

OPIOIDS IN CLINICAL PRACTICE	
GENERAL INFORMATION	
Course coordinator	Associate Professor Ivan Radoš, MD, PhD
Assistant/Associate	Professor Slavica Kvolik, MD, PhD Asst. Prof. Ozana Katarina Tot, MD, PhD Dino Budrovac, MD
Study Programme	Integrated undergraduate and graduate university study of Medicine
Status of the course	Elective
Year of study, semester	5 th year, 10 th semester
ECTS	2
Workload (hours)	Lectures (8); Seminars (8); Exercises (9)
Expected number of students	30
COURSE DESCRIPTION	
Course objectives	
To train students in understanding the effects of opioid therapy and to repeat indications, contraindications, as well as side effects of opioid therapy. Also the goal is to acquaint the student with alternative ways of applying opioid therapy. Enabling students to calculate the equianalgetic effect of individual opioids in relation to morphine. The aim of this course is to enable students to switch from non-opioid to opioid analgesic therapy, and vice versa from opioid to non-opioid therapy. The student will also be introduced to the pharmacokinetics and pharmacodynamics of opioid therapy as well as the effect of placebo on opioid therapy. The aim is also to acquaint the student with the abuse of opioid therapy, and how to act in such patients when prescribing analgesic therapy.	
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.; 4.1.; 4.2.	
Learning outcomes (5-10)	
After completing the course, the student will be able to independently calculate the equianalgetic doses of opioids that are used in clinical practice. The student will be able to independently decide which opioid therapy routes are appropriate for each patient. Also the student will be able to titrate opioid therapy for chronic and cancerous pain. Students will be familiar with the interactions of opioids and other common drugs used in clinical practice. Students will be able to independently program PCA pumps for opioid analgesic therapy.	
Course content	
Lectures	
What defines opioids, with a historical overview. Process morphine derivatives and opioid derivatives. Pharmacokinetics and pharmacodynamics of opioids with emphasis on differences in pharmacodynamics and pharmacokinetics in between oral and parenteral opioid administration, and transplacental transition of opioids. Protocol for analgesia, with methods of opioid use in special clinical situations, ie opioid use at home, opioids in cancer pain, opioid use in children and opioid use in the elderly. The most common problems in opioid research studies. The problem of addiction as a side effect of opioid treatment.	

Seminar

Review of opioids in clinical use with indications, contraindications, side effects and complications of opioid therapy. Opioids in clinical and preclinical studies with the effect of opioids on experimental animals and methods of application in experimental animals. Opioids and placebo in the treatment of pain.

Opioid abuse in non-medical use, with opioid preparations as an addictive substance. Addiction in pregnant women and impact on the newborn

Exercises

New opioids and systems for their use with an overview of alternative opioid routes: transdermal therapeutic systems, continuous use via PCA - indication, contraindications and side effects of opioid use in alternative ways Oral opioid therapy techniques, parenteral therapy, combined preparations and multimodal preparations. Defining the equianalgetic effects of opioids and comparing the doses of parenterally and orally administered drugs, comparing the equianalgesic doses of various opioids, presenting a clinical case.

Switching from non-opioids to opioid therapy and back. Reasons for switching from non-opioid to opioid therapy. Calculation of the required dose of the drug. How back? Abstinence syndrome

Mode of teaching

Lectures; Seminars; Clinical 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 (alignment 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
<p><i>Calculation of final grade:</i> 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</p>		
Required reading (available in the library and through other media)		
Title	Number of copies in the library	Availability through other media
1. Bol, uzroci i liječenje. Marko Jukić, Višnja Majerić Kogler Medicinska naklada Zagreb 2011.	0	Online available
Additional reading		
1. Katarina Šakić i suradnici: Klinička anesteziologija, reanimatologija i intenzivno liječenje, udžbenik fakulteta sveučilišta Josip Juraj Strossmayer u Osijeku, Grafika Osijek 2008 2. Natuknice s predavanja (handouts)		
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.		