



UČNI NAČRT PREDMETA / SUBJECT SPECIFICATION

Predmet:	Infekcijske bolezni
Subject Title:	Infectious diseases

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
Splošna medicina General medicine - EMŠP		5	10

Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Klin. vaje Clin. work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
15	30		15		90	5

Nosilec predmeta / Lecturer: Izred. prof. dr. Gorazd Lešničar

Jeziki / Languages: Predavanja / Lecture: Slovenski/Slovene
Vaje / Tutorial: Slovenski/Slovene

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Prerequisites:

Vsebina:

Uvod v infekcijske bolezni, klinični in laboratorijski znaki vnetja.
Bakterijske okužbe: stafilokokne, streptokokne, pertusis, tetanus, botulizem, davica, leptospiroze, lymska borelijoza.
Virusne okužbe, ki jih povzročajo: enterični virusi, respiratorni sincicijski virusi, adenovirusi, herpes virusi, varicela-zoster virus, citomegalovirus, Epstein-Barr virus, virus influence in parainfluence, virusi hepatitisa, ošpice, rdečke, exanthema subitum, exanthema infectiosum, AIDS, klamidijske okužbe, rikezioze. Parazitarne bolezni: trihineloz, malarija, tripanosomioza. Zoonoze: antraks, bruceloza, lišmanioza, tularemija. Bolezenski sindromi: bakterijski meningitisi, serozni meningitisi, encefalitisi, bakterijske in atipične pljučnice, črvesne okužbe, hemoragične mrzlice, nejasna vročinska stanja, sepsa, izpuščajne bolezni, sindrom utrujenosti.
Tematsko posodabljanje predavanj zahteva dodatek ali razširitev poglavij s spoznanji o

Content (Syllabus outline):

Introduction to infectious diseases, clinical and laboratory signs of inflammation.
Bacterial infections: staphylococcal, streptococcal, pertusis, tetanus, botulism, diphtheria, leptospirosis, Lyme boreliosis.
Viral infections caused by enteroviruses, intestinal respiratory viruses, adenoviruses, herpes viruses, varicella-zoster virus, cytomegalovirus, Epstein-Barr virus, influenza and parainfluenza virus, hepatitis, rubella, exanthema subitum, exanthema infectiosum, AIDS; chlamidia, rickettsia infections.
Parasitic infestations: trichinellosis, malaria, trypanosomiasis. Zoonoses: anthrax, brucellosis, leishmaniasis, tularemia. Disease syndromes: bacterial meningitis, serous meningitis, encephalitis, bacterial and atypical pneumonias, intestinal infections, hemorrhagic fever, unexplained fever conditions, sepsis, cutaneous rash, fatigue syndrome.
{0>Tematsko posodabljanje predavanj zahteva dodatek ali razširitev poglavij s spoznanji o vse

vse bolj aktualnih infekcij (okužbe pri imunsko oslabljenih osebah, transplantiranih, nosilcih umetnih materialov, bolnišnične okužbe, okužbe v tropskih razmerah oz. na potovanjih, bioterrorizem).

Infektologija za odrasle bolnike

Študent mora spoznati in obvladati diagnostični in terapevtski pristop pri bolniku s sumom na infektivno bolezen oziroma pri vročičnem bolniku, spoznati mora značilnosti okužb glede na prizadeti organski sistem (npr. okužb osrednjega živčevja, dihal, prebavil, sečil, spolovil, mišic, kosti in sklepov, kože in podkožja), značilnosti nekaterih boleznih oziroma bolezenskih stanj (npr. virusni hepatitis, AIDS, lymfska borelijoza, infektivni endokarditis, sepsa, septični šok, pogostejše tropske bolezni), značilnosti okužb pri bolnikih z ohranjeno ali okvarjeno imunostjo in/ali vgrajenimi umetnimi materiali, ukrepe za preprečevanje nalezljivih bolezni, doktrino racionalne uporabe antibiotikov, protivirusnih, protiglivičnih in protiparazitnih zdravil, kakor tudi pristope za odkrivanje, dokazovanje, zdravljenje in preprečevanje bolnišničnih okužb.

Pediatrska infektologija

Specializant spozna značilnosti in osvoji znanje o etiologiji, epidemiologiji, kliničnih simptomih in znakih, zdravljenju in preprečevanju okužb pri otrocih v različnih starostnih obdobjih. Usposobi se tudi za interpretacijo rezultatov laboratorijskih testov, še posebno tistih, ki se razlikujejo od ugotovitev pri odraslih bolnikih.

Intenzivna in urgentna infektologija

Specializant se seznani s prepoznavanjem, diagnostiko in zdravljenjem akutnih infektivnih bolezni, ki ogrožajo življenje in ki potrebujejo intenzivno zdravljenje, kakor tudi s preprečevanjem okužb in pravili bolnišnične higiene na oddelku za intenzivno terapijo.

Sklopi naslovnih tem predavanj:

STREPTOKOKNE OKUŽBE:

- streptokokno vnetje žrela (tonsillopharyngitis)
- škrlatinka (scarlatina)
- šen (erysipelas)
- impetigo - pyoderma
- pnevmokokne okužbe
- druge

bolj aktualnih infekcij (okužbe pri imunsko oslabljenih osebah, transplantiranih, nosilcih umetnih materialov, bolnišnične okužbe, okužbe v tropskih razmerah oz. na potovanjih, bioterrorizem). Updating of lecture themes requires an addition or extension of chapters with new findings on nowadays topical infections (in immune-deficient persons, transplant recipients, recipients of artificial materials, hospital infections, tropic areas- or travel-related infections, bioterrorism).

Infectology in adult patients

Students shall learn and become proficient in the diagnostic and therapeutic approach to patients with suspected infectious disease or febrile condition, learn about infection characteristics with respect to organ system affected (e.g. infections of the central nervous-, respiratory-, gastrointestinal-, urinary system, reproductive organs, muscles, bones and joints, skin and subcutaneous tissues), the characteristics of certain diseases or pathologic conditions (e.g. viral hepatitis, AIDS, Lyme borreliosis, infectious endocarditis, sepsis, septic shock, more frequent tropic diseases), characteristics of infections in patients with preserved or damaged immunity and/or inserted artificial materials, measures for prevention of infectious diseases, doctrine of rational use of antibiotics, antiviral, antifungal and anti-parasitic medications, as well as approaches for the detection, verification, treatment and prevention of hospital infections.

Paediatric infectology

Residents learn and acquire knowledge of etiology, epidemiology, clinical symptoms and signs, treatment and prevention of infection in children in different age periods. They become proficient in the interpretation of the findings of laboratory tests, particularly the ones that differ from those in adult patients.

Intensive and emergency infectology

Residents become acquainted with the identification, diagnosis and treatment of acute life-threatening infectious diseases, which require intensive therapy, as well as with the prevention of infections and rules of hospital hygiene in the unit of intensive therapy.

Sets of lecture title themes:

STREPTOCOCCAL INFECTIONS:

- streptococcal inflammation of the pharynx (tonsillopharyngitis);
- Scarlet fever (scarlatina)
- Erysipelas

STAFILOKOKNE OKUŽBE

- stafilokokne okužbe kože
- stafilokokna pljučnica
- stafilokokni meningitis
- stafilokokna sepsa
- stafilokokni endokarditis
- stafilokokni perikarditis
- stafilokokni osteomielitis
- stafilokokni artritis
- sindrom toksičnega šoka

OKUŽBE Z ANAEROBI

- tetanus
- botulizem
- druge klostridijske bolezni
- davica

OKUŽBE S HERPES VIRUSI

- s herpes simplex virusom tip 1, 2, 6
- s citomegalovirusom
- z varicela - zoster virusom (varicella, herpes zostere)
- z Epstein Barrovim virusom (mononucleosis infectiosa)

ČREVESNE OKUŽBE:

Salmoneloze

- trebušni tifus
- paratifus A, B
- akutni enterokolitis

Griža (dysentria)

Kampilobakterioza

Zastrupitev s hrano - stafilokokna

- Clostridium perfringens
- Bacillus cereus

Jersinioza

Kolera

Virusni enterokolitisi

- rotavirusni
- norwalk virusni
- adenovirusni
- astrovirusni

Driske na potovanjih

Driske pri imunsko motenih bolnikih

Driske povzročene z E. coli

Driske povzročene z aeromonas sp.

Driske povzročene s Clostridium difficile

OKUŽBE OSREDNJEGA ŽIVČEVJA

Gnojni (bakterijski) meningitis

- meningokokni meningitis
- Pneumokokni meningitis
- Hemofilusni meningitis
- Listerijski meningitis

- Impetigo - pyoderma
- Pneumococcal infections
- Others

STAPHYLOCOCCAL INFECTIONS

- staphylococcal infections of the skin
- staphylococcal pneumonia
- staphylococcal meningitis
- staphylococcal sepsis
- staphylococcal endocarditis
- staphylococcal pericarditis
- staphylococcal osteomyelitis
- staphylococcal arthritis
- toxic shock syndrome

ANAEROBIC INFECTIONS

- tetanus
- botulism
- other clostridial diseases
- diphtheria

HERPES VIRUS INFECTIONS

- with herpes simplex virus types 1, 2 and 6
- with cytomegalovirus
- with varicella, herpes zoster virus
- with Epstein-Barr virus (mononucleosis infectiosa)

INTESTINAL INFECTIONS:

Salmonelloses

- typhoid fever
- paratyphoid fever A, B
- acute enterocolitis

Bloody diarrhea (dysentria)

Campylobacteriosis

Food poisoning - staphylococcal

- Clostridium perfringens
- Bacillus cereus

Yersiniosis

Cholera

Viral enterocolitis infections

- rotaviral infections
- Norwalk virus infections
- adenoviral
- astroviral

Travel-related diarrheas

Diarrheas in immune-deficient patients

E. coli-caused diarrheas

Aeromonas sp.-caused diarrheas

Clostridium difficile -caused diarrheas

CENTRAL NERVOUS SYSTEM INFECTIONS

Purulent (bacterial) meningitis

- meningococcal meningitis
- pneumococcal meningitis

- Stafilokokni meningitis
- Gramnegativni bacilarni meningitis

Serozni meningitisi, meningoencefalitisi

- tuberkulozni meningitis
- leptospirozni meningitis
- borelijski meningitis
- brucelozni meningitis
- mikoplazmatski meningitis
- klopni meningoencefalitis
- herpetični (HSV tip 1, 2) meningoencefalitis
- enterovirusni meningoencefalitisi
- glivični meningoencefalitis
- parazitični meningoencefalitis

OKUŽBE DIHAL

Tonsilofaringitis

Bakterijske pljučnice

Atipične pljučnice:

- klamidijske okužbe
- mikoplazemske okužbe
- legioneloze
- Q mrzlica

Oslovski kašelj (pertussis)

Influenca

Parainfluenca

Virusna prehladna obolenja

Adenoviroze

IZPUŠČAJNE BOLEZNI

Ošpice (morbili)

Rdečke (rubella)

Erythema infectiosum

Exanthema subitum

Norice (varicella) - herpes zoster

Rikecizioze

VIRUSNI HEPATITISI - A, B, C, D, E, G, H

PARAZITNE BOLEZNI

Toksoplazmoza

Lamblioza

Tenioza - cisticerkoza

Ehinokokoza

Trihinelozna

Filarioza

Okužbe s pneumocistis carinii

ZOONOZE

Listerioza

Bruceloza

Tularemija

Lymfska borelijoza

Erlinioza

Vranični prisad (antraks)

Bolezni mačje opraskanine

Steklina (rabies)

- Haemophilus influenzae-caused meningitis
- listerial meningitis
- staphylococcal meningitis
- gram-negative bacterial meningitis

Serous meningitis, meningoencephalitis

- tuberculous meningitis
- leptospirosis-caused meningitis
- Borellia-caused meningitis
- brucelous meningitis
- mycoplasma meningitis
- tick-borne meningoencephalitis
- herpetic (HSV type 1, 2) meningoencephalitis
- enteroviral meningoencephalitis
- fungal meningoencephalitis
- parasitic meningoencephalitis

RESPIRATORY INFECTIONS

Tonsilopharyngitis

Bacterial pneumonias

Atypical pneumonias

- chlamydial infections
- mycoplasmic infections
- legionelloses
- Q fever

Whooping cough (pertussis)

Influenza

Parainfluenza

Viral cold-related diseases

Adenoviroses

RASH DISEASES

Measles (morbili)

German measles (rubella)

Infectious erythema

Exanthema subitum

Varicella - herpes zoster

Rickettsioses

VIRAL HEPATITISES - A, B, C, D, E, G, H

PARASITIC DISEASES

Toxoplasmosis

Lambliosis

Teniosis - cysticercosis

Echinococcosis

Trichinosis

Filarosis

Pneumocystis carinii infections

ZOONOSES

Listeriosis

Brucellosis

Tularaemia

Lyme borreliosis

Ehrlichiosis

Anthrax

Cat-scratch diseases

TROPSKE BOLEZNI
Malaria
Amebiaza
Lišmanioza
Tripanosomoza
Shistosomoza
Hemoragične mrzlice:
- rumena mrzlica
- Denga
- Hantan mrzlica
- Lassa mrzlica
- Marburg mrzlica
- Ebola
Leptospiroze
Kuga
GLIVIČNE OKUŽBE
NOZOKOMIALNE (BOLNIŠNIČNE) OKUŽBE
HIV okužba - AIDS
OKUŽBE PRI IMUNSKO MOTENIH BOLNIKI
OKUŽBE PRI NOSILCIH UMETNIH MATERIALOV
OKUŽBE PRI TRANSPLANTIRANCIH
VROČINA NEZNANEGA IZVORA (STATUS FEBRILIS)
NAJPOMEMBNEJŠI SIMPTOMI IN ZNAKI PRI
OPISOVANJU IN DIAGNOSTICIRANJU
INFEKCIJSKIH BOLEZNI:
vročina
diplopija
mrzlica
fotofobija
bolečina
nistagmus
krvavitev
anizokorija
hujšanje
midrijaza
utrujenost
mioza
splošno bolezensko počutje
dispnoa
hipotermija
hiperventilacija
neredno dihanje
bolečine pri dihanju
nenadna smrt
bolečine v prsih
lokalna in generalizirana limfadenopatija
nauzea
cianoza
vomit
ikterus
bolečine v trebuhu
lokalna rdečina kože
napetost preko pasu
kožni izpuščaji
diareja
hemoragična diateza
primes sluzi, krvi v blatu
pik žuželke

Rabies
TROPICAL DISEASES
Malaria
Amebiasis
Leishmaniasis
Trypanosomiasis
Schistosomiasis
Haemorrhagic fevers:
- yellow fever
- Dengue fever
- Hantan fever
- Lassa fever
- Marburg fever
- Ebola
Leptospiroses
Plague
FUNGAL INFECTIONS
NOSOCOMIAL (HOSPITAL) INFECTIONS
HIV infection - AIDS
INFECTIONS IN IMMUNE-DEFICIENT PATIENTS
INFECTIONS IN ARTIFICIAL MATERIAL
RECIPIENTS
INFECTIONS IN TRANSPLANT RECIPIENTS
FEBRILE CONDITION OF UNKNOWN ORIGIN
(STATUS FEBRILIS)
MOST IMPORTANT SIGNS AND SYMPTOMS IN
DESCRIBING AND DIAGNOSING INFECTIOUS
DISEASES:
fever
diplopia
chills
photophobia
pain
nystagmus
hemorrhage
anisochoria
loss of body weight
mydriasis
fatigue
miosis
general feeling of illness
dyspnea
hypothermia
hyperventilation
irregular breathing
painful breathing
sudden death
pain in the chest
local and generalized lymphadenopathy
nausea
cyanosis
vomiting
icterus (jaundice)
pain in the abdomen
local erythema of the skin
tension in the waist area
cutaneous rash
diarrhea

pekoča mikcija	hemorrhagic diatesis
rana	presence of mucus and/or blood in stool
polakisurija	insect sting
glavobol	burning sensation on urination
oligurija	wound
trizmus	polakisuria
anurija	headache
bolečine v zatilju	oliguria
bolečine v ledjih	trismus
otrplost tilnika	anuria
motnje zavesti	pain in the nape of the neck
epistaksa	pain in the loins
parestezije	neck stiffness
nahod	consciousness disorders
tremor	epistaxis
strabizem	paresthesias
mišični krči	rhinitis (runny nose)
	tremor
paralize	strabismus
Razen opisov klasičnih infekcijskih bolezni in okužb posameznih organov bomo od študentov zahtevali tudi poznavanje patofiziološkega razumevanja in diferencialno diagnostiko komatoznih stanj, septičnega šoka, ARDS, dehidracije in akutne ledvične odpovedi ter razumevanje pojmov medsebojnih odnosov med makro in mikro organizmom (saprofit - komerzal - parazit - patogen; infekt - infekcijska bolezen; virulenca; rezistenca; imunost).	muscle spasms
	paralysis
	Besides being able to describe classical infectious diseases and individual organ infections, the students will be expected to understand patho-physiology and differential diagnosis of comatous conditions, septic shock, ARDS, dehydration and acute renal failure; they should also be able to explain the terms associated with relationship between macro- and microorganism (saprophyte - commensal - parasite - pathogen; infectant - infectious disease; virulence; resistance; immunity).

Temeljni literatura in viri / Textbooks:

Temeljna

- Marolt-Gomišček M, Radšel-Medvešček A. Infekcijske bolezni, Tangram, Ljubljana 2002.

Dopolnilna

- Poglavlje o infekcijskih boleznih v učbeniku Isselbacher in sod., Harrison's Principle of Internal Medicine, McGraw Hill, New York (16. izdaja 2005).
- Mandel GL, Bennett JE, Dolin R. Principles and Practice of Infectious Diseases. Churchill Livingstone, Philadelphia, 2005.
- Armstrong D, Cohen J. Infectious Diseases. Mosby, London, 1999.
- Loeb M, Smieja M, Smail F. Evidence-based Infectious diseases B MJ, London, 2004.
- Mayhall CG. Hospital epidemiology and Infection Control. Lippincott Williams and Wilkins. 3. izdaja. Philadelphia, 2004.
- Begovac J, Božinović D, Lisić M et al. Infektologija. Profil. Zagreb, 2006.
- Čizman M, Strle F. Infektološki simpoziji 1995-2007, Medicinski razgledi. Ljubljana, v l. 1995-2007.
- Gorišek-Reberšek J. in sod. Bedjaničevi simpoziji, SB Maribor, Maribor, v l. 1997-2007.

Cilji:

Študent pri pouku spoznava epidemiološke, patofiziološke, etiopatogenetske in klinične značilnosti infekcijskih bolezni, lastnosti povročiteljev (patogenost, virulenca, itd.) in gostiteljev (dovzetnost, nagnjenost, itd.) ter njihove medsebojne odnose. Spozna in zna razlikovati bolezenska dogajanja pri različnih patogenetskih oblikah infekcijskih bolezni, (tako lokalnih, kot sistemskih). Seznani se s

Objectives:

Students learn about epidemiological, patho-physiological, etio-pathogenetic and clinical characteristics of infectious diseases, causative agent (pathogenic potential, virulence, etc.) and host (susceptibility, inclination, etc.) properties and their interrelations. They learn to distinguish between different pathogenetic forms of infectious diseases (local as well as systemic). They get acquainted with

posebnostmi anamneze in klinične preiskave pri infekcijskih boleznih, mikrobiološkim in serološkim dokazovanjem povzročiteljev, osnovami racionalne uporabe antibiotikov, kemo- in imunoprofilakse ter z aktualnim epidemiološkim stanjem infekcijskih bolezni pri nas in v svetu. Tako razume bolezenska dogajanja in je sposoben samostojno ocenjevati načine preprečevanja in zdravljenja teh bolezni.

Predvideni študijski rezultati:

Znanje in razumevanje:

- prepoznavanje klinične slike
- uvajanje diagnostičnih preiskav
- diferencialno-diagnostična presoja
- zdravljenje bolezni

Prenesljive/ključne spretnosti in drugi atributi:

- poznavanje osnovnih higienskih principov
- obvladovanje antibiotične profilakse in zdravljenja

Metode poučevanja in učenja:

- predavanja z avdio-vizuelno podporo
- seminarji
- klinične vaje

specificity of anamnesis and clinical examination in infectious diseases, microbiological and serological verification of causative agents, basics of rational use of antibiotics, chemo- and immunoprophylaxis, and with current epidemiological situation in the area of infectious diseases in the country and abroad. Thus, they understand pathological occurrences and are able to independently consider possible preventive measures and treatment of these diseases.

Intended learning outcomes:

Knowledge and Understanding:

- recognition of clinical picture
- implementation of diagnostic investigations
- differential-diagnostic evaluation
- treatment of diseases

Transferable/Key Skills and other attributes:

- knowledge of the basic principles of hygiene
- knowledge of antibiotic prophylaxis and treatment

Learning and teaching methods:

- lectures with audio-visual support
- seminars
- clinical work

Načini ocenjevanja:

Delež (v %) /
Weight (in %)

Assessment:

- pisni izpit

100 %

- written examination