

**Ministry of Public Health of Ukraine
National O.O. Bohomolets Medical University**

**METHODICAL GUIDE
to practical classes for students**

<i>Educational discipline</i>	Propaedeutics of Pediatrics including nursing practice, basic medical skills in the pediatric department
<i>Training direction</i>	22 " Public Health ", II (master's) educational and qualification level
<i>Specialty</i>	222 «Medicine»
<i>Department</i>	Paediatrics # 2
<i>Thematic module 2</i>	Anatomical and physiological features of organs and systems in children, clinical examination methods. Semiotics of damage syndromes of each of the systems and the most common diseases.
<i>Topic:</i>	Methods of clinical examination of the nervous system in children, additional research methods. Semiotics of diseases of the nervous system in children.
<i>Course</i>	3

Approved on methodic meeting of department of pediatrics №2 from «28» august 2023., protocol №1

Considered and approved: CMC on pediatric disciplines from «28» august 2023., protocol №1

1. Goal: the student acquires knowledge about:

- features of clinical examination and changes in laboratory indicators in various diseases of the nervous system;
- semiotics of diseases of the nervous system in children.

acquisition of skills by the student:

- collection of anamnesis in children with damage to the nervous system;
- methods of clinical examination of children with pathology of the nervous system;
- diagnosis of pathological changes in cerebrospinal fluid analyzes in normal conditions and in various diseases of the nervous system.

2. Competencies:

- collecting complaints, medical history and life of a child (and/or his mother/caregiver) with a nervous system disease;
- conducting a clinical examination of children with a disease of the nervous system (assessment of motility, statics, sensory reactions and reflexes);
- clinical assessment of neurological status and semiotics of disorders in older children and adolescents;
- interpretation of laboratory and instrumental methods of examination in children with pathology of the nervous system;
- determination of clinical symptoms and syndromes in children with diseases of the nervous system.

Equipment: neurological hammer, hand sanitizer, tables for assessing psychomotor development of children of different ages

3. Plan and organizational structure of the lesson

The name of the stage	Description of the stage	Levels of assimilation
		*
Preparatory stage	Organizational measures Setting educational goals, student motivation	*
The main stage	Test control on the subject of the lesson, checking and announcing the results. - theoretical survey; - demonstration of practical skills, clarification of the most important points regarding the clinical examination of children with pathology of the nervous system (identification of meningeal symptoms, checking the state of reflexes, sensitivity, assessment of the state of	** *, **, ***

*

	the autonomic nervous system, assessment of movement coordination, etc.); - students' work on acquiring the skills of clinical examination of children with pathology of the nervous system; - acquisition by students of the ability to assess changes in the composition of the cerebrospinal fluid in various diseases of the nervous system in children Solving tasks according to the subject of the lesson	**, ***
Final	Analysis and assessment of student work results. Announcement of the topic of the next lesson, an indicative map for independent work with literature.	*
	Together	2,5 academic hours

Introductory, **reproducible, *** reconstructive, **** creative learning levels.

4. Content of educational material

4.1. A list of the main terms, parameters, and characteristics that the student should learn when preparing for the class:

<i>Terms:</i>	Характеристика, функції
<i>Anencephaly</i>	absence of cerebrum and skull bones
<i>Spinal hernia</i>	combined malformation of the spinal cord due to a defect in the closure of the neural tube
<i>Microencephaly</i>	reduction in the size of the skull and brain due to their underdevelopment, which is accompanied by mental retardation
<i>Macrocephaly</i>	increased skull and brain size without pronounced signs of hydrocephalus
<i>Hydrocephalus</i>	disorders of absorption and outflow of cerebrospinal fluid, etc.
<i>Dermographism</i>	the reaction of skin vessels to line irritation in the form of a white or red stripe
<i>Athetosis</i>	hyperkinesis of the slow type, which is characterized by slow, stereotyped and involuntary movements of the fingers and toes, which sometimes bend, then extend, then approach, then move away from each other, that is, they constantly change their position
<i>Paresis</i>	restriction of active limb movements

<i>Paralysis</i>	lack of active limb movements
<i>Tremor (shaking)</i>	rhythmic stereotyped movements of various parts of the body at rest (involuntary) or during voluntary movements (intentional), mainly of the distal parts of the upper limbs.
<i>Tics</i>	fast, clonic, non-rhythmic stereotyped movements in the form of frequent blinking, raising eyebrows, opening the mouth and contractions of facial muscles of other groups

5. Theoretical questions that are considered in class.

1. What are the features of collecting an anamnesis of a disease, an anamnesis of life, complaints of a patient with a suspicion of nervous system's a disease?
2. Characterize the main complaints of children with diseases of the nervous system.
3. Name the main clinical symptoms and syndromes in diseases of the nervous system in children.
4. Characterize the meningeal syndrome in children.
5. What specific symptoms are typical for meningitis in newborns and young children.
6. What changes in the cerebrospinal fluid are typical for viral, bacterial and tuberculous meningitis.
7. Describe the syndrome of meningism. What changes in the cerebrospinal fluid are characteristic of meningism.
8. Characterize the main syndromes of viral encephalitis in children.
9. What changes in the cerebrospinal fluid are characteristic of viral encephalitis.
10. What is the method of examination of cranial nerves in children.
11. Give a comparative description of central and peripheral paralysis.
12. Techniques for evaluating surface reflexes.
13. Methodology for assessing periosteal reflexes.
14. Name the types of reflex disorders.
15. Characterize pathological reflexes in children.
16. Name the main symptoms of motor and reflex disorders.
17. Describe the symptoms of chorea.
18. Characterize the convulsive syndrome in children. Name the main causes of seizures.
19. Name the indicators of cerebrospinal fluid in the norm.
20. Name the symptoms of unconsciousness.
21. Describe the stages of coma.
22. What is the method of autonomic nervous system's examination in children.

Recommended literature.

Basic:

Nelson textbook 21th Edition by Robert M. Kliegman, MD, Joseph St. Geme, Nathan J. Blum, Samair S. Shan, Robert C. Tasker, Karen M. Wilson, Richard E. Behrman Видавництво: Elsevier, 2019. P. 5497-5508.

Additional:

1. Fundamentals of pediatrics according to Nelson. Karen J. Marcante, Robert M. Kligman; translation of the 8th Eng. edition in 2 volumes. Scientific editors of the translation V.S. Berezenko, T.V. Rest Kyiv: VSV "Medicine", 2020.
2. Katilov O.V., Dmitriev D.V., Dmitrieva K.Yu., Makarov S.Yu. Clinical examination of a child. 2nd edition. Vinnytsia: Nova Kniga, 2019. 520 p.
3. Pediatrics: textbook. T.O. Kryuchko, O.Y. Abaturov, T.V. Kushnereva et al.ed. by T.O. Kryuchko, O.Y. Abaturov. Kyiv : AUS Medicine Publishing, 2016. 208 p. (p.39-49) ISBN 978-617-505-485-7.