide PhD students with knowledge regarding the effect of modern firearms on ultrastructural changes in the colon and other internal organs of the abdominal cavity.

3) to provide PhD students with knowledge on the methods of assessing the severity of the condition and to optimize the scope and sequence of diagnostic measures in wounded depending on the severity and nature of combat colon trauma.

4) Providing PhD students with knowledge of surgical tactics and technology of damage control surgery (DCS) in wounded with combat colon trauma at the stages of medical evacuation.

5) to provide PhD students with knowledge of the technology of specialized treatment of complications and to analyze the effectiveness of the provision of

surgical care for wounded with combat injuries of the colon.

Expected results

According to the results of studying the discipline, graduate students should ***to know:***

- to determine the clinical and nosological structure of combat trauma of the colon, patterns of its change depending on the timing and level of medical care
- to establish the pathomorphological characteristics of injuries of cavity organs by simulating gunshot wounds on the developed "thoracoabdominal ballistic simulator"
- determination of perfusion index

to be able to:

- use the scheme of diagnostic measures depending on the severity of the condition of wounded with combat colon trauma
- to carry out medical triage of the wounded and to distinguish non-severe, severe and extremely severe combat colon trauma to determine surgical tactics at the stages of medical evacuation.
- determine the macro- and microscopic consequences of damage when using firearms with different kinetic energy.
- apply damage control tactics (DCS) to achieve local hemostasis and decontamination in wounded with combat colon trauma.

COURSE DESCRIPTION

Forms and methods of training

The course is taught in the form of seminars (60 hours), as well as through the organization of independent work of graduate students (60 hours); total - 120 hours (4 credits).

The study of the discipline is implemented on the basis of the following teaching methods: - by the dominant means of teaching: verbal, visual;

1. Verbal (lecture, explanation, story, conversation, instruction);
2. Visual (multimedia presentations, videos, broadcasts from the operating room);
3. Practical:
 - preparation for practical classes;
 - independent study of topics that are not included in the plan of classroom classes;
 - solving test tasks;
 - mastering the technique of performing surgical manipulations.
 - work in the student scientific circle, writing scientific articles;
 - thematic discussions;
 - brainstorming;
 - round table;
 - analysis of specific situations (case method);
 - simulation tasks; - problem presentation;
 - presentations;

- trainings;
- business games.

Content of the discipline

Theme 1: Formation and development of military medicine in Ukraine

Military surgery in independent Ukraine

Topic 2. Scope and content of medical care at the stages of medical evacuation

Topic 3. Levels of medical support. Medical evacuation

Topic 4. Ballistic and morphological characteristics of a gunshot wound

Topic 5. Explosive trauma

Topic 6: Traumatic disease. Etiology and pathogenesis of traumatic disease.

Modern approaches to the treatment of traumatic disease.

Topic 7. Traumatic shock. Features of the clinical course

traumatic shock in injuries of different localization. Prevention and treatment of traumatic shock

Topic 8: Functional and anatomical injury severity scales

Topic 9: Pelvic trauma

Topic 10. Trauma to the genitourinary system

Topic 11. Trauma to the extremities.

Topic 12. Soft tissue wounds

Topic 13. Combined trauma

Topic 14. control of practical skills and theoretical. knowledge.

Topic 15. Credit class. Final control of mastering the discipline.

List of recommended literature:

(a) Basic:

1. Bily V.Y. Zhakhovsky V.O., Livinsky V.G. Place and role of the Military Medical Doctrine of Ukraine in the formation of the system of medical support of troops and civilians in wartime. *Science and Defense*. 2015; 1: 9-14.
2. Zarutskyi Y.L., Bilyi V.Y. Military field surgery / ed. by Y.L. Zarutskyi, V.Y. Bilyi. - K.: Phoenix, 2018. - P. 24-27.
3. Zarutskyi Y.L., Bilyi V.Y. Military field surgery / edited by Zarutskyi Y.L., Bilyi V.Y. - K. : Phoenix, 2018. - P. 45 -52.
4. Zarutskyi Y.L., Bilyi V.Y. Military field surgery / edited by Zarutskyi Y.L., Bilyi V.Y. - K.: Phoenix, 2018. - P. 369-376.
5. Zarutskyi Y.L., Bilyi V.Y. Military field surgery / edited by Zarutskyi Y.L., Bilyi V.Y. - K.: Phoenix, 2018. - P. 390-392.
6. Remeziuk EV Closed abdominal trauma / EV Remeziuk // Hospital surgery. Journal named after L. Ya. Kovalchuk. - 2020. - No. 2. - P. 80-83.
7. Kvasnevsky E.A. Abstract of the candidate's work "Surgical tactics in combat trauma of the colon" Kyiv.2020
Essays on surgery of combat abdominal trauma / V.Ya: "MP Lesya", 2016.-212p.
8. Muradyan K.R. Results of the introduction of interventional sonography in the diagnosis and surgical treatment of limited purulent-destructive complications of combat abdominal trauma. *Problems of military health care*. 2019. Issue 51. - P. 167-173.
9. Temporary guidelines on medical evacuation of the wounded and sick

in the Armed Forces of Ukraine for a special period. edited by Major General medical service Verba A.V., colonel of medical service Khoroshun E.M. - K.: UVMA, 2016. - 60 p.

10. Khomenko I.P., Yenin R.V., Tertyshnyi S.V. Possibilities of endovideosurgery in the treatment of abdominal wounds and injuries at the second level of medical care in the area of anti-terrorist operation. Odesa Medical Journal. 2017. № 3 (161). - C. 27-31.
11. Khomenko IP, Svitlychnyi EV, Grechanik OI, Melnyk OM, Tarasyuk BA Emergency ultrasound examinations in trauma. FAST protocol: textbook / Ukrainian Military Medical Academy. - Kyiv: Lyudmila Publishing House, 2018. - 65 p.
12. Office of the United Nations High Commissioner for Human Rights. Report on the human rights situation in Ukraine 16 November 2019 - 15 February 2020 // <https://www.ohchr.org/Documents/Countries/UA/29thReportUkraine-UA.pdf>

b) additional:

1. Alvarez B. D. Analysis of the Revised Trauma Score (RTS) in 200 victims of different trauma mechanisms / B. D. Alvarez, D. M. Razente, D. A. Lacerda // Rev Col Bras Cir. - 2016. - 43(5): 334-340. doi: 10.1590/0100-69912016005010.
2. ATLS: Advanced Trauma Life Support for Doctors (Student Course Manual), 9th Edition. - American College of Surgeons, 2015. - 392 p.
3. Berrios-Torres SI, Umscheid CA, Bratzler DW, et al. Draft of guidelines for the prevention of surgical site infection. CDC. 2014.
4. Biffl W. L. Management of patients with anterior abdominal stab wounds: a Western Trauma Association multicenter trial / W. L. Biffl, K. L. Kaups, C. C. Cothren, K. J. Brasel [et al.] // J Trauma. - 2009. - Vol. 66. - P. 1294-301.
5. Bortolin M, Baldari L, Sabbadini MG, Roy N: Primary repair or fecal diversion for colorectal injuries after blast: a medical review. Prehosp Disaster Med 2014; 29(3): 317-9.
6. Bosarge, Patrick L. MD; Como, John J. MD, MPH; Fox, Nicole MD // Management of penetrating extraperitoneal injuries // Journal of Trauma and Acute Care Surgery: [March 2016. - Vol. 80. - Issue 3. - P. 546-551.](#)
7. Brand M., Grieve A. Prophylactic antibiotics for penetrating abdominal trauma. Cochrane Database Syst Rev. 2019 Dec 12;12(12):CD007370. doi: 10.1002/14651858.CD007370.pub4. PMID: 31830316.
8. Harmston C., Ward J.B.M, Patel A. Clinical outcomes and effect of delayed intervention in patients with hollow viscus injury due to blunt abdominal trauma: a systematic review. Eur J Trauma Emerg Surg. 2018 Jun;44(3):369-376. doi: 10.1007/s00068-018-0902-2. Epub 2018 Jan 4.
9. Hirshberg A. Top Knife: The Art and Craft of Trauma Surgery / A. Hirshberg, C. L. Mattox. - Shrewsbury, UK : tfm Publishing Ltd, 2005.
10. Huang F-D., Yeh W-B., Chen S-S., Liu Y-Y., Lu I-Y., Chou Y-P., Wu T-C. Early management of retained hemothorax in blunt head and chest trauma. World J Surg. 2018; 42(7): 2061-6.

11. Ranko Lazovic. Performance of primary repair on colon injuries sustained from low-versus high-energy projectiles Ranko Lazovic**, Nemanja Radojevic*, and Ivana Curovic*** J Forensic Leg Med. 2016 Apr ; 39: 125-129. doi:10.1016/j.jflm.2016.01.005.
12. Reginelli A., Russo A., Maresca D., et al. Imaging assessment of gunshot wounds Semin Ultrasound CT MR, 36 (2015). - P. 57-67.
13. Roberts DJ, Bobrovitz N, Zygun DA, et al. Indications for use of damage control surgery and damage control interventions in civilian trauma patients: a scoping review. J Trauma Acute Care Surg. 2015;78(6):1187–1196.
14. Saghafinia M., Nafissi N., Motamedi M. R., Motamedi M. H., Hashemzade M., Hayati Z., Panahi F. Assessment and outcome of 496 penetrating gastrointestinal warfare injuries. J R Army Med Corps. 2010 Mar;156(1):25-7. doi: 10.1136/jramc-156-01-05.
15. Steele SR, Maykel JA, Johnson EK. Traumatic injury of the colon and rectum: the evidence vs dogma. Dis Colon Rectum 2011;1,184-1,201.
16. Stewart R. M., Rosenthal D. Colorectal trauma. In: Corman ML, editor. Colon and rectal surgery. Philadelphia, PA: Lippincott Williams & Wilkins; 2005. - P. 427-49.
17. Stewart R. M., Rosenthal D. Philadelphia, PA: Lippincott Williams & Wilkins; 2005. Colorectal trauma; pp. 427-449. [Google Scholar].
18. Watson JDB, Aden JK, Engel JE, Rasmussen TE, Glasgow SC: Risk factors for colostomy in military colorectal trauma: a review of 867 patients. Surgery 2014; 155: 1052-61.

EVALUATION

Current control is carried out at seminars in accordance with the formulated tasks for each topic. When assessing learning activities, preference is given to standardized methods of control: oral questioning, structured written works, discussions, role plays, reports. When mastering each topic for the current learning activity, the student is given grades on a 4-point traditional scale. The current progress is calculated as the average current score, that is, the arithmetic mean of all grades received by the postgraduate student (applicant) on the traditional scale, rounded to 2 (two) decimal places, for example 4.75.

Evaluation of current discipline control:

The meaning of the grade "**excellent**": the graduate student shows special creative abilities, is able to independently acquire knowledge, without the help of a teacher finds and processes the necessary information, is able to use the acquired knowledge and skills to solve problems, is able to produce innovative ways problem solving, convincingly argues answers, independently reveals his own talents and inclinations.

The meaning of the grade is "**good**": the graduate student is fluent in the studied amount of material, applies it in practice, freely solves exercises and problems in standard situations, independently corrects the mistakes made, the number of which is insignificant.

The meaning of the grade is "**satisfactory**": the graduate student is able to master a significant part of the theoretical material, but mainly in a reproductive form, shows knowledge and understanding of the main provisions, with the help of the

teacher can analyze the educational material, correct errors, among which there are a significant number of significant ones.

The meaning of the grade is "**unsatisfactory**": the graduate student has the material at the level of individual fragments that make up an insignificant part of the educational material.

Only those postgraduate students who do not have academic debts and have an average score for current educational activities of at least 3.00 are allowed to the final certification.

Forms and methods of final control

The final control in the discipline "surgery of cholelithiasis" is an exam.

The grade for the discipline is the arithmetic mean of the two components:

average current score as the arithmetic mean of all current grades;

traditional grade for the exam.

The obtained average score for the discipline by multiplying it by 40 (the resulting score is rounded to whole numbers) is converted to a grade on a 200-point scale, which, in turn, is converted to a traditional grade in the discipline on a 4-point scale.

average score for discipline	Grade in the discipline on a 200-point scale	Grade in the discipline for 4-point scale (traditional assessment)
4,62-5,0	185-200	5
3,77-4,61	151-184	4
3.0-3.76	120-150	3

Independent work

Evaluation of independent work of postgraduate students and applicants, which is provided in the topic along with classroom work, is carried out during the current control of the topic in the relevant classroom, as well as at the final control (exam).

COURSE POLICY ("rules of the game")

Policy on deadlines and retakes

Assignments must be completed on time according to the deadline. For late completion of the task, the graduate student receives an unsatisfactory grade. If the applicant for higher education was absent at classes 3 any reason, then the work is carried out within the time limits set by the teacher in accordance with "Regulations on organization educational process B ONMedU" (link to the provisions on the university website <https://onmedu.edu.ua/wp-content/uploads/2020/01/osvitnij-proces.pdf>). Retakes are carried out in accordance with the approved schedule.

Policy on academic integrity

Policy educational components is based on principles of academic integrity (reference to provisions on website of the University <https://onmedu.edu.ua/wp-content/uploads/2020/07/polozhennja-pro-dobrocheshnist.pdf>) and determined by system

requirements, which the teacher presents to the applicant when studying the educational component:

- independent performance of educational tasks, tasks of current and final control of learning outcomes (for persons with special educational needs, this requirement is applied taking into account their individual needs and capabilities);
- references to information sources in case of using ideas, developments, statements, information.

Policy on attendance and tardiness

To obtain a satisfactory grade, attendance and work in classroom classes (lectures and seminars) is mandatory. A postgraduate student is allowed to be late for no more than 10 minutes.

Mobile devices

It is permissible to use mobile devices in class with the permission of the teacher.

Behavior in the classroom

While in the classroom, the following values should be cultivated: respect for colleagues; tolerance for others; receptivity and impartiality; reasoned agreement or disagreement with the opinion of other participants in the discussion, as well as one's own opinion; respect for the dignity of the opponent's personality during communication; adherence to the ethics of academic relationships.