

Ministry of Health of Ukraine  
O.O. Bogomolets National Medical University

# NEUROLOGY: Clinical Cases

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A practical guide for students of higher medical education institutions of the 4<sup>th</sup> level of accreditation

Recommended by the Ministry of Health of Ukraine as a study guide for students of higher medical education institutions of the 4<sup>th</sup> level of accreditation

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У навчальному посібнику подано клінічні задачі з пропедевтичної та клінічної (спеціальної) неврології. Авторами на підставі власного досвіду змодельовано різні клінічні ситуації з низкою запитань, відповіді на які дають змогу послідовно визначити клінічний синдром, встановити топічний і клінічний діагноз та обрати правильну лікувальну тактику.

Для студентів вищих медичних навчальних закладів IV рівня акредитації, лікарів-інтернів та викладачів.

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The study guide contains clinical cases of propedeutic and clinical (special) neurology. Based on their own experience, the authors have simulated different clinical situations, each with a set of questions. As students answer these questions they learn to determine clinical syndromes, make topical and clinical diagnoses, and choose correct disease management.

For students of higher medical education institutions of the 4<sup>th</sup> level of accreditation, interns, and teachers.

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<b>Introduction .....</b>	<b>5</b>
<b>Chapter 1. Syndromes of Sensitive and Motor Disorders .....</b>	<b>6</b>
1.1. Historical Milestones in Neurology Formation.....	6
1.2. Pathology of the Sensitive Function of the Nervous System .....	9
1.3. Motor Function Disorders.....	12
1.4. Extrapyramidal System Lesions.....	14
1.5. Coordination System Pathology.....	15
<b>Chapter 2. Cranial Nerve Lesion. Impairment of the Autonomic Nervous System and Higher Brain Functions .....</b>	<b>16</b>
2.1. Cranial Nerve Lesion .....	16
2.2. Autonomic Nervous System Pathology.....	20
2.3. Higher Brain Function Pathology.....	21
<b>Chapter 3. Additional Methods of Investigation in Neurology. Cerebrospinal Fluid Pathology. Vascular Diseases of the Brain and Spinal Cord. Closed Craniocerebral and Spinal Trauma. Tumors of the Brain and Spinal Cord. Epilepsy. Neurointoxication. Nervous System Lesion under the Action of Physical Factors.....</b>	<b>24</b>
3.1. Additional Methods of Investigation in Neurology.....	24
3.2. Cerebrospinal Fluid Pathology. CSF Syndromes.....	26
3.3. Cerebral and Spinal Cord Vascular Diseases.....	28
3.4. Closed Trauma of the Central Nervous System .....	31
3.5. Brain and Spinal Cord Tumors .....	33
3.6. Epilepsy.....	35
3.7. Neurointoxication. Nervous System Lesions under the Influence of Physical Factors .....	36
<b>Chapter 4. Infectious, Parasitic and Demyelinating Diseases of the Nervous System. Amyotrophic Lateral Sclerosis. Headache, Migraine. Children’s Cerebral Palsy .....</b>	<b>38</b>
4.1. Infectious Diseases of the Nervous System .....	38
4.2. Parasitic Diseases of the Nervous System .....	43
4.3. Demyelinating Diseases of the Nervous System .....	44
4.4. Amyotrophic Lateral Sclerosis .....	46
4.5. Headache, Migraine .....	47
4.6. Children’s Cerebral Palsy.....	48

**Chapter 5. Diseases of the Peripheral Nervous System.**  
**Hereditary Diseases of the Nervous System. Myasthenia Gravis.**  
**Congenital Defects of the Spine and Spinal Cord. Syringomyelia.**  
**Somatoneurological Syndromes .....49**  
5.1. Diseases of the Peripheral Nervous System..... 49  
5.2. Hereditary Diseases of the Nervous System..... 54  
5.3. Myasthenia Gravis..... 56  
5.4. Congenital Defects of the Spine and Spinal Cord. Syringomyelia..... 57  
5.5. Somatoneurological Syndromes ..... 59  
**Keys.....61**

Further progress of higher medical education requires implementing new forms of both teaching methods and knowledge control. These new forms intensify the learning process and develop students' practical diagnostic skills.

This Practical Guide developed by the Neurological Department of O. O. Bohomolets National Medical University includes case studies that simulate clinical situations from various areas of propedeutic and special neurology. Each case is followed by a series of questions. As students solve these cases consistently, they learn to resolve clinical cases in general and, in particular, make topical and clinical diagnoses, determine a disease form and stage, make differential diagnosis, prescribe treatment and so on. Coherent algorithmic answers reflect a logical course of clinical case solution, encourage students to make a mental effort, and contribute to the development of clinical thinking of future physicians.

The proposed case studies can be used by instructors to monitor the knowledge and skills development of students as well as to help in their final assessment.

Correct answers to all questions are given in the end of every chapter. Therefore, students can use the Guide for self control as well as for independent study with ultimate purpose of better knowledge assimilation.

## SYNDROMES OF SENSITIVE AND MOTOR DISORDERS

### 1.1 | Historical Milestones in Neurology Formation

**1. A French neurologist who was the first to describe the clinical picture of hysteria, was the founder of neurology as an independent discipline.**

1. What is the neurologist's name?
2. When and where did he found the world's first neurological clinic?
3. What other diseases did this scientist study?

**2. The founder of Kyiv School of Neurology became the head of the first independent department of neurology at St. Volodymyr Imperial University. Being an immigrant he also organized the Medical Faculty, Department and Clinic of Nervous and Mental Diseases at the University of Zagreb (Croatia).**

1. Determine this scientist.
2. What famous writer was examined by this professor and got an excellent mark in his student years?
3. What medical disciplines except neurology were developed by this scientist?

**3. A prominent neurologist, one of the organizers of the Gerontology Institute in Kyiv, was the head of the neurological department of Kyiv Medical Institute from 1922 to 1962.**

1. Who was this scientist?
2. In what hospital did he head the department of neurology?
3. When did this department celebrate its 100<sup>th</sup> anniversary?

**4. In 1894, a famous Russian neurologist, the founder of the Moscow School of Neurology, Director of the first University Clinic of Nervous Diseases (1869) in Russia, described a special form of cortical epilepsy — *epilepsia partialis continua* — and correctly identified its infectious nature.**

1. Determine the scientist.
2. What is the modern name of this form of epilepsy?
3. Residual effects of what disease does it occur with?

**5. Focal seizures caused by local irritation of the central sulcus in patients with tumors in this area of the brain were described in 1863.**

1. What scientist described this form of epilepsy?
2. What are the clinical manifestations of these attacks?
3. Irritation of what brain areas can cause this type of epilepsy?

**6. At the end of the 19<sup>th</sup> century a famous Kyiv anatomist discovered nerve cells in monkeys that form pathways between the motor cortex area of the brain and the spinal cord.**

1. Identify the scientist.
2. What cells did he describe and what pathways do they form?
3. In which area of the cerebral cortex is the largest accumulation of these cells found?

**7. An English physician Thomas Willis is known for his work in the field of anatomy and physiology of the brain and its vessels.**

1. What anatomical formation on the basal surface of the brain was described by this scientist?
2. What forms this anatomical structure?
3. What is its significance?

**8. In 1869 a Scottish ophthalmologist described a pupillary syndrome that can help diagnose syphilitic lesions of the nervous system in combination with other symptoms.**

1. Identify the scientist.
2. How to check this syndrome?
3. Identify this pupillary abnormality.

**9. In 1896, a French neurologist (from a family of Polish immigrants), a member of the Paris Academy of Sciences, editor of *Revue Neurologique*, described the pathological reflex that is the earliest and most reliable sign of pyramidal pathway lesions.**

## Chapter 1 |

1. Identify the scientist.
2. How is this pathological reflex called? How is it checked?
3. What reaction occurs when it appears?
4. In what case can this reflex be physiological and why?

**10. In 1882, a therapist from St. Petersburg described a characteristic meningitis feature that is based on the reflective flexion contracture of the thigh muscles.**

1. Identify the scientist.
2. Describe this symptom.

**11. In 1689, a famous English physician Thomas Sydenham described the disease that is more common in children and gave it the name that means 'dance' in Greek.**

1. Determine the disease.
2. What is its etiology?
3. What are the main clinical manifestations of this disease?

**12. In 1872, an author described this progressive hereditary degenerative disease with premature death of neurons in the striar system, mainly the caudate nucleus, observed in members of different generations of one American family during 75 years.**

1. Name the scientist who described the disease.
2. What is the current name of the disease?
3. What are the main clinical syndromes of this disease?

**13. In 1890, a famous German physician, whose basic research was devoted to the study of cerebrospinal fluid circulation, was the first to perform lumbar puncture of the subarachnoid space to study the spinal fluid in vivo and endolumbar drug administration.**

1. Determine the scientist.
2. What disease studied by this scientist was named in his honor?

**14. In 1872, a French neurologist Guillaume Duchenne described a disease that occurred in infants after some obstetric manipulations. Four years later the clinical and anatomical features of this disease in adults were described by the German neurologist Wilhelm Erb.**

1. What structures of the nervous system are affected?
2. Identify the disease.