

Study program: Integrated Academic Studies in Medicine

Course title: Paediatrics

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Course status: compulsory

ECTS Credits: 12

Condition: Internal Medicine; Infectious Diseases; Pharmacology and Toxicology 2; Neurology

Course aim

The aim of this course is to get medical students familiar with paediatric population (aged from 0 to 18 years) and to teach them the basic principles of growth, development and nutrition. The main goal is to teach medical students to recognize clinical manifestations of common diseases in children, to plan diagnostic procedures, to consider differential diagnosis and therapy. Final goal is to educate physicians to correct attitudes toward this vulnerable population in general practitioner's office.

Expected outcome of the course:

During lectures students get basic knowledge about pathogenesis, clinical manifestations and therapy of diseases in population aged 0 to 18 years. We strongly emphasize specific issues of this age group (growth, development and nutrition), as well as the importance of preventive measures and accurate diagnosis (careful differential diagnosis and additional diagnostic procedures in the most frequent diseases in this population). Correct attitude and skillful communication with patients aged 0 to 18 years and their families. Specific history taking, physical examination and treatment. Specific tasks of general physicians in the absence of paediatrician. Immunization schedule, prevention and counseling for children and adolescents.

Course description

Theoretical education

1. Opening lecture. 2. Growth and development: estimation of growth and development and pathology of growth and development, 3. Genetics: Chromosomes and genes; Patterns of inheritance and inherited disorders; Congenital malformations; Genetic counseling; Prenatal diagnostics; Neonatal screening of inherited diseases. 4. Neonatology: Adaptation of newborn to the extra-uterine conditions; Delivery trauma; Mature and premature newborn; Neonatal jaundice, hemorrhagic disease of the newborn; Infections of the newborn; Respiratory distress; Hypoxic-ischemic encephalopathy. 5. Nutrition: Breastfeeding; Cow's milk; Nutrition of the premature newborn; Formulas; Diets. 6. Metabolism of water and electrolytes. 7. Rickets. 8. Juvenile diabetes. 9. Thyroid dysfunction: Congenital hypothyroidism; Hashimoto thyroiditis; Hyperthyroidism. 10. Obesity and hyperlipoproteinemias, 11. Congenital adrenal hyperplasia, Cushing's disease, Addison's disease, Pheochromocytoma, 12. Gastroenterology; diseases of upper and lower gastrointestinal tract, intestinal parasites, recurrent abdominal pain; Hepatology, non conjugated hyperbilirubinemia (Syndrome Gilbert), conjugated hyperbilirubinaemia (neonatal hepatitis); Extrahepatic biliar atresia; Chronic hepatitis; 13. Pulmonology: Airways in children; Diseases of upper and lower respiratory tract. 15. Pulmonary tuberculosis: Primary TBC; Post primary TBC; Therapy, diagnosis, prevention, BCG immunization. 16. Cardiology: Fetal circulation; Congenital heart diseases (clinical picture, diagnosis, therapy); Rheumatic fever; Bacterial endocarditis; Myocardial diseases; Rhythm disturbances; Conduction disturbances. 17. Immunology: Immunological system; Immunodeficiency. 18. Allergology: Urticaria; Quincke edema; Atopic dermatitis; Prevention of allergic diseases; Rheumatology. 19. Bones and muscles. 20. Hematology and Oncology: Anemias; Disorders of hemostasis; Screening of hemostasis; Thrombocytopenia; Coagulopathy; Vasculopathy; Lymph node enlargement; Acute leukemia; Oncology; Lymphoma; Solid tumors. 21. Social Medicine. 22. Neuropaediatrics: Normal psychomotor development; Denver developmental score; Paroxysmal non-epileptic disorder of childhood; Epilepsy and epileptic syndromes of childhood; Headache; Treatment of epilepsy and epileptic status. 22. Nephrology: Urinary tract infections; Vesicoureteral reflux; Reflux nephropathy and renoprotective therapy; Primary glomerular diseases; Acute and chronic renal failure. 23. Intoxication: General aspects; First aid; Treatment. 24. Pharmacotherapy: Pharmacokinetics and pharmacodynamics in children; Doses of the most common drugs used in children; Drugs and breastfeeding; History of medication. 25. Adolescence: Growth and development in adolescence; The most common problems of adolescents and their parents; Morbidity, mortality, risk behavior; Disorders on nutrition in adolescence, 26. Emergency and resuscitation in paediatrics: Cardiopulmonary-cerebral resuscitation in paediatrics; Resuscitation and treatment in some specific conditions in paediatrics (drowning, lightning/electrocution etc.)

Practical education

1. History taking and physical examination. Physician – patient relationship, co operability and general status of the patient. 2. Endocrine and metabolic diseases in paediatrics. Disorders of water and electrolytes and principals of correction of hydro-mineral disorder, Diabetes, hypothyroidism, hyperthyroidism, congenital adrenal hyperplasia, obesity and hyperlypopenemia. 3. Cardiovascular diseases in children. Inborn heart failure, rhythm disturbances, myocarditis and pericarditis, bacterial endocarditis. 4. Respiratory tract diseases in children. Acute and chronic inflammation of upper and lower respiratory tract in children, asthma cystic fibrosis. 5. Nutrition, breastfeeding and formulas, nutritional workshop, principles of nutrition of healthy and sick child. 6. Diseases of urogenital system, congenital malformations of urinary tract, the most common renal diseases, urinary tract infection, acute and chronic renal failure, parenteral and peritoneal dialysis. 7. Hematology and oncology - anemia, leukemia, malignant diseases of childhood, disorders of hemostasis. 8. Immunology, immunodeficiency, anaphylactic shock, allergic diseases, neurodermatitis, arthritis in children. 9. Neonatology, estimation of gestational age, hyperbilirubinaemia, Hypoxic-ischemic encephalopathy, hemorrhagic disease of the newborn, prematurity, nutrition of newborn and premature infant, Respiratory distress syndrome. 10. Neurological and psychiatric diseases in childhood, seizures, epilepsy, lumbar puncture, neurocutaneous diseases. 11. Diseases in adolescence. Anorexia, risky behavior, bulimia, prevention of risky behavior. 12. Diseases of gastrointestinal tract and liver: infective and chronic diseases of upper and lower gastrointestinal tract, liver diseases. 13. Healthcare of children and adolescents. 14. Healthcare and social paediatrics. 15. Intoxication in childhood and prevention. 16. Emergency and resuscitation in paediatrics

Literature

Compulsory

1. Lissauer T, Clayden G. (Eds). Illustrated Textbook of Paediatrics. 5th Edition, Elsevier 2017.

Number of active classes	Theoretical classes: 90	Practical classes: 105
		Other classes: 30

Teaching methods

Lectures. Practical education: history, physical examination, differential diagnosis and therapy. Case reports, workshops.

Student activity assessment (maximally 100 points)

Pre-exam activities	points	Final exam	points
Lectures	15	Written	10
Practices	15	Oral	50
Colloquium	10	
Essay			