

SUBJECT CARD

Faculty of Medicine and Health Sciences

Field of studies: Medicine

Form of studies: Full-time

Degree: long-cycle Master's program

Specializations: No specialization

Academic year: 2023/2024

DISEASES OF THE LOCOMOTOR SYSTEM	
SUBJECT	Diseases of the locomotor system (25E+ 20F)
NUMBER OF ECTS POINTS	3
LANGUAGE OF INSTRUCTION	English
TEACHER(S)	Assoc. Professor Krzysztof Tomaszewski, MD, PhD Assoc. Professor Zbigniew Żuber, MD, PhD Assoc. Professor Bogdan Batko, MD, PhD Professor Jerzy Sułko, MD, PhD Piotr Krawiec, MD, PhD Jolanta Osieleniec, MD Dorota Turowska-Heydel, MD, PhD lek. med. Małgorzata Sobczyk, MD lek. med. Elżbieta Mężyk, MD dr n. med. Przemysław Pękala MD, PhD dr n. med. Tomasz Pardała, MD, PhD dr n. med. Bartosz Godlewski, MD, PhD lek. med. Jakub Szmyd, MD
PERSON RESPONSIBLE	Assoc. Professor Bogdan Batko, MD, PhD
NUMBER OF HOURS	
LECTURES	5 h.
SEMINARS	10 h.
CLASSES	30 h.
GENERAL OBJECTIVES	
OBJECTIVE 1	To familiarize students with the etiopathogenesis, symptoms, diagnostics, conservative and surgical treatment, and prevention of diseases of the musculoskeletal system.
OBJECTIVE 2	Identifying practical methods of applying acquired theoretical knowledge in the field of musculoskeletal diseases.
LEARNING OUTCOMES	

DISEASES OF THE LOCOMOTOR SYSTEM

MW1	<p>Knowledge: The student knows and understands: classification, symptoms, basic principles of diagnostics as well as conservative and surgical treatment in degenerative diseases of the musculoskeletal system, including associated inflammatory, infectious and neoplastic lesions in adults.</p>
MW2	<p>Knowledge: The student knows and understands the etiopathogenesis of immune-dependent diseases of developmental age, knows the local and systemic symptoms associated with diseases of the developing motor organ. The student is able to define the threatening systemic complications of musculoskeletal diseases.</p>
MW3	<p>Knowledge: The student knows and understands: classification, symptoms, and basic principles of diagnosis and conservative treatment and physiotherapy methods of rheumatic diseases in adults. The student knows the extra-articular symptoms of rheumatic diseases and the most common comorbidities.</p>
MK1	<p>Knowledge: The student knows the definitions, classification criteria, and symptoms of the basic degenerative and deforming diseases of the musculoskeletal system: incl. osteoarthritis of the spine, hip and knee joints, as well as the small joints of hands and feet.</p>
MK2	<p>Knowledge: The student knows the definitions, classification criteria, and symptoms of basic inflammatory, infectious and neoplastic diseases of the musculoskeletal system in adults: incl. osteomyelitis, chondrosarcoma, osteosarcoma, Ewing's sarcoma.</p>
MK3	<p>Knowledge: The student knows the most common systemic diseases of the musculoskeletal system in the developmental age - JIA, spondyloarthropathies, myositis, vasculitis, systemic lupus, scleroderma, soft tissue inflammation, clinical symptoms, classification, diagnostic criteria and rules of management</p>
MK4	<p>Knowledge: The student knows the definitions, classification criteria, and symptoms of basic rheumatic diseases: incl. RA, inflammatory spondyloarthritis, polymyalgia rheumatica, crystallopathy, osteoporosis, fibromyalgia. The student knows the diseases in the course of which rheumatic symptoms may occur.</p>
MU1	<p>Skills: The student gathers a full medical history and conducts physical examination of an adult patient, aimed at identification of degenerative and deformative changes of the musculoskeletal system. The student is able to prepare and present a case study together with a diagnosis and a proposal for conservative and surgical treatment.</p>

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MU2	Skills: The student is able to interpret the results of additional tests (laboratory / imaging - X-ray / CT / MRI), plan and carry out the differential diagnosis in case of suspected degenerative and / or distorting changes to the musculoskeletal system in adults.
MU3	Skills: The student is able to efficiently conduct examination of the motor organ, gather medical history and conduct physical examination of a patient in the developmental age, with particular emphasis on the symptoms dominant in inflammatory systemic diseases. The student is able to prepare and present a case study along with a diagnosis and a sample therapy proposal.
MU4	Skills: The student is able to gather medical history and conduct physical examination of an adult patient, focused on inflammatory and systemic rheumatic diseases. The student is able to prepare and present a case study along with a diagnosis and a sample therapy proposal.
MU5	Skills: The student is able to interpret the results of additional tests (serologic / imaging), plan and carry out differential diagnosis in case of suspected inflammatory rheumatic diseases.
MC1	Skills: Can propose and discuss various measures of support for patients with incurable and chronic diseases.

INTRODUCTORY REQUIREMENTS

The student knows the basics of human anatomy and physiology.

Knowledge of the correct interpretation of the results of basic laboratory and imaging tests.

COURSE PROGRAM

DETAILED DESCRIPTION OF THE TOPIC BLOCKS

LECTURE 1	Introduction to orthopedics - history, terminology, basics of anatomy and biomechanics, surgical treatment of degenerative-deforming, infectious, inflammatory and neoplastic lesions (area F-2h).
LECTURE 2	Rheumatic diseases in children - classification, diagnosis, treatment (area E-1.5h).
LECTURE 3	Rheumatic diseases in adults - classification, diagnosis, comorbidity, conservative treatment (area E-1.5h).
LECTURE 4	Degenerative and deforming changes of the musculoskeletal system - diagnosis, classification, surgical treatment and postoperative procedure (area F-3h).

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LECTURE 5	Inflammatory, infectious and neoplastic changes of the musculoskeletal system - diagnosis, classification, surgical treatment and postoperative management (area F-3h).
LECTURE 6	Congenital and developmental defects of the musculoskeletal system, non-inflammatory systemic diseases, including metabolic disorders (area E-2h).
LECTURE 7	Inflammatory spondyloarthropathies, arthritis associated with metabolic diseases of the endocrine glands, diseases of bone and cartilage, and soft tissue rheumatism - diagnosis and treatment. Indications and contraindications to individual physiotherapy methods, considering the specificity of the most common diseases of the musculoskeletal system (area E-2h).
CLASS 1	Musculoskeletal examination; basics of X-ray, USG and MRI image interpretation in orthopedics; practical classes in basic ultrasound techniques of the musculoskeletal system; work with a patient in an orthopedic clinic; differential diagnosis of orthopedic diseases (area F-6h).
CLASS 2	Working with a patient in the orthopedic ward; assistance in qualifying for surgical treatment; participation in a typical orthopedic surgery (e.g. large joint replacement surgery); postoperative patient management (area F-6h).
CLASS 3	Differences in the structure of the musculoskeletal system and diagnosis and treatment of rheumatic diseases in developmental age (area E-6h).
CLASS 4	Full medical history gathering, and physical examination of the musculoskeletal system aimed to identify inflammatory and systemic rheumatic diseases in adults (area E-6h).
CLASS 5	Work with a patient in the rheumatology department, interpretation of serological tests and markers of the inflammatory process, imaging tests in adults (USG, X-ray, MRI - rheumatologist's perspective, densitometry) and the use of disease activity indices in practice (BASDAI, DAS28) (area E-6h).
DIDACTIC METHODS (APPLIED)	
	Lecture Seminar Teaching at the bedside Case study
STUDENTS WORKLOAD	
NUMBER OF HOURS UNDER SUPERVISION	(resulting from the study plan, i.e. lectures + exercises + tutorials + possibly other forms of classes) 45h

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NUMBER OF PREPARATION HOURS	Preparation for classes 15h Preparation of a report, presentation, medical history 10h
TOTAL NUMBER OF HOURS FOR THE COURSE	Sum of the above fields.90h

CONDITIONS FOR COURSE COMPLETION

	Attendance at clinical ward exercises and seminars. Positive assessment of practical skills (the tutor assesses these skills through constant observation of the student during the exercises). Average of the seminar tests $\geq 60\%$.
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METHODS OF ASSESSMENT

IN TERMS OF KNOWLEDGE	multiple-choice test before seminars
IN TERMS OF SKILLS	Case study presentation Interpretation of laboratory results Brainstorming ideas
IN TERMS OF SOCIAL COMPETENCY¹	Activity in classes, observation of behavior towards patients and colleagues, evaluation of group work.
FORMATIVE	Written test consisting of 10 questions - selection test before the seminar.
SUMMATIVE (I & II terms)	Term I (EXAM): Multiple-choice test (80 questions), each question has 4 different answers, one of which is correct. Term II (RETAKE EXAM): test or oral exam (5 open-ended questions)

GRADING SCALE

3,0 (SATISFACTORY)	55-63% of correct answers in the examination test
3,5 (SATISFACTORY PLUS)	64-72% of correct answers in the examination test
4,0 (GOOD)	73-81% of correct answers in the examination test
4,5 (GOOD PLUS)	82-90% of correct answers in the examination test
5,0 (VERY GOOD)	91-100% of correct answers in the exam test

BASIC LITERATURE

DISEASES OF THE LOCOMOTOR SYSTEM

- [1] McMaster Textbook of Internal Medicine; Rheumatology
- [2] Essentiales of Orthopaedic Surgery by Mark Baratz
- [3] Handbook of Fractures by Kovall and Zuckerman
- [4] EULAR Textbook on Paediatric Rheumatology, Alberto Martini, Eric Hachulla, BMJ Publishing Group. 2018

SUPPLEMENTARY LITERATURE

- [1] EULAR Textbook on Rheumatic Diseases – Third Edition (2018)
 - [2] Textbook of Pediatric Rheumatology, 8th Edition, Ross Petty, Ronald Laxer, Carol Lindsley, Elsevier, 2020
 - [3] Campbell's Operative Orthopaedics, 4-Volume Set 14th Edition, 2020
 - [4] Oxford Handbook of Rheumatology, Oxford University Press, 2018
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