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MEDICAL UNIVERSITY - PLEVEN **FACULTY OF MEDICINE**

**DEPARTMENT OF INFECTIOUS DISEASES,
EPIDEMIOLOGY, PARASITOLOGY AND
TROPICAL MEDICINE**

PROGRAM OF STUDY

IN

„INFECTIOUS DISEASES“


ENGLISH MEDIUM COURSE OF TRAINING

SPECIALTY OF MEDICINE

ACADEMIC DEGREE MASTER PROFESSIONAL QUALIFICATION

DOCTOR OF MEDICINE

Developed by: Assoc. Prof. G. Gancheva, MD, PhD	Approved by: Prof. A. Asparuhov, DSc	Endorsed by: Faculty Council	Copy № 1
1.09.2015 /date, signature/ /date, signature/	Protocol № 27/09.06.2016	Valid from: 1.09.2015

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According to the unified state requirements: compulsory

According to the curriculum: compulsory

Academic year: 2019/2020

Total number of hours: – 48 acad. hours (26 acad. hours for lectures and 32 acad. hours for practical exercises)

Total credits: 7.5

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Teaching team:

Assoc. Prof. Galya Gancheva, MD, PhD – University Hospital “Dr Georgi Stranski” – Pleven, Clinic of Infectious Diseases, phone +359 64 886 416, +359 64 886 411 – lectures, practical exercises, theoretical and practical exam

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Assist. Prof. Radomir Dobrev, MD – University Hospital “Dr Georgi Stranski” – Pleven, Clinic of Infectious Diseases, phone +359 64 886 413, +359 64 886 411 – practical exercises, practical exam

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1. Annotation:

Infections and infectious diseases are a great burden on many societies over the world. To reduce that burden an integrated approach is required, combining health promotion, disease prevention and patient treatment. The prerequisite for success in this fight is the participation of all health care professionals. Medical doctors, as major frontline providers of care, are in a position to contribute significantly to reducing the burden. The quality of education of medical students in the field of infectious diseases is crucial prerequisite for their future work.

The **aim of education** according to the present program is developing a knowledge, skills and attitudes of medical students regarding infections and infectious diseases and their prevention and control.

The training comprises thirteen lectures and sixteen practical exercises divided in two semesters according to the program for teaching of Infectious Diseases in Medical University – Pleven. It has structured to ensure that, after training, medical students have a broad and up-to-date knowledge of infections and infectious diseases. Each section can also be used independently to develop knowledge in a specific area. Knowledge about infectious diseases has undergone an extraordinary expansion during the years. During that time, previously unrecognized infections have emerged, and awareness of the role of microbes as potential agents of terrorism has been heightened. The population of patients whose host defenses are compromised by underlying diseases or by medical treatments continues to increase, and this has resulted in increasingly complex and challenging infections. In those years, important new advancements were made in the development of highly sensitive and specific diagnostic techniques, in antimicrobial therapy, in vaccines, and in appreciation of public health control measures against the spread of infectious diseases.

Materials for education are integrated in the System for online education () for usage in the students' self-training.

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2. Anticipated results – after completed course of education, the students will

- possess theoretical knowledge about etiology, pathogenesis, clinical features, diagnostic and therapeutic management of infectious and tropical diseases and their social and economic burden;
- be able to take informative history and physical examination of patients with infectious diseases, to group symptoms in syndromes, to prepare plan for diagnosis (and differential diagnosis) and treatment;
- have algorithms for different emergent situations at infectious (and not only) diseases;
- be familiar with measures for prevention during a contact with infectious patient.

3. Forms of education:


- Lectures
- Practical exercises
- Individual work
- Consultations

4. Methods of education:

- Presentations of lectures
- Practical exercises
- Work on practical tasks
- Individual work with recommended literature
- Tests

5. Thematic schedule of the material for infectious diseases:

PROGRAM OF THE LECTURES COURSE OF INFECTIOUS DISEASES AND TROPICAL MEDICINE FOR THE FIFTH YEAR MEDICAL STUDENTS		
№	Theme	hours
1.	INFECTION, INFECTIOUS PROCESS AND INFECTIOUS DISEASES	2
2.	BOWEL DISEASES – TYPHOID FEVER, SALMONELLOSIS, SHIGELLOSIS, COLIENTERITIS, CHOLERA, BOTULISM – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES.	2
3.	BOWEL DISEASES – DIAGNOSIS, DIFFERENTIAL DIAGNOSIS; TREATMENT – ETIOLOGICAL AND SUPPORTIVE TREATMENT.	2
4.	INFECTIONS OF THE CENTRAL NERVOUS SYSTEM (CNS) – MENINGOCOCCAL INFECTIONS, BACTERIAL MENINGITIS, VIRAL INFECTIONS OF THE CNS – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES.	2
5.	INFECTIONS OF THE CNS – DIAGNOSIS, DIFFERENTIAL DIAGNOSIS; TREATMENT – ETIOLOGICAL AND SUPPORTIVE TREATMENT.	2
6.	VIRAL HEPATITIS – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES, DIAGNOSIS, DIFFERENTIAL DIAGNOSIS, TREATMENT. ACUTE LIVER FAILURE.	2
7.	HAEMORRHAGIC FEVERS – CONGO-CRIMEAN HAEMORRHAGIC FEVER, HAEMORRHAGIC FEVER WITH RENAL SYNDROME. YELLOW FEVER. LEPTOSPIROSIS.	2
8.	INFECTIOUS DISEASES WITH EXANTHEMA – MEASLES, RUBELLA, CHICKENPOX, SCARLET FEVER.	2
9.	DIPHTHERIA. TETANUS	2
10.	RICKETTSIAL DISEASES – EPIDEMIC TYPHUS FEVER, BOUTONEUS	2

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	FEVER, Q FEVER.	
11.	HUMAN IMMUNODEFICIENCY VIRUS, AIDS; OPPORTUNISTIC INFECTIONS.	2
12.	LYME DISEASE.	2
13.	TREATMENT OF INFECTIOUS DISEASES.	2
14.	TROPICAL MEDICINE – DENGUE AND DENDGUE FEVER. ARBOVIRAL ENCEPHALITIS AND ENCEPHALOMYELITIS.	2
15.	TROPICAL MEDICINE – PLAGUE, LEPROSY.	2
	TOTAL	30

**PROGRAM FOR PRACTICAL EXERCISES AT INFECTIOUS DISEASES AND
TROPICAL MEDICINE
ENGLISH TEACHING SUMMER TERM**

№	Theme	hour
1.	TAKING A HISTORY AND PHYSICAL EXAMINATION OF A PATIENT WITH INFECTIOUS DISEASE.	2
2.	BOWEL INFECTIONS – TYPHOID FEVER, SHIGELLOSIS, SALMONELLOSIS, CHOLERA, COLIENTERITIS – ETIOLOGY, CLINICAL FEATURES, DIAGNOSIS, DIFFERENTIAL DIAGNOSIS.	2
3.	BOWEL INFECTIONS – DEHYDRATION – DEGREES, CLINICAL FEATURES, HYPOVOLEMIC SHOCK. MANAGEMENT AND TREATMENT.	2
4.	BACTERIAL INFECTIONS OF THE CENTRAL NERVOUS SYSTEM – CLINICAL FEATURES, DIAGNOSIS, DIFFERENTIAL DIAGNOSIS, TREATMENT.	2
5.	VIRAL INFECTIONS OF THE CENTRAL NERVOUS SYSTEM – DIAGNOSIS, DIFFERENTIAL DIAGNOSIS, TREATMENT.	2
6.	PRELIMINARY EXAMINATION. BOTULISM.	2
7.	MEASLES, RUBELLA, CHICKENPOX, MUMPS (PAROTITIS), INFECTIOUS MONONUCLEOSIS.	2
8.	DIPHThERIA, SCARLET FEVER, WHOOPING COUGH (PERTUSSIS), INFLUENZA.	2
9.	TROPICAL MEDICINE – WEST-NILE ENCEPHALITIS. THICK BORNE ENCEPHALITIS. SANDFLY FEVER. DENGUE AND DENDGUE FEVER. ARBOVIRAL ENCEPHALITIS AND ENCEPHALOMYELITIS.	2
10.	TROPICAL MEDICINE – BARTONELLOSIS. FELINOSIS (CAT-SCRATCH DISEASE). MURINE TYPHUS.	2
	TOTAL	20

**PROGRAM FOR PRACTICAL EXERCISES AT INFECTIOUS DISEASES AND
TROPICAL MEDICINE
ENGLISH TEACHING WINTER TERM**

№	Theme	hour
1.	VIRAL HEPATITIS – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES.	2
2.	VIRAL HEPATITIS – DIAGNOSIS, DIFFERENTIAL DIAGNOSIS, TREATMENT. ACUTE LIVER FAILURE – FEATURES AND	2

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	MANAGEMENT.	
3.	HIV/AIDS.	2
4.	TETANUS. ANTHRAX. RABIES. SEROTHERAPY.	2
5.	LEPTOSPIROSIS – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES, DIAGNOSIS, DIFFERENTIAL DIAGNOSIS, TREATMENT. ACUTE RENAL FAILURE – MANAGEMENT AND TREATMENT.	2
6	PRELIMINARY EXAMINATION. POLIOMYELITIS.	2
7.	HAEMORRHAGIC FEVERS – CONGO-CRIMMEAN HAEMORRHAGIC FEVER, HAEMORRHAGIC FEVER WITH RENAL SYNDROME.	2
8.	LYME DISEASE, BOUTOUNEUS FEVER – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES, DIAGNOSIS, TREATMENT.	2
	TOTAL	16

6. THESES OF INFECTIOUS DISEASES

6.1. THESES OF THE LECTURES

1. INFECTIONS, INFECTIONS PROCESS AND INFECTIONS DISEASES /2 h/.

Infection – a conflict between two organisms (microbial pathogens, host response). Categories of infections: symptomatic (disease), asymptomatic (unapparent), persistent infection. Defense of the host: innate and adaptive (acquired). Microbes – how do they overcome the host defense? Environment: flooding, war, refugees, economic, social, political changes. Dual infections. Symptoms and syndromes of infectious diseases. Outcome of infectious diseases. Infectious diseases – great diversity.

2. BOWEL DISEASES – TYPHOID FEVER, SALMONELLOSIS, SHIGELLOSIS, COLIENTERITIS, CHOLERA, BOTULISM – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES /2 h/.


Definition of infectious diarrhea. Magnitude of the problem. Causes of diarrheal infections. Pathogenesis of localized infection. Two common clinical syndromes: inflammatory (dysentery), non-inflammatory. Shigellosis. Cholera. Salmonellosis. Food-associated infections. Escherichia coli infections. System infection: enteric (typhoid) fever. Botulism.

3. BOWEL DISEASES – DIAGNOSIS, DIFFERENTIAL DIAGNOSIS; TREATMENT – ETIOLOGICAL AND SUPPORTIVE /2 h/.

Management of patient with infectious diarrhea: history, physical examination, decision where to treat. Laboratory investigations: biochemistry, microbiology tests: stool culture, blood culture, toxin and antigen detection. Differential diagnosis, esp. acute abdominal emergency. Therapy: fluid and electrolyte replacement (oral, intravenous); antimicrobials-rational approach; antidiarrheal therapy; diet, early re-alimentation in children. Probiotics. Prevention: general public measures. Vaccine preventable diarrheal diseases.

4. INFECTIONS OF THE CENTRAL NERVOUS SYSTEM (CNS) – MENINGOCOCCAL INFECTIONS, BACTERIAL MENINGITIS, VIRAL INFECTIONS OF THE CNS – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES /2 h/.

Clinical syndromes of CNS infections: bacterial meningitis, viral meningitis, encephalitis (mainly viral), focal infections: brain abscess, subdural empyema, infectious thrombophlebitis. *Bacterial meningitis* – predisposing conditions. Changed epidemiology. Signs of meningeal irritation, focal signs. Peculiarities in infants, elderly, immunocompromised, severely depressed. Clinical clue and settings. Lumbar puncture (LP) – after mandatory fundoscopy. CSF findings in bacterial meningitis. *Meningococcal disease*: asymptomatic carriage, meningococcal nasopharyngitis, meningococcal meningitis, meningococcaemia, fulminant meningococcaemia

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(Waterhouse-Friderixen syndrome). *Viral infections of CNS*. Neurotropic viruses. Clinical syndromes: acute aseptic meningitis, acute encephalitis or meningoencephalitis. Aseptic meningitis with bacterial etiology. Meningeal irritation, neurologic sign: mild or fleeting.

5. INFECTIONS OF THE CNS – DIAGNOSIS, DIFFERENTIAL DIAGNOSIS; TREATMENT – ETIOLOGICAL AND SUPPORTIVE /2 h/.

Differential diagnosis of aseptic meningitis: parameningeal, tuberculous, parasitic and fungal meningitis, lymphomatous and carcinomatous meningitis, granulomatous, vasculitic, sarcoidosis, Behcet disease, partially treated bacterial meningitis. Adjuvant therapy: dexamethasone before start of antibiotic therapy; diuretics – mannitol, furosemide, glycerol, sedatives, controlling aggravating factors.

Antimicrobial therapy: start on Gram stain result, or based on patient age and underlying disease status, pharmacological properties of antimicrobials, duration of course and doses. Antiviral treatment for HSV. Vaccines. Postexposure antibiotics for prophylaxis.

6. VIRAL HEPATITIS – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES, DIAGNOSIS, DIFFERENTIAL DIAGNOSIS, TREATMENT. ACUTE LIVER FAILURE /2 h/.

Hepatotropic viruses. Natural history of acute viral hepatitis: subclinical disease, self-limited symptomatic disease, fulminant hepatic failure. Clinical manifestation of acute viral hepatitis. Laboratory findings. Serological profiles. VHA: without chronic course or carriage. VHB: definite propensity for chronicity. VHC: indolent and silent hepatitis with the highest rate of chronicity. VHD-coinfection, superinfection. VHE with great case fatality rate among pregnant women. Fulminant hepatitis. Therapy of acute viral hepatitis – usually supportive, intravenous fluids, bed rest, diet. Monitoring of HVB for clearance of HBs Ag. Distinguishing from other diseases with hepatocellular damage. Vaccines and preventions. HBV and health care workers.

7. HAEMORRHAGIC FEVER. CONGO-CRIMEAN HAEMORRHAGIC FEVER. HAEMORRHAGIC FEVER WITH RENAL SYNDROME (HFRS). YELLOW FEVER. LEPTOSPIROSIS /2 h/.


Viral haemorrhagic fevers (VHF), general considerations. Syndrome of VHF, natural reservoirs: arthropods and rodents, rural and urban settings (dengue and yellow fever), nosocomial transmission, tropical area distribution, likelihood of importation. Congo-Crimean haemorrhagic fever: tick-borne, nosocomial, abrupt onset with severe flu-like presentation, severe haemorrhages on the skin and mucous membranes, extensive liver damage, laboratory findings. Haemorrhagic fever with renal syndrome (HFRS) – rodent-borne; four stages: febrile, hypotensive, oliguric, polyuric. Nephropathia epidemica. Hantavirus pulmonary syndrome. Yellow fever – mosquito borne; severe haemorrhages and extensive liver involvement. Quarantined disease. Leptospirosis – zoonosis. Kidney and liver involvement; haemorrhagic syndrome. Diagnosis and treatment. Prevention.

8. MEASLES. RUBELLA. CHICKENPOX AND ZOSTER. PATHOGENIC STREPTOCOCCI. SCARLET FEVER /2 h/.

Infectious diseases with rash, general considerations. Measles: highly contagious, catarrhal symptoms, Koplik' spots, rash, complications, vaccine preventable. Rubella, congenital rubella syndrome, vaccine-preventable. VZV infections – chickenpox and zoster (shingles). Streptococcal infections of upper respiratory tract, skin and soft tissues, non-suppurative sequelae: glomerulonephritis, rheumatic fever. Scarlet fever. Streptococcal toxic-shock syndrome (STSS). Treatment – etiologic and supportive.

9. DIPHTHERIA. TETANUS /2 h/.

Toxin mediated infections, general considerations. Tetanus: muscle rigidity and spasms, serotherapy. Diphtheria, nasopharyngeal, laryngeal. Myocarditis and polyneuritis – late complications. Antitoxin and antimicrobial therapy. Vaccine-preventable.

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10. RICKETTSIAL DISEASES – EPIDEMIC TYPHUS FEVER, BOUTONEUS FEVER, Q FEVER /2 h/.

Etiology, pathogenesis, clinical features, diagnosis, differential diagnosis and treatment of the mentioned above diseases.

11. HUMAN IMMUNODEFICIENCY VIRUS (HIV). AIDS. OPPORTUNISTIC INFECTIONS /2 h/.

History. Current world situation. HIV-1/2, Immunosuppression. Routes of transmission, groups at risk. Development of the disease. Primary HIV, progression to AIDS. Opportunistic infections, associated with AIDS. Diagnosis, two stages approach. Treatment. HAART. Prophylactic and treatment of opportunistic infections. Measures for spreading control. HIV and health care workers.

12. LYME DISEASE /2 h/.

Tick-borne diseases, general considerations, seasonal activities, current situation. Lyme borreliosis – the most common tick-borne infection in North America and Europe. Migrant erythema – a characteristic feature of Lyme borreliosis. Early and late disseminated Lyme borreliosis. Clinical diagnosis and the role of serological tests; intrathecal antibodies production. Doxycycline – the first-line antibiotic. HGA, babesiosis. Coinfections. Prevention.

13. TREATMENT OF INFECTIOUS DISEASES /2 h/.

Basic principles of the etiological, supportive and symptomatic treatment. Antibiotics – groups, drugs, doses, principles of antibiotic combinations.

14. TROPICAL MEDICINE – DENGUE AND DENDGUE FEVER. ARBOVIRAL ENCEPHALITIS AND ENCEPHALOMYELITIS /2 h/.

Etiology, pathogenesis, clinical features, diagnosis, differential diagnosis and treatment of the mentioned above diseases.

15. TROPICAL MEDICINE – PLAGUE, LEPROSY /2 h/.

Etiology, pathogenesis, clinical features, diagnosis, differential diagnosis and treatment of the mentioned above diseases.

6.2. THESES OF THE PRACTICAL EXERCISES:

1. TAKING A HISTORY AND PHYSICAL EXAMINATION OF A PATIENT WITH INFECTIOUS DISEASE /2 h/.

Summary of distinguishing features of infectious diseases. General preventive measures. Epidemiologic history: exposure to sick person, travel abroad, contaminated food and water, recreation activity, immunization. Main signs and syndromes: fever, enlarged lymph nodes, rash, jaundice, throat symptoms, liver and spleen enlargement, meningeal irritation, diarrhea, etc.


2. BOWEL INFECTIONS – TYPHOID FEVER, SHIGELLOSIS, SALMONELLOSIS, CHOLERA, COLIENTERITIS – ETIOLOGY, CLINICAL FEATURES, DIAGNOSIS, DIFFERENTIAL DIAGNOSIS. /2 h/.

Objectives: to make clinical diagnosis of infectious diarrhea.

Clinical features of infectious diarrhea, systemic signs, state of dehydration. Clinical signs of different degrees of dehydration. Epidemiological history. Laboratory investigations: blood cells count, haemoconcentration, electrolytes, parameters of alkaline-acid balance and their assessment. Case presentation. Summary.

3. BOWEL INFECTIONS – DEHYDRATION – DEGREES, CLINICAL FEATURES, HYPOVOLEMIC SHOCK. MANAGEMENT AND TREATMENT. /2 h/.

Objectives: to be able to distinguish infectious diarrhea; to take decision about the place of

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treatment (in hospital or ambulatory), to know the indications of antimicrobial therapy, to make assessment of degree of dehydration and take decision about oral or intravenous rehydration. Revision of clinical diagnosis of infectious diarrhea, hypovolemic shock. Differential diagnosis, special attention to acute abdominal emergency, food poisoning. Stool cultures, blood cultures, detection of antigens and their limitations. Fluid therapy: intravenous and oral, correction of acidosis and dyselektrolitaemia (especially potassium). Diet. Rational approach to use antimicrobials. Probiotics. Case presentation. Summary.

4. BACTERIAL INFECTIONS OF THE CENTRAL NERVOUS SYSTEM – CLINICAL FEATURES, DIAGNOSIS, DIFFERENTIAL DIAGNOSIS, TREATMENT /2 h/.

Objectives: to be able to make early clinical diagnosis of meningitis, to treat every haemorrhagic rash as meningococemia even in ambulatory settings. Meningeal irritation, in infancy, in elderly, CSF – normal value, LP, contraindications. Video. CSF – Gram stain, cultures. Blood cultures. Case presentations. Summary. Differentials, Therapy.

5. VIRAL INFECTIONS OF THE CENTRAL NERVOUS SYSTEM – DIAGNOSIS, DIFFERENTIAL DIAGNOSIS, TREATMENT /2 h/.

Objectives: to be able to make early clinical diagnosis of meningitis, to treat every haemorrhagic rash as meningococemia even in ambulatory settings.

Neurotropic viruses. Clinical syndromes: acute aseptic meningitis, acute encephalitis or meningoencephalitis. Arbovirus encephalitis, Rabies, Lymphocytic choriomeningitis. Meningeal irritation, neurologic signs. Differential diagnosis. Aseptic meningitis with bacterial etiology. Case presentations. Summary.

6. PRELIMINARY EXAMINATION. BOTULISM /2 h/.

Test for 20 min and subsequent discussion.

Botulism, Clinical picture of cranial neuropathy, symmetric descending flaccid paralysis and often respiratory arrest. Obstacles for early diagnosis. Mouse bioassay. Therapy – trivalent (ABE) antitoxin, supportive therapy. Prevention. Bioterrorism.

7. MEASLES, RUBELLA, CHICKENPOX, MUMPS (PAROTITIS), INFECTIOUS MONONUCLEOSIS /2 h/.

Approach to the patient with fever and rash. Measles: highly contagious, catarrhal symptoms, Koplik' spots, rash, complications. Vaccine-preventable. Rubella, congenital rubella syndrome, vaccine-preventable. VZV infections: chickenpox and zoster (shingles). Mumps, salivary glands, orchitis, meningitis. Vaccine-preventable. Case presentations.


8. DIPHTHERIA, SCARLET FEVER, WHOOPING COUGH (PERTUSSIS), INFLUENZA /2 h/.

Toxin mediated infections. Diphtheria, nasopharyngeal, laryngeal. Myocarditis and polyneuritis-late complications. Serotherapy and antibiotic therapy. Vaccine preventable. Scarlet fever, antimicrobial therapy. Influenza – etiology, clinical manifestations, diagnosis, treatment.

9. TROPICAL MEDICINE – ARBOVIRAL INFECTIONS. TICK BORNE ENCEPHALITIS. JAPANESE ENCEPHALITIS. WEST-NILE ENCEPHALITIS. SANDFLY FEVER. DENGUE AND DENGUE FEVER /2 h/.

Arboviral infections: general consideration. Tick-borne encephalitis. Japanese encephalitis. American encephalitis: St. Louis encephalitis. Equine encephalitis. West-Nile encephalitis. Sand-fly fever. Clinical features, diagnosis, therapy. Dengue (dengue shock syndrome). Clinical features, diagnosis, therapy. Prevention of arbovirus infections. Vaccines. Summary.

10. TROPICAL MEDICINE – BARTONELLOSIS. FELINOSIS (CAT-SCRATCH DISEASE). MURINE TYPHUS /2h/.

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Etiology, pathogenesis, clinical features, diagnosis, differential diagnosis and treatment of mentioned above diseases.

11. VIRAL HEPATITIS – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES.

/2 h/.

Clinical manifestation. Laboratory findings. Serological profiles. VHA: without chronic course or a carrier state. VHB: definite propensity for chronicity. VHC: indolent and silent hepatitis with the highest rate of chronicity. VHD-coinfection, superinfection. VHE with great case fatality rate among pregnant women. Fulminant hepatitis. Case presentations. Summary.

12. VIRAL HEPATITIS – DIAGNOSIS, DIFFERENTIAL DIAGNOSIS, TREATMENT. ACUTE LIVER FAILURE – FEATURES AND MANAGEMENT. /2 h/.

Revising clinical presentation of acute viral hepatitis. Therapy of acute viral hepatitis – usually supportive, intravenous fluids, bed rest, diet. Indication for steroids. Monitoring HVB for clearance of HBsAg. Distinguish from other diseases with hepatocellular damage. Case presentations. Summary.

13. HUMAN IMMUNODEFICIENCY VIRUS (HIV). AIDS. OPPORTUNISTIC INFECTIONS /2 h/.

HIV-1/2, Immunosuppression. Routes of transmission, groups at risk. Development of the disease. Primary HIV, progression to AIDS. Opportunistic infections, associated with AIDS. Diagnosis, two stages approach. Treatment. HAART. Prophylactic and treatment of opportunistic infections. Measures for spreading control. HIV and health care workers.

14. TETANUS, ANTHRAX, RABIES. SEROTHERAPY /2 h/.

Toxin mediated infections, general considerations. Tetanus: muscle rigidity and spasms, serotherapy. Serum sickness. Vaccine preventable. Anthrax. Bioterrorism. Rabies inevitable lethal encephalitis. Furious and dumb rabies. Ante-mortem and post-mortem diagnosis. Therapy-post-exposure vaccination. Aseptic meningitis. Paralytic meningitis. Laboratory diagnosis. Vaccines. Current world situation. Case presentations.

15. LEPTOSPIROSIS – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES, DIAGNOSIS, DIFFERENTIAL DIAGNOSIS, TREATMENT. ACUTE RENAL FAILURE – MANAGEMENT AND TREATMENT /2 h/.

Waterborne infection. Multisystem manifestations with liver and renal involvement. predominance. Antibiotic and supportive therapy. Management of acute renal failure. predominance. Differentials of jaundice with fever.

16. PRELIMINARY EXAMINATION. POLIOMYELITIS /2 h/.

Test for 20 min. and subsequent discussion.


Poliomyelitis. Characteristic of acute flaccid paralysis. Differentials. WHO targets for elimination. Vaccines.

17. HAEMORRHAGIC FEVERS – CONGO-CRIMEAN HAEMORRHAGIC FEVER, HAEMORRHAGIC FEVER WITH RENAL SYNDROME /2 h/.

Syndrome of VHF. Congo-Crimean haemorrhagic fever: tick-borne; abrupt onset with severe influenza-like presentation, severe haemorrhages in the skin and mucous membranes, extensive liver damage, lab findings. Haemorrhagic fever with renal syndrome, rodent-borne, 4 stages: febrile, hypotensive, oliguric, polyuric. Nephropathia epidemica. Hantavirus pulmonary syndrome. Laboratory diagnosis. Therapy and preventions.

18. LYME DISEASE, BOUTOUNEUS FEVER – ETIOLOGY, PATHOGENESIS, CLINICAL FEATURES, DIAGNOSIS, TREATMENT. /2 h/.

Tick-borne diseases, general considerations, seasonal activities, current situation. Lyme

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borreliosis the most common tick-borne infection in North America and Europe. Erythema migrans – a characteristic feature of Lyme borreliosis. Early and late disseminated Lyme borreliosis. Clinical diagnosis and the role of serological tests, intrathecal antibodies production. Doxycycline – the first line antibiotics. HGA, babesiosis. Coinfections. Case presentations. Summary.

7. METHODS FOR CONTROL:

7.1. CURRENT CONTROL – by tests, clinical cases and colloquiums.

7.2. FINAL CONTROL – in the end of the study year by practical exam (at a patient with infectious disease) and theoretical exam.

8. SYSTEM FOR SUMMARIZING OF CREDITS:

Total credits: 7.5

Total credits' assessment has been formed by sum of:

- Credits from practical exercises – 2.0;
- Credits from lectures – 1.5;
- Credits from working for practical exercises – 0.5;
- Credits from clinical cases – 1.0;
- Credits from colloquiums – 0.5;
- Credits from final exam – 2.0.

9. SYNOPSIS FOR EXAM OF INFECTIOUS DISEASES, PARASITOLOGY AND TROPICAL DISEASES FIFTH YEAR MEDICAL STUDENTS

33. INFECTION, INFECTIOUS PROCESS (DEFINITION, ROLE OF MICRO-, MACROORGANISM AND ENVIRONMENT IN INFECTIOUS PROCESS).

34. INFECTIOUS DISEASE – PERIODS, FEATURES IN THE COURSE OF INFECTIOUS DISEASES.

35. SYNDROMES IN INFECTIOUS DISEASES

36. CLINICAL METHODS, LABORATORY TESTS AND INSTRUMENTAL INVESTIGATIONS FOR DIAGNOSIS OF INFECTIOUS DISEASES.

37. ETIOLOGIC DIAGNOSIS OF BACTERIAL AND VIRAL DISEASES.

38. ETIOLOGIC TREATMENT OF INFECTIOUS DISEASES WITH BACTERIAL ETIOLOGY – ANTIBIOTICS. SIDE EFFECTS.

39. ETIOLOGIC TREATMENT OF INFECTIOUS DISEASES WITH BACTERIAL ETIOLOGY – CHEMO-THERAPEUTIC DRUGS. SIDE EFFECTS.

40. ETIOLOGIC TREATMENT OF INFECTIOUS DISEASES WITH VIRAL ETIOLOGY.

41. IMMUNOTHERAPY, VACCINAL THERAPY AND IMMUNOPROPHYLAXIS OF INFECTIOUS DISEASES. SIDE EFFECTS AND REACTIONS OF ANTIBIOTIC TREATMENT AND AFTER ADMINISTRATION OF ANTITOXINS AND IMMUNOSTIMULATING DRUGS – SERUM SICKNESS, ALLERGIC SHOCK ETC.

42. SUPPORTIVE TREATMENT OF INFECTIOUS DISEASES – FLUID-SALINE REPLACEMENT, SUPPORTIVE TREATMENT OF BRAIN OEDEMA, ACUTE RENAL FAILURE, ACUTE CARDIOVASCULAR FAILURE.


43. TYPHOID FEVER.

44. FOOD TOXIINFECTIONS – SALMONELLOSIS.


45. GASTROINTESTINAL INFECTIONS WITH VIRAL ETIOLOGY – ROTAVIRUS, ADENOVIRUS, NORWALK GASTROENTERITIS

46. SHIGELLOSIS.

47. COLIENTERITIS. CLOSTRIDIUM DIFFICILE ENTEROCOLITIS.

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48. CHOLERA.
 49. BOTULISM
 50. BRUCELLOSIS.
 51. LEPTOSPIROSIS.
 52. VIRAL HEPATITIS “A” AND VIRAL HEPATITIS “E”.
 53. VIRAL HEPATITIS “B” AND VIRAL HEPATITIS “D”.
 54. ACUTE LIVER FAILURE.
 55. VIRAL HEPATITIS “C”.
 56. HIV / AIDS.
 57. DIPHTHERIA. SCARLET FEVER.
 58. MEASLES. RUBELLA.
 59. CHICKENPOX. HERPES ZOSTER (SHINGLES).
 60. INFECTIOUS MONONUCLEOSIS (EPSTEIN-BARR’ DISEASE).
 61. INFLUENZA. OTHER RESPIRATORY INFECTIOUS DISEASES. PARAINFLUENZA. RESPIRATORY SYNCYTIAL VIRUS INFECTION. ADENOVIRUS INFECTION.
 62. PERTUSSIS.
 63. MUMPS (PAROTITIS).
 64. MENINGOCOCCAL DISEASE. CLINICAL FORMS OF MENINGOCOCCAL DISEASE.
 65. SECONDARY BACTERIAL MENINGITIS AND MENINGOENCEPHALITIS – MENINGITIS CAUSED BY STREPTOCOCCUS PNEUMONIAE, STAPHYLOCOCCUS, ECHERICHIA COLI.
 66. PRIMARY AND SECONDARY VIRAL MENINGITIS AND MENINGOENCEPHALITIS – ENTEROVIRAL, LYMPHOCYTARY CHORIOMENINGITIS, INFLUENZA, WEST-NYLE ENCEPHALITIS, HERPES VIRAL.
 67. POLIOMYELITIS.
 68. TULAREMIA.
 69. EPIDEMIC (LOUSE-BORNE) TYPHUS FEVER.
 70. Q-FEVER.
 71. BOUTONNEUSE FEVER.
 72. CONGO-CRIMMEAN HEMORRHAGIC FEVER.
 73. HAEMORRHAGIC FEVER WITH RENAL SYNDROME.
 74. YELLOW FEVER.
 75. ORNITHOSIS (PSITACOSIS).
 76. ANTHRAX.
 77. TETANUS.
 78. RABIES.
 79. LYME DISEASE.
 80. PNEUMOCYSTOSIS
 81. AMEBIASIS
 82. ACANTHAMEBIASIS. NEGLERIOSIS
 83. GIARDIASIS
 84. UROGENITAL TRICHOMONIASIS
 85. TOXOPLASMOSIS
 86. ENTEROBIASIS
 87. ASCARIASIS
 88. TRICHOCEPHALOSIS
 89. TOXOCARIASIS
 90. TRICHINELLOSIS
 91. STRONGYLOIDOSIS
 92. TAENIASIS AND CYSTICERCOSIS
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- 92B. TAENIARHYNCHOSIS
93. HYMENOLEPIDOSIS
94. ECHINOCOCCOSIS
95. INDICATORY PARASITOSEs FOR AIDS
96. MALARIA – ETIOLOGY, BIOLOGICAL CYCLE, PATHOGENESIS AND CLINICAL PRESENTATION
96B. MALARIA - CLINICAL PRESENTATION, COMPLICATIONS, DIAGNOSIS, TREATMENT, PROPHYLACTICS AND CONTROL
97. VISCERAL LEISHMANIASIS
98. CUTANEOUS AND MUCOCUTANEOUS LEISHMANIASIS: LEISHMANIASIS OF THE OLD WORLD AND LEISHMANIASIS OF THE NEW WORLD.
99. LYPHATIC FILARIASIS. WUCHERIASIS. BRUGIASIS.
100. ONCHOCERIASIS, RIVER BLINDNESS.
101. LOAOSIS.
102. DRACUNCOLOSIS, DRACONTIASIS, GUINEA WORM.
103. SCHISTOSOMIASIS UROGENITALIS.
104. SCHISTOSOMIASIS INTESTINALIS.
105. AFRICAN TRYPANOSOMIASIS.
106. AMERICAN TRYPANOSOMIASIS.
107. ANCYLOSTOMIASIS.
108. DIARRHEA SYNDROME IN THE TROPIC CAUSED BY PARASITES.
109. DENGUE.
110. SANDFLY FEVER.
111. MOSQUITO-BORNE ENCEPHALITIS.
112. TICK-BORNE ENCEPHALITIS.
113. PLAGUE.
114. LEPROSY.
115. BARTONELLOSIS.
116. CAT-SCRATCH DISEASE

REMARK:

The questions of epidemiology (from 1 to 32), clinic of infectious diseases, parasitology and tropical medicine (questions from 33 to 116) should be presented in the following order:

Epidemiology – definition, short history, geographical distribution, incidence, source/reservoir of infection, mechanisms and routes of transmission, susceptibility and immunity, characteristic of epidemiological process, prevention and strategies of combat (questions from 33 to 79).


Infectious Diseases – etiology, epidemiology, pathogenesis, pathomorphology, clinical features, diagnosis, differential diagnosis, treatment, prevention (questions from 33 to 79).

Parasitology – etiology, epidemiology, pathogenesis, pathomorphology, clinical features, diagnosis, differential diagnosis, treatment, and prevention (questions from 80 to 107).

Tropical Medicine – etiology, epidemiology, pathogenesis, pathomorphology, clinical features, diagnosis, differential diagnosis, treatment, and prevention (questions from 108 to 116).

10. RECOMMENDED LITERATURE:

1. Galya Gancheva. INFECTIOUS DISEASES – TEXTBOOK FOR MEDICAL STUDENTS. Volume 1. Medical University – Pleven, 2019. ISBN-978-954-756-226-4
2. Galya Gancheva. INFECTIOUS DISEASES – TEXTBOOK FOR MEDICAL STUDENTS. Volume 2. Medical University – Pleven, 2019. ISBN-978-954-756-227-1

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3. Principles and Practice of Infectious diseases. Gerald L. Mandell, John E. Bennett, Raphael Dolin, 2000 vol. I – 1-1534, vol. II – 1536-3263.
4. Microbiology and Infectious Diseases, 3rd edition. Gabriel Virella, ed. B.I. Waferly Pvt Ltd., 1998. ISBN 81-7431-036-3

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The program has been discussed and approved from Council of Department of Infectious Diseases, Epidemiology, Parasitology and Tropical Medicine, and endorsed from Faculty Council of Faculty of Public Health, Medical University – Pleven.