

GENERAL MEDICINE – YEAR 5

SYLLABI OF THE COURSES OFFERED TO EXCHANGE STUDENTS

YEAR 5 / SEMESTER 9

aVLPD0932c Pediatrics II - practice

Faculty of Medicine

autumn

Extent and Intensity

0/2/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

MUDr. Petr Jabandžiev, Ph.D.

Department of Pediatrics - Institutions shared with the Faculty Hospital Brno (paediatric medicine) - Faculty of Medicine

Contact Person: MUDr. Milena Burianová, Ph.D.

Course objectives

The aim of practical lessons in pediatrics is:

Introducing students to the field of therapeutic and preventive care in pediatrics

Understanding of pediatric propedeutics

Knowing the most common diseases in pediatrics

Acquiring examination methods needed to diagnose the most common diseases in pediatrics

Managing the differential diagnosis of the most common acute and chronic diseases in pediatrics

Understanding the principles of pharmacotherapy in pediatrics

Learning outcomes

After completing this course the student will have basic knowledge about:

- pediatric propedeutics
- the most common diseases in pediatrics and their diagnosis and treatment
- the care of the newborn
- nutrition in childhood

Syllabus

Theoretical part (seminars):

- Neonatology
- Intensive care in pediatrics
- Nutrition in pediatrics
- Pediatric immunology
- Pediatric gastroenterology

- Inherited metabolic disorders
- Pediatric rheumatology
- Pediatric hematology
- Pediatric nephrology
- Pediatric endocrinology
- Pediatric oncology

Practical part (ward):

- Practical bedside teaching
- Examination procedures in children (newborn, infant, toddler, pre-school and school-age child, adolescent) with diagnoses typical of these age groups
- Medical history
- Physical examination
- Differential diagnosing
- Designing of laboratory and instrumental examination
- Diagnosing and treatment

Literature

recommended literature

- KLIEGMAN, Robert, Bonita F. STANTON, Joseph W. ST. GEME and Nina F. SCHOR. *Nelson textbook of pediatrics*. Edited by Richard E. Behrman. 20th edition. Philadelphia: Elsevier, 2016. lxxviii, 17. ISBN 9781455775668.

not specified

- *Current diagnosis and treatment : pediatrics*. Edited by William W. Hay. 22nd ed. New York: McGraw-Hill Medical, 2014. xxviii, 15. ISBN 9780071827348.
- *American Academy of Pediatrics textbook of pediatric care*. Edited by Thomas K. McInerney. [Washington, D.C.]: American Academy of Pediatrics, 2009. xlix, 2935. ISBN 9781581106411.

Teaching methods

- practical training
- seminar

Assessment methods

To get the credit:

- attendance at 90% of seminars and practical trainings
- active participation

Language of instruction

English

aVLPD0932p Pediatrics II - lecture

Faculty of Medicine

autumn

Extent and Intensity

1/0/0. 0 credit(s). Type of Completion: z (credit).

Supervisor

MUDr. Petr Jabandžiev, Ph.D.

Department of Pediatrics - Institutions shared with the Faculty Hospital Brno (paediatric medicine) -
Faculty of Medicine

Contact Person: MUDr. Milena Burianová, Ph.D.

Course objectives

The aim of the course is to get acquainted with the main concepts and tasks of pediatrics.

Learning outcomes

The student will be acquainted with principal concepts and tasks of paediatrics.

The student will be acquainted with origin, diagnostics, therapy and prevention of basic nosological units in the childhood.

The student knows the system and contents of preventive examinations, vaccination.

The student is able to define risk factors endangering healthy development of child and adolescent.

Syllabus

- Neonatology
- Intensive care in pediatrics
- Nutrition in pediatrics
- Pediatric immunology
- Pediatric gastroenterology
- Inherited metabolic disorders
- Pediatric rheumatology
- Pediatric hematology
- Pediatric nephrology
- Pediatric endocrinology
- Pediatric cardiology
- Social issues in pediatrics

Literature

recommended literature

- *American Academy of Pediatrics textbook of pediatric care*. Edited by Thomas K. McInerney. [Washington, D.C.]: American Academy of Pediatrics, 2009. xlix, 2935. ISBN 9781581106411.

not specified

- KLIEGMAN, Robert, Bonita F. STANTON, Joseph W. ST. GEME and Nina F. SCHOR. *Nelson textbook of pediatrics*. Edited by Richard E. Behrman. 20th edition. Philadelphia: Elsevier, 2016. lxxviii, 17. ISBN 9781455775668.
- *Current diagnosis and treatment : pediatrics*. Edited by William W. Hay. 22nd ed. New York: McGraw-Hill Medical, 2014. xxviii, 15. ISBN 9780071827348.

Teaching methods

lecture

Assessment methods

credit

Language of instruction

English

aVLPG0921c Gynecology and obstetrics I - practice

Faculty of Medicine

autumn

Extent and Intensity

0/2/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Martin Huser, Ph.D., MBA

Department of Gynecology and Obstetrics - Institutions shared with the Faculty Hospital Brno -
Institutions of Reproductive Medicine - Faculty of Medicine

Contact Person: Zdeňka Kroupová

Course objectives

The aim of the subject Gynecology and obstetrics is to acquire the necessary and complex theoretical knowledge and practical skills in the field of prevention, diagnosis and treatment of diseases of female reproductive system. The content of the course provides students with an understanding, sufficient theoretical knowledge and basic practical skills in epidemiology, pathogenesis, diagnosis, therapy and prevention of the most important pathological conditions in gynecology and obstetrics. The course gives to its graduate's sufficient overview in reproductive health issues, family planning, diagnosis and treatment of infertility and maternal care during pregnancy. The content of the course is determined by the syllabus and is clearly and specifically defined before the course begins and includes the theoretical and practical segment. Theoretical preparation includes lectures, thematic seminars, practical lessons and self-study. The learning outcomes of the graduate of the subject include, in particular, sufficient medical knowledge to supervise the pregnancy and delivery and to resolve most common gynecological diseases. Upon graduation, the student gets enough practical

and theoretical information needed for medical decision making and can practice basic examination and treatment procedures in the field of gynecology and obstetrics. Students will also get a basic clinical view of gynecology and obstetrics. Student demonstrates their practical skills and performance using the "Procedure List" form (so-called logbook).

Learning outcomes

After completing the subject Gynecology and obstetrics, the student will be able to:

- Theoretically and practically perform gynecological and obstetrical examinations
- Know all common diagnostic and therapeutic procedures in the field
- Provide sufficient medical knowledge to monitor pregnancy and childbirth
- Will be sufficiently educated in symptoms, diagnosis and treatment of gynecological diseases
- Get enough practical and theoretical information about basic clinical decision making in the field

Syllabus

- Obstetrics Diagnosis of pregnancy Human pelvis, delivery ways, pelvic measurements Examination of a pregnant woman - external and internal obstetric examination Prenatal care Mechanism of human birth – cephalic presentation Abnormal presentation of the fetus - causes, diagnosis, birth mechanisms Breech presentation Multiple pregnancy and delivery of twins Hypertension in pregnancy - preeclampsia, eclampsia Trophoblastic diseases Fetal growth disorders - intrauterine growth retardation Premature birth - causes, clinical management Ectopic pregnancy - causes, symptoms, diagnosis, treatment Placenta previa and placental abruption Diseases of puerperium, puerperal sepsis Periparturine uterine bleeding and its treatment Prenatal diagnostics Ultrasound in obstetrics Gynecology Gynecological examination Laparoscopy in gynecology - indication, execution Hysteroscopy - Indication and execution Menstrual cycle disorders - classification, diagnosis, dysfunctional uterine bleeding Gynecological inflammation - etiology, pathophysiology Endometritis, myometritis, perimetritis Pelvic inflammatory disease and pelvoperitonitis Sexually transmitted diseases Endometriosis genital and extragenital Sterility, infertility - causes, meaning, treatment Contraception Benign and malignant neoplasms of gynecological organs Pre-canceroses of gynecological organs Diagnosis and treatment in oncogynecology Breast cancer, pre-cancerosis of the breast Benign breast disease Urinary incontinence in women Chronic pelvic pain Assisted reproduction

Literature

recommended literature

- ROZTOČIL, Aleš. *Moderní gynekologie*. 1. vydání. Praha: Grada Publishing, 2011. xviii, 508. ISBN 9788024728322.
- ROZTOČIL, Aleš. *Moderní porodnictví*. 1. vyd. Praha: Grada, 2008. 405 s. ISBN 9788024719412.
- *Dewhurst's textbook of obstetrics & gynaecology*. Edited by D. Keith Edmonds. Eighth edition. Chichester, West Sussex: Wiley-Blackwell, 2012. xv, 852. ISBN 9780470654576.
- HÁJEK, Zdeněk, Evžen ČECH and Karel MARŠÁL. *Porodnictví*. 3., zcela přepracované a d. Praha: Grada, 2014. 538 stran. ISBN 9788024745299.
- 1. Procházka M., Pilka R. a kol. *Porodnictví pro studenty všeobecného lékařství a porodní asistence*. Olomouc: AED - Olomouc s.r.o., 2016, 243 s., ISBN 978-80-906280-0-7

Teaching methods

Teaching takes place in three weekly blocks. Each block consists of five working days and includes teaching in inpatient and outpatient units within the Departments of Gynecology and Obstetrics. The courses last daily from 7 am to 1 pm and include a propedeutical part and practical part each day, using patients' medical reports. Every teaching day ends up with the clinical seminar led by the teacher and dedicated to one important topic within the field. Important parts of teaching methods are also practical demonstration of selected diagnostic and therapeutic techniques directly with patients or using simulators and daily presentation of clinical cases or up-to-date medical issues ended up with clinical discussion between the students and the teacher. The important part of the teaching process is to participate on at least one afternoon or weekend practice. The main purpose of such a practice is to increase the level of practical training, to allow students to experience the on-call clinical routine, to make a better overview of the daily work of a young doctor in specialty training and last but not least to reduce the number of students in the study groups during the weekday morning classes. Afternoon lessons begin at 1 pm (right after the clinical seminar, which is common for both morning and afternoon classes) and last until 4 pm. The weekend practical classes are scheduled from 8 am to 11 am and always begin at the departments' delivery rooms. The sign-up for afternoon and weekend practical lessons is necessary to do in advance using the is.muni.cz electronic system, maximum 4 students are allowed per each block.

Assessment methods

- Continuous discussions during internship, student presentations during seminars
- Recording from practice - logbook
- Interview (Colloquium)
- Practical exam (demonstration of skills)
- Continuous test-paper form
- Final exam - combined form

Daily evaluation – to receive the daily credit it is necessary to prove sufficient theoretical knowledge and practical demonstration of selected diagnostic and therapeutic procedures listed in the "Procedure list" (so-called logbook), which each student receives at the beginning of the course. Final evaluation - presentation of a given clinical problem or selected diagnostic-therapeutic method with the participation of a teacher (maximum of 10 minutes per student). In particular, the teacher assesses the professional medical level of the topic, quality and form of the presentation and the student's speech competences. This evaluation can be replaced by the elaboration and presentation of a selected scientific clinical topic (original scientific work, review article or meta-analysis, case report).

Language of instruction

English

aVLPG0921p Gynecology and Obstetrics I - lecture

Faculty of Medicine

autumn

Extent and Intensity

2/0/0. 1 credit(s). Type of Completion: k (colloquium).

Supervisor

prof. MUDr. Martin Huser, Ph.D., MBA

Department of Gynecology and Obstetrics - Institutions shared with the Faculty Hospital Brno -

Course objectives

The aim of the subject Gynecology and obstetrics is to acquire the necessary and complex theoretical knowledge and practical skills in the field of prevention, diagnosis and treatment of diseases of female reproductive system. The content of the course provides students with an understanding, sufficient theoretical knowledge and basic practical skills in epidemiology, pathogenesis, diagnosis, therapy and prevention of the most important pathological conditions in gynecology and obstetrics. The course gives to its graduate's sufficient overview in reproductive health issues, family planning, diagnosis and treatment of infertility and maternal care during pregnancy. The content of the course is determined by the syllabus and is clearly and specifically defined before the course begins and includes the theoretical and practical segment. Theoretical preparation includes lectures, thematic seminars, practical lessons and self-study. The learning outcomes of the graduate of the subject include, in particular, sufficient medical knowledge to supervise the pregnancy and delivery and to resolve most common gynecological diseases. Upon graduation, the student gets enough practical and theoretical information needed for medical decision making and can practice basic examination and treatment procedures in the field of gynecology and obstetrics. Students will also get a basic clinical view of gynecology and obstetrics. Student demonstrates their practical skills and performance using the "Procedure List" form (so-called logbook).

Learning outcomes

After completing the subject Gynecology and obstetrics, the student will be able to:

- Theoretically and practically perform gynecological and obstetrical examinations
- Know all common diagnostic and therapeutic procedures in the field
- Provide sufficient medical knowledge to monitor pregnancy and childbirth
- Will be sufficiently educated in symptoms, diagnosis and treatment of gynecological diseases
- Get enough practical and theoretical information about basic clinical decision making in the field

Syllabus

- Obstetrics Diagnosis of pregnancy Human pelvis, delivery ways, pelvic measurements Examination of a pregnant woman - external and internal obstetric examination Prenatal care Mechanism of human birth – cephalic presentation Abnormal presentation of the fetus - causes, diagnosis, birth mechanisms Breech presentation Multiple pregnancy and delivery of twins Hypertension in pregnancy - preeclampsia, eclampsia Trophoblastic diseases Fetal growth disorders - intrauterine growth retardation Premature birth - causes, clinical management Ectopic pregnancy - causes, symptoms, diagnosis, treatment Placenta previa and placental abruption Diseases of puerperium, puerperal sepsis Periparturine uterine bleeding and its treatment Prenatal diagnostics Ultrasound in obstetrics Gynecology Gynecological examination Laparoscopy in gynecology - indication, execution Hysteroscopy - Indication and execution Menstrual cycle disorders - classification, diagnosis, dysfunctional uterine bleeding Gynecological inflammation - etiology, pathophysiology Endometritis, myometritis, perimetritis Pelvic inflammatory disease and pelveoperitonitis Sexually transmitted diseases Endometriosis genital and extragenital Sterility, infertility - causes, meaning, treatment Contraception Benign and malignant neoplasms of gynecological organs Pre-canceroses of gynecological organs Diagnosis and treatment in oncogynecology Breast cancer, pre-cancerosis of the breast Benign breast disease Urinary incontinence in women Chronic pelvic pain Assisted reproduction

Literature

recommended literature

- HÁJEK, Zdeněk, Evžen ČECH and Karel MARŠÁL. *Porodnictví*. 3., zcela přepracované a d. Praha: Grada, 2014. 538 stran. ISBN 9788024745299.
- ROB, Lukáš, Alois MARTAN and Karel CITTERBART. *Gynekologie*. 2., dopl. a přeprac. vyd. Praha: Galén, 2008. xxiv, 319. ISBN 9788072625017.
- *Dewhurst's textbook of obstetrics & gynaecology*. Edited by D. Keith Edmonds. Eighth edition. Chichester, West Sussex: Wiley-Blackwell, 2012. xv, 852. ISBN 9780470654576.
- OATS, Jeremy and Suzanne ABRAHAM. *Llewellyn-Jones fundamentals of obstetrics and gynaecology*. 8th ed. Edinburgh: Mosby, 2005. x, 365. ISBN 0723433291.

not specified

- ČECH, Evžen, Zdeněk HÁJEK, Karel MARŠÁL and Bedřich SRP. *Porodnictví*. 2., přepracované a doplně. Praha: Grada, 2007. 544 s. ISBN 9788024713038.

Teaching methods

Teaching takes place in three weekly blocks. Each block consists of five working days and includes teaching in inpatient and outpatient units within the Departments of Gynecology and Obstetrics. The courses lasts daily from 7 am to 1 pm and includes a propedeutical part and practical part each day, using patients medical reports. Every teaching day ends up with the clinical seminar leaded by the teacher and dedicated to one important topic within the field. Important parts of teaching methods are also practical demonstration of selected diagnostic and therapeutic techniques directly with patients or using simulators and daily presentation of clinical cases or up-to-date medical issues ended up with clinical discussion between the students and the teacher. The important part of the teaching process is to participate on at least one afternoon or weekend practice. The main purpose of such a practice is to increase the level of practical training, to allow students to experience the on-call clinical routine, to make a better on overview of the daily work of a young doctor in specialty training and last but not least to reduce the number of students in the study groups during the weekday morning classes. Afternoon lessons begin at 1 pm (right after the clinical seminar, which is common for both morning and afternoon classes) and lasts until 4 pm. The weekend practical classes are scheduled from 8 am to 11 am and always begin at the departments delivery rooms. The sign-up for afternoon and weekend practical lessons is necessary to do in advance using the is.muni.cz electronic system, maximum 4 students are allowed per each block.

Assessment methods

• Continuous discussions during internship, student presentations during seminars • Recording from practice - logbook • Interview (Colloquium) • Practical exam (demonstration of skills) • Continuous test-paper form • Final exam - combined form Daily evaluation – to receive the daily credit it is necessary to prove sufficient theoretical knowledge and practical demonstration of selected diagnostic and therapeutic procedures listed in the “Procedure list” (so-called logbook), which each student receives at the beginning of the course Final evaluation - presentation of a given clinical problem or selected diagnostic-therapeutic method with the participation of a teacher (maximum of 10 minutes per student). In particular, the teacher assesses the professional medical level of the topic, quality and form of the presentation and the student's speech competences. This evaluation

can be replaced by the elaboration and presentation of a selected scientific clinical topic (original scientific work, review article or meta-analysis, case report).

Language of instruction

English

aVLOZ0943c Public Health III - practice

Faculty of Medicine

autumn

Extent and Intensity

0/1/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Bc. Zuzana Derflerová Brázdová, DrSc.
Department of Public Health - Theoretical Departments - Faculty of Medicine

Course objectives

The aim is that the student should be able to explain the relationship between human and environment, its physical, chemical, biological and psychosocial factors and their interactions. Student will be able to explain the role of adaptation and its active support for the positive development and promotion of both individual and public health; Student will be able to make deduction about possibilities for preventive provisions in the field of clean and safe environmental, occupational and home surrounding, the quality of air, water, food. Student will be able to understand and explain the different types of prevention, their tasks and aims and methods of realization. The student will be able to interpret the positive and negative influences of lifestyle factors on human/public health, including the autoaggressive behaviours (nutrition, physical activity, psychical overload and stress, smoking, abuse of alcohol and illegal drugs); Based on acquired knowledge, the student will be able to make deductions about the importance of environment and lifestyle in the health protection and promotion, and about the primary prevention priorities; Based on acquired knowledge, the student will be able to formulate decisions about concrete preventable possibilities for some more important non-communicable diseases, such as cardiovascular, oncological, metabolically, immune, respiratory.

Learning outcomes

At the end of course, student will be able

- to explain the relationship between human and environment, its physical, chemical, biological and psychosocial factors and their interactions.
- to explain the role of adaptation and its active support for the positive development and promotion of both individual and public health;
- to make deduction about possibilities for preventive provisions in the field of clean and safe environmental, occupational and home surrounding, the quality of air, water, food.
- to understand and explain the different types of prevention, their tasks and aims and methods of realization.
- to interpret the positive and negative influences of lifestyle factors on human/public health,

including the autoaggressive behaviours (nutrition, physical activity, psychical overload and stress, smoking, abuse of alcohol and illegal drugs);

- to make deductions about the importance of environment and lifestyle in the health protection and promotion, and about the primary prevention priorities;

- to formulate decisions about concrete preventable possibilities for some more important non-communicable diseases, such as cardiovascular, oncological, metabolically, immune, respiratory.

Syllabus

- Advising in prevention oriented on healthy life style (assessment methods and recommendation) Group immunity, serologic maps, vaccination programmes Nosocomial infections Labour safety, stratification of infectious risks in health care for patients and health workers Epidemiology of infectious diseases in emergency situations (natural disasters, civil wars etc.)

Literature

recommended literature

- Farmer R, Lawrenson R, Miller D: Epidemiology and public health medicine. 5th edition. Oxford - U.K.: Blackwell Publishing; 2004.
- Bonita R, Beaglehole R, Kjellström: Basic epidemiology. 2nd edition. Geneva - Switzerland: World Health Organization; 2006.

Teaching methods

seminars, group work with discussion, group project

Assessment methods

test, project

Language of instruction

English

aVLOZ0943p Public Health III - lecture

Faculty of Medicine

autumn

Extent and Intensity

1.5/0/0. 0 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Bc. Zuzana Derflerová Brázdová, DrSc.

Department of Public Health - Theoretical Departments - Faculty of Medicine

Course objectives

The aim is to understand the wider relationships and conotation of human and his environment with respect to individual and public health.

Learning outcomes

At the end of course, student will be able:

- to explain the relationship between human and environment, its physical, chemical, biological and psychosocial factors and their interactions.
- to explain the role of adaptation and its active support for the positive development and promotion of both individual and public health;
- to make deduction about possibilities for preventive provisions in the field of clean and safe environmental, occupational and home surrounding, the quality of air, water, food.
- to understand and explain the different types of prevention, their tasks and aims and methods of realization.
- to interpret the positive and negative influences of lifestyle factors on human/public health, including the autoaggressive behaviours (nutrition, physical activity, psychical overload and stress, smoking, abuse of alcohol and illegal drugs);
- to make deductions about the importance of environment and lifestyle in the health protection and promotion, and about the primary prevention priorities;
- to formulate decisions about concrete preventable possibilities for some more important non-communicable diseases, such as cardiovascular, oncological, metabolically, immune, respiratory.

Syllabus

- Health protection and promotion in emergency situations Advising in nutrition, obesity as a public health problem Epidemiology of respiratory diseases Global epidemic situation, surveillance of communicable diseases in the Czech republic Public health care: organization, economy, legal aspects

Literature

- Bonita R, Beaglehole R, Kjellström: Basic epidemiology. 2nd edition. Geneva - Switzerland: World Health Organization; 2006.
- Farmer R, Lawrenson R, Miller D: Epidemiology and public health medicine. 5th edition. Oxford - U.K.: Blackwell Publishing; 2004.

Teaching methods

lectures

Assessment methods

test

Language of instruction

English

aVLKB091 Clinical Biochemistry

Faculty of Medicine

autumn

Extent and Intensity

0/2/0. 3 credit(s). Type of Completion: k (colloquium).

Supervisor

doc. MUDr. Milan Dastyč, CSc., MBA

Department of Biochemistry - Theoretical Departments - Faculty of Medicine

Contact Person: Lenka Nerudová

Course objectives

After this course the participant should be able to: - choose biochemical tests suitable for diagnostics of diseases - know the basic problems of common biochemical diagnostic tests - know how to collect biological material and how to treat it to prevent false results - to assess reliability of laboratory results.

Learning outcomes

Student will be able to:

purposefully indicate laboratory biochemical tests

correctly interpret laboratory results

evaluate laboratory tests with regard to their sensitivity and specificity

use knowledge of the uncertainty of the evaluated parameter

to focus on possible pre-analytical influences and interferences

Syllabus

- Analytical sources of variation, accuracy and precision. Diagnostic accuracy, sensitivity, specificity, and efficiency of diagnostic tests. Reference ranges, decision values. Collection and processing of specimens, special requirements, general safety rules.
- Assessment and monitoring of nutritional status. Blood plasma proteins. Acute-phase reactants. Principles of nutritional support, enteral and parenteral nutrition. Dietary constituents providing a sufficient energy intake.
- Energy output, nitrogen balance. Indications for nutritional support. Oxygen, transport and metabolism, tissue hypoxia.
- Disorders of lipid and lipoprotein metabolism.
- Ischemic heart disease, congestive cardiac failure. Potassium and magnesium homeostasis.
- Iron and essential microelements metabolism.
- Disturbances of water and sodium balance. Plasma and urine osmolality. Plasma electrolytes in acid-base disorders.
- Assessment of acid-base balance. Investigating an acid-base status, indications for blood acid-base and oxygen measurements, interpretation of results.
- Laboratory evaluation of kidney function. Biochemical monitoring of acute and chronic renal failure, and of patients receiving haemodialysis. Urine sediment.
- Investigation of liver and biliary tract diseases. Signs of the liver injury, differentiating of hyperbilirubinaemias, syndrome of biliary obstruction.

- Clinical biochemistry of the GIT. Gastric acid secretion, maldigestion and malabsorption, assessment of pancreatic function.
- Disorders of saccharide metabolism, diabetes mellitus.
- Calcium and phosphate metabolism. Biochemical markers of bone metabolism (in the assessment of osteoporosis).
- Uric acid, hyperuricaemia. Renal tract stones.
- Laboratory assessment of thyroid and adrenal functions.
- Tumour markers. Biological causes of variation of test results, effects of drugs on chemical tests.

Literature

recommended literature

- *Tietz fundamentals of clinical chemistry*. Edited by Carl A. Burtis - Edward R. Ashwood - David E. Bruns - Barbara G. Sawye. 6th ed. St. Louis, Mo.: Saunders/Elsevier, 2008. xx, 952. ISBN 9780721638652.
- *Clinical chemistry : techniques, principles, correlations*. Edited by Michael L. Bishop - Edward P. Fody - Larry E. Schoeff. 6th ed. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins, 2010. xx, 732. ISBN 9780781790451.

Teaching methods

lectures, audio-visual study materials, pp-presentations,commentated videos, interactive inputs

Assessment methods

written test, the test consists of 40 questions,25 correct answers is needed to pass; colloquium

Language of instruction

English

aVLFP091 Physiology and Pathology of Newborn

Faculty of Medicine

autumn

Extent and Intensity

0/2/0. 3 credit(s). Type of Completion: k (colloquium).

Supervisor

prof. MUDr. Zdeněk Doležel, CSc.

Department of Pediatrics - Institutions shared with the Faculty Hospital Brno (paediatric medicine) - Faculty of Medicine

Contact Person: MUDr. Magdalena Rohanová

Course objectives

Pediatric is focused on diagnostic, treatment and prevention in childhood. There are specific conditions in childhood, different diagnostic tools and specific care. After the participation in the course students will be able to evaluate and summarize the state of the newborn after the delivery, during the transitional period perform the basic screenings, understand the impact of congenital and inherited diseases on children and their families. The target of the lectures is improve the knowledge of the students of most frequent disorders, basic diagnostic approach and therapeutical procedures in pediatrics.

Learning outcomes

The student will be able:

- to knowledge of the origin, course, treatment and prognosis of the most common childhood diseases
- to define risk factors that threaten the healthy development of the child.

Syllabus

- Organization of neonatology and perinatology. Physiology of newborn and adaptation changes of systems related to birth. Observation of newborn, morphological and functional characteristics. Newborn with low birth weight. Immature newborn. Hypotrophic and overmature newborn. Perinatal injuries. Newborn nutrition. Newborn with serious congenital defects. Asphyctic newborn. Newborn with bronchopulmonary dysplasia. Most frequent hereditary diseases. Neonatal screening. Age groups, growth and development of the child. Disorders of respiratory tract, GUT, cardiovascular, liver, hematologic disorders, neoplastic disease, endocrine disorder, inborn errors of metabolism, allergic disorders, immunodeficiency, infection in children.

Literature

recommended literature

- *Neonatology : management, procedures, on-call problems, diseases, and drugs.* Edited by Tricia Lacy Gomella. 4th ed. New York: Lange Medical Books/McGraw-Hill, 1999. xx, 698. ISBN 0838516157.

Teaching methods

lectures

Assessment methods

credit

Language of instruction

English

aVLAL091 Anaesthesiology and Treatment of Pain

Faculty of Medicine

autumn

Extent and Intensity

2/0/0. 3 credit(s). Type of Completion: k (colloquium).

Supervisor

doc. MUDr. Petr Štourač, Ph.D.

Department of Paediatric Anaesthesiology and Intensive Care Medicine - Institutions shared with the Faculty Hospital Brno (paediatric medicine) - Faculty of Medicine

Contact Person: MUDr. Lukáš Dadák, Ph.D.

Course objectives

At the end of the course students should be able to:
understand basic concepts of general and regional anesthesia;
learn basic skills of airway management

Syllabus

- Preoperative evaluation and premedication;
- Airway management
- General anaesthesia
- Regional anaesthesia
- Pain management
- After completing the test - voluntary days in the operating room and Center for Pain Management: i.v. lines, Bag Mask ventilation, Laryngeal Mask, Intubation, General and Regional anesthesia.

Literature

recommended literature

- BROWN, David L. *Atlas of regional anesthesia*. Illustrated by Jo Ann Clifford - Joanna Wild. 3rd ed. Philadelphia: Elsevier Saunders, 2006. xviii, 438. ISBN 1416022392.
- *Clinical anesthesia*. Edited by Paul G. Barash - Bruce F. Cullen - Robert K. Stoelting. 4th ed. Philadelphia: Lippincott Williams-Wilkins, 2001. xvi, 1576. ISBN 0781722683.
- *Anesthesia*. Edited by Ronald D. Miller. 5th ed. New York: Churchill Livingstone, 2000. xx, 1662. ISBN 0443079889.

not specified

- TSUI, Ban C. H. *Atlas of ultrasound and nerve stimulation-guided regional anesthesia*. Illustrated by Carol T. S. Chan. New York: Springer, 2007. xxiii, 302. ISBN 9780387681580.
- *Anestezie*. Edited by Reinhard Larsen - Jarmila Drábková. 2. vyd. Praha: Grada, 2004. 1376 s. ISBN 8024704765.
- *Anestezie*. Edited by Reinhard Larsen - Jarmila Drábková. 1. vyd. Praha: Grada, 1998. 935 s. ISBN 8071691798.

Bookmarks

<https://is.muni.cz/in/tag/LF:aVLAL091!>

Teaching methods

lectures, simulation and debriefing

Assessment methods

Lectures in the beginning of semester. Internship in operating room and pain clinic after MCQ test and simulation.

Language of instruction

English

aVLDO091 Clinical Training in Paediatric Oncology**Faculty of Medicine**

autumn

Extent and Intensity

2/0/0. 3 credit(s). Type of Completion: k (colloquium).

Supervisor

prof. MUDr. Jaroslav Štěřba, Ph.D.

Department of Pediatric Oncology - Institutions shared with the Faculty Hospital Brno (paediatric medicine) - Faculty of Medicine

Course objectives

The aim of the lectures and practical exercises is to acquaint students with the issues of pediatric oncology, age specific differences of pediatric cancer comparing with adult type of cancer, the basic principles of diagnosis and treatment of pediatric malignant diseases.

Learning outcomes

After finishing the course student knows:

- the differences of pediatric and adult types of cancer,
- the most frequent types of pediatric malignancies,
- symptoms of pediatric cancer,
- the basic principles of diagnostic procedures and anticancer treatment.

Syllabus

- Specific differences of pediatric cancer (child as a patient, types of childhood cancer and their biology behavior), the most frequent types of childhood cancer, clinical symptoms, diagnostic procedures and principles of therapy, acute toxicity of the treatment, late toxicity, survivors of childhood cancer and quality of life.

Literature*recommended literature*

- Philip A. Pizzo MD, David G. Poplack MD: Principles and Practice of Pediatric Oncology, ISBN-13: 978-1605476827

- Nathan and Oski's Hematology and Oncology of Infancy and Childhood, 2014, ISBN: 978-1-4557-5414-4
- Abrams, D.: Integrative Oncology, Oxford Univ. Press 2009, ISBN 978-0195309447

Teaching methods

Lecture, practical training.

Assessment methods

90 % attendance at lectures and practical training, credit

Language of instruction

English

YEAR 5 / SEMESTER 10

aVLPD1033c Pediatrics III - practice

Faculty of Medicine

spring

Extent and Intensity

0/2/0. 4 credit(s). Type of Completion: zk (examination).

Supervisor

MUDr. Petr Jabandžiev, Ph.D.

Department of Pediatrics - Institutions shared with the Faculty Hospital Brno (paediatric medicine) - Faculty of Medicine

Contact Person: MUDr. Petr Jabandžiev, Ph.D.

Course objectives

The aim of practical lessons in pediatrics is:

Introducing students to the field of therapeutic and preventive care in pediatrics

Understanding of pediatric propedeutics

Knowing the most common diseases in pediatrics

Acquiring examination methods needed to diagnose the most common diseases in pediatrics

Managing the differential diagnosis of the most common acute and chronic diseases in pediatrics

Understanding the principles of pharmacotherapy in pediatrics

Learning outcomes

After completing this course the student will have basic knowledge about:

- pediatric propedeutics
- the most common diseases in pediatrics and their diagnosis and treatment
- the care of the newborn
- nutrition in childhood

Syllabus

Theoretical part (seminars):

- Neonatology
- Intensive care in pediatrics
- Nutrition in pediatrics
- Pediatric immunology
- Pediatric gastroenterology
- Inherited metabolic disorders
- Pediatric rheumatology
- Pediatric hematology
- Pediatric nephrology
- Pediatric endocrinology
- Pediatric oncology

Practical part (ward):

- Practical bedside teaching
- Examination procedures in children (newborn, infant, toddler, pre-school and school-age child, adolescent) with diagnoses typical of these age groups
- Medical history
- Physical examination
- Differential diagnosing
- Designing of laboratory and instrumental examination
- Diagnosing and treatment

Literature

recommended literature

- KLIEGMAN, Robert, Bonita F. STANTON, Joseph W. ST. GEME and Nina F. SCHOR. *Nelson textbook of pediatrics. Volume 2*. Edited by Richard E. Behrman. 20th edition. Philadelphia: Elsevier, 2016. lxxviii, 17. ISBN 9781455775668.

not specified

- *Current diagnosis and treatment : pediatrics*. Edited by William W. Hay. 22nd ed. New York: McGraw-Hill Medical, 2014. xxviii, 15. ISBN 9780071827348.
- *American Academy of Pediatrics textbook of pediatric care*. Edited by Thomas K. McInerney. [Washington, D.C.]: American Academy of Pediatrics, 2009. xlix, 2935. ISBN 9781581106411.

Teaching methods

- practical training
- seminar

Assessment methods

To get the credit:

- attendance at 90% of seminars and practical trainings
- active participation

Language of instruction

English

aVLPG1022c Gynecology and Obstetrics II - practice

Faculty of Medicine

spring

Extent and Intensity

0/4/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Martin Huser, Ph.D., MBA

Department of Gynecology and Obstetrics - Institutions shared with the Faculty Hospital Brno -
Institutions of Reproductive Medicine - Faculty of Medicine

Contact Person: Zdeňka Kroupová

Course objectives

The aim of the subject Gynecology and obstetrics is to acquire the necessary and complex theoretical knowledge and practical skills in the field of prevention, diagnosis and treatment of diseases of female reproductive system. The content of the course provides students with an understanding, sufficient theoretical knowledge and basic practical skills in epidemiology, pathogenesis, diagnosis, therapy and prevention of the most important pathological conditions in gynecology and obstetrics. The course gives to its graduate's sufficient overview in reproductive health issues, family planning, diagnosis and treatment of infertility and maternal care during pregnancy. The content of the course is determined by the syllabus and is clearly and specifically defined before the course begins and includes the theoretical and practical segment. Theoretical preparation includes lectures, thematic seminars, practical lessons and self-study. The learning outcomes of the graduate of the subject include, in particular, sufficient medical knowledge to supervise the pregnancy and delivery and to resolve most common gynecological diseases. Upon graduation, the student gets enough practical and theoretical information needed for medical decision making and can practice basic examination and treatment procedures in the field of gynecology and obstetrics. Students will also get a basic clinical view of gynecology and obstetrics. Student demonstrates their practical skills and performance using the "Procedure List" form (so-called logbook).

Learning outcomes

After completing the subject Gynecology and obstetrics, the student will be able to: • Theoretically and practically perform gynecological and obstetrical examinations • Know all common diagnostic

and therapeutic procedures in the field • Provide sufficient medical knowledge to monitor pregnancy and childbirth • Will be sufficiently educated in symptoms, diagnosis and treatment of gynecological diseases • Get enough practical and theoretical information about basic clinical decision making in the field

Syllabus

- Obstetrics Diagnosis of pregnancy Human pelvis, delivery ways, pelvic measurements Examination of a pregnant woman - external and internal obstetric examination Prenatal care Mechanism of human birth – cephalic presentation Abnormal presentation of the fetus - causes, diagnosis, birth mechanisms Breech presentation Multiple pregnancy and delivery of twins Hypertension in pregnancy - preeclampsia, eclampsia Trophoblastic diseases Fetal growth disorders - intrauterine growth retardation Premature birth - causes, clinical management Ectopic pregnancy - causes, symptoms, diagnosis, treatment Placenta previa and placental abruption Diseases of puerperium, puerperal sepsis Periparturine uterine bleeding and its treatment Prenatal diagnostics Ultrasound in obstetrics Gynecology Gynecological examination Laparoscopy in gynecology - indication, execution Hysteroscopy - Indication and execution Menstrual cycle disorders - classification, diagnosis, dysfunctional uterine bleeding Gynecological inflammation - etiology, pathophysiology Endometritis, myometritis, perimetritis Pelvic inflammatory disease and pelveoperitonitis Sexually transmitted diseases Endometriosis genital and extragenital Sterility, infertility - causes, meaning, treatment Contraception Benign and malignant neoplasms of gynecological organs Pre-canceroses of gynecological organs Diagnosis and treatment in oncogynecology Breast cancer, pre-cancerosis of the breast Benign breast disease Urinary incontinence in women Chronic pelvic pain Assisted reproduction

Literature

recommended literature

- ROZTOČIL, Aleš. *Moderní gynekologie*. 1. vydání. Praha: Grada Publishing, 2011. xviii, 508. ISBN 9788024728322.
- HÁJEK, Zdeněk, Evžen ČECH and Karel MARŠÁL. *Porodnictví*. 3., zcela přepracované a d. Praha: Grada, 2014. 538 stran. ISBN 9788024745299.
- *Dewhurst's textbook of obstetrics & gynaecology*. Edited by D. Keith Edmonds. Eighth edition. Chichester, West Sussex: Wiley-Blackwell, 2012. xv, 852. ISBN 9780470654576.

Teaching methods

Teaching takes place in three weekly blocks. Each block consists of five working days and includes teaching in inpatient and outpatient units within the Departments of Gynecology and Obstetrics. The courses lasts daily from 7 am to 1 pm and includes a propedeutical part and practical part each day, using patients medical reports. Every teaching day ends up with the clinical seminar led by the teacher and dedicated to one important topic within the field. Important parts of teaching methods are also practical demonstration of selected diagnostic and therapeutic techniques directly with patients or using simulators and daily presentation of clinical cases or up-to-date medical issues ended up with clinical discussion between the students and the teacher. The important part of the teaching process is to participate on at least one afternoon or weekend practice. The main purpose of such a practice is to increase the level of practical training, to allow students to experience the on-call clinical routine, to make a better overview of the daily work of a young doctor in speciality

training and last but not least to reduce the number of students in the study groups during the weekday morning classes. Afternoon lessons begin at 1 pm (right after the clinical seminar, which is common for both morning and afternoon classes) and lasts until 4 pm. The weekend practical classes are scheduled from 8 am to 11 am and always begin at the departments delivery rooms. The sign-up for afternoon and weekend practical lessons is necessary to do in advance using the is.muni.cz electronic system, maximum 4 students are allowed per each block.

Assessment methods

• Continuous discussions during internship, student presentations during seminars • Recording from practice - logbook • Interview (Colloquium) • Practical exam (demonstration of skills) • Continuous test-paper form • Final exam - combined form Daily evaluation – to receive the daily credit it is necessary to prove sufficient theoretical knowledge and practical demonstration of selected diagnostic and therapeutic procedures listed in the “Procedure list” (so-called logbook), which each student receives at the beginning of the course Final evaluation - presentation of a given clinical problem or selected diagnostic-therapeutic method with the participation of a teacher (maximum of 10 minutes per student). In particular, the teacher assesses the professional medical level of the topic, quality and form of the presentation and the student's speech competences. This evaluation can be replaced by the elaboration and presentation of a selected scientific clinical topic (original scientific work, review article or meta-analysis, case report).

Language of instruction

English

aVLPG1022p Gynecology and Obstetrics II - lecture

Faculty of Medicine

spring

Extent and Intensity

0/1/0. 1 credit(s). Type of Completion: k (colloquium).

Supervisor

prof. MUDr. Martin Huser, Ph.D., MBA

Department of Gynecology and Obstetrics - Institutions shared with the Faculty Hospital Brno -
Institutions of Reproductive Medicine - Faculty of Medicine

Contact Person: Zdeňka Kroupová

Course objectives

The aim of the subject Gynecology and obstetrics is to acquire the necessary and complex theoretical knowledge and practical skills in the field of prevention, diagnosis and treatment of diseases of female reproductive system. The content of the course provides students with an understanding, sufficient theoretical knowledge and basic practical skills in epidemiology, pathogenesis, diagnosis, therapy and prevention of the most important pathological conditions in gynecology and obstetrics. The course gives to its graduate's sufficient overview in reproductive health issues, family planning, diagnosis and treatment of infertility and maternal care during pregnancy. The content of the course is determined by the syllabus and is clearly and specifically defined before the course begins and

includes the theoretical and practical segment. Theoretical preparation includes lectures, thematic seminars, practical lessons and self-study. The learning outcomes of the graduate of the subject include, in particular, sufficient medical knowledge to supervise the pregnancy and delivery and to resolve most common gynecological diseases. Upon graduation, the student gets enough practical and theoretical information needed for medical decision making and can practice basic examination and treatment procedures in the field of gynecology and obstetrics. Students will also get a basic clinical view of gynecology and obstetrics. Student demonstrates their practical skills and performance using the "Procedure List" form (so-called logbook).

Learning outcomes

After completing the subject Gynecology and obstetrics, the student will be able to: • Theoretically and practically perform gynecological and obstetrical examinations • Know all common diagnostic and therapeutic procedures in the field • Provide sufficient medical knowledge to monitor pregnancy and childbirth • Will be sufficiently educated in symptoms, diagnosis and treatment of gynecological diseases • Get enough practical and theoretical information about basic clinical decision making in the field

Syllabus

- Obstetrics Diagnosis of pregnancy Human pelvis, delivery ways, pelvic measurements Examination of a pregnant woman - external and internal obstetric examination Prenatal care Mechanism of human birth – cephalic presentation Abnormal presentation of the fetus - causes, diagnosis, birth mechanisms Breech presentation Multiple pregnancy and delivery of twins Hypertension in pregnancy - preeclampsia, eclampsia Trophoblastic diseases Fetal growth disorders - intrauterine growth retardation Premature birth - causes, clinical management Ectopic pregnancy - causes, symptoms, diagnosis, treatment Placenta previa and placental abruption Diseases of puerperium, puerperal sepsis Periparturine uterine bleeding and its treatment Prenatal diagnostics Ultrasound in obstetrics Gynecology Gynecological examination Laparoscopy in gynecology - indication, execution Hysteroscopy - Indication and execution Menstrual cycle disorders - classification, diagnosis, dysfunctional uterine bleeding Gynecological inflammation - etiology, pathophysiology Endometritis, myometritis, perimetritis Pelvic inflammatory disease and pelveoperitonitis Sexually transmitted diseases Endometriosis genital and extragenital Sterility, infertility - causes, meaning, treatment Contraception Benign and malignant neoplasms of gynecological organs Pre-canceroses of gynecological organs Diagnosis and treatment in oncogynecology Breast cancer, pre-cancerosis of the breast Benign breast disease Urinary incontinence in women Chronic pelvic pain Assisted reproduction

Literature

recommended literature

- HÁJEK, Zdeněk, Evžen ČECH and Karel MARŠÁL. *Porodnictví*. 3., zcela přepracované a d. Praha: Grada, 2014. 538 stran. ISBN 9788024745299.
- *Dewhurst's textbook of obstetrics & gynaecology*. Edited by D. Keith Edmonds. Eighth edition. Chichester, West Sussex: Wiley-Blackwell, 2012. xv, 852. ISBN 9780470654576.
- ROZTOČIL, Aleš. *Moderní gynekologie*. 1. vydání. Praha: Grada Publishing, 2011. xviii, 508. ISBN 9788024728322.

Teaching methods

Teaching takes place in three weekly blocks. Each block consists of five working days and includes teaching in inpatient and outpatient units within the Departments of Gynecology and Obstetrics. The courses last daily from 7 am to 1 pm and include a propedeutical part and practical part each day, using patients' medical reports. Every teaching day ends up with the clinical seminar led by the teacher and dedicated to one important topic within the field. Important parts of teaching methods are also practical demonstration of selected diagnostic and therapeutic techniques directly with patients or using simulators and daily presentation of clinical cases or up-to-date medical issues ended up with clinical discussion between the students and the teacher. The important part of the teaching process is to participate on at least one afternoon or weekend practice. The main purpose of such a practice is to increase the level of practical training, to allow students to experience the on-call clinical routine, to make a better overview of the daily work of a young doctor in specialty training and last but not least to reduce the number of students in the study groups during the weekday morning classes. Afternoon lessons begin at 1 pm (right after the clinical seminar, which is common for both morning and afternoon classes) and last until 4 pm. The weekend practical classes are scheduled from 8 am to 11 am and always begin at the departments' delivery rooms. The sign-up for afternoon and weekend practical lessons is necessary to do in advance using the is.muni.cz electronic system, maximum 4 students are allowed per each block.

Assessment methods

- Continuous discussions during internship, student presentations during seminars
- Recording from practice - logbook
- Interview (Colloquium)
- Practical exam (demonstration of skills)
- Continuous test-paper form
- Final exam - combined form

Daily evaluation – to receive the daily credit it is necessary to prove sufficient theoretical knowledge and practical demonstration of selected diagnostic and therapeutic procedures listed in the "Procedure list" (so-called logbook), which each student receives at the beginning of the course. Final evaluation - presentation of a given clinical problem or selected diagnostic-therapeutic method with the participation of a teacher (maximum of 10 minutes per student). In particular, the teacher assesses the professional medical level of the topic, quality and form of the presentation and the student's speech competences. This evaluation can be replaced by the elaboration and presentation of a selected scientific clinical topic (original scientific work, review article or meta-analysis, case report).

Language of instruction

English

aVLVL101p Internal Medicine - lecture

Faculty of Medicine

spring

Extent and Intensity

0/0/0. 4 credit(s). Type of Completion: zk (examination).

Supervisor

prof. MUDr. Miroslav Souček, CSc.

Second Department of Internal Medicine - Institutions shared with St. Anne's Faculty Hospital -

Faculty of Medicine

Contact Person: Eva Kašpárková

Course objectives

Particulars lectures on the most important issues of internal medicine.

Learning outcomes

Students will be acquainted with current knowledge in the lecture topics.

Syllabus

- Heart failure Echocardiography Therapy of bradycardia, pacemakers Unstable angina Functional gastrointestinal disease Nonfarmacology therapy of tachyarrhythmias Disorders of acid-base balance Kidney and farmakotherapy of Internal diseases Cardiovascular diseases and chronic stress Hypertension therapy Iodine-associated thyroid disease Management of treatment typ 2 diabetes Peptic ulcer disease Inflammatory bowel disease Genetics and arrhythmia Nutrition enteral and parenteral

Literature

- Davidson s Principles and Practise of Medicine. 20th Edition. N.A. Boon, N.R.Colledge, B.R.Walker
- Souček M., et all: Vnitřní lékařství pro stomatology
- Češka Richard.: Interna (2., aktualizované vydání) triton 2015, 870s, ISBN 978-80-885-6
- Klener P. et all. Vnitřní lékařství Druhé doplněné vydání. Praha. Galén . 2006,

Teaching methods

lecture

Assessment methods

Lectures are selective,optional.

Language of instruction

English

aVLKF101 Clinical Pharmacology

Faculty of Medicine

spring

Extent and Intensity

2/0/0. 3 credit(s). Type of Completion: k (colloquium).

Supervisor

doc. MUDr. Regina Demlová, Ph.D.

Department of Pharmacology - Theoretical Departments - Faculty of Medicine

Contact Person: Renata Blábllová

Course objectives

The subject is supported by possibility of consultations with authors of individual topics. It provides surveys of current trends in pharmacotherapy of pain, carcinomas, heart failure, hypertension, respiratory diseases, diabetes mellitus, infections, and in paediatric and elderly patients.

Syllabus

- 6.3.2018 Hypertension treatment, simply and effectively 13.3.2018 Antibiotics in ICU
20.3.2018 Drug Interactions in clinical practice 27.3.2018 Pharmacotherapy of heart failure
3.4.2018 Clinical pharmacology in diabetes mellitus 10.4.2018 Patients with thromboembolic disease - the treatment options 17.4.2018 Pharmacotherapy of patients with ischemic coronary heart disease and acute coronary syndrome 24.4.2018 Pharmacotherapy in patients with chronic obstructive pulmonary disease (COPD) and asthma bronchiale 1.5.2018 State holiday 8.5.2018 Colloquium (test), credit

Teaching methods

lecture

Assessment methods

colloquium

Language of instruction

English

YEAR 4 / SEMESTER 9/10

aVLAM9X1c Intensive Care Medicine - practice

Faculty of Medicine

autumn / spring

Extent and Intensity

0/2/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

MUDr. Jan Maláska, Ph.D.

Department of Anaesthesiology and Intensive Care Medicine - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Contact Person: MUDr. Václav Zvoníček, Ph.D.

Course objectives

The aim of the subject is to acquaint the student with principles of basic cardiopulmonary resuscitation, extensive resuscitation, recognition and evaluation of basic critical states. On the end

of the course the student will be able to perform basic cardiopulmonary resuscitation and will understand how to perform advanced cardiopulmonary resuscitation. The student will be able to assess the critical ill patient.

Learning outcomes

At the end of the course the student will be able:

- to perform basic cardiopulmonary resuscitation
- to understand how to perform advanced cardiopulmonary resuscitation.
- to assess the critical ill patient.

Syllabus

- **Intensive care practical training- two weeks intensive course**
- **time: 10:15-12:30**
- **!Study group 31 has courses at ARK, study group 30 at KARIM!**
- abbreviation:
- ARK = Anesteziologicko-resuscitační klinika FN u sv. Anny v Brně,
- KARIM= Klinika anesteziologie, resuscitace a intenz. med., FN Brno, Bohunice
- KDAR= Klinika dětské anesteziologie a resuscitace, FN Brno, Dětská nemocnice

1st week

- *Monday:* CPR, chest compression, recognition of arrest, laryngeal mask, intubation
- *Tuesday:* Advanced CPR, defibrillation, drugs for CPR, cycles of CPR
- *Wednesday:* Shocks, hypovolemia, pulmonary embolism, myocardial infarction
- *Thursday:* Respiratory insufficiency, asthma, COPD, PNO, asphyxia, tamponade
- *Friday:* Paediatric intensive care, **!courses are located in KDAR!**

2nd week at ARK

- *Monday:* intoxication, gastric lavage, hyperkalaemia, hyponatremia, anaphylactic shock
- *Tuesday:* trauma, head trauma, thoracic and abdominal trauma, basic approach
- *Wednesday:* scenario of critically ill patient, sepsis
- *Thursday:* MOF- definition, CVVHD, acid base- practical training
- *Friday:* scenario of critically ill. Credit

Literature

required literature

- Perkins GD, Handley AJ et al. Adult basic life support and automated external defibrillation section Collaborators. European Resuscitation Council Guidelines for Resuscitation 2015: Section 2. Resuscitation. 2015 Oct;95:81-99.

- Soar J, Nolan Jpet al. Adult advanced life support section Collaborators. European Resuscitation Council Guidelines for Resuscitation 2015: Section 3. Adult advanced life support. Resuscitation. 2015 Oct;95:100-47
- *ABC of intensive care*. Edited by Graham Nimmo - Mervyn Singer. 2nd ed. Chichester, West Sussex, UK: Blackwell Pub., 2011. xi, 76. ISBN 9781405178037.

recommended literature

- *Oh's intensive care manual*. Edited by Andrew D. Bersten - Neil Soni. 7th ed. [S.l.]: Butterworth-Heinemann, 2014. xix, 1242. ISBN 9780702047626.

Bookmarks

<https://is.muni.cz/in/tag/LF:aVLAM9X1c!>

Teaching methods

lectures and discussions, presentation of patients by consultant, simulation. Practical training (about 50 % of the total volume of teaching) is complemented by a comprehensive range of simulation teaching methods on simulators with varying degrees of fidelity, trainers and virtual patients. Simulation results in subsequent debriefing (feedback to the student). There is also problem-oriented learning in the foreground, where the student is taught by solving the problem presented, as well as team-oriented teaching when small groups of students discuss and choose a solution of the problem. Emphasis is also placed on the development of soft skills, incl. so-called "21st century skills", particularly communication, decision-making skills, critical thinking, crisis communication and teamwork.

Assessment methods

credit requirements is participation in course, one absence is accepted. Traditional methods are complemented by objective clinical evaluation that verifies clinical knowledge and other skills such as communication, physical examination, performance, performance interpretation, etc. This evaluation method provides students with objective and specific feedback.

Language of instruction

English

aVLAM9X1p Intensive Care Medicine - lecture

Faculty of Medicine

autumn / spring

Extent and Intensity

2/0/0. 3 credit(s). Type of Completion: zk (examination).

Supervisor

MUDr. Jan Maláska, Ph.D.

Department of Anaesthesiology and Intensive Care Medicine - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Contact Person: MUDr. Václav Zvoníček, Ph.D.

Course objectives

The aim of the course is to understand the basics of intensive care medicine. Lectures consist of ethiology, diagnostics and treatment of most frequent critical conditions. The specific management of critically ill will be explained, including mechanical ventilation and advanced cardiopulmonary resuscitation.

Syllabus

- Paediatric intensive care Nutrition. Acid-base balance disorders, electrolyte disorders Sepsis Intoxication Intensive care. Hemodynamic monitoring Shock. Fluid resuscitation Blood transfusions. Haematological management Disorders of consciousness, status epilepticus Respiratory failure. Status asthmaticus

Literature

required literature

- KLEMENTA, Bronislav, Olga KLEMENTOVÁ and Pavel MARCIÁN. *Resuscitace*. 1. vyd. [Olomouc: EPAVA, 2014. 279 s. ISBN 9788086297415.
- DOPORUČENÉ POSTUPY PRO RESUSCITACI ERC 2015: časopis Urgentní medicína. MEDIPRAX CB s.r.o., 2015, Ročník 18 ISSN 1212-1924, <https://cprguidelines.eu> – záložka 2015 Guidelines – Translations – Czech.
- Perkins GD, Handley AJ et al. Adult basic life support and automated external defibrillation section Collaborators. European Resuscitation Council Guidelines for Resuscitation 2015: Section 2. *Resuscitation*. 2015 Oct;95:81-99.
- Soar J, Nolan JP et al. Adult advanced life support section Collaborators. European Resuscitation Council Guidelines for Resuscitation 2015: Section 3. Adult advanced life support. *Resuscitation*. 2015 Oct;95:100-47
- *ABC of intensive care*. Edited by Graham Nimmo - Mervyn Singer. 2nd ed. Chichester, West Sussex, UK: Blackwell Pub., 2011. xi, 76. ISBN 9781405178037.

recommended literature

- *Oh's intensive care manual*. Edited by Andrew D. Bersten - Neil Soni. 7th ed. [S.l.]: Butterworth-Heinemann, 2014. xix, 1242. ISBN 9780702047626.
- Náhradní obsah: Pavel Ševčík. *Intenzivní medicína*. 3. přeprac. a rozšíř. vyd. Praha: Galén, 2014. s. 1047-1051, 5 s. ISBN 978-80-7492-066-0

Teaching methods

Lectures are obliged. The main teaching method is with a support of PPT.

Assessment methods

final classification: oral exam and written test – condition to pass the exam is credit of Intensive care medicine – practice.

Language of instruction

English

aVLCH9X33c Surgery III - practice

Faculty of Medicine

autumn / spring

Extent and Intensity

0/6/0. 5 credit(s). Type of Completion: z (credit).

Supervisor

MUDr. Tomáš Novotný, Ph.D.

Second Department of Surgery - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

The tuition in the 5th year takes its course in the fourteen days block. It includes 10 teaching hours of neurosurgery and plastic surgery, 8 hours of urology and 2 hours of cardiac surgery. Students should acquire basic knowledge and general view of mentioned surgical specialities.

Syllabus

- Neurosurgery: Introduction, wards and outpatients clinic, craniotomy, endoscopy, gamma knife, unconsciousness, intracranial hypertension, cerebral trauma, surgical neurooncology, vascular brain disease, surgery of epilepsy, hydrocephalus, degenerative backbone disease, surgery of the peripheral nerves, pain surgery, intracranial inflammatory disease.
- Urology: Introduction, wards and outpatients clinic, clinical investigation in urology, uroinfection, urolithiasis, renal colic, traumatology in urology, benign prostatic hyperplasia, urethral stricture, urinary incontinence, urooncology, erectile dysfunction.
- Plastic surgery: Introduction, wards and outpatients clinic, skin and musculocutaneous flaps, replantation, microsurgery, craniofacial surgery, hand surgery, children plastic surgery, congenital defects, reconstructive plastic in oncologic surgery, aesthetic surgery, breast reconstructive surgery.
- Cardiac surgery: Introduction, extracorporeal circuit, valvular defects, CABG, heart transplantation, surgery of the thoracic aorta, congenital defects of the heart and major vessels.

Literature

- HANUŠ, Tomáš and Petr MACEK. *Urologie pro mediky*. Vydání první. Praha: Galén, 2015. 305 stran. ISBN 9788024630083.
- VESELÝ, Jiří. *Plastická chirurgie (Plastic surgery)*. Brno, 2007.
- SMRČKA, Martin and Vladimír PŘIBÁŇ. *Vybrané kapitoly z neurochirurgie : pro studenty lékařské fakulty*. 1. vyd. Brno: Masarykova univerzita, 2005. 98 s. ISBN 8021037881.
- ZEMAN, Miroslav. *Speciální chirurgie*. 2. vyd. Praha: Galén, 2004. xxiii, 575. ISBN 8072622609.

Teaching methods

The tuition is provided in seminars with discussion, students are present during the surgical procedures in the operating room, bedside procedures and also in outpatient clinic.

Assessment methods

The written test in the end of the particular speciality is highly recommended. The credits are given on condition of the full training attendance and successful test results.

Language of instruction

English

aVLIN9X22 Infectious Diseases II

Faculty of Medicine

autumn / spring

Extent and Intensity

0/0/0. 1 credit(s). Type of Completion: zk (examination).

Supervisor

prof. MUDr. Petr Husa, CSc.

Department of Infectious Diseases - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Course objectives

The programme is the continuation of the lessons of INF 1 and enriches them; it is the preparation to the examination, too. The aim of this course is to spread the information about infectious diseases obtained during course VLIN7X21. The main stress is put on viral hepatitis, infectious of nervous and alimentary systems, Lyme diseases, sepsis, and differential diagnosis of infectious diseases.

Syllabus

- The carrier state (*Salmonella typhi abdominalis*, *Salmonella paratyphi B*, *Streptococcus pyogenes*, enteritic salmonellae - aetiology, treatment, regimen measures), viral carrier state, prion infections.
- Differential diagnosis of viral hepatitis, diarrhoeas, tonsillitis, lymphadenopathy, infectious exanthema, fever.
- Neuroinfections; bacterial meningitis - aetiology, clinical features, treatment. The problem of the bacterial meningitis in the newborns, little babies and in the elderly.
- Serous meningitis. Tickborne encephalitis. Lyme boreliosis - stage, clinical features, treatment. The examination of the cerebrospinal fluid; differential diagnosis of meningitis.
- The infectious diseases in the pregnancy. The infectious disease and the corticosteroid therapy.
- Anthroozoonoses. Anaerobic infections, tetanus.

- The introduction to the problem of the geographic and travel medicine. Malaria, leishmaniasis, typhoid fever.
- Clinical demonstration of the patients.

Literature

required literature

- HUSA, Petr, Lenka KRBKOVÁ, Drahomíra BARTOŠOVÁ, Svatava SNOPOKOVÁ, Alena HOLČÍKOVÁ, Pavel POLÁK, Radek SVOBODA and Kateřina HAVLÍČKOVÁ. *Infekční lékařství. Učební text pro studenty všeobecného lékařství (Infectious Diseases. Textbook for students of general medicine.)*. 1. vyd. Brno: Masarykova univerzita, 2011. 159 pp. ISBN 978-80-210-5660-2.

recommended literature

- Beneš, Jiří, hlavní autor a pořadatel. *Infekční lékařství*. 1. vyd. Praha: Galén 2009, 651 s. ISBN 978-80-7262-644-1

not specified

- *Infectious diseases for foreign students*. Edited by Petr Husa - Lenka Krbková. 1st ed. Brno: Masaryk University, 2013. 144 s. ISBN 9788021066304.

Teaching methods

Seminar, clinical demonstrations of patients.

Assessment methods

For credit is necessary full presence. Before passing of oral examination is necessary to have credit.

Language of instruction

English

aVLIN9X22c Infectious diseases II - practice

Faculty of Medicine

autumn / spring

Extent and Intensity

0/2/0. 1 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Petr Husa, CSc.

Department of Infectious Diseases - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Course objectives

The programme is the continuation of the lessons of INF 1 and enriches them; it is the preparation to the examination, too. The aim of this course is to spread the information about infectious diseases

obtained during course VLIN7X21. The main stress is put on viral hepatitis, infectious of nervous and alimentary systems, Lyme diseases, sepsis, and differential diagnosis of infectious diseases.

Syllabus

- The carrier state (*Salmonella typhi abdominalis*, *Salmonella paratyphi B*, *Streptococcus pyogenes*, enteric salmonellae - aetiology, treatment, regimen measures), viral carrier state, prion infections.
- Differential diagnosis of viral hepatitis, diarrhoeas, tonsillitis, lymphadenopathy, infectious exanthema, fever.
- Neuroinfections; bacterial meningitis - aetiology, clinical features, treatment. The problem of the bacterial meningitis in the newborns, little babies and in the elderly.
- Serous meningitis. Tickborne encephalitis. Lyme boreliosis - stage, clinical features, treatment. The examination of the cerebrospinal fluid; differential diagnosis of meningitis.
- The infectious diseases in the pregnancy. The infectious disease and the corticosteroid therapy.
- Anthroozoonoses. Anaerobic infections, tetanus.
- The introduction to the problem of the geographic and travel medicine. Malaria, leishmaniosis, typhoid fever.
- Clinical demonstration of the patients.

Literature

required literature

- HUSA, Petr, Lenka KRBKOVÁ, Drahomíra BARTOŠOVÁ, Svatava SNOPKOVÁ, Alena HOLČÍKOVÁ, Pavel POLÁK, Radek SVOBODA and Kateřina HAVLÍČKOVÁ. *Infekční lékařství. Učební text pro studenty všeobecného lékařství (Infectious Diseases. Textbook for students of general medicine.)*. 1. vyd. Brno: Masarykova univerzita, 2011. 159 pp. ISBN 978-80-210-5660-2.

recommended literature

- Beneš Jiří, hlavní autor a pořadatel. *Infekční lékařství*. 1. vyd. Praha: Galén 2009. ISBN 978-80-7262-644-1

not specified

- *Infectious diseases for foreign students*. Edited by Petr Husa - Lenka Krbková. 1st ed. Brno: Masaryk University, 2013. 144 s. ISBN 9788021066304.

Teaching methods

The stress is put on practical examination of the patients combined with lectures.

Assessment methods

Full attendance is necessary for giving course-unit credit.

Language of instruction

English

aVLNE9X1c Neurology - practice

Faculty of Medicine

autumn / spring

Extent and Intensity

0/6/0. 3 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Irena Rektorová, Ph.D.

First Department of Neurology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Course objectives

At the end of the course students should be able to: understand and explain the basics and principles of neurology; work with information on the neurological examination to create the symptoms, syndromes of the neurological disorders; make reasoned decisions about the topical diagnosis and differential diagnosis based on the symptomatology. make deductions based on acquired knowledge in the field of neurology interpret paraclinical examinations.

Learning outcomes

At the end of the course students should be able to: understand and explain the basics and principles of neurology; work with information on the neurological examination to create the symptoms, syndromes of the neurological disorders; make reasoned decisions about the topical diagnosis and differential diagnosis based on the symptomatology. make deductions based on acquired knowledge in the field of neurology interpret paraclinical examinations.

Syllabus

- General neurology Neurological syndromology and neurological evaluation. The practical lectures in the lecture hall and bedside examination of the patients. Day 1. neurological history taking. Reflexology. Palsies, pyramidal signs. Day 2. Cranial nerves examination. Sensitivity and its affections. Day 3. Extrapyramidal and cerebellar signs. Spine examination. Disorders of the stance and walking. Meningeal syndrome. Uncsciousness. Day 4. aphasias, alexia, agraphia and other higher central nervous system disorders Day 5. neurological paraclinical examinations, Neurological examination and notes. Neurological diagnosis. Days 6-7. Pediatric neurology, the principles. Special Neurology Day 3-5. Focus on main nosological units and syndromes in neurology. The practical lectures in the lecture hall and bedside examination of the patients. Day 8. stroke, multiple sclerosis. Day 9. Epilepsy, tumors, vertebrogenic disorders, movement disorders, headache, dementias. Day 10. Neuromuscular disorders, critical illness patient. Classified credit (practical exam with written neurological examination of the patient).

Literature

required literature

- ŠPINAR, Jindřich and Ondřej LUDKA. *Propedeutika a vyšetřovací metody vnitřních nemocí*. 2., přeprac. a dopl. vyd. Praha: Grada, 2013. 336 s. ISBN 9788024743561.
- ŠTOURAČ, Pavel, Josef BEDNAŘÍK, Milan BRÁZDIL, Zdeněk KADAŇKA, Petr KAŇOVSKÝ, Marek MECHL, Jiří PRÁŠEK, Ivan REKTOR, Irena REKTOROVÁ and Radomír ŠLAPAL. *Učebnice obecné neurologie (Textbook of General Neurology)*. 2., přepracované. Brno: Masarykova universita v Brně, 2003. 197 pp. ISBN 80-210-3309-6.

recommended literature

- *Učebnice speciální neurologie*. Edited by Zdeněk Kadaňka. 3., přeprac. vyd. Brno: Masarykova univerzita, 2010. 302 s. ISBN 9788021053205.
- *Učebnice speciální dětské neurologie : pro studenty 4. a 5. ročníku LF MU s rozšířenou výukou pediatrie (Special Pediatric Neurology for students of the 4th and 5th years, Medical Faculty, Masaryk University, with extended education in pediatrics)*. Edited by Hana Ošlejšková. 1. vyd. Brno: Masarykova univerzita, 2011. 123 s. ISBN 9788021056596.
- John Morris, Joseph Jankovic: *Neurological Clinical Examination*, Hodler Arnold Co, 2012
- *International Neurology: A clinical approach*: by Robert P. Lisak, Daniel D Truong, William M Carroll, Roongroj Bhidayasiri, Blackwell Publishing Ltd 2010, ISBN 9781444317008

not specified

- *Merritt's Neurology*, 13th Edition is edited by by Elan D. Louis MD MS (Author), Stephan A. Mayer MD (Author), Lewis P. Rowland MD (Author) ISBN-13: 978-1451193367, ISBN-10: 145119336X

Teaching methods

seminary lectures, internship

Assessment methods

credit, classified, ongoing written tests final oral exam

Language of instruction

English

aVLNE9X1p Neurology - lecture

Faculty of Medicine

autumn / spring

Extent and Intensity

2/0/0. 4 credit(s). Type of Completion: zk (examination).

Supervisor

prof. MUDr. Irena Rektorová, Ph.D.

First Department of Neurology - Institutions shared with St. Anne's Faculty Hospital - Faculty of

Medicine

Contact Person: doc. MUDr. Hana Ošlejšková, Ph.D.

Course objectives

At the end of the course students should be able to: understand and explain modern diagnosis and treatment of different neurological conditions. work with information on special neurology to make correct diagnosis; create differential diagnosis; make reasoned decisions about diagnosis and treatment plans; make deductions based on acquired knowledge in the field of neurology.

Learning outcomes

At the end of the course students should be able to: understand and explain modern diagnosis and treatment of different neurological conditions. work with information on special neurology to make correct diagnosis; create differential diagnosis; make reasoned decisions about diagnosis and treatment plans; make deductions based on acquired knowledge in the field of neurology.

Syllabus

- Oral lectures on different and updated topics in neurology: Neurological complications of spondylosis Epilepsy Subarachnoid hemorrhage Behavioral Neurology Stroke Parkinsons disease Migraine Myasthenia gravis Autoimmune neuropathies Multiple sclerosis Developmental Neurology Dementia Brain Tumors Pain

Literature

required literature

- ŠTOURAČ, Pavel, Josef BEDNAŘÍK, Milan BRÁZDIL, Zdeněk KADAŇKA, Petr KAŇOVSKÝ, Marek MECHL, Jiří PRÁŠEK, Ivan REKTOR, Irena REKTOROVÁ and Radomír ŠLAPAL. *Učebnice obecné neurologie (Textbook of General Neurology)*. 2., přepracované. Brno: Masarykova universita v Brně, 2003. 197 pp. ISBN 80-210-3309-6.
- ŠPINAR, Jindřich and Ondřej LUDKA. *Propedeutika a vyšetřovací metody vnitřních nemocí*. 2., přeprac. a dopl. vyd. Praha: Grada, 2013. 336 s. ISBN 9788024743561. .

recommended literature

- Kolektiv autorů Kliniky děské neurologie a dalších pracovišť LF and Kolektiv autorů Kliniky děské neurologie a dalších pracovišť LF. *Učebnice speciální dětské neurologie pro studenty 4. a 5.ročníku LF MU s rozšířenou výukou pediatrie (Textbook of Pediatric Neurology for special students of the 4th LF MU and 5th year with extended teaching of pediatrics)*. 1. vydání. Brno: Masarykova univerzita Brno, 2011. 123 pp. ISBN 978-80-210-5659-6. _
- John Morris, Joseph Jankovic: Neurological Clinical Examination, Hodler Arnold Co, 2012
- International Neurology: A clinical approach: by Robert P. Lisak, Daniel D Truong, William M Carroll, Roongroj Bhidayasiri, Blackwell Publishing Ltd 2010, ISBN 9781444317008
- Merritt's Neurology, 13th Edition is edited by by Elan D. Louis MD MS (Author), Stephan A. Mayer MD (Author), Lewis P. Rowland MD (Author) ISBN-13: 978-1451193367, ISBN-10: 145119336X
- *Child neurology*. Edited by John H. Menkes - Harvey B. Sarnat - Bernard L. Maria. Seventh edition. Philadelphia: Lippincott Williams & Wilkins, 2006. xiii, 1186. ISBN 9780781751049. _

not specified

- *Učebnice speciální neurologie*. Edited by Zdeněk Kadaňka. 3., přeprac. vyd. Brno: Masarykova univerzita, 2010. 302 s. ISBN 9788021053205.
- HOFFMANN, Georg Friedrich. *Dědičné metabolické poruchy*. Vyd. 1. Praha: Grada, 2006. 416 s. ISBN 8024708310.

Teaching methods

Oral lectures on different and updated topics in neurology. Presentations by professionals in neurology

Assessment methods

Graded credit. Ongoing written tests. The course is finished by oral examination.

Language of instruction

English

aVLON9X1c Clinical Oncology - practice

Faculty of Medicine

autumn / spring

Extent and Intensity

0/4/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Zdeněk Adam, CSc.

Department of Internal Medicine, Hematology and Oncology - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Contact Person: Eva Čechmanová

Course objectives

Main objective of Oncology can be summarized as follow: to learn, how is possible to avoid development of cancer, To learn all, what is necessary for early detection of every malignant disease in early stage and early refer the patients to the specialised oncologic therapy. All doctors has to know, how to treat usually and anusually complication of malignant disease and complication of therapy. Therefore great attention is given to the supportive, symptomatic and paliative therapy.

Learning outcomes

Main outcome of Oncology can be summarized as follow: to learn, how is possible to avoid development of cancer, To learn all, what is necessary for early detection of every malignant disease in early stage and early refer the patients to the specialised oncologic therapy. All doctors has to know, how to treat usually and anusually complication of malignant disease and complication of therapy. Therefore great attention is given to the supportive, symptomatic and paliative therapy.

Syllabus

- Pathogenesis of malignant disease. Chemotherapy, biotherapy and hormonotherapy. Radiotherapy. Histological and clinical staging. Bone marrow transplantation. Psychological problems of cancer patient. Basic information about the most frequent cancer: Breast cancer and other gynecological cancer, lung cancer, gastrointestinal tumors, cancer of kidney and bladder. Malignant hematological diseases.

Literature

required literature

- DOUBEK, Michael, Zdeněk ADAM, Zdeňka ČERMÁKOVÁ, Libor ČERVINEK, Martina DOUBKOVÁ, František FOLBER, Markéta HADRABOVÁ, Andrea JANÍKOVÁ, Jarmila KISSOVÁ, Marta KREJČÍ, Daniel LYSÁK, Miloslava MATÝŠKOVÁ, Tomáš NEBESKÝ, Luděk POUR and Daniela ŽÁČKOVÁ. *Hematologie. Pomocník ke stážíím na hematologických pracovištích*. 1. vyd. Brno: Masarykova univerzita, 2017. ISBN 978-80-210-8776-7.

not specified

- ADAM, Zdeněk, Marta KREJČÍ, Jiří VORLÍČEK, Zuzana ADAMOVÁ, Jaroslav BAČOVSKÝ, Viera BAJČIOVÁ, Otakar BEDNAŘÍK, Jan BLATNÝ, Tomáš BÜCHLER, Igor CRHA, Aleš ČERMÁK, Hana DOLEŽELOVÁ, Ladislav DUŠEK, Karel DVOŘÁK, Pavel FABIAN, Vuk FAIT, Antonín FASSMANN, Jindřich FIALA, Lukáš FIALA, Jindřich FÍNEK, Lenka FORETOVÁ, Radim GROSMAN, Jana HALÁMKOVÁ, Miroslav HEŘMAN, Martin HUSER, Ludmila HYNKOVÁ, Richard CHALOUPKA, Libuše KALVODOVÁ, Igor KISS, Iva KOČMANOVÁ, Martin KOMENDA, Jana KOPTÍKOVÁ, Zdeněk KOŘÍSTEK, Renata KOUKALOVÁ, Zdeněk KRÁL, Eva LÉTALOVÁ, Milan MACHÁLKA, Josef MALIŠ, Miloslava MATÝŠKOVÁ, Jiří MAYER, Vojtěch MORNSTEIN, Mojmír MOULIS, Jan MUŽÍK, Miroslav MYSLIVEČEK, Milan NAVRÁTIL, Tomáš NEBESKÝ, Miroslav NEČAS, Rudolf NENUTIL, Jiří NEUBAUER, Martin ONDRÁK, Zdeněk PAVELKA, Miroslav PENKA, Vojtěch PEŘINA, Katarína PETRÁKOVÁ, Petr POKORNÝ, Luděk POUR, Jiří PRÁŠEK, Zdeněk RÁČIL, Martin REPKO, Zdeněk ŘEHÁK, Jiří SCHOVANEC, Ondřej SLÁMA, Petr SMÍŠEK, Jan STARÝ, Petr SZTURZ, Marek SVOBODA, Vlastimil ŠČUDLA, Roman ŠEFR, Pavel ŠEVČÍK, Pavel ŠLAMPÁ, Lenka ŠMARDOVÁ, Jiří ŠNAJDAUF, Jaroslav ŠTĚRBA, Michal TICHÝ, Jiří TOMÁŠEK, Miroslav TOMIŠKA, Marcela TOMÍŠKOVÁ, Vít UNZEITIG, Jiří VANÍČEK, Vladimír VAŠKŮ, Rostislav VYZULA, Barbora WEINBERGEROVÁ, Marie ZÍTKOVÁ and Karel ZITTERBART. *Obecná onkologie (General oncology)*. První vydání. Praha: Galén, 2011. 394 pp. ISBN 978-80-7262-715-8.
- ADAM, Zdeněk, Marta KREJČÍ and Jiří VORLÍČEK. *Speciální onkologie. Příznaky, diagnostika a léčba maligních chorob (Special oncology. Symptoms, diagnostics and therapy of malignant disease)*. 1. vyd. Praha: Galén, 2010. 418 pp. Med. ISBN 978-80-7262-648-9.

Teaching methods

practical training at the clinic

Assessment methods

Credit

Language of instruction

English

aVLON091p Clinical oncology - lecture

Faculty of Medicine

autumn / spring

Extent and Intensity

1/0/0. 3 credit(s). Type of Completion: zk (examination).

Supervisor

prof. MUDr. Zdeněk Adam, CSc.

Department of Internal Medicine, Hematology and Oncology - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Contact Person: Eva Čechmanová

Course objectives

The main objectives can be summarized as follow: to understand the basis teaching of oncology, supportive care and treatment of all frequent oncologic diseases

Learning outcomes

The main objectives can be summarized as follow: to understand the basis teaching of oncology, supportive care and treatment of all frequent oncologic diseases

Syllabus

- **General oncology**
- Tumor development. Nutritional factors in tumor development. Nutritional issues in cancer patients. Morphological and clinical classifications. Anticancer chemotherapy, hormonotherapy and biotherapy. Radiotherapy. Oncological surgery. Use of radionuclides in diagnostics and therapy. Infectious complications in immunocompromised hosts, treatment of febrile neutropenia and sepsis. Palliative, supportive and analgesic care. Acute complications in oncological patients. Thrombophilia, coagulopathies, hypercalcemia, malignant osteolysis, hyperleukocytosis and hyperviscosity syndrome. Psychological support for cancer patients, their relatives and nursing staff. Hematopoietic stem cell transplantation.
- **Special oncology**
- Head and neck cancer. Skin tumors. Breast cancer. Digestive tract cancers. Urinary tract tumors. Tumors of the pleura, mediastinum and lungs. Malignant hematological diseases.

Literature

required literature

- DOUBEK, Michael, Zdeněk ADAM, Zdeňka ČERMÁKOVÁ, Libor ČERVINEK, Martina DOUBKOVÁ, František FOLBER, Markéta HADRABOVÁ, Andrea JANÍKOVÁ, Jarmila KISSOVÁ, Marta KREJČÍ, Daniel LYSÁK, Miloslava MATÝŠKOVÁ, Tomáš NEBESKÝ, Luděk POUR and Daniela ŽÁČKOVÁ. *Hematologie. Pomocník ke stážím na hematologických pracovištích*. 1. vyd. Brno: Masarykova univerzita, 2017. ISBN 978-80-210-8776-7.

not specified

- ADAM, Zdeněk, Marta KREJČÍ, Jiří VORLÍČEK, Zuzana ADAMOVIČ, Jaroslav BAČOVSKÝ, Viera BAJČIOVÁ, Otakar BEDNAŘÍK, Jan BLATNÝ, Tomáš BÜCHLER, Igor CRHA, Aleš ČERMÁK, Hana DOLEŽELOVÁ, Ladislav DUŠEK, Karel DVOŘÁK, Pavel FABIAN, Vuk FAIT, Antonín FASSMANN, Jindřich FIALA, Lukáš FIALA, Jindřich FÍNEK, Lenka FORETOVÁ, Radim GROSMAN, Jana HALÁMKOVÁ, Miroslav HEŘMAN, Martin HUSER, Ludmila HYNKOVÁ, Richard CHALOUPKA, Libuše KALVODOVÁ, Igor KISS, Iva KOČMANOVÁ, Martin KOMENDA, Jana KOPTÍKOVÁ, Zdeněk KOŘÍSTEK, Renata KOUKALOVÁ, Zdeněk KRÁL, Eva LÉTALOVÁ, Milan MACHÁLKA, Josef MALIŠ, Miloslava MATÝŠKOVÁ, Jiří MAYER, Vojtěch MORNSTEIN, Mojmír MOULIS, Jan MUŽÍK, Miroslav MYSLIVEČEK, Milan NAVRÁTIL, Tomáš NEBESKÝ, Miroslav NEČAS, Rudolf NENUTIL, Jiří NEUBAUER, Martin ONDRÁK, Zdeněk PAVELKA, Miroslav PENKA, Vojtěch PEŘINA, Katarína PETRÁKOVÁ, Petr POKORNÝ, Luděk POUR, Jiří PRÁŠEK, Zdeněk RÁČIL, Martin REPKO, Zdeněk ŘEHÁK, Jiří SCHOVANEC, Ondřej SLÁMA, Petr SMÍŠEK, Jan STARÝ, Petr SZTURZ, Marek SVOBODA, Vlastimil ŠČUDLA, Roman ŠEFR, Pavel ŠEVČÍK, Pavel ŠLAMPA, Lenka ŠMARDOVÁ, Jiří ŠNAJDAUF, Jaroslav ŠTĚRBA, Michal TICHÝ, Jiří TOMÁŠEK, Miroslav TOMIŠKA, Marcela TOMIŠKOVÁ, Vít UNZEITIG, Jiří VANÍČEK, Vladimír VAŠKŮ, Rostislav VYZULA, Barbora WEINBERGEROVÁ, Marie ZÍTKOVÁ and Karel ZITTERBART. *Obecná onkologie (General oncology)*. První vydání. Praha: Galén, 2011. 394 pp. ISBN 978-80-7262-715-8.
- ADAM, Zdeněk, Marta KREJČÍ and Jiří VORLÍČEK. *Speciální onkologie. Příznaky, diagnostika a léčba maligních chorob (Special oncology. Symptoms, diagnostics and therapy of malignant disease)*. 1. vyd. Praha: Galén, 2010. 418 pp. Med. ISBN 978-80-7262-648-9.

Teaching methods

lecture

Assessment methods

Oncology for students of general medicine ends with oral examination.

Language of instruction

English

aVLVL9X62c Internal medicine part 2- Pneumology

Faculty of Medicine

autumn / spring

Extent and Intensity

0/1.6/0. 2 credit(s). Type of Completion: z (credit).

Supervisor

MUDr. Martina Doubková, Ph.D.

Department of Pulmonary Diseases and Tuberculosis - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Contact Person: Kateřina Tichá

Course objectives

At the end of the course students should be able to understand pathophysiology of breathing, pulmonary function tests (spirometric, pletysmography, oxygen measurements), basic diagnosis and differential diagnosis of lung diseases (pneumonia, asthma bronchiale, chronic obstructive pulmonary disease, tuberculosis, lung cancer, interstitial lung disease). Students should be able to understand basic X-ray interpretation. Students will be able to use the acquired information in differential diagnosis of dyspnea, cough, chest pain, hemoptysis.

Learning outcomes

Students should be able to understand diagnostics and differential diagnosis of pulmonary diseases, evaluate physical findings of patients with lung disease, interpret pulmonary functional and radiological findings and suggest treatment.

Syllabus

- The lessons are focused on getting both theoretical and practical experience covering the entire area of pulmonology. The practice is done at the bedside in the ward and by demonstrating different methods of examination. The theory is discussed in seminars organized in the Departments pulmonary classroom. Day 1: Chronic obstructive pulmonary disease Day 2: Asthma bronchiale Day 3: Tuberculosis or lung cancer Day 4: Pneumonia. Day 5: Interstitial lung diseases. In the Simulation Center for Practical Training of Future Physicians, a practical demonstration of propedeutics with physical examinations, pulmonary functional examinations, analysis of blood gas, X-ray findings, drainage of pleural effusions, and bronchoscopic methods will be included.

Literature

required literature

- LONGMORE, J. M. *Oxford handbook of clinical medicine*. 9th ed. New York: Oxford University Press, 2014. 902 s. ISBN 9780199609628.

Teaching methods

The lesson consists of the theory and the clinical practice (practical group projects - examinations of patients, descriptions of chest X-ray, presentations by professionals). It is assumed that the student has knowledge of pathological physiology, propedeutics and pharmacology.

Assessment methods

The semester is closed by completing a simple multiple-choice test or an oral exam covering the information presented at the seminars. A 100% participation is a precondition for granting the credit.

Language of instruction

English

aVLVL9X63c Internal medicine part 3 - Nephrology, Diabetology, Rheumatology and Endocrinology

Faculty of Medicine

autumn / spring

Extent and Intensity

0/3.2/0. 3 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Miroslav Souček, CSc.

Second Department of Internal Medicine - Institutions shared with St. Anne's Faculty Hospital -
Faculty of Medicine

Contact Person: Eva Kašpárková

Course objectives

After the completion of lessons the student will understand the problems of diseases taught in the block No. 3 : diabetology, nephrology, endocrinology, rheumatology. diseases of water, elektrolyte, mineral and acid-base metabolism. He/she will be able to diagnose and know the therapy of these disorders.

Learning outcomes

After the completion of lessons the student will understand the problems of diseases taught in the block No. 3 : diabetology, nephrology, endocrinology, rheumatology. diseases of water, elektrolyte, mineral and acid-base metabolism. He/she will be able to diagnose and know the therapy of these disorders.

Syllabus

- Kidney and urinary disease.
- Laboratoty diagnostic test and clinical examination of the kidney and urinary tract diseases.
- Glomerular diseases.
- Nefrotic syndrome.
- Diabetis nephropathy
- Tumorous of the kidney and urinary tract.
- Tubulointerstitial disease. reflux nephropathy. Renal vascular disease.
- Acute and chronic renal failure.
- Renal replacemet therapy.
- Haemodialysis.
- Renal transplantation.
- Endocrine disease.
- Laboratoty diagnostic test and clinical examination of the endocrine diseases.
- Hypothalamic and pituitary disease.
- Diabetes insipidus.
- Acromegaly.Gigantism.

- Hyperprolactinaemia
- Cushing's disease.
- Thyroid and parathyroid glands diseases.
- Thyroid enlargement. Goitre diffuse. Solitary thyroid nodule.
- Autoimmune thyroid disease.
- Thyrotoxicosis. Thyrotoxic crisis(thyroid storm).
- Hypothyroidism.
- Hypothyroidism.
- Thyroid neoplasma.
- The parathyroid glands disease.
- Hyperparathyroidism, primary, secondary,tertiary.
- Pseudohypoparathyroism
- Adrenal glands diseases.
- Cushing's syndrome.
- Adrenal insufficiency.
- Congenital adrenal hyperplasia
- Pheochromocytoma.
- Neuroendocrine tumours
- Diabetes mellitus
- Aetiology and pathogenesis of diabetes
- Investigations. Insulin delivery. Insulin regimens.
- Oral-antidiabetic drugs .
- Diabetes mellitus typ 1 - aetiology,pathogenesis, diagnostic,therapy.
- Diabetes mellitus typ 2 - aetiology,pathogenesis,diagnostic,therapy.
- Diabetes in pregnancy. Gestational diabetes.
- Diabetic ketoacidosis,
- Nonketotic hyperosmolar diabetic coma.
- Hypoglycaemia. Hypoglycaemic coma.
- Management of the diabetes. Dietary management.
- Long-term complications of diabetes
- Diabetic retinopathy.Diabetic neuropathy.

- The diabetic foot.
- Inflammatory joint disease.
- Laboratory diagnostic test and clinical examination of the inflammatory joint diseases.
- Rheumatoid arthritis.
- Seronegative spondylarthritis
- Systemic connective tissue disease.
- Systemic lupus erythematosus.
- Systemic sclerosis
- Polymyositis and dermatomyositis
- Sjogren's syndrome
- Systemic vasculitis
- Other forms of vasculitis
- Musculoskeletal manifestations of disease in other systems
- Osteoporosis, osteomalacia, osteonecrosis, drug-induced lupus syndrome, myositis.
- Psoriasis
- Gout
- Paget's disease
- Osteoarthritis. Spinal and back disease.
- Acute rheumatic fever
- Disorders of acid-base balance
- Investigation of water and electrolytes
- Metabolic acidosis, metabolic alkalosis, respiratory acidosis, respiratory alkalosis, mixed acid-base disorders
- Disorders of amino acid metabolism
- Metabolic disease.
- Obesity. Hyperlipidemia. Metabolic bone disease.
- Malabsorption.
- Nutrition, enteral and parenteral alimentation
- Artificial alimentation

Literature

recommended literature

- Češka R. akol. Interna Triton Praha, 2012, ISBN 978-80-7387-423-0
- Souček M. a kol. Vnitřní lékařství. Grada Publishing 2011, 1577s. ISBN 978-80-247-2110-1

not specified

- Dítě, P. a kol. Vnitřní lékařství. Druhé, doplněné a přepracované vydání Galen, 2007. 586 s.
- Klener P. et al. Vnitřní lékařství Druhé doplněné vydání. Praha. Galén . 2006,
- Davidson s Principles and Practise of Medicine. 20th Edition. N.A. Boon, N.R.Colledge, B.R.Walker

Teaching methods

Lessons are taking place in blocks of 14 days. Attendance at the tuition is obligatory. The students work in groups of 5-6 members at the patient's bed step by step in all specialized department of the clinic. Expert seminars are the part of education.

Assessment methods

Successful written test on problems of internal medicine – block 3 is necessary for getting the credit. The test consists of 20 questions and the student must make out correctly 60% of questions.

Language of instruction

English

aVLVL9X64c Internal medicine part 4 - Gastroenterology and Haematology

Faculty of Medicine

autumn / spring

Extent and Intensity

0/3.2/0.3 credit(s). Type of Completion: z (credit).

Supervisor

MUDr. Jiří Dolina, Ph.D.

Department of Internal Gastroenterology - Institutions shared with the Faculty Hospital Brno - Adult Age Medicine - Faculty of Medicine

Course objectives

The main objectives can be summarized as follows. To understand the basic teaching of gastroenterology during the stay on Clinic of Internal Medicine - Gastroenterology and to understand the basic knowledge of hematology during the stay on Clinic of Internal Medicine Hematooncology.

Learning outcomes

Students will know clinical symptoms and laboratory markers of all discussed diseases in this block. That they will in time recognise discussed diseases by their future patients.

Syllabus

- Internal medical education, block IV, at IInd internal hematooncological department consists of 5 seminars and practical case presentation in patients. 1. Malignant lymphoproliferative disease, 2. Anemia and thrombocytopenia. 3. Acute and chronic leukaemias. 4. Inherited and acquired coagulopathy. 4. Palliative and supportive treatment. Treatment of sepsis and septic shock

Literature

required literature

- DOUBEK, Michael, Zdeněk ADAM, Zdeňka ČERMÁKOVÁ, Libor ČERVINEK, Martina DOUBKOVÁ, František FOLBER, Markéta HADRABOVÁ, Andrea JANÍKOVÁ, Jarmila KISSOVÁ, Marta KREJČÍ, Daniel LYSÁK, Miloslava MATYŠKOVÁ, Tomáš NEBESKÝ, Luděk POUR and Daniela ŽÁČKOVÁ. *Hematologie. Pomocník ke stážíím na hematologických pracovištích*. 1. vyd. Brno: Masarykova univerzita, 2017. ISBN 978-80-210-8776-7.

recommended literature

- ADAM, Zdeněk, Marta KREJČÍ, Jiří VORLÍČEK, Zuzana ADAMOVÁ, Jaroslav BAČOVSKÝ, Viera BAJČIOVÁ, Otakar BEDNAŘÍK, Jan BLATNÝ, Tomáš BÜCHLER, Igor CRHA, Aleš ČERMÁK, Hana DOLEŽELOVÁ, Ladislav DUŠEK, Karel DVOŘÁK, Pavel FABIAN, Vuk FAIT, Antonín FASSMANN, Jindřich FIALA, Lukáš FIALA, Jindřich FÍNEK, Lenka FORETOVÁ, Radim GROSMAN, Jana HALÁMKOVÁ, Miroslav HEŘMAN, Martin HUSER, Ludmila HYNKOVÁ, Richard CHALOUPKA, Libuše KALVODOVÁ, Igor KISS, Iva KOČMANOVÁ, Martin KOMENDA, Jana KOPTÍKOVÁ, Zdeněk KOŘÍSTEK, Renata KOUKALOVÁ, Zdeněk KRÁL, Eva LÉTALOVÁ, Milan MACHÁLKA, Josef MALIŠ, Miloslava MATYŠKOVÁ, Jiří MAYER, Vojtěch MORNSTEIN, Mojmír MOULIS, Jan MUŽÍK, Miroslav MYSLIVEČEK, Milan NAVRÁTIL, Tomáš NEBESKÝ, Miroslav NEČAS, Rudolf NENUTIL, Jiří NEUBAUER, Martin ONDRÁK, Zdeněk PAVELKA, Miroslav PENKA, Vojtěch PEŘINA, Katarína PETRÁKOVÁ, Petr POKORNÝ, Luděk POUR, Jiří PRÁŠEK, Zdeněk RÁČIL, Martin REPKO, Zdeněk ŘEHÁK, Jiří SCHOVANEC, Ondřej SLÁMA, Petr SMÍŠEK, Jan STARÝ, Petr SZTURZ, Marek SVOBODA, Vlastimil ŠČUDLA, Roman ŠEFR, Pavel ŠEVČÍK, Pavel ŠLAMPÁ, Lenka ŠMARDOVÁ, Jiří ŠNAJDAUF, Jaroslav ŠTĚRBA, Michal TICHÝ, Jiří TOMÁŠEK, Miroslav TOMIŠKA, Marcela TOMIŠKOVÁ, Vít UNZEITIG, Jiří VANÍČEK, Vladimír VAŠKŮ, Rostislav VYZULA, Barbora WEINBERGEROVÁ, Marie ZÍTKOVÁ and Karel ZITTERBART. *Obecná onkologie (General oncology)*. První vydání. Praha: Galén, 2011. 394 pp. ISBN 978-80-7262-715-8.
- ADAM, Zdeněk, Marta KREJČÍ and Jiří VORLÍČEK. *Speciální onkologie. Příznaky, diagnostika a léčba maligních chorob (Special oncology. Symptoms, diagnostics and therapy of malignant disease)*. 1. vyd. Praha: Galén, 2010. 418 pp. Med. ISBN 978-80-7262-648-9.

not specified

- ADAM, Zdeněk, Marta KREJČÍ and Jiří VORLÍČEK. *Hematologie : přehled maligních hematologických nemocí*. 2., dopl. a zcela přeprac. Praha: Grada, 2008. 390 s.,x. ISBN 9788024725024.
- DÍTĚ, Petr and ET AL. *Vnitřní lékařství*. Druhé vydání. Praha: GALÉN, Na Bělidle 34, 2007. 586 pp. ISBN 978-80-7262-496-6.

Teaching methods

Lessons are taking place in blocks of 14 days. Attendance at the tuition is obligatory. The students work in groups of 5-6 members at the patient's bedside step by step in all specialized departments of the clinic. Expert seminars are the part of education.

Assessment methods

credit

Language of instruction

English

aVLVL9X65c Internal medicine part 5 - Cardiology and Angiology

Faculty of Medicine

autumn / spring

Extent and Intensity

0/3.2/0. 3 credit(s). Type of Completion: z (credit).

Supervisor

prof. MUDr. Jiří Vítovec, CSc.

First Department of Internal Medicine - Cardioangiology - Institutions shared with St. Anne's Faculty Hospital - Faculty of Medicine

Contact Person: prof. MUDr. Lenka Špinarová, Ph.D., FESC

Course objectives

The student should know the basic physical examination and functional tests in cardiology, should interpret ECG and recognize important arrhythmias. He/she must be able to describe basic examination in cardiology. He/she must be able to describe signs and symptoms of the most frequent cardiovascular disease, like hypertension, ischemic heart disease, myocardial infarction, arrhythmias, pulmonary embolism, peripheral artery disease, cardiogenic shock, syncope, pulmonary oedema, aortic aneurysm. He/she must know the basic pathology of congenital and acquired valve disease, endocarditis, myocarditis and pericarditis. He/she must know the cardiovascular pharmacology as well as non-pharmacological treatment including pacing, resynchronisation and defibrillation. He/she must be able to describe the methods in invasive cardiology and cardio surgery. He/she must know the cardiovascular risk factors and to describe the pathophysiology of atherosclerosis.

Learning outcomes

The student have to know the basic physical examination and functional tests in cardiology, should interpret ECG and recognize important arrhythmias. He/she must be able to describe basic examination in cardiology. He/she must be able to describe signs and symptoms of the most frequent cardiovascular disease vide objectives of the subject

Syllabus

- **Cardiology**

Chronic coronary artery disease

stable angina pectoris, silent ischemia angina pectoris inversa, etiology, pathophysiology, differential diagnosis of the chest pain, methods of examination, risk factors, primary and secondary prevention, complications, therapy, prognosis, classification (CCSC)

Acute coronary artery disease

nonstable angina pectoris, acute myocardial infarction, sudden death, etiology and pathophysiology, methods of examination, complications, therapy, prognosis

Myocarditis

virus, bacterial and parainfectious etiology, pathophysiology, methods of examination, complications, relation to dilated cardiomyopathy, prognosis, therapy

Endocarditis

noninfectious, bacterial endocarditis, etiology and pathophysiology, typical forms, high risk population (valvular disease, after valvular replacement, intravenous drug users, immunocompromised patients), methods of examination, differential diagnosis, surgical vs. nonsurgical treatment, indications, prognosis.

Tachyarrhythmias

supraventricular (atrial fibrillation, atrial flutter, other supraventricular tachycardias), ventricular (ventricular tachycardia, fast ventricular tachycardia, ventricular fibrillation), premature beats, etiology, pathophysiology, differential diagnosis, pharmacologic, nonpharmacologic treatment including radiofrequency catheter ablations and implantable cardioverters-defibrillators.

Bradyarrhythmias

sinus bradycardia, rhythm of AV junction, sinoatrial arrest and block, AV block II. and III. ventricular asystole, etiology and pathophysiology, differential diagnosis, syncope, methods of examination, HUT test, pharmacologic treatment, cardiac pacemaker implantation.

Left ventricular insufficiency

acute (Killip classification) etiology, pathophysiology, therapy, chronic, NYHA classification, etiology, pathophysiology, treatment (including heart transplantation), prognosis.

Cor pulmonale

acute (incl. acute pulmonary embolism), chronic, etiology, pathophysiology, differential diagnosis primary pulmonary hypertension, therapy, prognosis

Heart valvular disease

etiology and pathophysiology, congenital, febris rheumatica, single valvular disease, multiple valvular disease, differential diagnosis, complications, pharmacologic, surgical, catheterization therapy, prognosis

Congenital valvular disease in adults

defect of atrial septum, defect of ventricular septum, Fallot tetralogy, Ebstein's anomalia, transposition of main vessels, ductus arteriosus persistens, etiology, pathophysiology, therapy, prognosis

Venous disease

acute vein thrombophlebitis (flebothrombosis), etiology and pathophysiology, extraordinary forms (phlegmasia alba and coerulea dolens) differential diagnosis, methods of examination, complications, therapy, prevention, varicose complex, consequences of recurrent thrombophlebitis, superior and inferior vena cava syndrome.

Arterial disease

ischemic arterial disease, thrombangitis obliterans, acute peripheral artery strokes (embolisation and thrombosis). coarctation of the aorta, aortal dissection, etiology, pathophysiology, differential diagnosis, methods of examination, complications, therapy, prognosis.

Arterial hypertension

essential and secondary hypertension, etiology, pathophysiology, classification methods of examination, complications, therapy, prognosis

Pericarditis and pericardial effusion

virus, bacterial malignant and noninfectious etiology, pathophysiology, differential diagnosis, methods of examination, complications, therapy, prognosis

Cardiomyopathy

definition, primary (idiopathic), secondary (specific), morphologic stratification, hypertrophic, dilated and restrictive), arrhythmogenic right ventricle dysplasia, etiology pathophysiology, differential diagnosis, methods of examination, complications, therapy, prognosis

Methods of examination in cardiology

anamnesis, laboratory assesment, noninvasive methods (electrocardiography, X ray methods, NMR, echocardiography, radionuclear methods, stress examinations, signal averaged ECG, Holter monitoring, heart rate variability, baroreflex sensitivity), invasive (right and left heart cathetrization, coronary angiography, electrophysiology, heart biopsy)

Literature

recommended literature

- *Davidson's principles and practice of medicine*. Edited by Brian R. Walker. 22nd ed. Edinburgh: Churchill Livingstone/Elsevier, 2014. xix, 1372. ISBN 9780702050350.
- SOUČEK, Miroslav, Jindřich ŠPINAR, Jiří VORLÍČEK, Zdeněk ADAM, Dagmar ADÁMKOVÁ KRÁKOROVÁ, Lenka BABIČKOVÁ, Karola BALŠÍKOVÁ, Drahomíra BARTOŠOVÁ, Otakar BEDNAŘÍK, Richard BERGER, Šárka BOHATÁ, Petr BRHEL, Tomáš BRYCHTA, Yvona BRYCHTOVÁ, Alena BULIKOVÁ, Petr BURKOŇ, Ivan ČAPOV, Aleš ČERMÁK, Eva ČEŠKOVÁ, Milan DASTYCH, Regina DEMLOVÁ, Petr DÍTĚ, Jiří DOLINA, Michael DOUBEK, Martina DOUBKOVÁ, Lenka DUBSKÁ, Ladislav DUŠEK, Pavel FABIAN, Vuk FAIT, Zdeněk FOJTÍK, Lenka FORETOVÁ, Tomáš FREIBERGER, Renata GAILLYOVÁ, Roman GÁL, Ladislav GROCH, Marek HAKL, Jana HALÁMKOVÁ, Aleš HEP, Jitka HILLOVÁ MANNOVÁ, Ota HLINOMAZ, Ivo HOFÍREK,

Jan HOLČÍK, Alena HOLČÍKOVÁ, Alena HONDLOVÁ, Anna HRAZDIROVÁ, Jan HRUDA, Petr HUSA, Libuše HUSOVÁ, Richard CHALOUPKA, Václav CHALOUPKA, Josef CHOVANEC, Stanislav JANOUŠEK, Jana JURÁNKOVÁ, Ladislav KABELKA, Zdeněk KADAŇKA, Bohdan KADLEC, Zdeněk KALA, Bohuslav KIANIČKA, Dagmar KINDLOVÁ, Igor KISS, Jarmila KISSOVÁ, Martin KLABUSAY, Ivo KOCÁK, Jiří KÖNIG, Jana KOPTÍKOVÁ, Zdeněk KOŘÍSTEK, Zdeněk KRÁL, Milan KRATOCHVÍL, Lenka KRBKOVÁ, Marta KREJČÍ, Petr KRIFTA, Petr KROUPA, Darja KRUSOVÁ, Lucie KŘIKAVOVÁ, Růžena LÁBROVÁ, Radek LAKOMÝ, Jan LATA, Jolana LIPOLDOVÁ, Jiří LITZMAN, Ondřej LUDKA, Jan MALÁSKA, Hana MATĚJOVSKÁ KUBEŠOVÁ, Jiří MATOUŠEK, Pavel MATUŠKA, Miloslava MATYŠKOVÁ, Jaroslav MELUZÍN, Hana MELUZÍNOVÁ, Zdeněk MERTA, Blanka MIČÁNKOVÁ ADAMOVÁ, Miroslav MORÁŇ, Vojtěch MORNSTEIN, Jan MUŽÍK, Tomáš NEBESKÝ, Anna NEČASOVÁ, Marta NEDBÁLKOVÁ, Miroslava NEKULOVÁ, Petr NĚMEC, Jiří NEUBAUER, Pavel NOHEL, Jana BĚLOBRÁDKOVÁ, Miroslav NOVÁK, Bronislava NOVOTNÁ, Petr ŠTOURAČ and Vojtěch THON. *Vnitřní lékařství (Internal Medicine)*. 1.vyd. Praha, Brno: Grada, 2011. 1788 pp. Vnitřní lékařství. ISBN 978-80-247-2110-1.

Teaching methods

Course is organized as 10 days intership at cardiological clinics. Course is composed of collective seminars to the given topics and practical bed-side demonstrations in small groups.

Assessment methods

The condition for giving course unit credit is full attendance in all lessons and completion of final credit.

Language of instruction

English