



"APPROVED"
at a meeting of the Department of Neurology
protocol № 6
from November 8, 2023
Head of the Department, professor T. Nehrych

GENERAL NEUROLOGY

1. Receptorics, sensitivity. Clinical classification of sensitivity. Anatomy of sensory pathways (those of the superficial and deep sensitivity).
2. Pathway of superficial sensitivity. Symptoms of its damage at the different levels.
3. Pathway of deep sensitivity. Symptoms of its damage at the different levels.
4. Kinds of sensory deficit (quantitative and qualitative ones), pain and its varieties.
5. Types of sensory deficit: classification, topical background of the lesion(s), symptoms.
6. Vestibulocochlear nerve (functions, pathways, symptoms of damage).
7. Visual analyzer (functions, pathways, symptoms of damage [nerve, optic chiasm, optic tract, cortex]).
8. Cortico-spinal tract (functions, anatomy, symptoms of damage at the different levels).
9. Cortico-nuclear tract (functions, anatomy, symptoms of damage at the different levels).
10. Sensory portion of the trigeminal nerve (functions, pathways, symptoms of damage at the different levels).
11. Central paralysis (definition, topical background of lesion, symptoms).
12. Peripheral paralysis (definition, topical background of lesion, symptoms).
13. Oculomotor nerve (functions, pathways, symptoms of damage).
14. Facial nerve (functions, pathways, symptoms of damage at the different levels).
15. Symptoms of a transverse spinal lesion at the different levels (upper cervical, lower cervical, thoracic, lumbosacral). Brown-Sequard syndrome.
16. Alternating syndromes (definition, classification). Syndromes of pontine lesions.
17. Bulbar and pseudobulbar paralysis (topical background of lesion(s), symptoms).
18. Hypoglossal cranial nerve (functions, pathways, symptoms of damage).
19. Glossopharyngeal and vagus cranial nerves (functions, pathways, symptoms of damage at the different levels).
20. Alternating syndromes (definition, classification). Medullary alternating syndromes.
21. Alternating syndromes (definition, classification). Peduncular alternating syndromes.
22. Peripheral (flaccid) paralysis (definition, topical background of damage, symptoms).
23. Abducens and trochlear cranial nerves (functions, pathways, symptoms of damage).
24. Trigeminal nerve (sensory portion): functions, topical background of damage, symptoms.
25. Central and peripheral paralysis of facial muscles (topical background of damage, symptoms).
26. Types of ataxias (topical background of damage, clinical features).
27. Central and peripheral paralysis of the tongue muscles (topical background of damage, symptoms).
28. Types of pathological gait (topical background of lesion, clinical features).
29. Cerebellum (functions, basic anatomical and physiological data, cerebellar pathways, symptoms of damage).
30. Alternating syndromes (definition, classification). Topical background of damage, symptoms.
31. Symptoms of affection and irritation of the cerebral cortex in the frontal and temporal lobes.
32. Accessory cranial nerve (functions, pathways, topical background of lesions, symptoms).

33. Symptoms of affection and irritation of the cerebral cortex in the parietal and occipital lobes.
34. Paleostriatum (functions, basic anatomical and physiological data, symptoms of damage).
35. Neostriatum (functions, basic anatomical and physiological data, types and characteristics of hyperkinesias).
36. Alternating syndromes (definition, classification). Wallenberg's syndrome (definition, topical background of damage, symptoms).
37. Bulbar and pseudobulbar paralysis (definition, topical background of damage, symptoms).
38. Extrapyramidal system (functions, anatomical and physiological features, symptoms of damage to various parts).
39. Cerebellum (functions, cerebellar tests, cerebellar efferent pathways, symptoms of affection).
40. Cerebellum (functions, cerebellar tests, cerebellar afferent pathways, symptoms of affection).
41. Symptoms of affection of the peripheral nerve, spinal nerve, intervertebral ganglion, posterior spinal root, posterior spinal horn, anterior gray commissure, lateral spinal column, medial lemniscus, thalamus, corona radiata, post-central gyrus.
42. The motor portion of the trigeminal nerve (functions, pathways, topical background of lesion, symptoms).
43. Symptoms of a transverse spinal lesion at the different levels (above the cervical enlargement, cervical enlargement, thoracic, lumbosacral levels). Brown-Sequard syndrome.
44. Symptoms of lesion and irritation of the cerebral cortex in the frontal and temporal lobes.
45. Syndromes of damage to the internal capsule, thalamus, corona radiata. Brown-Sequard syndrome.
46. Central (spastic) paralysis (definition, topical background of damage, symptoms) Symptoms of damage to the pre-central gyrus, corona radiata, internal capsule, lateral spinal column, anterior spinal horn, anterior spinal root, spinal and peripheral nerve.
47. Symptom-complexes of movement disorders due to damage to the cortico-nuclear pathway.
48. Types of aphasia (topical background of damage, symptoms).
49. Pathological reflexes (circumstances of occurrence, classification, names, clinical presentation).
50. Cerebral and spinal meninges, meningeal syndrome.
51. Reflex system of the spinal cord. Reflex, reflex arc, unconditional reflexes (their arcs).
52. Cerebrospinal fluid — normal parameters, physiology of CSF formation. Lumbar puncture's technique.
53. Symptoms of affection to the autonomic nervous system (sympathicotonia, vagotonia).
54. Blood supply of the brain and spinal cord.
55. Parkinsonism (topical background of damage, symptoms, biochemical mechanisms).
56. Types and characteristics of hyperkinesias.
57. Symptom-complexes of movement disorders due to damage to the cortico-spinal pathway.
58. Suprasegmental part of the autonomic nervous system (anatomical and physiological features, functions, syndromes of lesion).
59. Horner syndrome. Parinaud syndrome. Decorticate and decerebrate rigidity.
60. Segmental part of the autonomic nervous system (anatomical and physiological features, functions, syndromes of damage).
61. Functional methods of neurological diagnosis (names, principles of the methods, indications).
62. Agnosias, aphasias, apraxias.
63. Meningeal syndrome and stretch signs (preconditions of occurrence, clinical symptoms)
64. Speech disorders (topical background of damage, symptoms).
65. Physiology of CSF formation, composition of CSF in normal state.
66. Alternating syndromes (definition, classification, topical background of damage, symptoms).

67. Bulbar and pseudobulbar paralysis (definition, topical background of damage, symptoms).
68. Neuroimaging in neurology (names, principles of the methods, diagnostic indications).
69. Central and peripheral paralysis (definitions, topical background of damage, symptoms).

CLINICAL NEUROLOGY

1. Ischemic stroke.
2. Hemorrhagic stroke.
3. Facial neuropathy.
4. Subarachnoid hemorrhage.
5. Tuberculosis of the nervous system. Tuberculous meningitis.
6. Meningitis: classification. Meningococcal meningitis.
7. Transient ischemic attacks.
8. Diabetic polyneuropathy.
9. Trigeminal neuralgia.
10. Non-epileptic paroxysmal states.
11. Vertebrogenic lumbosacral radiculoneuropathy.
12. Tick-borne encephalitis.
13. Multiple sclerosis.
14. Syringomyelia, syringobulbia.
15. Primary and secondary prevention of cerebral stroke. Principles of cerebral stroke's rehabilitation.
16. Neurological manifestations of polymyositis.
17. Closed head injury: classification. Cerebral concussion. Principles of rehabilitation.
18. Congenital defects of the spine and spinal cord.
19. Alcoholic polyneuropathy.
20. Diphtheritic polyneuropathy.
21. Radial, ulnar and median neuropathies.
22. Encephalitis lethargica.
23. Acute disseminated encephalomyelitis. Neurological manifestations of COVID-19 infection.
24. Herpes simplex encephalitis.
25. Acute infectious myelitis.
26. Acute poliomyelitis.
27. Amyotrophic lateral sclerosis.
28. Classification of primary headaches. Tension type headache.
29. Affection of the nervous system in AIDS (neuro-AIDS).
30. Neurological manifestations of vertebral osteochondrosis.
31. Brachial plexites.
32. Progressive muscular dystrophies.
33. Myasthenia gravis. Myasthenic syndromes.
34. Classification of primary headaches. Cluster headache.
35. Emergency conditions in myasthenia gravis: myasthenic and cholinergic crises (preconditions of development, clinical picture, diagnosis, treatment).
36. Charcot-MarieTooth disease.
37. Strumpell's familial spastic paraplegia.
38. Primary progressive muscular dystrophies (Duchenne muscular dystrophy).
39. Emergency conditions in neurology (basic principles of therapy, disorders of consciousness, Glasgow coma scale).
40. Acute autoimmune inflammatory polyradiculoneuropathy (Guillain-Barré syndrome).
41. Tibial and common peroneal neuropathy, sciatica.
42. Friedreich's ataxia. Pierre-Marie ataxia.
43. Hepatocerebral dystrophy (Wilson's disease).
44. Myotonia Congenita (Thomsen's disease)
45. Huntington's disease.
46. Epilepsy: definition, etiology, pathogenesis, classifications of epileptic disease and seizures.
47. Epilepsy (definition, diagnosis, principles of treatment, emergency aid).
48. Meningitis: classification. Serous meningitis.

49. Status epilepticus: definition, clinical picture, emergency aid.
50. Somatoneurological syndromes in cardiovascular diseases.
51. Somatoneurological syndromes in diseases of the gastrointestinal tract.
52. Principles of undifferentiated and differentiated treatment of cerebral strokes.
53. Parkinson's disease.
54. Classification of head injury. Cerebral contusion. Principles of rehabilitation.
55. Periodic paralysis.
56. Classification of primary headaches. Migraine.
57. Polyneuropathies (etiology, classification, clinical features, diagnosis, principles of treatment and rehabilitation).
58. Sleep disorders (dyssomnias): insomnia, hypersomnia.
59. Classification of head injury. Diffuse axonal injury. Principles of rehabilitation.
60. Somatoneurological syndromes in rheumatological and blood diseases.
61. Cerebral palsy.
62. Classification of closed brain injury. Cerebral compression. Principles of rehabilitation.
63. Neurosyphilis, early and late forms.
64. Neuroborreliosis.
65. Stages of physiological sleep. Classification and clinical types of sleep disorders.
66. Somatoneurological syndromes in renal diseases.
67. Emergency conditions in neurology, principles of therapy (intracranial hypertension, psychomotor agitation, pain syndrome).
68. Radicular syndromes of cervical and lumbar localization.
69. Spinal stroke. Principles of rehabilitation.
70. Perinatal affections of the nervous system.

PRACTICAL SKILLS

1. Cerebellar function examination's methodology.
2. Examination of pathological hyperreflexia reflexes.
3. Examination of physiological reflexes, reflex arcs of the latter.
4. Examination of pathological reflexes from the lower extremities.
5. Examination of the muscle tone, changes of the latter, syndromes that are characteristic for these changes.
6. Examination of motor functions.
7. Examination of stretch signs, name of symptoms.
8. Examination of the strio-pallidary system's functions (gait, active movements, muscle tone, speech, handwriting).
9. Speech disorders, syndromes that are characterized by the specific speech changes.
10. Examination of olfactory and gustatory analyzers.
11. Evaluation of somato-autonomic reflexes (Ashner-Danigni test, clinostatic Danielopoulos' test, orthostatic Prevel's reflex), dermal autonomic reflexes, pilomotor sympathetic reflex.
12. Examination of visual analyzer.
13. Describe the presented changes in visual fields (define the syndrome, topical background of the lesion).
14. Examination of the trigeminal nerve's functions.
15. Examination of the oculomotor nerves' functions.
16. Describe the fundoscopic picture in various pathological conditions (optic neuritis, papilledema, optic atrophy).
17. CSF changes in subarachnoid hemorrhage, multiple sclerosis, purulent and serous meningitis, neurotuberculosis, Guillain–Barre syndrome.
18. Autonomic innervation of the eye.
19. EEG – diagnostic value of the method, indications for usage. Define and describe EEG changes in epilepsy.
20. Describe the technique of a lumbar puncture. Indications for its usage.
21. Describe the changes at the presented cerebral and spinal MRI images of the patients with multiple sclerosis (MRI modes, radiological characteristics of foci).
22. Examination of the function of the facial nerve. Signs of central and peripheral lesions of the facial nerve.
23. Meningeal syndrome (definition, causes, symptoms), examination of meningeal symptoms.
24. Evaluate the presented MRI images of neurological patients (multiple sclerosis, cerebral stroke, acute disseminated encephalomyelitis, neuroAIDS).
25. Describe the presented CSF assays, specify diseases, for which they are typical.
26. Indications and contraindications for lumbar puncture, possible complications of the latter.
27. Computed tomography (CT) — physical principles of the method, diagnostic value in neurology.
28. Examination of muscle tone (changes in muscle tone, which syndromes are characterized by the specified pathological changes).
29. Ultrasound of the major cranial and cervical vessels — physical principles of the method, diagnostic value in neurology, indications.
30. Describe the changes at the presented EEGs of epileptic patients (pattern of absence, focal discharges, generalized discharges, status epilepticus)
31. Examination of the function of the strio-pallidary system.
32. Electromyoneurography – physical principles, interpretation and diagnostic value of the method, indications.
33. Peculiarities of examination of a neurological patient.
34. Point out the main radiological signs of osteochondrosis on the presented spondylograms.
35. X-ray diagnostic methods in neurology (craniography, spondylography, angiography) — physical principles, diagnostic value, indications.

36. Describe the presented electroneuromyograms (ALS, myotonia, myasthenia gravis, polyneuropathy).
37. Evaluate the presented CT scans of neurological patients (cerebral infarction, hemorrhagic stroke, traumatic brain injury, subarachnoid hemorrhage).
38. Examination of physiological reflexes, arcs of the latter.
39. Visual analyzer's examination.
40. Examination of olfactory and gustatory analyzers.
41. Cerebellar functions' examination.
42. Examination of meningeal symptoms.
43. Examination of the function of the facial nerve.
44. Examination of pathological hyperorality reflexes.
45. Examination of pathological plantar reflexes.
46. Examination of the functions of the oculomotor nerves.
47. Speech disorders, indicate the syndromes that are characterized by the specified speech changes.
48. Examination of the bulbar group of cranial nerves (IX, X, XII cranial nerves).
49. Describe the technique of a lumbar puncture.
50. Evaluation of the autonomic innervation of the eye.
51. Checking the muscle tone, its changes, syndromes for which these changes are typical.
52. Indications and contraindications for lumbar puncture, possible complications.
53. Computed tomography (CT) — physical principles, diagnostic value in neurology.
54. Describe the fundoscopic picture in various pathological conditions (neuritis, papilledema, optic atrophy).
55. Describe the presented CSF assays. For which diseases are they typical?
56. Describe the presented changes of visual fields (name of the syndrome, topical background of the lesion).
57. Describe the changes on the presented cerebral and spinal MRI images.
58. EEG — diagnostic value of the method, indications for its usage. Name and describe EEG changes in epilepsy.
59. MRI — physical principles of the method, diagnostic value in neurology.
60. Ultrasound of the main cranial and cervical vessels — physical principles, diagnostic value in neurology, indications.
61. MRI — physical principles, diagnostic value in neurology.
62. Describe the changes on the presented cerebral and spinal MRI images of patients with multiple sclerosis (MRI modes, characteristics of foci).
63. Point out the main X-ray signs of osteochondrosis on the presented spondylograms.
64. X-ray research methods in neurology (craniography, spondylography, angiography) — physical principles, diagnostic value, indications.
65. Peculiarities of examination of neurological patients.
66. Examination of the function of the trigeminal nerve.
67. CSF changes in subarachnoid hemorrhage, multiple sclerosis, bacterial, viral and tuberculous meningitis, Guillain-Barre syndrome.
68. Checking the muscle tone, its changes, syndromes for which these changes are characteristic.
69. Examination of the functions of the oculomotor nerves.
70. Indications and contraindications for lumbar puncture, possible complications of the latter.