LIST OF PRACTICE TOPICS ON NEUROLOGY AND NEUROSURGERY FOR THE 4TH-YEAR STUDENTS OF THE FACULTY OF FOREIGN STUDENTS (*studying in English*) IN THE 8 SEMESTER

9. Vascular disorders of the nervous system.

1. Clinical classification of the cerebrovascular disorders.
2. Transient ischemic attack, acute hypertensive crisis, transient global amnesia and acute hypertensive encephalopathy. Etiology, pathogenesis, symptoms, diagnosis, treatment.
3. Cerebral infarction. Etiology, risk factors, pathogenetic types (aterotrombotic, cardioembolic, hemodynamic, lacunar, hemorheologic).
4. Symptoms of cerebral infarction in the carotid, vertebral and basilar arteries.
5. Basic stroke therapy. Emergency medical treatment of the stroke. Primary and secondary prevention.
6. Differentiated therapy of cerebral infarction. Thrombolysis, surgical treatment.
7. Intracerebral hemorrhage. Etiology, pathogenesis, symptoms, diagnosis, drug therapy, surgical treatment.
8. Subarachnoid non-traumatic hemorrhage. Etiology, pathogenesis, symptoms, diagnosis, treatment. Indications for surgical treatment.
9. Instrumental methods for the diagnosis of vascular diseases of the nervous system.
10. Chronic cerebral ischemia (cerebrovascular encephalopathy). Stages, clinical features, diagnosis, and treatment.
11. Spinal blood supply disorders: classification, clinical courses, diagnosis, treatment.

Supervision of thematic patients; discussion of clinical cases.

10. Autoimmune diseases of the nervous system.

1. Multiple sclerosis. Etiology, pathogenesis, symptoms, diagnosis, diagnostic criteria of McDonald, differential diagnosis
2. Multiple sclerosis. Principles of treatment (drugs, criteria for prescribing).
3. Acute disseminated encephalomyelitis. Etiology, pathogenesis, symptoms, diagnosis, treatment.
4. Myasthenia. Etiology, pathogenesis, classification, symptoms, diagnosis, differential diagnosis, treatment.
5. Myasthenic and cholinergic crises, symptoms, emergency care.
6. Acute inflammatory demyelinating polyradiculoneuropathy Guillain – Barré. Etiology, pathogenesis, symptoms, diagnosis, treatment.
7. Chronic inflammatory demyelinating polyradiculoneuropathy. Etiology, pathogenesis, symptoms, diagnosis, treatment.

Supervision of thematic patients; discussion of clinical cases.

11. Degenerative diseases of the nervous system.

1. Parkinson's disease and parkinsonism syndrome. Etiology, pathogenesis, clinic, diagnosis. Drug therapy (principles of prescription and groups of drugs) and surgical treatment.
2. Amyotrophic lateral sclerosis. Etiology, pathogenesis, symptoms, diagnosis, treatment.
3. Alzheimer's disease. Etiology, pathogenesis, clinic, diagnosis, treatment, prevention.
4. Syringomyelia. Etiology, pathogenesis, symptoms, diagnosis, treatment.
5. Huntington's disease. Etiology, clinic, diagnosis, treatment.
6. Wilson disease. Etiology, pathogenesis, clinic, diagnosis, treatment.

Supervision of thematic patients; discussion of clinical cases.

12. Hereditary diseases of the nervous system.

1. Classification of the hereditary diseases of the nervous system. Genetic counseling, medical care for patients with genetic pathology.
2. Duchenne’s myodystrophy. Etiology, pathogenesis, symptoms, diagnosis, treatment.
3. Limb girdle Erb's muscular dystrophy. Distal muscular dystrophy with the late onset (Welander type). Mode of inheritance, clinical features, diagnosing, differential diagnostics.
4. Spinal amyotrophy of childhood: types, clinic, diagnosis, treatment.
5. Hereditary polyneuropathy: classification, clinic, diagnosis, therapy.
6. Myotonia congenital. Etiology, pathogenesis, clinic, diagnosis, treatment.
7. Hereditary spastic paraplegia (Strumpell disease). Etiology, pathogenesis, clinic, diagnosis, treatment.
8. Spinocerebellar ataxia. Clinic, diagnosis, treatment.
9. Friedreich's disease. Etiology, clinic, diagnosis, treatment.

Supervision of thematic patients; discussion of clinical cases.

13. Disorders of the peripheral and autonomic nervous system.

1. Epidemiology and classification of diseases of the peripheral nervous system.
2. Classification of the polyneuropathies.
3. Diphtheritic polyneuropathy. Etiology, pathogenesis, symptoms, diagnosis, treatment.
4. Diabetic polyneuropathy. Pathogenesis, symptoms, diagnosis, treatment.
5. Alcoholic polyneuropathy. Pathogenesis, symptoms, diagnosis, treatment.
6. Backbone osteochondrosis: etiology, pathogenesis.
7. Classification of the neurological disorders at the backbone osteochondrosis. Stages of the disease: reflex, radicular, compressive- ischemic.

8. Reflex and radicular syndromes of neurological manifestations of the backbone osteochondrosis at the cervical, thoracic and lumbosacral level: clinic, differential diagnosis
9. Compressive-ischemic syndrome C5 – C6, C7 – C8, L2 – L4, L5 – S1. Clinic, diagnosis.
10. Combined therapy and prevention of neurological manifestations of the backbone osteochondrosis. Indications for surgical treatment and its types.
11. Compression ischemic mononeuropathies of the median, ulnar, radial, femoral, sciatic, peroneal, tibial nerves: etiology, symptoms, diagnosing, treatment, prevention.
12. The syndrome of autonomic dysfunction. Diagnosis and treatment of diseases of the autonomic nervous system.
Supervision of thematic patients; discussion of clinical cases.

14. Epilepsy and seizures. Facial pain and headache.
1. Epilepsy. Epidemiology, classification, etiology, pathogenesis. Classification of epileptic seizures. Symptoms of focal and generalized epileptic seizures.
2. Diagnosis of epilepsy. Differential diagnostics of the epileptic seizures, syncope and hysterical seizures.
3. Status epilepticus. Emergency care for epileptic seizure and status.
4. Anticonvulsant therapy. Absolute and relative contraindications to work. Treatment of pharmacoresistant epilepsy: drug therapy, ketogenic diet, surgical.
5. International classification of the facial pain and headache.
6. Migraine. Pathogenesis, classification, clinic, diagnosis, treatment, prevention.
7. Tension headache. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment and prevention.
8. Cluster headache. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment and prevention.
9. Trigeminal neuralgia. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment. Surgical treatment and its types.
Supervision of thematic patients; discussion of clinical cases.

15. Traumatic brain and spinal cord injury. Neurosurgical treatment of vascular diseases of nervous system.
1. Epidemiology, classification, etiology, pathogenesis of the brain and spinal cord injury.
2. Mild traumatic brain injury: concussion and contusion of the brain. Clinic, diagnosis, treatment.
3. The moderate traumatic brain injury. Clinic, diagnosis, treatment.
4. Severe traumatic brain injury. Clinic, diagnosis, treatment.
5. Intracranial traumatic hemorrhages. Clinic, diagnosis, methods of surgical treatment.
6. Peculiarities of the traumatic brain injury in children, elderly and old ages and injuries due to alcohol intoxication.
7. Prevalence, mechanisms, classification, pathogenesis of spinal cord injury. Diagnosis of the level and degree of the spinal cord lesion (concussion, contusion, compression). The principles of conservative and surgical treatment.
8. Complications and sequelae of the traumatic brain and spinal cord injury. Emergency care and transportation of the patients. The principles of rehabilitation.
9. Carotid-cavernous anastomosis. Etiology, symptoms, diagnosis, treatment.
10. Cerebral aneurysms. Etiology, symptoms, diagnosis, surgical treatment.
11. Arteriovenous malformations. Symptoms, diagnosis, surgical treatment.
12. Surgical treatment of occlusive processes of extra- and cerebral vessels.
Supervision of thematic patients; discussion of clinical cases. ***Computer testing in neurology and neurosurgery***

Head of the of the Neurology
and neurosurgery Department with
course of medical rehabilitation, FATandR,
PhD, Associate Professor N.N. Usova