

REGIONAL ANESTHESIA IN THE PAIN TREATMENT	
GENERAL INFORMATION	
Course coordinator	Professor Slavica Kvolik, MD, PhD
Assistant/Associate	Assoc. Prof. Ivan Radoš, MD, PhD Asst. Prof. Ivana Haršanji Drenjančević, MD, PhD Gordana Kristek, MD, PhD Nenad Nešković, MD, PhD
Study Programme	Integrated undergraduate and graduate university study of Medicine
Status of the course	Elective
Year of study, semester	5 th year, 9 th semester
ECTS	2
Workload (hours)	Lectures (5); Seminars (10); Exercises (10)
Expected number of students	30
COURSE DESCRIPTION	
Course objectives	
Learn the principal groups of local anesthetics, therapeutic use and side effects of local anesthetics. To train students to recognize side effects and their treatment. Set an indication for regional or local anesthesia. Distinguish types of regional anesthesia techniques according to the method of local anesthetic application: bolus, intermittent and continuous. Get acquainted with the application of ultrasound in the performance of regional anesthesia techniques. Demonstrate patient-controlled analgesia techniques. Specific application of regional anesthesia and analgesia techniques in orthopedics and gynecology.	
Enrolment requirements and entry competencies	
Passed all exams of previous years of study	
Learning outcomes at the Programme level	
1.1.; 1.2.; 2.1.; 3.1.; 3.4.; 3.5; 4.1.; 4.2	
Learning outcomes (5-10)	
After passing the exam the student will be able to: 1. Recognize the effects and side effects of local anesthetics, indications for drug combination in regional anesthesia, 2. Recognize the systemic toxicity of the local anesthetic and select the appropriate intervention 3. Determine indications for regional anesthesia 4. Distinguish indications for use and evaluate the effects of individual regional anesthesia techniques 5. With the help of ultrasound, distinguish individual structures near which nerve blocks are made 6. Independently perform infiltration anesthesia on manequin, recommend to the patient certain techniques of regional anesthesia.	
Course content	
Lectures Drugs: local anesthetics, analgesics - mechanism of action and systemic effects. Regional anesthesia and perioperative pain. An integrated approach to regional anesthesia and pain management. A multimodal approach to pain management and chronic pain. Peripheral nerve blocks of the upper extremities in regional anesthesia and treatment of pain: indications and contraindications.	

Seminars

Scales for assessing the severity of pain and sedation, recording strength. Complications of local anesthetics. Regional anesthesia in gynecology. Spinal anesthesia for caesarean section. Painless labor in epidural analgesia. Complications of regional anesthesia in gynecology. Central blocks in program surgery. Spinal and epidural anesthesia, spinal and epidural catheters.

Exercises

Use of ultrasound in regional anesthesia. Demonstration of an ultrasound machine and anatomical view of a model in a pain clinic. X-ray-guided regional analgesia. Assessment of the patient's condition and treatment effect. A practical approach to the treatment of acute and postoperative pain. Application of analgesics intermittently and continuously. Exercises in ultrasound-guided Regional anesthesia: assessment of patient status and treatment effect. Case reports.

Mode of teaching

Lectures, Seminars; Exercises

Student obligations

Attendance at all forms of lectures, seminars and exercises is mandatory, and the student must access all knowledge tests. A student may justifiably miss 30% of each form of lectures. Missed exercise must be colloquial.

Monitoring student work (slignment of learning outcomes, teaching methods and grading)

Teaching activity	ECTS	Learning outcome	Student activity	Assessment methods	Grade points	
					Min.	Max.
Class attendance	0.5	1-5	Attending classes	Evidences	5	10
Seminar	0.5	1-5	Preparation of seminars	Presentation within the group	5	10
Exercises	0.5	1-5	Attendance and active participation in exercises	Exercise diary	10	30
Final exam	0.5	1-5	Learning for the written exam	Written exam	30	50
Total	2				50	100

Evaluation of the final exam:

Percentage of accurate answers provided (%)	Grade points
60,00-69,99	30
70,00-79,99	35
80,00-89,99	40
90,00-94,99	45
95,00-100,00	50

Calculation of final grade:

Grades obtained during the oral exam are added to the points earned during the course. The evaluation is performed by absolute distribution, ie on the basis of the final achievement and is compared with the numerical system as follows:

0-59.99 rating points - DID NOT PASS; 60-100 evaluation points – PASSED

Required reading (available in the library and through other media)

	Number of copies in the library	Availability through other media
1. Marko Jukić, Ino Husedžinović, Slavica Kvolik, Višnja Majerić, Kogler, Mladen Perić, Josip Žunić "Clinical Anesthesiology", published by Medicinska naklada, 2012.	2	
2. Script for the course "Regional anesthesia in the pain treatment"		

Additional reading

<https://www.nysora.com/techniques/> Online available

Course evaluation procedures

Anonymous, quantitative, standardized student survey on the subject and work of teachers conducted by the Office for Quality of the Medical Faculty Osijek.

Note /Other

E-learning is not included in the total course hours, but it is used in teaching and contains links to various pages, video and audio materials available on the website.