MINISTRY OF HEALTH OF UKRAINE

KHARKIV NATIONAL MEDICAL UNIVERSITY

IV medical faculty

Department of Infectious Diseases

**EDUCATIONAL AND PROFESSIONAL PROGRAMME**

**“Medicine”**

**of the second (Master’s) level of higher education**

**in speciality No. 222 “Medicine”**

**in the field of knowledge No. 22 “Health Care”**

SYLLABUS

EDUCATIONAL DISCIPLINE

**CLINICAL PARASITOLOGY AND TROPICAL MEDICINE**

Academic year: 2020-2021

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| Approved at a meeting of the Infectious Diseases Department  Protocol No. 19 dated August 28, 2020  Head of the department,  prof. \_\_\_\_\_\_\_\_\_\_\_ K.V. Yurko |  | Approved by the methodical commission of KhNMU on problems of professional training of medical profile  Protocol No. \_\_ dated \_\_\_\_\_\_, 2020  Chairman of the methodical commission,  prof. \_\_\_\_\_\_\_\_\_\_\_ P.G. Kravchun |

**Kharkiv - 2020**

**The name of the discipline «Clinical parasitology and tropical medicine»**

**Developers:**

Head of the department, DSc., prof. Yurko K.V.

PhD, Assistant Professor Yaroslava Burma

**Data on teachers:**

|  |  |
| --- | --- |
| Name, Surname | Kateryna Yurko Professor, DSc  Andriy Bondarenko Professor, DSc  Anton Sokhan Professor, DSc  Grygory Gradil Associate Professor  Dmytro Katsapov Associate Professor  Olena Mohylenets Associate Professor  Yaroslava Burma Assistant Professor  Natalia Antsyferova Assistant Professor  Igor Bodnya Assistant Professor |
| Professional interests, professional development trajectory | See profile of a teacher at the page of the Department of Infectious Diseases on the site of KhNMU:  http://knmu.kharkov.ua/index.php?option=com\_content&view=  article&id=140:2011-05-14-18-46-26&catid=7:2011-05-05-09-09-08&Itemid=27&lang=en |
| Contact phone | +38(0572) 97-50-18 |
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| Schedule of classes | In accordance with the schedule of the educational office |
| Consultations | In accordance with the schedule of the department (Monday, Tuesday, Wednesday, Thursday, Friday, from 9.00 to 16.00), educational room of the Infectious Diseases Department.  On-line consultations due to preliminary agreement with a teacher |

**Information about the discipline**

1. **Description of the discipline**

Year of education: 6-th

Semester: XI або XII /2021-2022 academic year

Content of the discipline: 120 hours (4 ECTS credit): practical classes – 20 hours, self-work of the students – 100 hours.

In the general system of medical training, the discipline "Clinical Parasitology and Tropical Medicine" occupies an important place given the high prevalence of parasitic diseases and infectious pathology of the tropics, the need to form future doctors clinical thinking, skills and practical skills that provide timely diagnosis of infectious diseases of tropical climate and their complications, rational treatment, selection of optimal tactics in case of emergency care. Particular attention in the teaching of the discipline is paid to the issues of early diagnosis, treatment of patients in the prehospital stage, which helps to improve the quality of medical training, especially for the outpatient health department.

This determines the relevance of teaching the discipline "Clinical Parasitology and Tropical Medicine" for specialists of the second (master's) level, field of knowledge 22 - "Health", specialty - 222 "Medicine".

The syllabus is organized with the application of modern pedagogical principles of organization of the educational process of higher education.

Infectious diseases of mainly parasitic etiology and helminthiasis, which are more common in countries with hot (tropical, equatorial) climates and are not typical for the European continent are the subject of study of the discipline. However, due to the expansion of international relations and the global redistribution of labor resources, migration processes, growing urbanization, military conflicts, the rapid development of the tourism industry, they may pose an epidemiological threat to other regions.

The discipline has a page in the Moodle system (http://31.128.79.157:8083/my/).

**2. Purpose and tasks of the academic discipline**

The purpose of teaching the discipline "Clinical Parasitology and Tropical Medicine" is to form the ability to apply the acquired knowledge, skills, abilities and understanding of infectious pathology of countries with tropical climates in the globalization of economic processes and patterns of modern pathological process in various etiological factors of tropical climate growth of international tourism, international redistribution of labor resources, the need to form future doctors' clinical thinking, skills and practical skills that provide timely diagnosis of tropical infectious diseases and their complications, the appointment of rational treatment, the choice of optimal tactics in case of emergency care.

The main tasks of studying the discipline "Clinical Parasitology and Tropical Medicine" are:

* mastering the skills of interviewing patients with infectious pathology that occurs in the tropics;
* gaining the ability to determine the necessary list of laboratory and instrumental studies and evaluate their results in infectious diseases occurring in the tropics;
* acquisition of the ability to establish a preliminary and clinical diagnosis of the disease;
* acquisition of the ability to determine the necessary mode of work and rest, the nature of nutrition in the treatment of infectious diseases that occur in the tropics;
* acquiring the ability to determine the principles and nature of treatment of infectious diseases that occur in the tropics;
* acquisition of the ability to diagnose emergencies that may occur in patients with infectious pathology occurring in the tropics;
* acquisition of the ability to determine tactics and skills of providing emergency medical care to infectious patients;
* mastering the skills of medical manipulations for patients with infectious diseases that occur in the tropics;
* gaining the ability to plan and conduct sanitary and hygienic, preventive and anti-epidemic measures for infectious diseases that occur in the tropics;
* acquisition of the ability to determine the tactics of management of persons with infectious pathology, subject to dispensary supervision;
* acquisition of the ability to keep medical records.

**3. Status and format of the discipline**

The discipline belongs to the elective disciplines. It produced in internal training format.

**4. Teaching methods**

Among the teaching methods in the study of the discipline "Clinical Parasitology and Tropical Medicine" depending on the stage of training use the method of preparation for the study of new material and study of new material, its consolidation in the form of questions for self-control, and the method of explaining the teacher be used explanatory-illustrative, reproductive, partial-search, research methods, and independent work, where the teacher's guidance is indirect.

Conducting of practical classes on certain topics is involving with multimedia presentations, videos, other teaching aids (guidelines posted in the repository of KNMU (<http://repo.knmu.edu.ua/handle/123456789/155>).

**5. Recommended literature**

1. **Infectious Diseases:**textbook / O.A. Holubovska, M.A. Andreichyn, A.V. Shkurba et al. ; edited by O.A. Holubovska. – Kyiv : AUS Medicine Publishing, 2018. – 664 p.
2. Atlas of Infectious Disease Pathology / ed. B. H. Schmitt. - Cham : Springer, 2017. - X, 255 p. : fig. - (Atlas of Anatomic Pathology / ed. Liang Cheng).
3. Clinical Infectious Disease / ed.: D. Schlossberg. – [2nd Ed.]. – Cambridge University Press, 2015 [pdf 46 MB].
4. Mandell, Douglas, and Bennett's Infectious Disease Essentials / ed.: J. E. Bennett, R. Dolin, M. J. Blaser. - Philadelphia : Elsevier, 2017. - XI, 520 p. - (ExpertConsult).

**6. Pre-requisites and details of discipline**

The discipline is integrated with such disciplines as medical and biological physics, biology, normal and pathological anatomy, microbiology, virology and immunology, physiology, pathophysiology, internal medicine, surgery, neurology, dermatology, epidemiology, ophthalmology, otolaryngology, hematology, hematology .

**7. Learning results**

As a result of discipline learning the students should

**know:**

- basics of health care legislation and policy documents governing the activities of health authorities and institutions;

- general issues of organization of medical and psychological care in Ukraine;

- organization of hospital and polyclinic departments;

- organization of ambulance and emergency care for the adult population;

- organization of dispensary supervision;

- anti-epidemic measures in the event of an outbreak;

- principles of diet therapy, physiotherapy and therapeutic exercise;

- forms and methods of sanitary and educational work;

- modern literature by profession;

**be able:**

- generalize scientific and practical literature;

- take an active part in the dissemination of medical knowledge among the population;

- to carry out educational work (conversations, lectures) among the population, patients and in institutions of general medical service;

- interpret the concept of "parasitology", "tropical medicine". Determine the place of subtropical, tropical infectious diseases in the system of infectious diseases and tropical medicine;

- interpret epidemiological and pathogenetic patterns, features of the clinical course, diagnosis and prevention of parasitosis and tropical infectious diseases;

- demonstrate skills of clinical and laboratory diagnosis of the most common parasites and tropical infectious diseases and their complications;

- to conduct a differential diagnosis of the most common parasites and tropical infectious diseases and their complications;

- to make the plan of inspection of the patient;

- to determine the tactics of hospitalization and isolation of patients with the most common parasitosis and tropical infectious diseases;

- to diagnose emergencies in parasitosis and tropical infectious diseases;

- prescribe rational treatment to patients with the most common parasitosis and tropical infectious diseases at different stages of medical care;

- to determine treatment tactics in case of complications or emergencies in parasitosis and tropical infectious diseases;

- plan the main preventive measures against parasitosis and tropical infectious diseases;

- to predict the consequences of parasitosis of tropical infectious diseases on human health.

**Contents of the discipline**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Discipline sections | Number of hours | | | | | |
| Form of study (full-time study) | | | | | |
| In total | including | | | | |
| Lectures | Practical | Laboratory | Individual | Self-work |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Topic 1. Tropical viral diseases and infectious diseases regulated by the International Health Regulations 2005. | 30 | - | 5 | - | - | 25 |
| Topic 2. Protozoan diseases of the tropics. | 30 | - | 5 | - | - | 25 |
| Topic 3. Rickettsiosis and bacterial infections common in the tropics. | 30 | - | 5 | - | - | 25 |
| Topic 4. Helminthiasis. Credit. | 30 | - | 5 | - | - | 25 |
| Total hours of discipline | 120 | - | 20 | - | - | 100 |

**Thematic plan of practical classes**

|  |  |  |
| --- | --- | --- |
| № | Topic title | Number of hours |
| 1. | Tropical viral diseases and infectious diseases regulated by the International Health Regulations 2005. | 5 |
| 2. | Topic 2. Protozoan diseases of the tropics. | 5 |
| 3. | Topic 3. Rickettsiosis and bacterial infections common in the tropics. | 5 |
| 4. | Topic 4. Helminthiasis. Credit. | 5 |
| Total hours of discipline | | 20 |

**Thematic plan for independent work**

|  |  |  |
| --- | --- | --- |
| №  з/п | Topic title | Number of hours |
| 1. | Tropical viral diseases and infectious diseases regulated by the International Health Regulations 2005. | 25 |
| 2. | Topic 2. Protozoan diseases of the tropics. | 25 |
| 3. | Topic 3. Rickettsiosis and bacterial infections common in the tropics. | 25 |
| 4. | Topic 4. Helminthiasis. Credit. | 25 |
| Total hours of independent student work | | 100 |

**Discipline Policy**

Students are expected to attend all practical classes. Missed practical classes must be completed (according to the schedule on the information stand of the department) according to the form generally accepted in KNMU.

During the practical lesson it is desirable to take an active part in the discussion and debate. Students must be prepared for a detailed understanding of the material, questions, expression of their point of view, discussion. During the discussion it is important:

- respect for colleagues,

- tolerance for others and their experience,

- susceptibility and impartiality,

- the ability to disagree with the opinion, but to respect the personality of the opponent,

- careful argumentation of his opinion and the courage to change his position under the influence of evidence,

- self-expression, when a person avoids unnecessary generalizations, describes his feelings and formulates his wishes based on their own thoughts and emotions,

- Mandatory acquaintance with primary sources. The creative approach in its various displays is encouraged. Students are expected to be interested in participating in city, national and international conferences, competitions and other events in the subject profile. For participation in conferences, Olympiads, conducting scientific research, writing abstracts, articles, the student is awarded additional points (up to 10). In the first lesson, the teacher conducts safety briefings, the main provisions of which are given in the workbook on the discipline. Everyone should know where the nearest evacuation exit is, where the fire extinguisher is, how to use it, the peculiarities of working with infectious patients, etc. The form of clothing is a medical gown, hat, medical mask, changeable shoes.

It is important for students to follow the rules of good behavior at the university. These rules are common to all, they also apply to all faculty and staff, and are not fundamentally different from the generally accepted norms.

During classes it is allowed:

- leave the audience for a short time if necessary and with the permission of the teacher;

- drink soft drinks;

- take photos of presentation slides;

- take an active part in the class;

not allowed:

- eat (except for persons whose special medical condition requires another - in this case, medical confirmation is required);

- smoking, drinking alcohol and even low-alcohol beverages or drugs;

- use obscene language or use words that offend the honor and dignity of colleagues and faculty;

- gambling;

- damage the material and technical base of the university (damage inventory, equipment; furniture, walls, floors, litter the premises and territories);

- shouting or listening to loud music in classrooms and even in corridors during classes.

The Department of Infectious Diseases maintains zero tolerance for plagiarism. Students are expected to constantly raise their awareness of academic writing.

**Evaluation policy**

Current control is carried out in the form of oral examination, test computer, test written control, control of practical skills. Final control is carried out in the form of offset.

During the assessment of mastering each subject of the discipline (current educational activity - CEA) the student is graded according to the traditional 4-point system: "excellent", "good", "satisfactory" and "unsatisfactory". The final score on the CEA and, accordingly, the grade in the discipline is defined as the arithmetic mean for traditional grades for each lesson, rounded to 2 decimal places and converted into a multi-point scale according to the table.

The maximum number of points that a student can score for studying is the discipline - 200 points, the minimum - 120 points.

Assessment of the results of the discipline is carried out directly at the last (credit) lesson.

After completing the study of the discipline, the teacher puts the student's number of points in the record book, and fill in the progress of students in the discipline in the form: U-5.03A - credit.

Students who do not enroll in the discipline are given "FX" or "F" ("unsatisfactory").

Table 1

**Recalculation of the average score for current activities in a multi-point scale**

**(for disciplines ending with a differentiated credit)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 4- score scale | 200- score scale |  | 4- score scale | 200- score scale |  | 4- score scale | 200- score scale |
| 5 | 200 | 4,22-4,23 | 169 | 3,45-3,46 | 138 |
| 4,97-4,99 | 199 | 4,19-4,21 | 168 | 3,42-3,44 | 137 |
| 4,95-4,96 | 198 | 4,17-4,18 | 167 | 3,4-3,41 | 136 |
| 4,92-4,94 | 197 | 4,14-4,16 | 166 | 3,37-3,39 | 135 |
| 4,9-4,91 | 196 | 4,12-4,13 | 165 | 3,35-3,36 | 134 |
| 4,87-4,89 | 195 | 4,09-4,11 | 164 | 3,32-3,34 | 133 |
| 4,85-4,86 | 194 | 4,07-4,08 | 163 | 3,3-3,31 | 132 |
| 4,82-4,84 | 193 | 4,04-4,06 | 162 | 3,27-3,29 | 131 |
| 4,8-4,81 | 192 | 4,02-4,03 | 161 | 3,25-3,26 | 130 |
| 4,77-4,79 | 191 | 3,99-4,01 | 160 | 3,22-3,24 | 129 |
| 4,75-4,76 | 190 | 3,97-3,98 | 159 | 3,2-3,21 | 128 |
| 4,72-4,74 | 189 | 3,94-3,96 | 158 | 3,17-3,19 | 127 |
| 4,7-4,71 | 188 | 3,92-3,93 | 157 | 3,15-3,16 | 126 |
| 4,67-4,69 | 187 | 3,89-3,91 | 156 | 3,12-3,14 | 125 |
| 4,65-4,66 | 186 | 3,87-3,88 | 155 | 3,1-3,11 | 124 |
| 4,62-4,64 | 185 | 3,84-3,86 | 154 | 3,07-3,09 | 123 |
| 4,6-4,61 | 184 | 3,82-3,83 | 153 | 3,05-3,06 | 122 |
| 4,57-4,59 | 183 | 3,79-3,81 | 152 | 3,02-3,04 | 121 |
| 4,54-4,56 | 182 | 3,77-3,78 | 151 | 3-3,01 | 120 |
| 4,52-4,53 | 181 | 3,74-3,76 | 150 | **< 3** | **Not enough** |
| 4,5-4,51 | 180 | 3,72-3,73 | 149 |
| 4,47-4,49 | 179 | 3,7-3,71 | 148 |
| 4,45-4,46 | 178 | 3,67-3,69 | 147 |
| 4,42-4,44 | 177 | 3,65-3,66 | 146 |
| 4,4-4,41 | 176 | 3,62-3,64 | 145 |
| 4,37-4,39 | 175 | 3,6-3,61 | 144 |
| 4,35-4,36 | 174 | 3,57-3,59 | 143 |
| 4,32-4,34 | 173 | 3,55-3,56 | 142 |
| 4,3-4,31 | 172 | 3,52-3,54 | 141 |
| 4,27-4,29 | 171 | 3,5-3,51 | 140 |
| 4,24-4,26 | 170 | 3,47-3,49 | 139 |

**Control questions, tasks for independent work**

1. The concept of "invasion", "parasitism", "parasitology", "tropical medicine". Features of tropical diseases.

2. Classification of tropical diseases.

3. Principles of diagnosis of infectious diseases common in the tropics.

4. Methods of specific diagnosis of parasitic diseases.

5. Preventive measures, principles of immunoprophylaxis of infectious diseases common in the tropics.

6. Principles of treatment of infectious diseases common in the tropics.

7. Areas of treatment of infectious diseases common in the tropics.

8. Features of management of the patient with cholera: etiology, epidemiology, pathogenesis, clinical course, laboratory diagnostics, differential diagnosis, complications, treatment, prevention. The order of hospitalization, rules of discharge of patients from an infectious hospital.

9. Dehydration shock: definition, pathogenesis, clinical manifestations, differential diagnosis. Clinical and laboratory diagnosis of water-electrolyte disorders at different degrees of dehydration. Emergency aid.

10. Features of management of the patient with amebiasis: etiology, epidemiology, classification, pathogenesis, clinical course, laboratory diagnostics, differential diagnosis, complications, treatment, prevention. The order of hospitalization, rules of discharge of patients from an infectious hospital.

11. Features of management of the patient with giardiasis: etiology, epidemiology, pathogenesis, clinical course, laboratory diagnostics, differential diagnosis, complications, treatment, prevention.

12. Features of management of a patient with balantidiasis: etiology, epidemiology, pathogenesis, clinical course, laboratory diagnosis, differential diagnosis, complications, treatment, prevention.

13. Classification of helminthiasis. The effect of helminths on the human body. Methods of laboratory diagnosis of helminthiasis. Nematodes. Filariasis. Trematodes. Schistosomiasis. Cestodes. Management of patients.

14. Features of the management of a patient with malaria: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnosis, differential diagnosis, complications, treatment, prevention. Indications for examination for malaria. The order of hospitalization, rules of discharge of patients from infectious hospital.

15. Features of management of a patient with leishmaniasis: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnostics, differential diagnosis, complications, treatment, prevention

16. Features of management of the patient with trypanosomiasis: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnostics, differential diagnosis, complications, treatment, prevention

17. Features of the management of a patient with typhus and Brill's disease: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnosis, differential diagnosis, complications, treatment, prevention. The order of hospitalization, rules of discharge of patients from infectious hospital.

18. Features of plague patient management: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnostics, differential diagnosis, complications, prognosis, treatment, prevention. The order of hospitalization, rules of discharge of patients from infectious hospital. Preventive measures in the foci of infection.

19. Features of the management of a patient with anthrax: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnosis, differential diagnosis, complications, prognosis, treatment, prevention. The order of hospitalization, rules of discharge of patients from infectious hospital. Preventive measures in the foci of infection.

20. Features of management of the patient with tularemia: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnostics, differential diagnosis, complications, prognosis, treatment, prevention. The order of hospitalization, rules of discharge of patients from infectious hospital. Preventive measures in the foci of infection.

21. Features of management of the patient with yellow fever: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnostics, differential diagnosis, complications, prognosis, treatment, anti-epidemic measures, principles of immunoprophylaxis. The order of hospitalization, rules of discharge of patients from infectious hospital.

22. Features of management of a patient with brucellosis: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnostics, differential diagnosis, complications, prognosis, treatment, prevention. The order of hospitalization, rules of discharge of patients from infectious hospital.

23. Features of management of patients with arbovirus encephalitis: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnostics, differential diagnosis, complications, prognosis, treatment, prevention. The order of hospitalization, rules of discharge of patients from infectious hospital.

24. Features of management of the patient with phlebotomic fever, dengue fever: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnostics, differential diagnosis, complications, prognosis, treatment, prevention. The order of hospitalization, rules of discharge of patients from infectious hospital.

25. Features of the management of a patient with Ebola, Marburg, Lassa: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnosis, differential diagnosis, complications, prognosis, treatment, prevention. The order of hospitalization, rules of discharge of patients from infectious hospital.

26. Peculiarities of management of patients with Ku fever, Tsutsugamusi, Rocky Mountain spotted fever, Marseille fever: etiology, epidemiology, pathogenesis, classification, clinical course, laboratory diagnosis, differential diagnosis, complications, prognosis, treatment, prevention, prevention infectious diseases hospital.