THE MINISTRY OF HEALTH OF UKRAINE ZAPORIZHZHIA STATE MEDICAL UNIVERSITY Department of nervous diseases

# **NEUROLOGY TESTS**

for practical employments for the students of the 4<sup>th</sup> course of II international faculty speciality "General medicine" English medium of instruction

> Zaporizhzhia 2019

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## **INTRODUCTION**

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

## THE TESTS

### **Thema: Motor system**

- 1. The central paresis is characterized by:
  - A.Increased muscle tone by the type of spasticity.
  - B. Abdominal reflexes are present, animated.
  - C. Pathology reflexes are present.
  - D.Atrophy of musles.
  - E. Reduction of tendon reflexes.
- 2. For perepheral paresis is characterized:
  - A.Hypotonia of the muscles.
  - B.Reduction of tendon reflex.
  - C. Atrophy of muscles.
  - D.Pathology reflexes are present.
  - E. Tendon reflexes are present is high.
- 3. The peripheral paresis development when damaged:
  - A.Precentral gyrus.
  - B.Radiant crown.
  - C. Anterior cord of spinal cord.
  - D.Anterior spine of the spinal cord.
  - E. Neuromuscular synapse.
- 4. The central paresis develops when damaged:
  - A. Postcentral gyrus.
  - B. Internal capsule.
  - C. Dosal spine of the spinal cord.
  - D. Lateral spine of the spinal cord.
  - E. Anterior horns of spinal cord.
- 5. The symptom of Babinsky on the right occurs when the damage:
  - A. Posterir (back) spine of the spinal cord.
  - B. Internal capsyla of the left.

- C. Lateral spine of the spinal cord.
- D. Thalamus of the left.
- E. Right lower pedunculus of cerebellum.
- 6. Atrophy of the muscules of the paralyzed limbs is not typical for the damage:
  - A. Muscles.
  - B. Neuromuscular synapse.
  - C. Lateral cord of the spinal cord.
  - D. Internal capsule.
  - E. Peripheral nerves.
- 7. The lower spastic paraparesis is typical for the damage:
  - A. Paracentral lobules in both hemispheres of the brain.
  - B. Frontal hoems of spinal cord in both sides.
  - C. Lateral cords of the brain in both sides.
  - D. Back cords of the brain in both sides.
  - E. Peripheral nerves lower limb.
- 8. In case of damage to the interior capsule is typical:
  - A. Monoparesis of upper limbs.
  - B. Monoparesis of lower limbs.
  - C. Hemyparesis.
  - D. Lower paraparesis.
  - E. Tetraparesis.
- 9. Decrease in the knee reflex is characteristic of damage:
  - A. Anterior horns of spinal cord level L1-L4.
  - B. Anterior horns of spinal cord level L5-S1.
  - C. External femoral nerve.
  - D. Femoral nerve.
  - E. Sciatic nerve.

10. For in case of damage to the lateral spine of spinal cord of the level thoracica:

A. Right hemyparesis.

- B. Left hemyparesis.
- C. Paresis of left lower limbs.
- D. Lower paraparesis.
- E. Right hemyanastesia.

#### Thema: Extrapyramidal system

- 1. Changes in muscle tone in Parkinson's disease:
  - A. Hypotonia.
  - B. Phenomenon of a "folding knife".
  - C. Spasticity.
  - D. Phenomenon of a "cogwhell".
  - E. Rigidity.
- 2. For diagnosis of parkinsonism the presence of:
  - A. Rigidity.
  - B. Hypokinesia.
  - C. Tremor.
  - D. Postural canges
  - E. Vegetative disorders.
- 3. Essential tremor:
  - A. Often occurs at a young age.
  - B. Combined with hypokinesis.
  - C. Postural.
  - D. Increases with alcohol.
  - E. Increases with emotional stress.
- 4. Local forms of muscle dystonia:
  - A. Acaderny paralysis (palsy).
  - B. Blepharospasm.
  - C. Writer's cramp.
  - D. Central monoparesis.
  - E. Spastic torticollis.

- 5. In Parkinsonism can be observed:
  - A. Rare blinking.
  - B. Orthostatic hypotension.
  - C. Dementia.
  - D. Retro- and lateropilsion.
  - E. Autonomic disordrs.
- 6. For Parcinson's disease characterized by:
  - A. The beginning at a youg age.
  - B. Debut with a shake of the head.
  - C. A sudden development of symptoms.
  - D. The prevalene of symptoms on the side.
  - E. Presence of paresis.

7. A child of 10 year. In the history of rheumatism, there were fast, sweeping involuntary movements in the muscles of the face of the limbs (reminiscent motor anxiety):

A. Atetosis.

- B. Parkinson's syndrome.
- C. Chorea.
- D. Choreoatetosis.
- E. Hemiballism.

8. A child of 15 years. In the anamnese disease encephalitis, appered involuntary contractions of the muscles of the trunk, neck, belt of the lower extremities, which are monotonic, rotational in muscular dystonia. Spesity the syndrome.

- A. Atetosis.
- B. Chorea.
- C. Hemiballism.
- D. Torsion dystonia.
- E. Myoclonus-epilepsy.

9. The patient during thr writing there are convulsions of a tonic character in the fingers of the hand. Spesity the syndrome.

- A. Atetosis.
- B. Chorea.
- C. Writing spasm.
- D. Tiki.
- E. Torticollis spatica.

10. In a patient of 65 years has gradually there was stiffness in movement, "posture flexors", slow monotonous speech, tremor of the head and tremor in the hands by coin account type gait in small steps. Spesity the syndrome.

- A. Chorea.
- B. Myoclonus epilepsy.
- C. Hemibbalism.
- D. Parkinson's syndrome.
- E. Tremor seuilis.

### Thema: Ataxia

- 1. For ataxia cerebellar is characterized:
  - A. Intention tremor.
  - B. Increased ataxia in closed eyes.
  - C. Mystagmus.
  - D. Symptom of Noika positive.
  - E. Loss of deep sensetivity.
- 2. Cerebellar ataxia may occur when the lesion:
  - A. Dorsal spinal cords of the brain.
  - B. Hemispheres of the cerebellum.
  - C. Capsula internal.
  - D. The cerebellar vernis.

- E. Lateral horns of spinal cord.
- 3. For sensetive ataxia is characterized:
  - A. Nystagmus.
  - B. Increased ataxia in cloused eyes.
  - C. Scanning speech.
  - D. Loss of deep sensetivity.
  - E. Intense tremor.
- 4. Sensetive ataxia may occur when the lesion:
  - A. Cerebellum.
  - B. Lateral spinal cord of the brain.
  - C. Frontal lobe.
  - D. Peripheral nerves.
  - E. Thalamus.
- 5. For vestibular ataxia typical:
  - A. Nystagmus.
  - B. Intense tremor.
  - C. Vomiting nausea.
  - D. Dysdiadochokinesia.
  - E. System dizzness.
- 6. Vestibular ataxia may occur. When the lesion?
  - A. Spinal cord.
  - B. Brain steam.
  - C. N.vestibulocoxlearis.
  - D. Thalamus.
  - E. Semicircular tubules.
- 7. For cortical ataxia typical:
  - A. Intense tremor.
  - B. Nystagmus.
  - C. Muscles hypotonia.
  - D. Ataxia on the Romberg's pose and walking.

- E. Loss of deep sensetivity.
- 8. With the defeat of the cerebellar vermis:
  - A. Nystagmus.
  - B. Hypotonia of muscules.
  - C. Loss of deep sensetivity.
  - D. Ataxia of the Romberg's pose.
  - E. Atetosis.
- 9. With the defeat of the left hemisphera of the cerebellar:
  - A. Hyperreflexia of right hand.
  - B. Intense tremor of left hand.
  - C. Intense tremor of right hand.
  - D. Hypotonic of muscules of right.
  - E. Dysdiadochokinesis in left hand (upper limbs).

10. Patient has hypesthesia in lower limbs, on the type of "socks", ancle reflexes absence, ataxia, when walkinng, worse with thw eues closed. Neurology defeat:

- A. Sensetive ataxia.
- B. Lower paraparesis.
- C. Cerebellar ataxia.
- D. Vestibular ataxia.
- E. Loss of sensetivity, type polyneuritises type.

### Thema: Cerebrospinal fluid (CSF)

- 1. Specity structures of the brain which produce:
  - A. Choroid plexus of the ventricles of the brain.
  - B. Epineurium.
  - C. Hard shell.
  - D. Soft shell.
  - E. Endoneurium.
- 2. Spesity of physiological role of CSF:
  - A. Neuroendocrine.

- B. Mechanical protection of the brain.
- C. Thermoregylation.
- D. Hormonal.
- E. Blood flow to the brain.
- 3. Spesity methods which do not use for study cerebrospinal fluid:
  - A. Measurement of liquor pressure.
  - B. Immunological.
  - C. Erological.
  - D. Coagulatin.
  - E. Study protein, sugar, chlorides.
- 4. Spesity what factors do not lead to hypertensive syndrome?
  - A. Atrophia cortex of brain.
  - B. Hyperproduction of CSF.
  - C. Inflommatory of meninges.
  - D. Tumor brain.
  - E. Violation of the venous outflow.
- 5. What symptom is not related to meningeal?
  - A. Neck stiffness.
  - B. Kernin's sign.
  - C. Brudzinski sign (upprr, middle, lower).
  - D. Symptom Babinski.
  - E. Symptom Lassegue.
- 6. Specify signs of liquor syndrom: protein-dissociation:
  - A. Pleocytosis.
  - B. Decreased of protein.
  - C. Normal level of chlorides.
  - D. Increased of protein.
  - E. Increased glucose in CSF.

7. Headache, huperestesia, vomiting, nausea, bradicardia, syndrome Kernig's, Brudzinski, neck stiffness typical for:

- A. Hypertension syndrome.
- B. Meningeal syndrome.
- C. Vascular crisis.
- D. Symptom adrenal crisis.
- E. Vagoinsular crisis.

8. The patient was worried about a sharp headache, a study of cerebrospinal fluid: protein 4.0 gr/l, citosis 7 cells in 1 mcl, CSF is a colorless, transparent. what is the syndrome?

A. Meningeal.

- B. Hypertension.
- C. Protein-cells dissociation.
- D. Cell-protein dissociation.
- E. Hydrocephalic syndrome.

9. The woman, 40 year, against high temperature sharp headache, vomiting appeared neck stiffness, symptom Kernig's. what tactics of conducting the patient?

- A. R-ray of skill.
- B. Lumbar puncture.
- C. Electroencephalography.
- D. Carotid ultrasonography.
- E. MRI.

10. Old women complains of decreased vision, eyesight is not impoving with points. The last three months the lack of side vision. Neurological examination: hemianopsia, the pallor of the temporal portion of the disk of the optic nerve, acromegaly. On the radiograph of the skeel characteristic of the disease, indicate them:

- A. Strengthening soudstage picture.
- B. Expansion of the Turkish saddle.

- C. The absence of changes in R-ray.
- D. Thin biones of the cranial vault.
- E. Placebase.

### Thema: Vegetative system

- 1. Specify the function which is not typical for vegetetive nervous sustem:
  - A. Trophic.
  - B. Adaptation of vital functions.
  - C. Innervation of the internal organs.
  - D. Regulation of sensory innervation.
  - E. Homeostasis.
- 2. What research method is not typical for autonomic nervous system?
  - A. The study of autonomic reactiviy.
  - B. Test of study.
  - C. Orthostatic.
  - D. Research of regional tone.
  - E. Definition of vegetative Kerdo index.
- 3. Spesify what symptoms are not typical when defeat of star knot nerves:
  - A. Burning pain in half of face neck hands.
  - B. Tachycardia.
  - C. Vasomator disorders.
  - D. Horner syndrome.
  - E. Retention of urine.
- 4. Spesifity what symptoms are not typical for sympathyadrenal attacks:
  - A. Skin is pail.
  - B. Bradycardia.
  - C. Tachecardia.
  - D. High blood pressure.
  - E. Dryness of hair and skin.
- 5. Spesifity what symptoms are not typical for vagoinsular attacks:

- A. Hypertemia.
- B. Bradycardia.
- C. Abdominal spastic pain.
- D. Midriasis and widing of eue-slit.
- E. Miosis.
- 6. To clinical forms of hypothalamic syndroms includes everything except:
  - A. Autonomic-vascular
  - B. Neuro-endocrine-methabolic.
  - C. Neuro-muscular.
  - D. Sleeping disorders.
  - E. Rigidity.
- 7. Specify symptom is not typical for Horners syndroms:
  - A. Mydriasis.
  - B. Miosis.
  - C. Ptosis.
  - D. Enophtalmia.
  - E. Hypohidrosis.
- 8. Specify main signs of disease Raynaud's:
  - A. Peripheral paresis of limbs.
  - B. Central paresis of limbs.
  - C. Hypokinesia.
  - D. Attaks of blaching or cyanosis and pain in fingers.
  - E. Sensetive ataxia.

9. The patient and there is no reaction of pupils to light and saved the reaction to accomadation and convergence. What syndrome developed at patient?

- A. Argyl-Robertson's syndome.
- B. Horner's syndrome.
- C. Weber's syndrome.
- D. Tolosa-Hant's syndrome.
- E. Benedict's syndrome.

10. Patient complains of swelling of the face on the right, the throat, hoarseness. Objectively: swelling of the eyelid, cheek and upper lip, on palpation there is stress and itching and also swelling in the oral mucosa of the pharynx. Put the clinical diagnosis?

A. Migraine.

- B. Ganglionic Gasserov node.
- C. Ganglionic pterygopalatine node.
- D. Angioedema Qween.
- E. Glossalgia.

## **Thema: Cortex**

- 1. Violation higher brain function this:
  - A. Acalculia.
  - B. Aphasia.
  - C. Central paresis.
  - D. Ataxia.
  - E. Agnosia.
- 2. Apraxia this:
  - A. Promiscuity speech.
  - B. Impaired recognition of sensory imges.
  - C. The loss of speech abilities as a means of expression.
  - D. Violation of coordination of movements.
  - E. Violation complex motor acts.
- 3. Specify what speech disorder occurs in lesion of the temporal lobe?
  - A. Autotopagnosia.
  - B. Motor aphasia.
  - C. Sensory aphasia.
  - D. Aphoma.
  - E. Scanning spech.
- 4. Agnosia this:

- A. Speech blurred (unintelligible pronunciation).
- B. Violation of recognition of sensory images.
- C. Violation of memory on current events.
- D. Violation of complex motor act.
- E. Loss of spech abilities as away of expressing thoghts.
- 5. Specify what speech disorders occur in lession of the frontal lobe on the left:
  - A. Aphonia.
  - B. Sensory aphasia.
  - C. Motor aphasia.
  - D. Dysarthria.
  - E. Mutism.
- 6. Specify signs violation of parietal lobe on the leftt:
  - A. Amusia.
  - B. Motor aphasia.
  - C. Agraphia.
  - D. Aprasia.
  - E. Anosmia.
- 7. Specify clinical signs violation of frontal lobe on the right (parient of left handed):
  - A. Acalculia.
  - B. Hemyanopsia.
  - C. Sensory aphasia.
  - D. Motor aphasia.
  - E. Amnestic aphasia.
- 8. To the types of agnosia are of the following except:
  - A. Motor.
  - B. Visual.
  - C. Auditory.
  - D. Olfactory.
  - E. Flavoring.

9. Singus of lesion of the left parietal lobe of all of the below, except:

- A. Monoplegia.
- B. Monoanasthesia.
- C. Apraxia.
- D. Alexia.
- E. Autotopanosia.

10. Patient has asteriognosis of left hand; specify localisation of the pathologycal focus:

- A. Thalamus.
- B. Parietal lobe of the left.
- C. Parietal lobe of the right.
- D. Frontal lobe on the left.
- E. Temporal lobe of right.

### **Thema: Sensation**

- 1. Types of deep sensetivity:
  - A. Joint sense.
  - B. Temperature sense.
  - C. Pain sense.
  - D. Vibration sense.
  - E. Graphism.
- 2. The test neuron of the syperficial sensaion pathways is located:
  - A. Skin.
  - B. Intervertebral ganglion.
  - C. Dorsal horns of spinal cord.
  - D. Thalamus.
  - E. Postcentral.
- 3. The thirg neuron of the deep sensation pathways is located:
  - A. Muscles.
  - B. Intervertebral ganglion.

- C. Dorsal horns of spinal cord.
- D. Thalamus.
- E. Postcentral gyrus.

4. The feeling of "creping crawling" without external irritation is:

- A. Hyperpathia.
- B. Synesthesia.
- C. Anesthesia.
- D. Paresthesia.
- E. Dysesthesia.

5. Violation of sensetivity by type "glowes" on "ams and socks@ on leg, determined by lesion:

- A. One peripheral nerve.
- B. Dorsal nerve root.
- C. All peripheral nerves.
- D. Front greysoldering.
- E. Posterior funiculus of spinal cord.
- 6. With lesions of the posterior funiculus of spinal cord may occur:
  - A. Sensetive ataxia.
  - B. Hyperpathia.
  - C. Analgesia.
  - D. Peripheral paresis of limbs.
  - E. Intesion tremor.

7. Segmental dissociated type of sensetivity disorders occurs. When the lesion is damaged?

- A. Posterior funiculus of spinal cord.
- B. Posterior horns of spinal cord.
- C. Lateral horns of spinal cord.
- D. Front grey soldering.
- E. Anterior horns of spinal cord.

8. What kinds of sensetivity are disturbed in the lesion of the posterior horns of the spinal cord?

- A. Temperature, pain.
- B. Vibration, joint senses.
- C. Light houch (tactile).
- D. Stereognosis.
- E. Localisation and kinesthesia.
- 9. Hyperpathia is characteristic of lesions:
  - A. Posterior root.
  - B. Lateral funiculus of spinal cord.
  - C. Anterior funiculus of spinal cord.
  - D. Posterior funiculus of spinal cord.
  - E. Thalamus.

10. Patient has violation of pain and temperature sensetivity in the form of a "jaket", no other sensetivity disorders. What type of sensitivity disorders?

- A. Mononeuritic (or neural).
- B. Polyneuritic.
- C. Segmental-radicular.
- D. Segmental-dissociated.
- E. Conductive.

## **Thema: Spinal cord**

- 1. With the defeat of the anterior horns of the spinal cord, there are:
  - A. Paresis of muscles.
  - B. Reflexes or absent of decreased.
  - C. Fasciculation of muscles.
  - D. Segmental-dissociated type of disorder of sensetivity.
  - E. Conductive type of disorder of sesetivity.
- 2. With the defeat of the cervical thickening, there are:

- A. Peripheral paresis of apper limbs.
- B. Conductive type of sesetivity disorder.
- C. Peripheral paresis of lower limbs.
- D. Central paresis of lower limbs.
- E. Violation of functions of pelvic organs.
- 3. With the defeat of lumbar thickening, there are:
  - A. Peripheral paresis of lower limbs.
  - B. Central paresis of lower limbs.
  - C. Segmental dissociated type sensetivity disorder.
  - D. Violation of function of pelvic organs.
  - E. Peripheral paresis of upper limbs.
- 4. With the defeat of posterior horns of spinal cord, there are:
  - A. Conductive type deep sensetivity disorder.
  - B. Pain and temperature of sensetivity disorders (conductive type).
  - C. Peripheral paresis.
  - D. Segmental dissosiated type of sensetivity disorders.
  - E. Central paraparesis.

5. Syndrome of Klodt-Bernard-Gorner appears, when segments of the spinal cord are affected at the level of:

- A. C4-C5
- B. C6-C7
- C. C6-Th1
- D. Th2-Th3
- E. Th4-Th5
- 6. With the defeat of upper cervical part of spinal cord there are:
  - A. Spastic tetraplegia.
  - B. Peripheral paresis of upper limbs, central paresis of lower limbs.
  - C. Diaphragm paresis.
  - D. Segmental dissosiated type of sensetivity disorder.
  - E. Ptosis, miosis, enophtalm.

- 7. With the defeat of half transversal of spinal cord, throcica level is right:
  - A. Central paresis of right lower limb.
  - B. Central paresis of left lower limb.
  - C. Decreased join sense of the right lower limb.
  - D. Decreased pain sensetivity on the right lower limb.
  - E. Violation of functions of pelvic organs.
- 8. Syndrome of Brown-Sequard is characterized by:
  - A. Spastic (central) tetraplegia, paresis of diaphragm, conductive type of sensetivity disorder.
  - B. Spastic paraparesis of lower limbs conductive type of sensetivity disorder.
  - C. Peripheral paraparesis of lower limbs conductive type of sensetivity disorders and disfunctions of pelvic organs.
  - D. Join of sensetivity disorder conductive type, sensetive ataxia.
  - E. Central paresis and loss of deep sensetivity profound on the affected side, on the opposite side-loss of pain and temperature sensetivity, conductive type.

9. Patient has disease of amyotrophic lateral sclerosis. Clinical symptoms: signs of central and peripheral paresis (paresis mixed), sensetivity and function of the pelvic organs are not impaired that is syndromes:

- A. Syndrome of brown-sequard.
- B. Syndrome of upper cervical part.
- C. Syndrom of combined lesions of the anterior horns and lateral funiculus.
- D. Syndrom lumbar thickening.

10. The lower peripheral paraplegia (paraparesis), paraaneshesia (hyposthesia), sevese radicular pain, true urinary incontinence. Spesify the syndrome of defeat:

- A. Syndrome of lumbar thickening.
- B. Syndrome of thoracic segments.
- C. Syndrome of cauda equina.
- D. Syndrome of posterior funiculus.
- E. Syndrom of posterior horns.

## Thema: Brain stem

- 1. For the defeat of the optic nerve is characterized:
  - A. Homonymos hemianopsia.
  - B. Bitempral chemianopsia.
  - C. Binasal heteronomous hemianopsia.
  - D. Amblyopia, amaurosis.
  - E. Ptosis, enophtalmous.
- 2. Homonymos hemianopsia occurs in lesion of:
  - A. Occipital lobe.
  - B. Optic trakt (way).
  - C. Thalamus.
  - D. Optic nerve.
  - E. Retina.
- 3. Binasai hemianopsia occurs in lesions of:
  - A. Optic trakt.
  - B. Optic chiasm.
  - C. Internal capsula.
  - D. Temporal lobe.
  - E. Retina.
- 4. Quadrant hemianopsia characteristic of defeat:
  - A. Internal capsula.
  - B. Retina.
  - C. Optic chiasm.
  - D. Thalamus.
  - E. Temporal lobe.
- 5. Argyle-Robertson syndrome is:
  - A. Decrease in visual acvity.
  - B. Loss of direct reactin of the pupil to light.
  - C. Loss of reaction of the pupil to accommodation.

- D. Pupillotonia.
- E. Maintaining the reaction of the pupil on convergence.
- 6. Unilateral anosmia occurs when the lesion:
  - A. Temporal lobe.
  - B. Occipital lobe.
  - C. Olfactory tract.
  - D. Olfactory bulb.
  - E. Nasal mucosal reseptors.
- 7. Symptomes defeat of thalamus:
  - A. Hemihypesthesia.
  - B. Hemiataxia.
  - C. Homonymous hemianopsia.
  - D. Heteronomous hemianopsia.
  - E. Horizontal paresis of the eye.
- 8. Hemiplegia, hemianesthesia, hemianopsia it's defeat:
  - A. Thalamus.
  - B. Internal capsule.
  - C. Frontal lobe.
  - D. Parietal lobe.
  - E. Occipital lobe.
- 9. Hemianopsia occurs when the lesion:
  - A. Front thigh of the internal capsule.
  - B. Knee of the internal capsule.
  - C. Anterios of hind femur internal capsule.
  - D. Posterior of hind femur internal capsule.
  - E. Optic nerve.
- 10. Olfactory hallucinations occur in defeat:
  - A. Nasal mucosal receptors.
  - B. Olfactory bulb.
  - C. Olfactory tract.

- D. Temporal lobe.
- E. Occipital lobe.

### **Thema: Oculomotori disorders**

- 1. Symptoms of lesion of oculomotor nerve:
  - A. Ptosis.
  - B. Miosis.
  - C. Paresis of the internal rectus muscle of the eye.
  - D. Paresis of the syperios oblique muscle on the eye.
  - E. Paresis of the lateral rectus muscle of the eye.
- 2. Symptom of lesions of n.abducens:
  - A. Diplopia.
  - B. Paresis of the lateral rectus muscle of the eye.
  - C. Paresis of the internal rectus muscle.
  - D. Convergent strabismus.
  - E. Paresis of the convergence.
- 3. Symptoms of lesions of n.trochlearis:
  - A. Paresis accommodation.
  - B. Paresis of the lower oblique muscle of the eye.
  - C. Paresis of the syperios oblique muscle of the eye.
  - D. Midriasis.
  - E. Diplopia.
- 4. Symptoms of lesions of the upper orbital slit:
  - A. Limiting the movement of the eyeball downwards.
  - B. Limiting the movement of the eyeball outward.
  - C. Enophthalmus.
  - D. Miosis.
  - E. Violation of sensetivity in the forehead.
- 5. Midriasis occur in defeat:

- A. Abducens nerve.
- B. Trochlar nerve.
- C. Oculomotor nerve.
- D. Medulla oblongata.
- E. Cerebrum peduncles.

6. The patient has converging strabismus, limitig the movement of the eyeball outward. Where localization of the lesion?

- A. Abducens nerve, right.
- B. Oculomotor nerve, right.
- C. Trochlear nerve, right.
- D. Trochlear nerve left.
- E. Thalamus left side.

7. The patient has ptosis on the right, divergent strabismus, mydriasis, the movement of the eyeball is possible only from the outside. Where localization of the lesion?

- A. Abducences nerve right.
- B. Oculomotor nerve right.
- C. Trochlar nerve, right.
- D. Right half of the pons Varolii.
- E. Left half of the pons Varolii.

8. The patient has diplopia when lookingg down, limiting the movement of the eyeball downwards. Where localization of the lesion?

- A. Abducens nerve left.
- B. Oculomotor nerve left.
- C. Trochlear nerve left.
- D. Midbrain left.
- E. Midbrain right.
- 9. Ptosis, myosis, enophtamos this syndrom:
  - A. Benedikt's syndrome.
  - B. Millard-Gubler syndrome.

- C. Bernar-Gorner's syndrome.
- D. Tolos-Hunt's syndrome.
- E. Foville's syndrome.

10. The patient has on right – pain and violation sensetivity in the forehead, ptosis, and eyeball is motion less mydriasis. Where localization of the lesion?

- A. Midbrain right.
- B. Pons Varolii right.
- C. Pons Varolii left.
- D. Upper orbital slit.
- E. Cerebrum peduncle right.

## Thema: Clinic of defeat of the trigeminal, facial, vestibulocochlear nerves, clinic defeat of the ponto-cerebellar angle

- 1. Symptomes of the central paresis of the muscles face (3):
  - A. Smoothness of the frontal wrinkles.
  - B. Smoothness of nasolabial foldy.
  - C. Bell's symptom.
  - D. Lowering the angle of the mouth.
  - E. Srewing the face to the healthy side with a smile.
- 2. Symptomes of the peripheral paresis of muscles face (3):
  - A. Lagophalm.
  - B. Loss of sensetivity in half of the tongue.
  - C. Loss of taste, on the back of a 2/3 tongue.
  - D. Bell's symptom.
  - E. Smoothness of the frontal wrinkles.
- 3. Lagophtalmus is (2):
  - A. Lacrimation.
  - B. Dry eyes.
  - C. Widening of the eye.

- D. Strabismus.
- E. Rare flashing
- 4. Central paresis of muscles face occur in lesion of (2):
  - A. Nuclei of n.facialis.
  - B. Root of n.fscialis.
  - C. N.facialos in fallopian canal.
  - D. Fallopian canal.
  - E. Precentral gyrus.
  - F. Knee of inner capsule.
- 5. For vestibules vertigo is characterized (3):
  - A. Feeling of rotatin of one's body.
  - B. Increased dizziness, when head position changes.
  - C. Nausea, vomiting.
  - D. Intension tremor in upper limbs.
  - E. Intension tremor in lower limbs.

6. Patient has feeling of rotation of surrounding objects, nausea, vomiting, sensorineural hearing loss on the right ear, horisontal nystagmus on the right. Where localization of lesion?

- A. Right part of pons Varolii.
- B. Leaft part of pons Varolii.
- C. Temporal lobe of the right.
- D. Temporal lobe of the left.
- E. N.vestibulocochlear, right.
- 7. Symptomes of the neurolgia of trigeminal nerve (2):
  - A. Seve bonts of short-term pain
  - B. Loss of all kinds of sensitivity in the area of II-III branches of the trigeminal nerve.
  - C. Presence of trigger zones.
  - D. Decrease of corneal reflex.
  - E. Lowering of the mouth on the side of pain.

8. Symptomes of lesion of the pontocerebellar angle (3):

- A. Sensorneural hearing loss.
- B. Sensetive ataxia.
- C. Lesion of sensetivity on the face.
- D. Paresis mimics muscles of the peripheral type.
- E. Dysphonic, dysphagia.

9. The patient has pain, decrease of all kinds of sensitivity in the area forehead and upper eyelid on the right. Where is localization of lesion?

- A. Ganglion Gasser's right.
- B. I branche of the n.trigeminal.
- C. II brache of the n.trigeminal.
- D. III brache of the n.trigeminal
- E. Pons Varolii of the right.

### Thema: Clinic of defeat of medulla oblongata, IX-XII pairs cranial nerves

1. The patient has dysathria, deviation of tongue on the left. There are no external changes in the tongue. Where is localization of lesion?

- A. N.hypoglossus. left.
- B. N.hypoglossus right.
- C. Cortico-nuclear tract on the left.
- D. Cortico-nuclear tract on the right.
- E. Right half of the medulla oblongata.
- 2. Bulbar syndrome occur in lesion of (2):
  - A. Accessory nerve.
  - B. Glossopharyngeal and vegus nerves.
  - C. Upper roots of cervical area of spinal cord.
  - D. Medulla oblongata.
  - E. Cortico-spinal tract from both sides.

- 3. Manifestation of bulbar syndrome:
  - A. Dysphania.
  - B. Dyshagis.
  - C. Dysartria.
  - D. Pharyngeal and palatal refleas are rebitalisation.
  - E. Reflex of oral automatism.
- 4. Pseudobulbar syndrome occur of lesion:
  - A. Accessory nerve.
  - B. Glosopharyngeal and vagus.
  - C. Hypoglossal nerve.
  - D. Cortico-nuclear tract from both sides.
  - E. Medulla oblongata.
- 5. Manifestations of pseudobulbar syndrome (3):
  - A. Paresis of trapezoid and sternocleidomastoid muscles.
  - B. Dysphagia.
  - C. Decrease of pharyngeal and palatal reflexes.
  - D. Violent Laughter.
  - E. Positive reflexes of oral automatism.

6. After syrgery on the thyroid land, the patient had hoarseness, while laryngoscopy rewaled paralysis of the right vocal cords. Damaged nerve branch:

- A. Glossopharyngeal nerve.
- B. Accessory nerve.
- C. Hypoglossal nerve.
- D. Vagus nerve.
- E. Facial nerve.
- 7. Bilateral damage of accessory nerve manifests:
  - A. Handing down of the head.
  - B. Peripheral paresis of upper limbs.
  - C. Central paresis of upper limbs.
  - D. Dysphonia.

E. Dysphagia.

8. With peripheral paresis of thebtongue, in contract to the central paresis, there is:

- A. Central paresis of the limbs.
- B. Peripheral paresis of the limbs.
- C. Atrophy and fibrillar muscular twiching.
- D. Dysphagia.
- E. Dysphnia.
- 9. With pseudobulbar syndrome in contract to bulbar syndrome noted (2):
  - A. Decrease of pharyngeal reflex.
  - B. Increased mondibular reflex.
  - C. Dysphonia.
  - D. Dysartria.
  - E. Violent Laughter.
- 10. Symptomes of bilateral damage to the cortical nuclear patways:
  - A. Dysphonia.
  - B. Revitalization of pharyngeal reflex.
  - C. Dysphagia.
  - D. Atrophy and fibrillar muscluar twiching of tongue.
  - E. Hanging down of the head.

## Thema: Alternating syndromes

1. The patient has peripheral paresis of mimic muscles of left, central hemiparesis limbs of the right localization of lesion:

- A. Precentral gyrus, right.
- B. Precentral gyrus, left.
- C. Pons Vardii of the right.
- D. Pons Varolii of the left.
- E. Left hemisphera of cerebellum.

2. The patient has diplopia, ptosis, divergent strabismus, mydriasis, exophthalmus, on the right, contralateral – central hemiparesis of the limbs. Name syndrome:

A. Benedikt syndrome.

- B. Weber syndrome.
- C. Foville syndrome.
- D. Claude's syndrome.
- E. Shmidt's syndrome.

3. Patient has diplopia, divergent strabismus, mydriasis, distuurbances of accommodation and convergence the absence of pupillary light reflex on the left side, right side – intention tremor, hemiataxia, and hypothonia of muscles. What name syndrome?

- A. Weber syndrome.
- B. Benedikt syndrome.
- C. Foix syndrome.
- D. Claude's syndrome.
- E. Foville's syndrome.

4. Patient has ptosis of syperior eyelid, divergent strabismus, exophthalmus, mydriasis on the right contralateral – intension tremor, choreoathetosis, anesthesia. What name is syndrome?

- A. Weber's syndrome.
- B. Benedict syndrome.
- C. Foix syndrome.
- D. Caude's syndrome.
- E. Millard-Gubler syndrome.

5. Patient has palate peresis, vocal cord paresis contrlateral – central hemiparesis left. Where is localization of lesion? Name of the syndrome.

A. Left pons Varolii, Foville's syndrome.

- B. Medulla oblongata, Avellis syndrome.
- C. Medula oblongata, Schmidt's syndrome.

D. Pons Varalii, Foville's syndrome.

E. Medula oblongata, Jacson's syndrome.

6. Ipsilateral symptoms: palate paresis, vocal cord paresis, tongue peripheral paresis, trapezius and sternocleidomastoideus muscles peripheral paresis. Contralateral – central hemiparesis, hemianasthesia. What name syndome?

A. Shmidt syndrome.

B. Avellis syndrome.

C. Foville's syndrome.

D. Millard-Gubler syndrome.

E. Jackson syndrome.

7. Patient has diplopia, convergent strabismus, and peripheral paresis of mimic muscles on the left, right – central hemiparesis of limbs. What name syndome?

A. Millard-Gubler syndrome.

- B. Foville's syndrome.
- C. Shmidt's syndrome.
- D. Avellis's syndrome.

E. Weber's syndrome.

8. Patient has tongue peripheral paresis on the side of lesion and central hemiparesis on the limbs – contralateral. What name of syndrome?

- A. Walenberg's-Zakcharchenko syndrome.
- B. Shmidts's syndrome.
- C. Foville's syndrome.
- D. Jackson's syndrome.
- E. Avellis's syndrome.
- 9. Patient has syndrome millard-Gubler. What clinical symptoms?
  - A. Diplopia, convergent strabismus peripheral paresis of mimic muscules.
  - B. Palate paresis, vocal cord paresis, central hemiparesis opposite side.
  - C. Diplopia, exophthalmus, mydriasis, contrlateral hemi
  - D. Peripheral paresis of mimic muscles side of lesion, contrlateral central hemiparesis.

E. Tongue peripheral paresis, contralateral hemiparesis.

10. Patient has insilateral – insufficience V, IX, X pairs of cranial nerves (hemianesthesia of face, vocal cord and paresis palate), syndrome of Clodes-Gorner, ataxia of cerebellar in limbs; contrlateral – hemianesthesia, may be hemiparesis. Name paresis:

- A. Jackson.
- B. Fofille.
- C. Schmidt.
- D. Cervical bulge of spinal cord.
- E. Wallenberg-Zakcharchenko.

### Thema: Mental distress (impairment of consciousness)

- 1. Disorder of consciousness can occur with small lesions:
  - A. Frontal lobe.
  - B. Temporal lobe.
  - C. Parietal lobe.
  - D. Occipital lobe.
  - E. Midbrain.
- 2. When copied saved (2):
  - A. Speech.
  - B. Adequate response to speech commands.
  - C. Reaction to painful irritations.
  - D. Reaction pupil's to light.
  - E. Control of pelvic organs.
- 3. When coma saved (3):
  - A. Arbitrary movements in the limbs.
  - B. Direct reation of pupils to light.
  - C. C. Friendly reaction of pupils to light.
  - D. Corneal reflex.

E. Control of pelvic organs.

4. At a coma it is impossible to ivestigate rigidity of cervical muscles at suspicion on:

- A. Ischemic stroke.
- B. Spontaneous brain hemorrhage.
- C. Traumatic brain hemorragic.
- D. Fracture of a cervical department of a spinal cord.
- E. Purulent meningitis.
- 5. Dosorder of sensetivity of the sopor can be identifield:
  - A. Pain sensetivity.
  - B. Temperature sensetivity
  - C. Joins sense.
  - D. Stereogosis.
  - E. Two dimensional spase senses.
- 6. Causes of metabolic coma (2):
  - A. Encephalitis.
  - B. Meningitis.
  - C. Spit drug poisoning.
  - D. Urema.
  - E. Tumor of the brain.
- 7. The main method that confirms the death of the brain:
  - A. X-ray computed tomography.
  - B. Magnetic resonanse imaging.
  - C. Echoencephaloscopy.
  - D. Electroencephalography.
  - E. X-ray of skill.
- 8. In the chronic vegetative state, the patient is preserved:
  - A. Speech.
  - B. Writing.

- C. Sleep-wake cycle.
- D. Purposeful ovements.
- E. Stereognosis.
- 9. The severity of the following disorders of consiousness (2):
  - A. Delirium.
  - B. Hallucinations.
  - C. Sopor
  - D. Akinetic mutism
  - E. Coma
- 10. Akinetic mutism is ussually caused by defeat:
  - A. Frontal lobe
  - B. Parietal lobe
  - C. Occipital lobe
  - D. Cerebellum.
  - E. Medulla oblongata.

### **TEST ANSWERS**

### Motor system.

1. A, C; 2. A, B, C; 3.D, E; 4. B, D; 5. B, C; 6. B, C; 7. A, C; 8. C; 9. A, D; 10.C

### Extrapyramidal system.

1. D; 2. B; 3. A, C; 4. B, C, E; 5. A, B, C; 6. D; 7. C; 8. D; 9. C; 10. D.

### Ataxia.

1. A, C; 2.B, D; 3. B, D; 4. D, E; 5. A, C, E; 6. D, C, E; 7. D; 8. A, B, D; 9.D,E; 10. A,E.

### **Cerebrospinal fluid.**

1. A; 2. B; 3.D; 4. A; 5. E; 6.D; 7. B; 8. C; 9. B; 10.B.

### Vegetative system.

1.D; 2.B; 3.E; 4.B; 5.D; 6.E; 7.A; 8. D; 9.A; 10.D.

### Cortex.

1. A,B,E; 2.E; 3.C; 4.B; 5.C; 6.E; 7A; 8.A; 9.A; 10.

### Sensation.

1. A, D; 2.B; 3.D; 4.D; 5.C; 6. A, B; 7. B, D; 8.A; 9.E; 10.C.

### Spinal cord

1. A,B,C; 2.A,B,D,E; 3. A, D; 4.D; 5.C; 6.A,C; 7.A,C; 8.E; 9.C; 10.C

### Brain stem.

1. D; 2. A,B,C; 3. B; 4.E; 5.B,E; 6.C,D,E; 7. A,B,C; 8.B; 9.D; 10.D.
### **Oculomotoris disorders.**

1. A,C; 2. A,B,D; 3. C,E; 4. A,B,E; 5. C,E; 6. A; 7. B; 8. C; 9.C; 10. D.

# Clinic of defeat of the trigeminal, facial, vestibulocochlear nerves, clinic defeat of the ponto-cerebellar angle.

1. B, D, E; 2. A,D,E; 3.C,E; 4. D,E; 5 . A,B,C; 6.E; 7.A,C; 8.A,C,D; 9.B.

Clinic of defeat of medulla oblongata, IX-XII pairs cranial nerves. 1.D; 2. B,D; 3.A,B,C; 4.D; 5.D,E; 6.A; 7.A; 8.C; 9.B,E; 10. A,B,C/

## Alternating syndrome.

1.D; 2.B; 3.D; 4.B; 5.B; 6.A; 7.B; 8.D; 9.D; 10.E.

## Mental distress

1.E; 2.CD; 3.C,D; 4.D; 5.A; 6. C,D; 7.D; 8.C; 9.C; 10.A.

# Spinal cord.

1.A,B,C; 2. A,B,D,E; 3.D; 4.D; 5.C; 6.A,C; 7. A,C; 8.E; 9.C; 10.C.

### SITUATIONAL TASK

1. A woman at the age of 62 year develops wakness in the left extremities, during the examination: in the left limbs of the movements absent, tone increased in the flexors of the hand and extensors of the leg, deep reflexes present, pathology reflex of Babinski positive.

The question.

- 1. Neurology syndrome.
- 2. Localization of lesion.
- 3. Additional research methods.

2. The man at the age of 40 years, in moning after sleep found, weakness in the right hand. The examination: muscles hypotonia, deep reflexes decreased, pathology reflexes absent, fibrillary twiching of the muscles.

The question.

- 1. Neurology syndrome.
- 2. Localization of lesion.
- 3. Additional research methods.

3. The manat the age 55 yers gradually increasing wakness and weeght, loss of the lower and then of the upper extremineties. The examination: muscle atrophy on the upper and lower limbs, fasciculation twiching (especially hands) decreased muscles tone, present deep reflexes symptom of Babinski positive.

The question.

- 1. Neurology syndrome.
- 2. Localization of lesion.
- 3. Additional research methods.

4. In the woman of 25 years of pregnancy appeared involuntary repid movements in the face, the body, limbs. Anamnesis: rheumatic attack in the age 18, there were similar motor disorders. Examination: involuntary, rapid chaotic movements in the face and extremities, pathology reflexes absent.

The question.

- 1. Neurology syndrome.
- 2. Localization of lesion.

5. The 18-years-old girl concerned about the involuntary movements of thr facial mucles, the frequent blinking of the left eue, these violations arose in 10 years, intensified with excitement. Examination: periodically arising rhytmic contraction of the circular muscle of both, more left, other neorilogical disorders.

The question.

- 1. Neurology syndrome.
- 2. Localization of lesion.

6. The man of 25 years notes stiffness in the limbs and periodically involuntary movements in them for two years. Examination: hypocinesia, increase of muscle tone by type of rigidity, involuntary slow movemente in the right hand, MRY of brain without pathology. Ophthalmologist: Kaiser-Freischner ring.

The question.

- 1. Neurology syndrome.
- 2. Localization of lesion.

7. The man 45-years, notes the turmail of the gait, awkwarrdness in left extremities. Examination: muscle hypotonic, decrease of reflexes, intensional tremor, when perfoming coordinate tests, dysdiadohokinesis, ataxia left in Romberg test.

- 1. Neurology syndrome.
- 2. Localization of lesion.

8. The woman has scanning speech, vertical nystagmus loss of muscle tone, ataxia of the Rombergs test, asynergia of Babinski, pathology reflwx and sensetivity lesion absent.

The question.

- 1. Neurology syndrome.
- 2. Localization of lesion.

9. The man of 40-years concerned about the pain and numbness in lower limbs, shakiness when walkin periodic drop. Examination: loss of sensetivity on the legs on the type "soks", muscular hypotonia, absent of ancle reflexes. Romberg test – ataxia, when closing eyes intensifying coordinating disturbances.

The question.

- 1. Neurology syndrome.
- 2. Localization of lesion.

10. Deep sensetivity is affected on both sides from the level of the T6 segment downward.

The question.

- 1. What kinds of sensetivity are affected?
- 2. Where is the lesion localized?
- 3. Why does the patient complain of unsteadiness, when walking?

11. A diabetes patient has lost all kinds of sensetivity in the hands and feet, on the type "socks" and "gloves".

- 1. What is type of sensitive impairement?
- 2. The damage of what structure of nervous system can explain these sensitive disorders?

12. Recurrent feeling of numbing sensation in the patient's right hand lost for a minuye.

The question.

- 1. What part of the nervous system stimulation ate these feeling assotiated with?
- 2. How are such attacks called?

13. After severe head injury the patient's left optic nerve was damage. Vision on the left side.

The question.

- 1. How is this pathology called? Whill the pupilary eye rection be preserved?
- 2. Is there any likelihood for optic nerve atrophy to develop?

14. A patient of 60 yeas old, after a year ago a stroke is affected by pain in the left limbs, during the examination all type of sensetivity are weakened on the left, coordinating tests – ataxia on the left, no over violations, sometime violent crying.

The question.

- 1. Neurology syndrome.
- 2. Where is the lesion localized?

15. The women of 65 old had healing is a sense of smell, in the examination of neurological disorder's is not, only a decrease in smeell. CT head – does not change.

- 1. Neurology syndrome.
- 2. Where is the lesion localized?

16. The man of 36-yers old for a long time bother pain in hands, periodically there are burns from touching hot objects the temperature of which he does not feel. During examination reveals multiple traces of "painless" burn on the hands recuction of pain and temperature sensetivity in the form of a "jacket", fasciculation in the muscles of both brushes, loss of reflexes on hand.

The question.

- 1. Neurology syndrome.
- 2. Where is the lesion localized?
- 3. What is type of sensetive impairement?

17. A patient developed upper flaccid paraparesis and lower spastic paraplegia, ptosis, miosis and enophtalmus, after a trautic spinal cord injury.

The question.

- 1. Due to the damage of that structure and at what level dial this pathology apper?
- 2. Is the appearance of urination disorders possible in this case and if so, of what type?
- A patient had a traumatic spinal cord transection lesion at the C3-C4 level/ The question.
  - 1. What motor and sensory disorders apper?
  - 2. Due to the damageof what nervous structure did they apper?
  - 3. Will breathing disturbance apper and if so why?

19. A patient, who has suffered from ischemic stroke, has left-sided arooping of the mouth corner, tongue deviation to the left, dysarthria, muscle weakness in the left hand with deep reflexes increasing in it.

- 1. What does dysarthria mean?
- 2. How is this motor impairment called?

20. Dysphagia, dysphonia, dysarthria are gradually developing in a 55-year-old patient. Phonation determined soft palate lowering. Pharyngeal reflex is absent. A marked atrophy of the tongue muscles and fibrillar twiching within them are observed.

The question.

- 1. How is this clinical syndrome called?
- 2. What does twiching in the tongue muscles evidenced about?
- 3. What is the localisation of the pathological focus?

21. An 85-yers-old patient was admitted to the neurological department with dysphonia, disarthria, dysphagia, pharyngeal reflex is present. The involuntary crying and oral automatism reflexes are noted.

The question.

- 1. How is this clinical syndrome called?
- 2. Where is the lesion located?
- 3. Define the terms mentioned above.

22. A patient has been sick for the lost 2 days. He suffers from burning pain and parewstesia in the left half of the face and vesicular rach appeared on the skin of the left side of the forehead.

The question.

- 1. What structures of the nervous system is lesion?
- 2. What sensetive disorders and in what area can occur?
- 3. What reflexes can change and why?

24. A patient has developed left-side facial asymmetry after spercooling: he can't closehie left eye, raise his left eyebrow, the left corner of the mouth is droped. He also experiences hyperacusis and alternatin of taste on the left side of the tongue.

The question.

- 1. What structure of nervous system is affected? What level of the affected structure is damaged?
- 2. What king of mimic muscle paresis is it?

25. The patient had headache, vomiting, assimetric and pain of face, hearing impairment. Examination: peripheral paresis of mimic muscles, nystagmus, diplopia on the right, violation sensitivity on the face, ataxia on the Romberg's test. Audiogram – decreased hearing.

The question.

- 1. How is this clinical syndrome called?
- 2. What is the location of the pathological focus?

26. In a 50-year-old patient, whowas had syphillis 15 years ago, had sensetive ataxia, Argyll-Robertson's syndrome.

The question.

- 1. What are the signs of Argyll-Robertson's syndrome?
- 2. The lesion of what structure caused sensetive ataxia?

27. A patient revealed a mild divergent strabismus and diplopia of the right eye, while looking dowward.

The question.

- 1. Paresis of which muscle caused this pathology?
- 2. What structure is affected?

28. The patient complains of double vision while trying to look to the left. Convergent strabisusm of the left eye is observed.

- 1. Paresis of which muscle caused this strabismus?
- 2. Where is the lesion localized?

29. A patient has peripheral paresis of mimic muscles, diplopia, and convergent strabismus – contralateral – central hemiparesis.

The question.

- 1. Where is lesion localized?
- 2. How is the described syndrome called?

30. Dizziness and diplopia suddenly appeared in a 65-year-old patientwith arterial hypertension. The upper right eyelid has drooped. The pupil of the right eye has dilated; the eyeball has turned out ward. The strength of the left extremities is reduced, the Babinski reflex appeared on the left side.

The question.

- 1. How is the decribed syndrome called?
- 2. Which structures and which level are affected?

31. A narrowed right eyelid and pupil, anesthesia of pain and temperature sensetivity on the right half of the face in the outer Zelder zone, right – sided vocal cord and soft palatparesis, dysphagia, dysphonia and cerebellar ataxia in the right extremities, were found in the neurological status of a stroke patient. Contrlateral side: hemihypesthesia of pain and temperature sensetivity have been founded.

The question.

- 1. How is this syndrome called?
- 2. Make and explain a topical diagnosis.
- 3. What is the type of impaired face sensetivity?

32. A young woman suffers from gastritis. He has recureent acute attacks of skin, pallar, tachycardia, chills, feeling of brethlessness, and fear of death. An attack losts 20-30 minutes and is followear by polyuria.

- 1. How this attack called?
- 2. Where are lesions localized?
- 3. Will blood pressure change during the attack?

33. The patient has recurrent auditiry hallucinations. He does not understand speech addressed to chim so it sounds as a foreigh language. Patient's spech sounds seem to be a verbal mash.

The question.

- 1. How is this speech disorder called?
- 2. What do the auditory hallucinations indicate?
- 3. Where is lesion located?

34. Within seven months a patient became apathic, with reduction of criticizm and inadequate behavior. He has Janiszewski's grasping reflex, oaral automatism reflexes, instability when walking with a tendency to fall to the right.

The question.

- 1. How is this behavior disorder called?
- 2. Name the oral automatism reflexes.
- 3. How is the walking instability called?
- 4. Where is the lesion located?

35. A CSF study of a patient with meningeal syndrome was perfosmed. The obtained results were cytosis-150 in 1 mm<sup>3</sup> (mastly lymphosytes), protein -0,33 g/l.

- 1. Are CSF data pathological?
- 2. Name the CSF syndrome?
- 3. What are the changes in the number of cells found in the spinal fluid?

36. A 50-year-old patient has suddenly developed a subarachnoid hemorrhage during physical exertion.

The question

- 1. What syndrome can be observed in the neurological status?
- 2. Describe the symptoms of this syndrome.
- 3. What additional clinical tests will confirm the diagnosis?

37. A patient with purulent otitis complains of severe headache and nausea. Body temperature is  $39,5^{0}$ C. There is neck muscle stiffness Kernig's sign is positive.

The question.

- 1. What syndrome is observed in the patient?
- 2. What additional clinical tests will confirm the diagnosis?

38. The patient developed intracranial hypertension syndrome.

The question.

- 1. What are the signs of this syndrome?
- 2. What instrumental examinations are recommended to perform?
- 3. What disease can cause it?

39. The man for two days werried about the growing, headache and fever to  $39^{0}$ C, at the examination: in the mind, focused in place and time, but the questions and swered naonosyllabically, drowsiness, meningeal syndrome positive, there are no other neurological disorders.

- 1. Neurological syndrome.
- 2. Degree and nature of impaired consciousness.
- 3. Where is the lesion localized?
- 4. Additional methods of investigation.

40. The patient lacks higher cortical functions and purposeful movements in response to external stimulation. However, independent breathing and cordiovascular activity remain.

The question.

- 1. Neurological syndrome.
- 2. Where is the lesion localized?

# TASKS WITH MULTIPLE QUESTIONS

1. Patient has weakness of right limbs increased of muscle tone in the flexor arm and extensor legs, hyperreflexia, a symptom of Babinsky.

Name the neurological symptomes (3).

A. Hemiparesis.

- B. Monoparesis.
- C. Spasticity.
- D. Muscle stiffness.
- E. Pathology reflex.

Where localization of lesion? (1)

A. Lateral funiculus in cervical part of spinal cord, right.

B. Posterior funiculus in cervical part of spinal cord, right.

C. Thalamus left.

- D. Thalamus right.
- E. Internal capsula on the left.

2. A man aged 30 years in the moning after sleep developed weakness in the right hand. When the examination revealed the impossibility of extension of the right hand and fingers muscle hypotension and reflexes of triceps in the right arm absence.

Name the neurological symptomes.

A. Peripheral paresis of hand.

- B. Central paresis of hand.
- C. Mixed paresis of hand.

Where localization of lesion?

- A. Precentral gyrus left.
- B. Lateral funiculus of spinal cord on the cervical part of right.
- C. Radial nerve on the right.
- D. Median nerve on the right
- E. Ulnar nerve.

Recommended additional research method:

- A. Computed tomographe.
- B. Magnetic resonance imaging of the head.
- C. Magnetic resonance imaging of the spinal cord.
- D. Electroencephlography.
- E. Electromyograhy.

3. A man aged 60-years-old gradually develops a weakness in his right leg. When examining direct the leg paresis in the proximal part to 4 points (easy), in the foot to paints, the tone is increased in the extensor legs, hyperactivity of the knee, Achilles reflexes, Babinsky symptom presence.

Name the neurological symptomes (3).

- A. Monoparesis of leg.
- B. Spasticity.
- C. Hyperreflexia.
- D. Muscular rigidity.
- E. Fasciculations of muscle.

Where localization of lesion?

- A. Right perineal nerve.
- B. Lateral funiculew, cervical part, of the spinal cord.
- C. Right tibial nerve.
- D. Thalamus of the left.

E. Anterior horns of spinal cord, cervical part.

Additional research method.

- A. Muscle biopsy.
- B. Needle electronmyography.
- C. Magnetic resonance imaging of the spinal cord..
- D. Electromyography
- E. Ultrasonography.

4. A women 55-years gradually develops weakness and weight loss in lower and then in apper limbs. Examination: in all limbs expressed atrophy, fasciculations of musles, of tendon reflexes hyperreflexia, presense of the pathological reflex (Babinski sign), hypotonia of muscles.

Name the neurological symptomes.

- A. Peripheral tetraparesis.
- B. Central tetraparesis.
- C. Mixed tetraparesis.
- D. Peripheral paraparesis.

Where localization of lesion?

- A. Corticospinal (pyramidal) way (tract).
- B. Neuromuscular synapse.
- C. Anterior horns of the spinal cord.
- D. Posterior horn of spinal cord.

5. A woman of 25-year-old makes complaints about trembling finger, which is aggravated by excitement, when drinking alcohol, tremor regresses on the next day is some what stenghened. Examination: the trembling of the fingers is not great, is amplifed in Romberg sample; there is a trembling of the head; the performance of the coordinatoss is satisfactory, there are no other chages in neurological status.

Name the neurological symptomes.

A. Athetosis.

B. Intention tremor.

C. Ataxia.

D. Postular tremor.

E. Tremor of rest.

Specify a preliminary diagnosis.

A. Parkinson's disease.

B. Small chorea.

C. Essential tremor.

D. Chorea Huntington's.

6. A man 60 year old appeared and gradually throughout the year, tremor and stiffness in the right hand. Examination: hypomimia, monotonous sloww speech, tremor on the type "swallowing of pills" on the right upper limbs, slowing the pace of movement, present vegetative reactions: hypersalivation, hyperhidrosis.

Name the neurological symptomes (2).

A. Spasticity.

B. Aheyrokinesis.

C. Intention tremor.

D. Hypokinesia.

E. Sensetive ataxia.

Specify a preliminary diagnosis.

A. Parkinson's disease.

B. Essential tremor.

C. Chorea Huntington's.

D. Muscules dystonia.

E. Hemiballism.

Prescribe treatment (2).

A. Levodopa (L-DOPA).

B. Selegin.

C. Baclophen.

D. Neuromidin.

E. Riluzole.

7. A yong man of 16 years old for 10 years is disturbed by involuntary stereotyped movements in the muscles of the face, sholder girdle and upeer limbs, involuntary shouting, snorting ect. Objctively: involuntary quck, repetitive movement in the face, sholder girdle and grunting and sniff, there are noother neurological disorders.

What neurology symptoms?

- A. Athetosis.
- B. Chorea.

C. Hemiballism.

D. Postural tremor.

E. Tiks.

Specify a preliminary diagnosis.

A. Fourette's syndrome.

B. Chorea Huntington's.

C. Small chorea.

D. Neurosis tick.

E. Muscles dystonia.

Prescribe treatment.

A. Bisoprolol (propranolone).

B. Cyclodol.

C. Haloperidol.

D. Botulinum toxin.

8. A woman of 50 years of age worried for two years involuntary turn of the head to the left, increasing with excitement and walking, at rest-decreases, et examination: involuntary turn of the head to the left, tonic tension of the

sternocleidomastoid muscle on the right of the other nurological disorders is not present.

Specify a preliminary diagnosis.

- A. Parkinson's disease.
- B. Chorea Huntington's.
- C. Muscles dystonia.
- D. Small chorea.
- E. Fourettes syndrome. Prescribe treatment.
- A. Propronalone.
- B. Amantadium.
- C. Haloperedol.
- D. Botulinum toxin.
- E. Pimozide.

9. The patient has muscular hypotonia of the left limbs, intention tremor, in the Romberg position is unstable, deviates to the left.

What type of ataxia?

- A. Cerebellar.
- B. Sensetive.
- C. Vestibular.
- D. Cortical.
- E. Mixed (cerebellar and sensetive).

Where localisation of lesion?

- A. Posterior funiculus of spinal cord, right.
- B. Posterior funiculus of spinal cord, left.
- C. Brain steam.
- D. Hemisphera of cerebellum left.
- E. Frontal lobe of left.

10. The patient has muscular hypotonia, asynrgia of Babinski, unstable in the Romberg position and when wolking, there is no sensetivity disorders.

What type of ataxia?

- A. Cerebellar.
- B. Vestibular.
- C. Frontal.
- D. Sensetive.
- E. Mixed (sensetive+cerebellar). Where localisation of lesion?
- A. Hemisphers of gerebellum left.
- B. Hemisphera of cerebellar left.
- C. Spinal cord.
- D. Vermix of cerebellum.
- E. Parietal lobe.

11. The patient has hypesthesia in legs, the type "sooks"; Achilles reflexes absent, in the Romberg's position unstable and when wolking, intensifuing with closed eyes.

What neurology disorders? (2)

- A. Sensetive ataxia.
- B. Central paraparesis lower.
- C. Polyneuritic type senserivity disorders.
- D. Cerebellar ataxia
- E. Vestibular ataxia

Where localization of the lesion?

- A. Peripheral nerves
- B. Posterior funiculus of spinal cord.
- C. Brain stem.
- D. Vermix of cerebellum.
- E. Labyrinth.

Additional research method:

- A. MRI of head.
- B. CT of head.
- C. MRI of spinal cord.
- D. Electromyography.
- E. Electroencephalography.

12. The patient has nustagmus, scanning speech in the legs the force is reduced, the reflexes ae animated, and the bilateral symptom of the Babinsky: in the left limbs is a intentional tremor, there are no sensory disturbances.

What is a neurology disorder? (2)

- A. Sensetive ataxia.
- B. Lower spastic paraparesis.
- C. Vestibular ataxia.
- D. Cerebellar ataxia.
- E. Mixed ataxia.

Where is localization on the lesion? (2)

- A. Hemisphera of the cerebellum.
- B. Posterior funiculus of spinal cord.
- C. Lateral funiculus of spinal cord.
- D. Anteior horns of spinal cord.
- E. Labyrinth.
- Additional research method (2):
- A. MRI of head.
- B. MRI of spinal cord.
- C. R-electroencepahalography.
- D. Electromyography.
- E. CT of head.

13. The patient has violation of sensetivity: pain and temperature, in the form of a "jacket", there are no other disorders of sensetivity.

Which type disorders of sensetivity?

- A. Mononeuritic.
- B. Polyneuritic.
- C. Segmental redicular.
- D. Segmental dissociated.
- E. Conductive.

Where is localization of the brain?

- A. Peripheral nerve.
- B. Posterior horns of spinal cord.
- C. Posterior roots of spinal cord.
- D. Front grey commissure of the spinal cord.
- E. Postcentral gyrus.

14. The patient has violation of all type of sensetivity in legs by the form type "golf" there are no Achilles reflexes.

Which type disorders of lesion?

- A. Mononeuritic.
- B. Segmental dissociated.
- C. Polyneuritic.
- D. Segmental radicular.
- E. Conductive.

Where is localization of the lesion?

- A. Peripheral nerve.
- B. Posterior roots.
- C. Lateral funiculus.
- D. Posterior funiculus of spinal cord.
- E. Front white commissure.

15. The patient worried about shakiness when walking falls. Objectivety: the muscular joint feeling is lost in born legs, there are no knee and Achilles reflexes, muuscular tone low, in Romberg pose and when walking the staggering is amplified when the patient close his eyes.

Which type disorders of sensetivity?

- A. Polyneuritic.
- B. Segmental radicular.
- C. Segmental dissociated.
- D. Spinal conductive.
- E. Cortical.

Where is localization of the lesion?

- A. Peripheral nerve.
- B. Posterior roots of spinal cord
- C. Posterior (dorsal) horns of spinal cord.
- D. Posterios funiculus of spinal cord.
- E. Lateral funiculus of spinal cord.

16. The patient lost all kinds of sensetivity on the left side of the body, in the left hand and leg.

Which type disorders of sensetivity?

- A. Segmental-radicular.
- B. Segmental-dissociated.
- C. Polyneuritic.
- D. Conductive.
- E. Cortical.

Where is localization of the lesion?

- A. Internal capsule.
- B. Thalamus.
- C. Upper part of part of postcentral gyrus.
- D. Transverse spinal injury.

### E. Upper part of precentral gurus.

17. The patient is concerned about pain in the lumbar region and the back surface of the left leg. Objectively: lost all kinds of sensetivity in the forn of a "lamp", on the back surface on the left leg and along the outes edge of the foot, absent of Achilles reflex.

Which type disorders of sensetivity?

- A. Segmental-radicular.
- B. Segmental-dissociated.
- C. Polyneyritic.
- D. Mononeuritic
- E. Conductive.

Where is localization of the lesion?

- A. Back 5 lumbar spine sulcus.
- B. Back 1 sacral pine sulcus.
- C. Peroneal nerve
- D. Tibial nerve
- E. Femoral nerve

18. The patient had loss of vision: (visual field loss right) on the right eye and visual field loss on the left eye.

What name syndrome?

- A. Amaurosis.
- B. Ambliopia.
- C. Homonemous hemianopsia.
- D. Binasal hemianopsia.
- E. Bitemporal hemianopsia.Where is localization of the lesion?
- A. Retina of eye.
- B. Optic nerve.

- C. Chiasma opticum.
- D. Knee of internal capsula.
- E. Occipital lobe.

The pupil's reactions to light will be:

- A. Not changed.
- B. Lost onle to light.
- C. Lost only to accommodation.
- D. Lost only to convergence.
- E. Lost to light, accommodation and convergence.
- 19. Damage to what part of the analyzer is the cause of amaurosis:
  - A. Thalamus.
  - B. Optic tract.
  - C. Internal nerve.
  - D. Opti nerve.
  - E. Occipital lobe.

20. The patient has loss of vision (visual field loss) on the left; paresis of mimic muscles lower part left; in the left limbs – movemen absent, reflex Babinski's present, lesion of all type sensetivity.

What name is syndrome (3)?

- A. Central hemiplegia.
- B. Hemianessthesia.
- C. Peripheral paresis of mimic muscles.
- D. Hemiataxia.
- E. Hemianopsia.

Where is localization of the lesion?

- A. Thalamus is right.
- B. Internal capsule is right.
- C. Frontal lobe is left.

- D. Frontal lobe is right.
- E. Occipital lobe is left.

21. The patient has violated all types of sensitivity limbs in left, parasthesia and pain, the performs a finger – nasal test with open eyes, but misses with closed eyes.

What name is syndrome (3)?

- A. Hemihypesthesia.
- B. Central hemiparesis.
- C. Sensetive hemiataxia.
- D. Cerebellar ataxia
- E. Central neuropatic pain.Where is localization of the lesion?
- A. Internal capsula, right.
- B. Thalamus, right.
- C. Occipital lobe right.
- D. Occipital lobe left.
- E. Cerebellum, right hemisphera.

22. The patient has on oh=ne side of the ptosis, the eyeballs outwardly guided, mydriasis, and the ovement of the eyeball is possible only to the outside.

What muscles are affected?

- A. Internal rectus muscle of the eye.
- B. Muscle lifting the upper eyelid.
- C. Apper rectus muscle of the eye.
- D. External rectus muscle of the eye.
- E. Circular muscle of the eye. Where is localization of the lesion?
- A. Oculomotor nerve.
- B. Trochlear nerve.

C. Abducenc nerve.

D. Upper knolls of the quadruple.

E. Midolle brain.

23. The patient has on the left – ptosis, mydriasis, the movement of the eyeball is possible, only to the outside, in right limbs – movement absent, muscle tone and reflex in increased, reflex Babinski positive.

What is lesion?

- A. Cortico-nuclear pathway.
- B. Cortico—spinal (pyramidal) way.
- C. Abducens nerve.
- D. Oculomotor nerve.
- E. Trochlear nerve.

Where is localization of the lesion?

- A. Precentral gyrus, left.
- B. Peduncle of brain, left.
- C. Peduncle of brain right.
- D. Varolii pons right.
- E. Varolii pons left.

24. The patient eyes are turned to the right, there are no movements of the eyeballs to the left, in the left limbs movements absent, inreases deep reflexes, reflex Babinski's positive.

What name is syndrome?

- A. Paresis of mimic muscles on the peripheral type.
- B. Cortical paresis of the eye.
- C. Alternating syndrome.
- D. Central hemiparesis on the left.
- E. Paresis of the eye with lesion of the brain stem.Where is localization of the lesion?

- A. Frontal lobe, right.
- B. Varolii pons, left.
- C. Varolii pons, right.
- D. Midbrain left.
- E. Midbrain right.

25. The patient has episodes of double vision that appear in the evening and completely pass in the mornig. Examination: double ide – ptosis, restriction of movements of eyeballs in all directions after the introduction of the checked all the symptoms regressed.

What is lesion?

- A. Nerve oculomotor.
- B. Midbrain.
- C. Varolii pons.
- D. Neuro-muscular synaps.
- E. Frontal lobes.

Additional research method:

- A. Magnetic resonance imaging.
- B. Computed tomography.
- C. Angiography.
- D. Electromyography.
- E. Research of cerebrospinal fluid.

26. The petient has convergent strabismus, diplopia during looking on the right, right eyeball not move to outside.

What is a muscle are affected?

- A. Internal rectus muscle of the eye.
- B. Apper rectus muscle of the eye.
- C. Lower oblique muscle of the eye.
- D. External rectus muscle of the eye.

E. Circular muscle of the eye.

Where localization of lesion?

- A. Abducens nerve.
- B. Thoclear nerve.
- C. Oculomotor nerve.
- D. Ciliary spinal center.
- E. Frontal lobe.

27. The patient has dysarthria, deviation of tongue of the left, atrophy of tongue left side; in the right limbs – central hemiparesis.

Name neurological syndrome (3):

- A.Central hemiparesis of the right.
- B. Alternating syndrome.
- C. Paresis of tongue of peripheral type.
- D.Paresis of tongue of the central type.
- E. Pseudobulbar syndrome. Where localization of lesion?
- A. Right half of thr medulla oblogata.
- B. Left half of the medulla oblongata.
- C. Precentral gyrus, right.
- D. Precentral gyrus, left.
- E. Cortico-nuclear pathway from both sides.

28. The patient has dysartria, deviation of tongue left, on the right – movements absent reflexes present, a symptom of Babinsky.

Name neurological syndrome (2):

- A. Alternating syndrome.
- B. Paresis of tongue of peripheral type.
- C. Paresis of tongue of central type.
- D. Pseudobulbar syndrome.

- E. Central paresis of the left.Where localization of lesion (2)?
- A. Right half of medulla oblongata.
- B. Left half of medulla oblongata.
- C. Cortico-nuclear pathway, left
- D. Cortico-nuclear pathway, right.
- E. Cortico-spinal (pyramidal) pathway.

29. The patient has dysphagia, dysartria, weakening to mobiliy of the soft palate on both sides; pharyngeal and mandibular reflex is increased, violent crying, reduction instrength and present, syndrome of Babinski's from both sides.

Name neurological syndrome (2):

- A. Alternating syndrome.
- B. Pseudobulbar syndrome.
- C. Bulbar syndrome.
- D. Central teraparesis.
- E. Peripheral tetraparesis.Where localization of lesion (2)?
- A. Pyramidal tract from both sides.
- B. Medulla oblongata.
- C. Cortico-nuclear from both sides.
- D. Glossopharyngeal nerve.
- E. Vagus nerve.

30. The patient has dysphagia, dysphonia, and dysarthria. At the tongue – atrophied, fibrillar muscular twiching; pharyngeal and palatal reflexes is increased. In the extremities – reduction in strength and movement, atrophy faciculation in born reflexes present, syndrome of Babinski from both sides.

Name neurological syndrome (3):

A. Bulbar syndrome.

- B. Pseudobulbar syndrome.
- C. Mixed tetraparesis.
- D. Peripheral tetraparesis.
- E. Central tetraparesis.

Where localization of lesion (3)?

- A. Spinal-thalamic pathway from both sides.
- B. Cortico-nuclear pathway from both sides.
- C. Anterior horns of spinsl cord.
- D. Posterior horns of spinal cord.
- E. Cortico-spinal (pyramidal) pathway.

31. The patient has swallowing disorder, hoarseness, decreased of pharyngeal reflex, pain and temperature sesetivity decreace on the trunk and extremities.

Name neurological syndrome (2):

- A.Bulbar syndrome.
- B. Segmental-raducular type of sensetivity disorders.
- C. Alternating syndrome.
- D.Central hemiparesis on the right.
- E. Pseudobulbar syndrome.

Where localization of lesion?

- A. Left half of medulla oblongata.
- B. Right half medulla oblongata.
- C. Postcentral gyrus on the left.
- D. Postcentral gyrus on the right.
- E. Thalamus of the left.

32. The patient is concerned about pain in Lumbosacral region and the back surface of the left leg; left – weakened all kinds of sensitivity of the form of the band along the posterior surface of the thigh, the posterolateral surface of

the skin and in the region of the big toe, the weakness of the dorsal flexion of the foot and the large finger.

Name neurological syndrome (2):

- A. Conductive disorder of sensitivity.
- B. Segmental-radicular disorderss of sensetivityy.
- C. Segmental-dissociated disorder of sensetivity.
- D. "Central" pain.
- E. Peripheral paresis.

Where localization of lesion (2)?

- A. Anterior root L1
- B. Anterior root S1
- C. Posterior root L5
- D. Posterior root S1
- E. Posterior horns level L5-S1

33. The patient has multiple traces of painless burns on the hands, a decrease in pain and temperature sensetivity in the form of a "jacket", fasciculation in the muscles of both hands, loss of reflexes from the hands.

Type disorders of sensetivity:

- A. Conductive.
- B. Segmental dissociated.
- C. Segmental radicular.
- D. Cortical.
- E. Alternating.

Where localization of lesion?

- A. Posterior horns.
- B. Posterior roots.
- C. Lateral funiculus.
- D. Parietal lobe from both sides.
- E. Thalamus from both sides.

34. The patient has loss of joint muscle sense in the legs, absence of knee and Achilles reflex, ataxia in the Romberg's position and when wolking, intensifuing with closed eyes.

Name neurological syndrome (2):

- A. Peripheral paresis in the leg.
- B. Conductive type disorders of the deep sesation.
- C. Conductive type disorders of the syperficial sensation.
- D. Sensetive ataxia.
- E. Cerebellar ataxia.Where localization of lesion (2)?
- A. Lateral funiculus.
- B. Posterior funiculus.
- C. Posterior funiculus.
- D. Anterior horns.
- E. Commissure grisea anterior.

35. The patient is concerned about the imperative urge to urinate and weakness in the legc, a decrease in the tone in the extensors of the leg, there are a knee and Achilles reflexes, the clonus of feet, a bilateral symptom of Babisky.

Where localization of lesion?

- A. Frontal horns.
- B. Posterior funiculus.
- C. Posterior horns.
- D. Lateral funiculus.
- E. Commissura grisea anterior.

Treatment of spastic (increased of tone muscle) (2)?

- A. Baclofen.
- B. Sirdalud.
- C. Nakom.
- D. Midantan.

E. Finlepsin.

35. The patient has weaknes of both feet absent of Achilles reflex and decreased knee reflexes, loss of all type sensitivity in the feet and anogenital area, incontinence.

Name neurological syndrome (3):

- A. Peripheral paresis of feet.
- B. Central paresis of feet.
- C. Disorders of sensitivity.
- D. Disorders of sensitivity on the conductive type.
- E. Disorders of pelvic organs.

Affected segments of the spinal cord at the level (2):

- A. Th8-Th12.
- B. L1-L2.
- C. L3-L4
- D. D.L5-S1.
- E. S2-S4.

36. The patient has face asymmetry<sup>^</sup> right flatness, of the forehead skin folds and nosolabial fold, corner of mouth is lowered, when you try to close youre the right eyeball goes up, theprotein coat of the eye is visible, there is a lacrimation on the right eye gap is wider than the left, the taste is lost in the front two thirds of the tongue on the right.

Name neurological syndrome and symptoms:

- A. Peripheral paresis of mimic muscles.
- B. Lagopthalmos.
- C. Bell's symptoms.
- D. Hyperacusia.
- E. Dysphagia.

Where localization of lesion?

- A. Facialis nerve to the branch of why a greter petrosal nerve (petrosus major).
- B. Facialis nerve after branching off from a greates petrosal nerve, but before the branch of the cord of the tympamun.
- C. Facialais nerve after branching of why of the cord of the tympamun.
- D. Right half of pons Varolii.
- E. Left precentral gyrus.

37. The patient has left nasolabial fold is smoothed and the angle of the mouth is lowered, with a smile the mouth is mismatched to the right, when protruding tongue deviates to the left to tongue is not changed externally; in the left extemities decrease in strength and movement, animated tendon reflexes, Babinsky's reflexes positive.

Name neurological syndrome:

- A. Paresis of the left half of the face in the central type.
- B. Paresis of the left half of the face in the peripheral type.
- C. Paresis tongue in the peripheral type.
- D. Central paresis of the left.
- E. Hemiataxia left. Where localization of lesion?
- A. Varolii pons of the left.
- B. Varolii pons of the right.
- C. Cortico-spinal (pyremidal) pathway.
- D. Cortico-nuclear pathway.
- E. Hemisphere cerebellum on the right.

38. The patient has hearing loss on the right ear, peripheral paresis of mimic muscles and loss of all type sensitivity of right side face, intentin tremor on the arm, nystagmus, ataxia, when perfoming coordinate test.

Name neurological syndrome:

- A. Lesion of vestibulo-cochlearis nerve of right.
- B. Paresis of the right half of the face in the central type.
- C. Cerebellar ataxia right.
- D. Cerebral type lesion sensitivity on the face.Where localization of lesion?
- A. Varolii pons on the right.
- B. Pontocerebellar angle.
- C. Precentral and postcentral gyrus on the left hemisphere of brain.
- D. Facialis nerve on the right.
- E. Ganglion Gasser's on the right.

39. The patient develops severe dizziness, numbress of the right half of the face and extremities of left. Dizziness is left in the form of a rotation of his own body accompanied by vomiting and nausea. Examination: loss of pain and temperature sensory on the right half of the face left half of body and left extremities.

Name neurological syndrome (2):

- A. Alternating type of the sensetivity.
- B. Cortical type of lesion of the sensitivity.
- C. Vestibular dizziness.
- D. Cerebellar ataxia.
- E. Central hemiparesis, left.Where localization of lesion?
- A. Postcentral gyrus, right.
- B. Right half of Varolii pons and medulla oblongata.
- C. Left half of Varolii pons and medulla oblongata.
- D. Nerve vectibulocochlear, right.
- E. Nerve vestibulocochlear, left.

40. Patient is troubled by attack of short-term (several second) intense pain in the right lower jaw area, occur several times a day, provoked by talking with cheming teeth cleaning, an examination outside the attack of neurological disorders is not present.

Where localization of lesion?

- A. Ganglion Gasser's right.
- B. Nerve trigeminal on the first branch.
- C. Nerve trigeminal on the second branch.
- D. Nerve trigeminal on the III branch.
- E. Glossppharyngeal nerve.

Name neurological syndrome and symptomes:

- A. Pareses mimic muscules on the peripheral type.
- B. Peripheral type lession sensitivity on the face.
- C. Cortical type lession sensitivity on the face.
- D. Alternating type lession of sensitivity.
- E. Paresis of right face on the central type.

CLINICAL NEUROLOGY
# THE TESTS

# Thema: Headache and facialis pain

- 1. Factors triggering a migraine attack (3):
  - A. Emotional stress.
  - B. Is not enough sleep.
  - C. Reading before going to bed.
  - D. Hard physical work.
  - E. All of the abow.
- 2. For the prevention of migraine attacks use:
  - A. Symatriptan.
  - B. Carbamazepine.
  - C. Amitriptyline.
  - D. Atenolol.
  - E. Piracetam.
- 3. Tension headache is characterized by pain:
  - A. Pulsating.
  - B. One-sided.
  - C. Paroxysmal.
  - D. Oppressive nature of the form of a "hoop".
  - E. None of the abow.

4. The presence of a trigger zone on the face, irritation of which is provokes an attack of pain is characteristic of:

- A. Migraine without aure.
- B. Migraine with aura.
- C. Tension headache.

- D. Claster headache.
- E. Neuralgia of trigemenal nerve.
- 5. Attacks of migraine (2):
  - A. More often observed in woman.
  - B. Appear at a youth ful or yong age.
  - C. Imtensifield in old age.
  - D. Last no more than 4 hours.
  - E. More often observed in man.
- 6. The most common type of headache:
  - A. Migraine
  - B. Claster headache.
  - C. Tension headache.
  - D. Hypertension of headache.
  - E. Vascular headache.
- 7. For migraine of the characterized:
  - A. A family nature of the disease.
  - B. Unilateral pain.
  - C. Pulsating nature of pain.
  - D. Frequency of seizures in the elderly age.
  - E. Frequency of occurrence.
- 8. Treatment of attacks of the migraine (2):
  - A. Piracetam.
  - B. Ergotamin (Diergorot)
  - C. Symatriptiptan.
  - D. Carbamazepine.
  - E. Petoxifylline.

- 9. Claster headache (3):
  - A. Lasts 15 to 80 minutes.
  - B. Occurs mainly in woman.
  - C. Accompainied by lacrimation, rhinorrhea, hyperemia of the mucous membrane of eye, eyelid edema.
  - D. Stopped by paracetomol.
  - E. Accurs mainly in man.
- 10. Treatment of nerolgia of trigemenal nerve:
  - A. Piracetam
  - B. Curbamazepine (finlepsin)
  - C. Vincamine.
  - D. Rivastigmine (Exelon)
  - E. Clexan.
- 11. Treatment of claster headache:
  - A. Non-narcotic analgesics.
  - B. Narcotic analgesics.
  - C. Oxygen inhalation.
  - D. Symatriptan.
  - E. Vinpoceptin.
- 12. With ophthalmoplegic migraine (3):
  - A. Nature of pain is pulsating.
  - B. Oculomator disturbances occur.\pain is left on one side.
  - C. Develop loss of vision.
  - D. All of the above.
- 13. Headache of the migraine (4):
  - A. Hemicrania (unilateral location).

- B. Pulsating quality.
- C. Aggravation by or causing ovoidance of routine physical activity.
- D. Caused by irritatin of the trigger zones.
- E. Bilateral location.
- 14. Treatment of the chronic tension headache:
  - A. Antidepressants, muscle relaxants.
  - B. Kalymin, meloxicam.
  - C. Antidepressants, corticosteroids.
  - D. Pregabalin, diclophenac.
  - E. Antiepileptic and neuropletove drugs.
- 15. Visual defect typical of migraine with aura:
  - A. Central scotoma.
  - B. Homonymous "flickering" scotoma.
  - C. Visual hallucination.
  - D. Binasal hemianopsia.
  - E. Bitemporal hemiansia.

# **Thema: Stroke**

- 1. Duration of neurological disorders with transitor ischemic attacks (TIA):
  - A. Up to 24 hours
  - B. Up to 2 days.
  - C. Up to 3 days.
  - D. Up to one week.
  - E. Up to one month.
- 2. Etiology of transitor ischemic attacks (4):
  - A. Rheumatic heart disease.

- B. Erythremia.
- C. Dissection of the internal carotid artery.
- D. Atherosclerosis.
- E. Hypothyroidism.
- 3. The main difference transitor ischemic attacks from stroke:
  - A. Absense of a violation of consciousness.
  - B. Absense aphasia.
  - C. Duration of local neurological symptoms less than a day.
  - D. Less degree of neurological disorders.
  - E. Sudden onset.
- 4. The risk factors for ischemic stroke:
  - A. Arterial fibrillation.
  - B. Arterial hypertension.
  - C. Diabetes mellitus.
  - D. Transitor ischemic attacks.
  - E. Episodic headaches.
- 5. Progressive stroke is characteristic of:
  - A. Lacunar stroke.
  - B. Atherotrombotic stroke.
  - C. Cardioembolic stroke.
  - D. Hemodinamic stroke.
- 6. With stroke, localization in the basin of the anterior cerebelar artery there is:
  - A. Hemianopsia.
  - B. Optic-pyramodal syndrome.
  - C. Aphasia sensory.
  - D. Hemiparesis with predominance in the lower limbs.

- 7. With stroke localization in the basin of pasterior cerebral artery there is:
  - A. Hemiparesis with predominance in the lower limbs.
  - B. Hemiparesis with predominance in the upper limbs.
  - C. Hemiparesis.
  - D. Hemianosia.
  - E. Motor aphasia.
- 8. For the diagnosis of ischemic stroke the most informative method:
  - A. Echoencephalography.
  - B. Electroencephalography.
  - C. Duplex scanning of the carotid and vertebral arterics.
  - D. CT scan of head.
  - E. Lumbar punture.
- 9. For cardioembolic stroke characterized (2):
  - A. A by the gradual development of disease.
  - B. Hemorrhaic character of a stroke.
  - C. Optic-pyramidal syndrome.
  - D. Atrial fibrillation.
  - E. Diabetes mellitus.
- 10. Ischemic stroke on the vestebro-basilar basin characterized (2):
  - A. Meningeal syndrome.
  - B. Hemiparesis.
  - C. Severe headache in the debult of the disease.
  - D. Preceding ischemic attacks.
  - E. Fever.
- 11. For the ischemic stroke on the vertebro-basilar basin characterized (2):

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A. Alternating syndrome

- B. Motor aphasia.
- C. Disorders of oculomotor nerves.
- D. Monoparesis of hand.
- E. Monoparesis of leg.
- 12. For lacunar stroke characterized (2):
  - A. Focus less than 15 mm in diameter.
  - B. Hemorrhagic character of a stroke.
  - C. Stenosis of the internal carotid artery.
  - D. Motor aphasia.
  - E. Isolated hemiparesis.
- 13. For the aterothombotic stroke characterized (2):
  - A. Rheumatic disease.
  - B. Non-vale atrial fibrilation.
  - C. Aterosclerotic stenosis big cerebral artery.
  - D. Ishemic focus on the CT-scan head large than 15 mm dimeter.
  - E. Impaired consciousness with a slight neurological deficit.
- 14. Treatment of edema with extensive stroke:
  - A. Mannitol.
  - B. Glyceral.
  - C. Piracetam.
  - D. Cerebrolysin
  - E. Vinpocetine.
- 15. Cerebrospinal fluid with ischemic stroke:
  - A. Increased lymphocyte count.
  - B. Is not changed.
  - C. Increased protein count.

- D. Contains red blood cells.
- E. Leaks under low pressure.

# Thema: Hemorrhagic stroke

- 1. Etiology of hemorrhagic stroke (4):
  - A. Arterial hypertension.
  - B. Hemoplegia.
  - C. Alteriovenous malformation.
  - D. Atrial fibrillation.
  - E. Amyloid angiopathy.
- 2. For hemorrhagic stroke in the cerebellum characterized (4):
  - A. Headacher
  - B. Ataxia of limbs.
  - C. Amnestic aphasia.
  - D. Dizziness.
  - E. Stiff neck muscles.
- 3. Etiology non-traumatic subarachnoid hemorrhagr (2):
  - A. Saccular aneurysm.
  - B. Rheumatic heart disease.
  - C. Cocaine use.
  - D. Atrial fibrillation.
  - E. Cerebral atherosclerosis.

4. Prevention of spasm of cerebral arteries after clichis aneurysm with subarachnoid hemurrhage:

- A. Epsilon aminocaproic acid.
- B. Nimodipine.
- C. Cerebrolisin.

- D. Mannitol.
- E. Piracetam.
- 5. For intracerebral hemorrhagic stroke characterized:
  - A. Still neck muscles.
  - B. Impaired consciousness.
  - C. Hemiparesis.
  - D. Syndrome of Fovill.
  - E. Gradually increasing focal neurological disorders.
- 6. Typical complication of subarachnoid hemorrhag (2):
  - A. Myocardial infarction.
  - B. Artherial hypotension.
  - C. Spasm of cerebral arteries.
  - D. Recurrent of subarachnoid hemorrhage.
  - E. Purulent meningitis.
- 7. For the dignosis of intracerebral hemorragic stroke of the most informative:
  - A. Lumbar puncture.
  - B. Echoencephalographyy
  - C. Electroencephaography.
  - D. CT scan of head.
  - E. Cerebral angiographia.
- 8. For sybarachnoid hemorrhage characterized (2):
  - A. Stiff of neck muscles.
  - B. Vestibular ataxia.
  - C. Impraized consciousness.
  - D. Sensory aphasia.
  - E. Alternating syndrome.

- 9. Blood of CSF-typical for (2):
  - A. Intracerebral hemorrhage.
  - B. Lacunar stroke.
  - C. Sybarachnoid hemorrhage.
  - D. Atherotrombotic stroke.
  - E. Acute hypertension encephalopathy.
- 10. For hemorrahic of pons of brain steam not characterized:
  - A. Impaired conciousness.
  - B. Tetraplegia.
  - C. Alternating syndrome.
  - D. Sensory aphasia.
  - E. Peripheral paresis of mimic muscles.
- 11. For hemorrhagic of thalamus characterized (3):
  - A. Impaired conciousness.
  - B. Hemianesthesia.
  - C. Hemiataxia.
  - D. Dysphagia.
  - E. Syndrome of Hornes.
- 12. Main methods of diagnosis of subarachnoid hemorrhage (2):
  - A. Lumbar puncture.
  - B. Echoencephalography.
  - C. Duplex scanning of the carotid and vertebral arteries.
  - D. CT scan of the head.
  - E. MRI of head.
- 13. The most informative method for the diagnosis of cerebral aneurysm:

A. MRI

- B. MR angiography.
- C. CT scan.
- D. Cerebral angiography.
- E. Transcranial dopplerography.
- 14. Prevention of cerebral artery spasm in subarachnoid hemorrhage:
  - A. Aspirini.
  - B. Varpharini.
  - C. Heparini.
  - D. Memodipine.
  - E. Cerebrolisin.
- 15. For hemorrhage of basal ganglii and internal capsule characterized (3):
  - A. Hemiplegia.
  - B. Hemianesthesia.
  - C. Hemianposia.
  - D. Dysphagia.
  - E. Dysphonia.

# **Thema: Epilepsy**

- 1. Generalized epileptic seizure is different from partial seizure:
  - A. Convulsions in all limbs.
  - B. Convulsions in the face.
  - C. Loss of consciousness.
  - D. Aura.
  - E. Visceral disturbances.
- 2. Electroencephalogram in patients with absans is detected:
  - A. A pek-wave complex with a frequency of 3 Hz.

- B. Highamplitude waves delta.
- C. Highamplitude waves theta.
- D. Highamplitude waves alpha.
- E. Highamplitude waves betha.

### 3. Treatment of absans:

- A. Depacin
- B. Carbomazepin.
- C. Cavinton.
- D. Parlolel.
- E. Suksilep.
- 4. Partial seizures include (2):
  - A. Simple absans.
  - B. Acinetic absans.
  - C. Psychosensory seizures.
  - D. Motor Jackson seizures.
  - E. Large convulsive seizures.
- 5. Epilepsy that occurs in old age is more often the result of:
  - A. Perinatal pathology.
  - B. Tumor brain.
  - C. Serous meningitis.
  - D. Purulent meningitis.
  - E. Cerebrovascular disease.
- 6. General principles of epilepsy therapy (2):
  - A. The choice of anticonvulsant depending o the occurrence.
  - B. Treatment courses for 3-6 months during the year.
  - C. Combination of everal antiepileptic drugs at the beginning of treatment.

- D. The choice of the dose of the drug depending on the weight of the patient.
- E. Termination of treatment in the absence of seizures during the year.
- 7. The cause of epilepsy in childhood is most often (2):
  - A. Idiopatic.
  - B. Tumor brain.
  - C. Cerbrovascular disease.
  - D. Infection of the brain and its membranes.
  - E. Degenerative disease.
- 8. Epileptic status is diagnosed, the seizure last more than:
  - A. 10 min.
  - B. 30 min.
  - C. 3 hors.
  - D. 12 hors.
  - E. 24 hors.
- 9. During epileptic seizure to relieve seizures injcted:
  - A. Amitriptiline.
  - B. Vinpoceptin.
  - C. Diazepam.
  - D. Piracetam
  - E. Cerebrolisin.
- 10. The most common of syncope (fainting):
  - A. Nocturic.
  - B. Vasomotor.
  - C. Cardiogenic
  - D. Ortostatic.

- 11. Loss of consciousness during the syncope lasts:
  - A. A few minutes.
  - B. 1-2hours.
  - C. 3-4 hours.
  - D. 4-6 hours.
  - E. More than 6 hours.
- 12. For syncope are characterized (2):
  - A. Pale of skin
  - B. Decreased of muscules tone.
  - C. Myosis.
  - D. Increased of muscyles tone.
  - E. Symptoms of Babinski of from two sides.
- 13. Syncope occurs when:
  - A. Arhethmias.
  - B. Artioventricular block.
  - C. Chronic gastritis.
  - D. Acute pyelonephritis.
  - E. Arterial hypotension.

14. A 28-year-old emotionally labile women began to feel weakness, dizzness, darkening of the eyes, nausea and loss consiousness without seizures, being in a stuffy room. Objectively: unconscious, skin is pale sweaty, distal limbs ae cold. BP - 200/100 mm Hg, PR 80-100 bm, shallow breathing. What is the most likely diagnosis?

- A. Neuotic conditin.
- B. Panic attack
- C. Synkope.
- D. Seizures.

E. Hysterical neurosis.

### 15. List instrumental diagnostic methods for epilepsy:

- A. Electroencephalography.
- B. Reoencephalography.
- C. CT scan of head.
- D. Myelography.
- E. Craniography.

### Thema: Somatoneurology. Intoxication.

- 1. The most frequent damage to the nervous system in diabetes melitus:
  - A. Distal sensitivity polyneuropathya.
  - B. Neuropathy of nerve abducens.
  - C. Neuropathy of nerve oculomotorius.
  - D. Neropathy of nerve fibular.
  - E. Proximal amyothophia.

# 2. Treatment of diabetes polyneuropathy:

- A. Acidi ascorbinici.
- B. Alpha-lipoid acidi.
- C. Vitamin B12.
- D. Acetilsalycylic acid.
- E. Nimotop.
- 3. Causes of hypoxic encephalopathy:
  - A. Cardiac arrest.
  - B. Strangulation.
  - C. Poisoning with mercury.
  - D. Poisoning with carbon monoxide.

E. Poisoning lead.

4. What change in the heart rhythm is the most common cause of cardioembolic stroke?

- A. Paroxysmal tachycardia.
- B. Lomg Q-T syndrome.
- C. Bradycardia.
- D. Atrial fibrillation.
- E. Adams-Stokes syndrome.

5. A 52-year-old patient complains of frequent headache, dizziness, nausea, weakness, loss of memory, insomnia, emotional disorders. Subcortical reflexes are positive, tendon reflexex are increased. Disorder of coordination on the Romberg test.

Name the neurological syndrome.

- A. Myelopathy.
- B. Radicular.
- C. Encephalopathy.
- D. Asthenic.
- E. Acute disorders of cerebral blood circulation.

6. Name clinical signs of myopathic syndrome:

- A. Sensitivity violations.
- B. Motor impairments.
- C. Ataxia.
- D. Oculumotor disorders.
- E. Seizures.

7. A 43-year-old patient complains of numbress and weakness in the legs after long walk. Neurological status: feet are cold tj the touch, stocking & glove distribution sensitivity disorders. Achilles reflexes are decreased, pathological reflexes are absent. Name the neurological syndrome.

- A. Myasthenic syndrome
- B. Polyneuropathy
- C. Myelopathy
- D. Encephalopathy.
- E. Redicular.
- 8. What are the main clinical symptoms of panic attacks?
  - A. Pain or discomfort in the chest.
  - B. Dizziness or weakness.
  - C. Fear of death.
  - D. Nausea or stomach discomfort
  - E. Everything correct.
- 9. Why does a patient with botulism require artificial respiration?
  - A. Respiratory failure due to toxic pneumonia.
  - B. Paralysis of respiratory muscles.
  - C. Heart failure.
  - D. Seizures.
  - E. Coma.
- 10. Cholinesterase blockage is observed in the following cases of poisoning:
  - A. Botulism.
  - B. Organophosphate compounds intoxication.
  - C. Mercurialismus.
  - D. Lead intoxication.
  - E. All of the above.
- 11. Diminished visual acuti can occurs in case of:

A. Botulism.

- B. Methanol poisoning.
- C. Manganese intoxication.
- D. Arsenic poisoning.
- E. Wernicke-Korsakoff syndrome.

12. Symptopms of which substance poisoning are similar to idiopathic Parkinson's disease?

- A. Lead intoxication.
- B. Mercury intoxication.
- C. Manganese intoxication.
- D. Teraethyl lead intoxication.
- E. Arsenic intoxiacation.

13. Fingernail pigmentation changes (leunychia) can occur in case of poisoning by:

- A. Lead.
- B. Mercury.
- C. Manganese
- D. Tetraethyl lead.
- E. Arsenic compounds.

# Thema: Craniocerebral injury, syringomyelia, innate defects of spine and spinal cord

- 1. Causes of primary brain damage with head injury (2):
  - A. The mechanical action of a hurting object.
  - B. Swelling of the brain.
  - C. Ratational movement of the brain.
  - D. Hydrocephalus.

- 2. Epidural hematoma occurs due to bleeding from:
  - A. The middle envelope artery.
  - B. Duropian veius.
  - C. Posterior cerebral artery.
  - D. Anterior cerebral artery.
- 3. Duration of loss of consciousness during a brain shock:
  - A. Few seconds or minutes.
  - B. 1-2 hours.
  - C. 3-24 hours.
  - D. More than a day.

4. The absence of neurological disorders after 2-3 hours after traumatic brain injury is typical for:

- A. Brain shock.
- B. Mild contusion brain.
- C. Moderate contusion brain.
- D. Severe contusion brain.
- E. Intracranial traumatic hematoma.
- 5. Mild traumatic brain injury:
  - A. Brain shock.
  - B. Mild contusion brain.
  - C. Moderate contusion brain.
  - D. Severe contusion brain.
  - E. Compresion of brain.

6. Determine the congenital malformation of the trunk and caudal part of brain stem, cerebellar vermis, leading to incomplete opening of the median IV-th ventricle apertures:

- A. Dandy-Walker syndrome
- B. Arnold-Chiari anomaly.
- C. Kippel-Feil syndrome.
- D. Syringomyelia.
- E. Spina bifida.
- 7. Hidden spina bifida is:
  - A. Spliting of arc and vertebral bodies and adjacent soft tissue.
  - B. Spliting of vertebrae arches.
  - C. Incomplete closing of the vertebral bodies.
  - D. Incomplete closing of the vertebral arches in combination with tumorlike growths.
  - E. Hernial protrusion of the meninges, filled with CSF.
- 8. Syringomyelia is based on the formation of \_\_\_\_\_\_in the spinal cord:
  - A. Tumors.
  - B. Cysts.
  - C. Abscesses.
  - D. Cavities.
  - E. Haemorrhages.
- 9. "Syringomyeliyic" sensory disorders:
  - A. "Jacke type" of the sensory loss.
  - B. Stocking & glove distribution.
  - C. Hemianalgesia.
  - D. Parestesias.
  - E. Tactile hallucination.

- 10. "Frog neck" is a symptom of:
  - A. Kippel-Feil syndrome.
  - B. Dandy-Walker syndrome.
  - C. Arnold-Chiari anomaly.
  - D. Syringomyelia
  - E. Spina bifida.

# **Thema: Tumor brain**

- 1. For the tumor of the frontal lobe characteristic (2):
  - A. Behavior disorder
  - B. Dysphagia
  - C. Dysphonia
  - D. Hemianopsia
  - E. Urinary incontinence.
- 2. Manifestation of intracranial hypertension with a brain tumor (2):
  - A. Headache.
  - B. Cerebellum ataxia.
  - C. Hemiparesis.
  - D. Vomiting, nausea.
  - E. Anosmia.
- 3. For piturary tumor characteristic (2):
  - A. Acromegaly.
  - B. Ataxia.
  - C. Bitemporal hemiapia.
  - D. Asteriognosis.
  - E. Epileptic seizores.

- 4. For the tumor of the parietal lobe is characteristic (2):
  - A. Apraxia.
  - B. Dysphogia.
  - C. Tetreparesis.
  - D. Hemihypostesia.
  - E. Anosmia.
- 5. Treatment of the neurinoma of ponto-cerebellum angle:
  - A. Surgical removal of the tumor.
  - B. Radiation therapy.
  - C. Chemotherapy.
  - D. Combination of chemotherapy and radiation therapy.
  - E. Corticosteroid.
- 6. Tumor of the occipital lobe usually manifests:
  - A. Hemiparesis.
  - B. Dysarthria.
  - C. Anosmia.
  - D. Hemianopsia.
  - E. Sensetive ataxia.
- 7. For cerebellar tumor typical (3):
  - A. Hemihypostesia.
  - B. Hemianopsia.
  - C. Ataxia.
  - D. Muscular hypotonia.
  - E. Headache.
- 8. For headache of the train tumors are characteristic:

A. Aura.

- B. Gradual increase.
- C. Gain at night in the morning.
- D. Tearing or dry eyes.
- E. Termination when taking serotonin receptor antagonists.
- 9. Epileptic seizores observed with brain tumors in:
  - A. 1%
  - B. 5%
  - C. 10%
  - D. 30%
  - E. 90 in percent of cases.
- 10. Low symptom flow characteristic of the tumor:
  - A. Anterior part of frontal lobe
  - B. Pituitary.
  - C. Cerebellum.
  - D. Corpus callosum.
  - E. Temporal lobe of non-dominant hemisphere.
- 11. Main method for the diagnosis of brain tumors:
  - A. Electroencephalogram.
  - B. Encephalogram.
  - C. Doppler.
  - D. MRI.
  - E. Radiography of the skull.
- 12. Radicular poins in spinal cord tumors (3):
  - A. More common with inramedullary localization.
  - B. Worse when lying down and coughing.

- C. Always accompanied by muscular-tonic syndrome.
- D. Often accompanied by painful percussion of spinous processes.
- E. Often the first symptom of a tumor.
- 13. Main method for the diagnosis of tumor of spinal brain:
  - A. Spondylography.
  - B. Lumbar puncture.
  - C. Myelography.
  - D. MRI.
  - E. EMG.
- 14. An extramedullary thoracic tumor localized to the right (3):
  - A. Radicular pain right.
  - B. Pain sensitivity disoarders in the right leg.
  - C. Deep sensitivity disorders in the right leg.
  - D. Central paresis of the right leg.
  - E. Syndrome Horner's left.
- 15. For meningioma typical:
  - A. Brain metastasis.
  - B. Spinal brain metastasis.
  - C. Internal organs metastasis.
  - D. Slow growth.
  - E. The benign nature of the tumor.

# **Thema: Perinatal disease**

1. Premature baby has meningeal signs and seizures which occus on the 2-nd day of life. Neurology exam: tremor, restless behavior, increased muscular tone, the tendon a periostal hyperreflexia, spontaneases reflex of Moro. CSF-xanthochromia, presence of erythrocytes, increased protein. What is the disease?

- A. Non-traumatic subarachnoid hemorrhage acuts period.
- B. Intraventricular hemorrhage
- C. Non-traumatic subarachnoid hemorrhage, recovery period
- D. Intracerebral hemorrhage
- E. Cerebral palsy
- 2. Which of the following signs belong to subarachnoid hemorrhage?
- A. The presence of lucid interval
- B. Meningeal syndrome
- C. General symptoms
- D. Absent blood in CSF
- E. Present blood in CSF
- 3. What motor disorders can be revaled in spastic diplegia?
- A. Cntral hemiparesis
- B. Central (spastic) tetraparesis prevalent im lower limbs
- C. Spastic lower paraparesis
- D. Peripheral tetraparesis
- E. Hypertonic-hyperkinetic

4. In a patient 3-yer-old with complicated obstetric history (fetal hypoxia, asphexia), delay psychoverbal and motor development the neurological status at birth marked weakness of limbs, with increased of muscles tone and tendon reflex pathology reflex from two side, not to talk, walks. What is the disease?

A. Cerebral palsy, spastic diplegia form

- B. Cerebral palsy, hemiparesis's form
- C. Intraventricular hemorrhage
- D. Cerebral palsy, a tonic astatic
- E. Cerebral palsy double hemiplegia
- 5. What main clinical syndrome typical for:
- A. Central lower paraparesis
- B. Central hemiparesis
- C. Central tetraparesis prevalent in lower limbs
- D. Atonic-astatic
- E. Hypertonic-hyperkinetic

6. In a patient 12-year-old with complicated obstetric history (rapid birth, asphyxia) delay psychoverbal the neurology status at birth masked weaknees of limbs of the right side with increased muscles tone and tendon reflex present pathology reflex of right side, deviation of tongue in right, saved sensitivity. What is clinical diagnosis and syndrome, topic diagnosis?

- A. Cerebral palsi diplegia
- B. Frontal central gyrus left
- C. Central hemiparesis
- D. Central tetraparesis
- E. Cerebral palsi hemiplegia
- 7. List the clinical forms of cerebral palsi:
- A. Hypotonic-hyperkinetic

- B. Double hemiplegia
- C. Hypertonic-hyperkinetic
- D. Spastic hemiplegia
- E. Atomic-astatic
- 8. For hyperkinetic form of cerebral palsi typical:
- A. Athetosis
- B. Chorea
- C. Torsion distonic
- D. Choreoathetosis
- E. All of the above
- 9. Most often in diagnostic intracranial changes among the first year of life used:
- A. Computed tomography
- B. MRI
- C. Neurosonography
- D. Analysis of CSF
- E. Diaphanoscopy
- 10. What form of cerebral palsy called the disease "Little"?
- A. Hemiplegia
- B. Hyperkinetic
- C. Atonic-astanic
- D. Spastic diplegia
- E. Combined

# Thema: Neurophamacology

- 1. Drugs to reduce mucle tone:
  - A. Proserine.
  - B. Phenobarbital.
  - C. Etamsylate.
  - D. Baclofen.
  - E. Diclofenac.
- 2. Drugs that do not causw medical polyneuropathy:
  - A. Cytostatics
  - B. Tubrculostatic drugs.
  - C. Nitrofurans.
  - D. Antimalarial.
  - E. Antiepileptic drugs.

3. Medriasis, tachycardia accommodation paralysis, dry mouth and skin causes of drugs:

- A. Atropine
- B. Proserine
- C. Galantamine
- D. Kalymine.
- E. Pilocarnine.
- 4. Drugs of nootropic action:
  - A. Piracetam
  - B. Diclofenac
  - C. Mydokalm
  - D. Acyclovir
  - E. Trental

- 5. Drugs of antiplatelet effect:
  - A. Proserine
  - B. Piracetam
  - C. Levodopa
  - D. Acetilsalycicylic acid.
  - E. Melatonin.
- 6. Does not apply to drugs with anticoagulant properties:
  - A. Heparine.
  - B. Warfarin
  - C. Clexan
  - D. Dycinone
  - E. Xarelto.
- 7. Does not apply to drug with antiepileptic:
  - A. Depakine-chrono
  - B. Finlepsin.
  - C. Benzonal
  - D. Atorvastatin
  - E. Lamictal
- 8. Drugs for the treatment of syarachnoid hemorrhage:
  - A. Fibrinolytic and heparine
  - B. Dycinoni
  - C. Nimotop
  - D. Ascorbinic acid
  - E. Vicasol
- 9. Drugs for the treatment of trigeminal neuralgia:
  - A. Antioxidants

- B. Antiepileptic
- C. Dycinoni
- D. Clopidogrel
- E. Solumedrol

### 10. Drugs of antiviral action:

- A. Acyclovir
- B. Movalis.
- C. Mydocalm.
- D. Proserine
- E. Amitriptyline.
- 11. Drugs for the treatment of multiple sclerosis, aggravation are not:
  - A. Methylpresednisolon.
  - B. Plasmoferes.
  - C. Antioxidants.
  - D. Neuroprotective drugs.
  - E. Antibiotics.
- 12. Drugs of choice for the treatment of the epileptic status:
  - A. Lasix.
  - B. Diazepam (seduxen)
  - C. Ergotamin
  - D. Actovegin
  - E. Herenal
- 13. Drugs for the treatment of myastenia is not:
  - A. Proserin
  - B. Prednisolone
  - C. Plasmopheresis

- D. Cyclophosphamide
- E. Botulinum toxin type A

### 14. Drugc not used for Parkinson treatment:

- A. Nacom
- B. Jmex.
- C. Aminazin
- D. Mirapex
- E. Stalevo
- 15. Drugs not used for relief of a migraine attack:
  - A. Sumatriptan
  - B. Lovastotin
  - C. Imet
  - D. Dihydroergotamine
  - E. Acetylsalicylic acid.

### Thema: Hereditary disease

- 1. Method diagnostic of the myastenic (2):
  - A. CT scan of head.
  - B. Proserin test.
  - C. MPI of head
  - D. Electromyographia
  - E. Evoked somatosensory potentials.
- 2. Myasthenic syndrome Lambert-Eaton most often due to:
  - A. Systemic lupus erythematosus.
  - B. Bronchogenic cancer.
  - C. Myastenia.

- D. Polymyositis.
- E. Thymectomy.
- 3. Neural muscular atrophy (Charcot-Marie-Tooth disease):
  - A. Central paresis of mimic muscles
  - B. Peripheral distal paresis in limbs
  - C. Cerebellum ataxia
  - D. Polyneuritic typr sensetivity disorder
  - E. Dysfunction of pelvic organs
- 4. Myasthenic crisis develop when taking:
  - A. Proserin
  - B. Sermion
  - C. Kalymin
  - D. Tranquilizers
  - E. Pentoxifylline
- 5. Cholinergic crisis may develop due to:
  - A. The malignant course of myasthenia
  - B. Overdose of tranquilizers in patient with myasthenia.
  - C. Overdose of antidepressants in patients with myastenia
  - D. Overdose of proserin in patients with myastenia
  - E. Overdose of kalimin in patients with myastenic.
- 6. Myastenia caused by defeat:
  - A. Peripheral nerves
  - B. Anterior horns of spinal cord
  - C. Anterior funiculus of spinal cord
  - D. Posterior horns of spinal cord
  - E. Postsynaptic receptor neuro-muscular synapse.

### 7. Myopathies Duchenne:

- A. Inheriteol in an autosomal dominant manner
- B. Inherited in an autosomal recessive manner
- C. Inherited in x-linked resessive
- D. Dysimmune disease
- E. Degenerative disease
- 8. For myopathies Duchenne is characterized:
  - A. Weakness of pelvis muscles.
  - B. Dysfunction of pelvic organs
  - C. Cardiovascular disorders
  - D. Dysartria, dysphonia, dysphagia
  - E. Disorders of deep sensetivity in the legs.
- 9. Clinic form of the myashenia (2):
  - A. Eye form
  - B. Cerebellum
  - C. Pseudobulbar
  - D. Spinal
  - E. Generalized
- 10. For long-term treatment of myasthenia gravis use:
  - A. Vitamins B
  - B. Piracetam
  - C. Kalimin
  - D. Vitamin B6
  - E. Carbamazepine.

11. for familian spastic paraplegia characterized by defeat of spinal anatomic structures:

- A. Pyramidal tract pathway
- B. Cerebellum pathway
- C. Cells of anterios horns
- D. Posterior funiculus of spinal cord
- E. True A and B
- 12. What age is more likely to suffer Shtrympel's disease?
  - A. Childhood
  - B. Addescent
  - C. Adult
  - D. Eldery
  - E. Infant
- 13. What kids of sensetivity are affected by Friedreich's ataxia?
  - A. Touch
  - B. Pain and temperature
  - C. Deep
  - D. Lesion of the sensetivity not
  - E. No correct answer.
- 14. Parkinson's disease is manifected by the following syndromes:
  - A. Choicoathetosis.
  - B. Acinetorigidny syndrome.
  - C. Vestibulo-cerebellum syndrome
  - D. Pyramidal
  - E. Hyperkinetic
- 15. To the main symptoms of hepatocerebral dystrophy does not apply:
  - A. Plastic stiffness
  - B. Hyperkynesis

- C. Hemiparesis
- D. Reduced inteligence
- E. Kaiser-Fleishner ring.

### Thema: Disease of peripheral nervous system

- 1. Symptomes of neuropathy of the uknar nerve (3):
  - A. Numbness in the little finger of the medial syrface of the hand.
  - B. Interosseous atrophy of the hand and hypothenor
  - C. Paresis of the flexors of the hand
  - D. Paresis muscles of the adductor little finger.
- 2. Symptoms of radiation nerve damage (3):
  - A. Loss of reflex from the treceps muscle
  - B. Paresis of the extensors of hand and fingers
  - C. Swelling of the hand
  - D. Sitting sensetivity in the anatomical snuffbox
  - E. None of the proposed.
- 3. Syndrome tunnel carpall characteristic (2):
  - A. Pain in the hand and palmar surface of the first three fingers
  - B. Loss of the reflex of he shoulder
  - C. Loss of the reflex of the triceps of the shoulder.
  - D. Weaknecc of the abductor muscle of the hand (little finger)
  - E. Positive symptom of Tinnel/
- 4. Manifestation of alcoholic neuropathy (3):
  - A. Peripheral paresis of distal part of legs.
  - B. Weakening of pulsation of arteries in the distal part of the feet.
  - C. Disorders of sensetivity, conductiv type.

- D. Vegetative-trophic disorders of the lower limbs.
- E. Pain and parasthesia in legs.
- 5. Major risk factor for neuropathy of the fscial nerve:
  - A. Diabetes mellitus
  - B. Alcohol abuce
  - C. Hypertension
  - D. Congenital narowness of the facialis nerve canal.
  - E. Smoking.
- 6. Treatment carporal tunuel syndrome:
  - A. The introduction of dexamethasone in the carpal tunnel
  - B. Piarcetam
  - C. Cavinton
  - D. Clexane
  - E. Surgical carpal decompression.
- 7. Cusalgia ar characteristic for defeat:
  - A. Ulnar nerve
  - B. Facial nerve
  - C. Femoral nerve
  - D. Median nerve
  - E. Radial nerve
- 8. Treatment of distal diabetic polyneuropathy;
  - A. Kalymin
  - B. Copaxone
  - C. Piracetam
  - D. Drugs alfalipoic acid
  - E. Drugs ascorbinici acidi
- 9. Symptome of neuropathyof the tibial nerve (3):
  - A. Weakness of the plantar flexion of the foot and toes
  - B. Loss of the knee jerk
  - C. Loss of the ancle jerk
  - D. Hypesthesia on sole and external surface of the feet.
  - E. Swelling of the feet
- 10. For acute inflammatory demyelinating polyradiculo neuropathy typical:
  - A. Peripheral paresis of limbs
  - B. Conductive type disterbens of the pain sensetivity
  - C. Protein-cell dissociatin in CSF
  - D. Paresis of mimic muscles
  - E. Oculomotor disorders
- 11. Among the cranial neuropathy more common neuropathy:
  - A. Oculomotor nerve
  - B. Facial nerve
  - C. Abducens nerve
  - D. Glossopharyngeal nerve
  - E. Vagus nerve
- 12. Treatment of neuropathy of the fasial nerve:
  - A. Kalymim
  - B. Prednisolone
  - C. Piracetam
  - D. Vinposetin
  - E. Acetilsalycicylic acid
- 13. Treatment acute inflamatory demielinating polyradiculoneuropathy:
  - A. Plasmopheresis

- B. Sirdalud
- C. Immuneglobulin class G
- D. Clexane
- E. Prednisolone
- 14. In the syndrome Gillian-Barre cranial nerves are more often affected:
  - A. Optic nerve
  - B. Oculomoto nerve
  - C. Abducens nerve
  - D. Facial
  - E. Accessorynerve
- 15. Drug polyneuropathy cause:
  - A. Cytostic
  - B. Antihypertensive agents
  - C. Indirect coagulants
  - D. Anti-tuberculosis drugs
  - E. None of the above.

## Thema: Vertebrogenic dissorder of peripheral nervous system

- 1. Symptoms of didiscogenic radiculopathy L5.
  - A. Back pain radiating to the front of the thigh.
  - B. Loss of Achille reflex
  - C. Symptoms of strain: Wasserman Matskevych
  - D. Loss of the knee reflex
  - E. Weakness of the long extensor of the big toe.
- 2. Symptoms of discogenic radiculophy S:
  - A. Back pain radiating the front of the thigh and hip.

- B. Loss of achille reflex
- C. Weakness of peroneur muscle
- D. Loss of sensitivity in the area of the thumb
- E. Loss of sensetivity in the anogenital region
- 3. Most often hernia of the spinal disc occurs in the department:
  - A. Cervical part
  - B. Thoracic
  - C. Upper lumbar part
  - D. Lower lumbar part
- 4. Diagnosis of disk (C4) herniation (2):
  - A. R-ray of spinal cord
  - B. CN-scan of spinal cordd
  - C. MRI of spinal cord
  - D. Radioisotope spinal scintigraphy
  - E. Densitometry
- 5. Hernia disk L4-L5 can (3):
  - A. Cause radiculopathy L5
  - B. Cause radiculopathy S1
  - C. Cause of spinal cord compression
  - D. Asymptomatic
- 6. X-ray of spinal cord reveals (3):
  - A. Hernia of the spinal disk
  - B. Spinal fracture of compression.
  - C. Spondylolisthesis
  - D. Fracture of vertebral body
  - E. Osteoporosis

#### 7. Reflected back pains are characteristic of:

- A. Anemia
- B. Erytheremia
- C. Ischemic heart disease
- D. Urdithiasis
- E. Prostate disease
- 8. For lumbago typical (3):
  - A. Acute development
  - B. Sharp limitation of movements in the back due to pain
  - C. Dysfunction of the pelvic organs
  - D. Conductive type of sensetivity disorder
  - E. Muscular tonic syndrome.
- 9. Symptoms of harsetail root compression (2):
  - A. Symptom Babinski
  - B. Nubbness in the legs and anogenital region
  - C. Weakness in the proximal legs.
  - D. Dysfunction of the pelvic organs
  - E. Loss of knee reflex
- 10. Treatment of horsetail root discogenic root compression.
  - A. Spinal traction
  - B. Reflexology
  - C. Manual therapy
  - D. Antidepressant
  - E. Surgical treatment
- 11. Symptomes of rediculopathy C6 radix (3):
  - A. Pain, on anterior external surface of arm

- B. Weekness hypotrophy of m.biceps brachii
- C. Low extensor elbow and carpo-radial reflex
- D. Muscular tonic syndrome
- E. Syndrome Horner of side radiculopathy
- 12. Symptomes of radiculopathy L4 (2):
  - A. Pain in external-posterior surface of hip, crus, foot.
  - B. Loss of knee reflex
  - C. Muscular tonic syndrome
  - D. Paresis of toes flexors
  - E. Dysfunction of the pelvic organs

13. The clinical picture of the compression of the horsetail roots differes from the compression of the conic and epiconus:

- A. Asymmetric lesions
- B. Absence of pain syndrome
- C. Lower peripheral paraparesis
- D. Dysfunction of the pelvic organs
- E. With all of the above

14. A patient has pain in lumbar region, weeakness in lower extremities, disorders of pelvic organs. Examination: lower spastic paraparesi. MRI-hernia of dick L4-L5, L5-S1, canal stenosis of spain. What is the diagnosis?

- A. Radiculoishemia L5
- B. Radiculopathy L5-S1
- C. Myeloishemia
- D. Radiculoishemia L5-S1
- E. Radiculoishemia S1

15. Reflex syndromes at the cervical level are not characterized by the next features:

- A. Barre-Lieou syndrome
- B. Forced head and neck position
- C. Neck pain, painful spasms and neck muscles tension
- D. Sensory, motor and reflex (changed reflex) disorders
- E. Absence of senory, motor and reflex (changed reflex) disorders.

## **Thema: Multiple sclerosis**

- 1. Multiple sclerosis debut occurs more often in age:
  - A. From 3 to 10 years
  - B. From 10 to 20 yers
  - C. From 20 to 40 years
  - D. From 40 to 60 years
  - E. Older than 60 years
- 2. Type of disorders in multiple sclerosis
  - A. Polyneuritic
  - B. Mononeuritic
  - C. Segmental-dissociated
  - D. Segmental-radicular
  - E. Conductive type
- 3. Diagnostic method of multiple sclerosis:
  - A. Evokes potential reseach
  - B. MRI
  - C. Electroencephalography
  - D. Duplex scanning of the carotid and vertebral arteries
  - E. Biopsy of the brain substance

- 4. In multiple sclerosis primary suffers:
  - A. Cortex of brain
  - B. Cells of anterior horns of spinal cord
  - C. Bosall ganglion
  - D. White matter of the brain and spinal cord
  - E. Cells of posterior horns of spinal cord.
- 5. For multiple sclerosis characterized (3):
  - A. Retrobulbar neuritis
  - B. Spastic torticolis
  - C. Cerebellum ataxia
  - D. Sensory aphasia
  - E. Urging to urinate
- 6. In debut of multiple sclerosis of the typical:
  - A. Visualdisorders
  - B. Pelvic disorders
  - C. Epileptic attacks
  - D. Motor aphasia
  - E. Sensory aphasia
- 7. Of cranial nerves in multiple sclerosis most often suffer:
  - A. Olfactory nerve
  - B. Optic nerve
  - C. Trigeminal nerve
  - D. Abducens nerve
  - E. Fasial nerve
- 8. Manifestation of multiple sclerosis:
  - A. Tics

- B. Intention tremor in honds legs
- C. Futtering tremor (asterix)
- D. Spastic torticolis
- E. Writing spasm
- 9. For multiple sclerosis is characterized by lesions detected during MRI:
  - A. Brain cortex
  - B. Cortex of cerebellum
  - C. Pituitary gland
  - D. White matter around the ventricles of the brain
  - E. Corpus callosum
- 10. For relief of multiple sclerosis exacerbations used:
  - A. Pulse therapy with methyl prednisone
  - B. Thiamine
  - C. Cerebrolysin
  - D. Copaxon
  - E. Baclofen

11. The basic fir the diagnosis of multiple sclerosis in the studyof cerebrospinal fluid is the definition of:

- A. Glucose concentration
- B. Oligoclonal antibodies
- C. Protein concentration
- D. Concentration of potassium
- E. Concentration of immunoglobulin G.
- 12. The frequency of exacerbations in multiple sclerosis reduces the use of  $(3)^{\wedge}$ 
  - A. Piracetam
  - B. Rebif

- C. Betaferon
- D. Sirdalud
- E. Copaxone
- 13. In terminal stage, multiple sclerosis patients are more to die from (2):
  - A. Myocardial infarction
  - B. Live failure
  - C. Pheumonia
  - D. Ascending urinary tract infection
  - E. Stroke
- 14. Multiple sclerosis refers to disease:
  - A. Vascular
  - **B.** Infectious
  - C. Dysmetabolic
  - D. Autoimmune
  - E. Degenerative
- 15. Acute multiple encephalomyelitis occur more often when:
  - A. Measles
  - B. Rubella
  - C. Varicella
  - D. Pyelonephritis of the upper limbs.
  - E. Trombophelebitis of upper limbs

# **Thema: Inflamation disease**

- 1. For encephalitis is characterized (4):
  - A. Central paresis of limbs
  - B. Fever

- C. Headache
- D. Rash on the face and upper limbs
- E. Epileptic seizure
- 2. In cerebrospinal fluid with encephalitis revel:
  - A. Increase in the number of cells more than 1000 in ml
  - B. Lymphocytic pleocytosis
  - C. Glucose is increased
  - D. The formation of fibran films
- 3. Treatent of encephalitis of the not clear etiology
  - A. Piracetam
  - B. Acyclovir
  - C. Baclofen
  - D. Immuneglobulin
  - E. Prednisone
- 4. Etiology ogf the purulent meningitis (2):
  - A. Pale spirichete
  - B. Pneumococcus
  - C. Streptococcus
  - D. Mycobacterium TB
  - E. Viruses
- 5. Etiology of serous meningitis (3):
  - A. Enteroviruses
  - B. Meningococcus
  - C. AIDS virus
  - D. Armstrong virus (choriomeningitis)
  - E. Stophylococcus

- 6. For purulent meningitis is ttypical (3):
  - A. Neck stiffness
  - B. Kernig's sign
  - C. Epileptic seizures
  - D. Headache
  - E. Aphasia

7. For serous meningitis is characteristic (2):

- A. Headache
- B. Hemiparesis
- C. Changes of consiousness, coma
- D. Neck stiffness
- E. Hemorrhagic rach of face and body
- 8. Main additional method of diagnosis of meningitis:
  - A. MRI head
  - B. Lumbar puncture
  - C. CT scan
  - D. Electroencephalography
  - E. Duplex scanning of the carotid and vertebral arteries
- 9. For tuberculous meningitis specifically (3):
  - A. Chronic course
  - B. Sensory aphasia
  - C. Damage to the oculomotor nerves
  - D. Headache
  - E. Cerebellum ataxia
- 10. In cerebrospinal fluid with purulent meningitis detected  $(2)^{\wedge}$ 
  - A. An increase in the number of cells up to 1000 or more per mkl

- B. Lymphocytic pleocytosis
- C. Decreased of protein
- D. Decreased of sugar
- E. The formation of fibrin limbs
- 11. In cerebrospinal fluid with serous meningitis detected:
  - A. An increase in the number of cells up 100 or more per mkl
  - B. Neutrophil pleocytosis
  - C. Normal glucose of CSF
  - D. Decreased of protein
  - E. Colorless and treanparent liguar
- 12. Main treatmet of purulent meningitis:
  - A. Antibiotics
  - B. Hormones
  - C. Plasmopheresis
  - D. Immuneglobulin
  - E. Repeated lumbar puncture
- 13. Poliomyelitis is (2):
  - A. Caused by the Coxacci
  - B. Occurs predominantly in children under the age of 10 years
  - C. Manifested by the development of motor aphasia
  - D. Manifested b development of cerebellum ataxia
  - E. Manifested by peripheral paresis of lower limbs
- 14. Clinical form of neurosyphilis (3):
  - A. Tabes dorsalis
  - B. Meningitis
  - C. Syndrom of lateral amyotrophic sclerosis

- D. Progressive paralisis
- E. Neuralgia of trigemenal nerve
- 15. Meningovascular syphilis is (3):
  - A. Manifested by cerebral stroke
  - B. Manifested by spinal troke
  - C. Manifested by lateral amyotrophic sclerosis syndrome
  - D. The most common form of neurosyphilis is currently

16. Damage to the nervous system in acquired immunodeficiency syndrom (AIDS) (4):

- A. Meningitis
- B. Encephalitis
- C. Myelopathy
- D. Damage of facialis nerve
- E. Myopathy
- 17. AIDS-dementia is (4):
  - A. Occurs in half of the patients (in the advanced stage of the disease)
  - B. Manifested memory disorders
  - C. Manifested of ataxia and central paresis of limbs
  - D. Manifested of epileptic attacks
  - E. Regresses with adequate treatment of the underlying disease

18. A patient had fever, chills malaise for 3 days then flaccid paresis of lower limb appeared which changed on the spastic tetraparesis with bulbar syndrome, disorders of breathing in a few days. Which diagnosis is the most appropriate?

- A. Myelitis of upper cervical level of the spinal cord
- B. Myelitis of cervical enlargement level of the spinal cord
- C. Poliomyelitis, paralitic form

- D. Spinal cord
- E. Amyotrophic lateral sclerosis, bulbar form

19. A 65-year-old patient has been suffering fromchoking while eating slurred speech, incorrect articulation, fibrillar twitching and hypotrophy of the tongue muscles, and oral automatism signs for theree mounth. What is the most likely diagnosis?

- A. Poliomyelitis, bulbar form
- B. Amyotrophic lateral form
- C. Amyotrophic lateral sclerosis
- D. Acute disseminated encephalomyelitis
- E. Multiple sclerosis
- F. Ischemic stroke of brain steam

#### **TEST ANSWERS**

#### Headache

1. A, B, D; 2. C,D; 3. D; 4. E; 5. A,B; 6. C; 7.A,D,C,E 8. B,C; 9. A,C,E; 10. B; 11. C, D; 12. A,B,C; 13. A, B,C; 14. A; 15.B

## Stroke

1.A; 2. A,B,C,D; 3. C;, 4. A,B,C,D; 5.B; 6.D; 7. D; 8.D; 9. A,D; 10. B, D; 11. A, C; 12. A,E; 13. C, D; 14. A,B; 15. B

# Hemorragic stroke

1. A,B,C,E; 2. A,B,D,E; 3. C; 4. B; 5. A,B,C; 6. C, D; 7.D; 8.A,C; 9 A,C; 10. D; 11.A,B,C; 12. A, 13. D, 14. D, 15 A,B,C

# Epilepsy

1. B; 2.A; 3.A; 4.C,D; 5.E; 6.A, D; 7.A; 8.B; 9.D; 10 B; 11. A; 12. A,B; 13.A,B; 14.C; 15 A.

## Somatoneurology

1. A; 2.B; 3. A,B,D; 4.D; 5.C; 6.B; 7.B; 8.E; 9.B; 10.B; 11. B; 12. C; 13.E

## **Craniocerebral trauma**

1. A,C; 2. A; 3.A; 4.E; 5. A; 6. A; 7. B; 8. D; 9.A; 10. C

# Tumor

1. A; 2. A, D; 3. A, C; 4. A,D; 5.A; 6.D; 7. C,D,E; 8.B,C; 9. A; 10.A,D,E; 11. D; 12. B,D,E; 13.D; 14. A,C,D; 15. D,E

## Neuropharmacology

1.D; 2.E; 3.A; 4.A; 5.D; 6.D; 7D; 8.A4 9.B; 10.A; 11.E; 12.B; 13.E; 14.C; 15.B

## **Perinatal disease**

1. A; 2. B,C,E; 3.B,E; 4. E; 5.C; 6.B,C,E; 7.B,C,D,E; 8.E; 9.C; 10. D

# Hereditary disease

1.B,D; 2.B; 3.B,D; 4.D; 5.E; 6.E; 7.C; 8.C; 9.A,E; 10.C; 11.A, 12.A; 13.C; 14.B; 15.C

## Disease peripheral nervous system

1. A,B,C; 2.A,B,D; 3.A,E; 4.A,D,E; 5.D; 6. A,E; 7.D; 8.D; 9. C,D; 10. A,C,D; 11.B; 12.B; 13. A,C; 14. D; 15. A,D

# Vertebrogenic disorders of peripheral nervous system

1. E; 2.B; 3.D; 4. B, C; 5. A,B,D; 6. B,C,D; 7. C,E; 8. B,E; 9. B,D; 10.E; 11. A,B,D; 12.B,C; 13.A; 14.D; 15.D

## **Multiple sclerosis**

1.C; 2.E; 3.A,B; 4.D; 5.A, C, E; 6. A; 7.B; 8.B; 9. D, E; 10.A; 11.B,E; 12.E; 13. C, D; 14.D; 15.D

## Inflamation disease

1. A, B,C,E; 2. B, 3. B; 4. B, C; 5.A,C,D; 6.A,B,D; 7. A,D; 8.B; 9.A,C,D; 10. A,D; 11.A; 12.A; 13. B, E; 14. A, B,D; 15. A,B,D; 16. A,B,C,D; 17.A,B,C,D; 18.B; 19. B

#### **CLINICAL CASES**

1. A patient, who has suffered from ischemic stroke, has right-sided drooping of the mount corner, tongue deviation to the right, dysarthria, muscle weakness in the right hand with deep reflexes increasing in it.

- 1. What does "dysarthria" mean?
- 2. How is this motor impairment called?
- 3. Where is the lesion located?

2. A patient has been sick for the last 2 days. He suffers from burning pain and paresthesia in the right half of the face. This morning a vesicular rash appeared on the skin of the right side of the forehead.

- 1. What structures of the nervous system are affected?
- 2. What sensitive disorders and what area can occur?
- 3. Will there be any changes in the patient's reflexes?

3. An 88-year-old patient was admitted to the neurological department with dysarthria, dysphonia and dysphagia. The involuntary crying and oral automatism reflexes are noted.

- 1. Define the terms mentioned above.
- 2. How is this clinical syndrome called?
- 3. What is the topical diagnosis?

4. Dysphagia, dysphonia and dysarthria are gradually developing in a 50-yearold patient. Phonation determined soft palate lowering. Pharyngeal reflex is absent. A marked atrophy of the tongue muscles and fibrillary twitching within them ara observed.

- 1. How is this clinical syndrome called?
- 2. What does fibrillary twitching in the tongue muscles evidenced about?
- 3. What is the location of the pathological process?

5. A patient has had an ischemic stroke with left-sided hemiplegia, hemianesthesia and hemianopsia.

- 1. Determine the topical diagnosis.
- 2. What vascular territory has stroke occurred in?

6. A 19-ywar-old woman developed a severe knife-like headache and vomiting against the background of psycho-emotional exertion. She is agitated. In the neurological status there are no focal neurological symptoms, only neck stiffness and Kernig's sign are present.

- 1. What disease should be suspected?
- 2. What is the possible cause of the disease?
- 3. Point out subsequent approach to the patient's investigation and treatment.

7. During an interview a girl suddenly stopped, turned pale, her pupils dilated. After 5-6 seconds she continued her answer. Her parents claim that such attack had been observed before.

- 1. How is such attack called?
- 2. Make a clinical diagnosis.
- 3. What research should be performed?

8. A 24-year-old patient was admitted to the hospital after a series of generalized convulsive seizures. Between attacks the patient did not recover his conciseness.

- 1. How is this condition called?
- 2. Make a clinical diagnosis.
- 3. What department should the patient is treated at?
- 4. What treatment should be prescribed?

9. A person working at a factory producing thermometers and manometers began to lose weight dramatically, has insomnia and anxiety against the

background of expressed asthenic syndrome. Neurological examination showed signs Parkinson's syndrome, generalized tremors, ataxia and decreased intelligence.

- 1. Chronic poisoning with what substance is possible?
- 2. How to treat patient.

10. A 8-yerd-old boy complains of severe headache and nausea. His body temperature is 39,3°C; examination reveals labial herpes, petechial leg hemorrhages, occipital muscle rigidity, and positive bilateral Kernig's sign.

- 1. What disease has most likely affected the patient?
- 2. Where the patient must be treated?
- 3. What additional diagnostic procedures should be performed?

11. A patient's body temperature is 38,2°C; examination reveals neck stiffness and bilateral positive Kernig's sign. This conditional has developed secondary to pyogenic otitis. CSF analysis demonstrates neutrophilic pleocytosis.

- 1. What is the most likely diagnosis?
- 2. Determine the examination methods and treatment options.

12. A child developed elevated body temperature of 37,8°C, sore throat, abdominal pain, vomiting and diarrhea. Three days later, he began feeling weakness in both legs. Examination revealed a reduction in active movement volume and muscle strength in the legs, hypotonia of the leg muscles and areflexia of deep reflexes. All types of sensitivity are preserved.

- 1. What syndromes have occurred in the patient?
- 2. What structure impairment can explain all the pathological symptoms?
- 3. Make a preliminary diagnosis.
- 4. What is the etiology of the disease?
- 5. What is the route of contamination?

13. A patient who was treated for syphilis 10 years ago developed back pain, paresthesia, and radicular pain of the extremities. Neurological examination revealed hypalgesia un the T3-T4 segments and on the lateral surface of both calves, decreased knee and Achilles reflexes, and positive Argyll Robertson's syndrome. An ophthalmologist diagnosed primary optic disk atrophy.

- 1. Make a preliminary diagnosis.
- 2. What additional diagnostic procedures should be performed to confirm the preliminary diagnosis?
- 3. What treatment must be prescribed?

14. An HIV-positive patient suddenly developed a series of generalized seizures. Examination revealed impaired judgment, disorientation, slight meningeal symptoms, motor aphasia, and right-side hemiplegia. Brain MRI demonstrated ring-like foci in the frontal and temporal lobes, which showed "mass effect" and accumulated the contrast agent in the periphery as a thin rim while contrasting.

- 1. What is the most likely disease?
- 2. What diagnostic procedures should be performed to identify the disease etiology?

15. A 25 year-old woman complains of severe headache and elevated body temperature of  $37,5^{0}$ C, axillary lymphadenopathy, and maculopapular skin rash. Periodically she suffers from double vision, neck stiffness, and positive Kernig's sign. Three weeks ago the woman was playing with her cat – there are scratches on the skin.

- 1. What is the most likely disease?
- 2. What diagnostic procedures should be performed to confirm the diagnosis?
- 3. What are treatment options?

16. An 18-yerd-old female student spending her summer vacation at the seashore developed uncertainty and instability while walking and slow speech. Neurological examination revealed horizontal nystagmus, scanning speech, intention tremor during the finger-to-nose and heel-to-shin tests.

- 1. What structures of the nervous system are impaired?
- 2. What is the name of the described triad of symptoms?
- 3. What is the most likely disease?
- 4. What additional diagnostic procedures should be performed to confirm the diagnosis?

17. Six months after labor, a patient complained of leg heaviness and mimic muscle paresis. Examination revealed left-sided peripheral paresis of the mimic muscles, absent abdominal reflexes, increased knee jerk and Achilles reflexes, and positive bilateral Babinski's sign.

- 1. Impairment of what structures of the nervous system can explain such symptoms?
- 2. What is the most likely disease?
- 3. What additional diagnostic procedures should be performed?
- 4. Determine treatment options.

18. A young woman underwent treatment for acute disseminated encephalomyelitis at the neurological department six months ago. After that she left better but the neurological status was marked by such symptoms as asymmetry of deep reflexes on the lower extremities and absent abdominal reflex.

- 1. What can the neurological status changes indicate?
- 2. Determine further patient's management.

19. A 50-year-old patient complains of muscle weakness of the upper extremities and hand atrophy. He has been ill for 5 months. Examination reveals

loss of arm muscle strength, thenar hypotrophy, and fibrillary twitching of the shoulder girdle muscles. Deep reflexes of the arms and legs are increased but the abdominal reflexes are preserved.

- 1. What structures of the nervous system are impaired?
- 2. Make a preliminary clinical diagnosis.
- 3. Determine treatment options.

20. A 40-year-old patient has been suffering from choking while eating , slurred speech, incorrect articulation, fibrillary twitching and hypotrophy of the tongue muscles, and oral automatism signs for three months.

- 1. What are names of these symptoms and syndrome?
- 2. What structures of the nervous system are impaired?
- 3. What is the most likely diagnosis?

21. A young woman periodically suffers from attacks of throbbing headache in the left temporal area radiating to the left eye. The attacks are preceded by visual deteriorations in the form of visual field loss. Sometimes the attacks is accompanied by vomiting. The attack lasts a few hours and often disappers after sleep.

- 1. What is the most likely diagnosis?
- 2. What form of the disease does the woman suffer from?
- 3. Determine treatment options during the attack.

22. A 30-year-old man suffers from cyclic attacks of headache. These attacks usually occur at night and are preceded by alcohol intake.

- 1. What type of headache does the man suffer from?
- 2. What is it caused by?

23. A patient develops bilateral diffuse monotonous constricting headache due to abnormal stress at work, which does not interfere with his physical activity.

- 1. What is the most likely clinical diagnosis?
- 2. Determine treatment options.

24. A patient complains of limitation of active movements in the right shoulder joint because of a shoulder injury: he can't raise his hand to a horizontal level, bend elbow. The neurological status revealed inability of arm flexion, reduced carporadial reflex, tenderness in palpation in the right supraclavicular fossa and hypoesthesia on the lateral part of the right shoulder.

- 1. Define the type of motor function disorders.
- 2. What structures of the nervous system are impaired?
- 3. Make a clinical diagnosis.

25. After hypothermia a 23-yers-old patient had a fever up to  $37,8^{\circ}$ C, pain and weakness in the lower extremities. In the neurological status there is positive Lasegue's sign on both sides, reduced muscle strength in the legs, absence of knee jerk an Achilles reflexes, hyperesthesia on the feet. Blood analysis reveals moderate leukocytosis (12,4x10<sup>9</sup>/l), CSF analysis shows protein-cell dissociation.

- 1. What structures of the nervous system are impaired?
- 2. What disease can be suspected?
- 3. What pathological symptoms may appear in case of disease progress?

26. A patient is suffering from diabetes, complains of double vision. In the neurological status there is ptosis of the right upper eyelid, divergent strabismus and right-side exophthalmia.

- 1. What structures of the nervous system are impaired?
- 2. What other symptoms are typical of such pathology?
- 3. Make a clinical diagnosis.

27. A patient complains of asymmetric face and pain in the left ear. On the auricle vesicular rash was found. In the neurological status there is peripheral

paresis of the muscles of the left half of the face, disturbance of taste on the left half of the tongue.

- 1. What structures of the nervous system are impaired?
- 2. What kind of disease can we think of?
- 3. What treatment should be administered?

28. A 16-year-old patient has noted weakness in both legs, can't stand for a long time. Unable to stand on the heels, raises feet high during walking. Besides that signs of atrophy of the lower parts of the legs and feet deformation (Fridrayh's feet) have appeared. The absence of Achilles reflexes and a peripheral polyneural type of sensitivity disorders are noted (of the "socks" type).

- 1. What disease should be suspected?
- 2. What research should be performed to clarify the diagnosis?
- 3. What disease should be differentiated?

29. A 17-year-old patient complains of gradually developing lower spastic paraparesis. In the neurological status there are positive Babinski's and Rossolimo's reflexes bilaterally, spastic gait, tendon and muscle contractures. Abdominal reflexes are absent. The function of the pelvic organs is not impaired. Intelligence is not affected. MRI of the brain shows no pathology.

- 1. What structures are affected?
- 2. What kind of the disease can you think of?
- 3. What treatment should be administered to the patient?

30. An 18-year-old patient has such symptoms as myopathic face. Transverse smile, tapir mouth, winging scapulas, which have been progressing gradually over the last 3 years. Reduced tendon reflexes are also present.

- 1. Identify the clinical diagnosis.
- 2. What are diagnostic criteria for this disease?
- 3. What treatment can be administered to the patient?

31. After flu a 30-year-old patient has complaints about general muscle weakness, difficulty in swallowing and snuffling voice after muscular exertion.

- 1. What is the preliminary diagnosis?
- 2. What additional investigations can clarify the diagnosis?
- 3. What treatment should be administered to the patient?

32. Three weeks after a cold a 33-year-old patient started to complain of weakness in the limbs and intermittent double vision. Neurological examination revealed intermittent partial ptosis, which becomes marked when looking up, and divergent strabismus on both sides.

- 1. Identify the clinical diagnosis.
- 2. What additional investigations can clarify the diagnosis?
- 3. What treatment should be administered to the patient?

33. A patient that has a generalized form of myasthenia gravis after recovering from flu suddenly noticed difficulties while swallowing and breathing.

- 1. What complications of the disease have appeared?
- 2. What actions should be undertaken by the doctor?
- 3. What treatment should be administered to the patient?

34. A 35-year-old patient complains of hearing loss, weakness in the hands and feet. These phenomena have bothering the patient over the last three years. The patient has a low stature with a short, webbed neck, a low hairline. In the neurological status there is hearing loss, increased tendon and periosteal reflexes on the extremities, increased spastic muscle tone in the limbs. The bilateral Babinski reflex positive.

- 1. What is the preliminary clinical diagnosis?
- 2. What additional methods of examination will confirm it?
- 3. Determine the treatment strategy.

35. A patient suffering from diabetes suddenly fell unconscious. During examination a doctor found contracted pupils, irregular breathing, high pulse rate, dry and hot skin, acetone odor in the patient's breath. In the neurological status: low muscle tone, decreased reflexes.

- 1. What investigation should be urgently administered to the patient?
- 2. Can we suspect a stroke?
- 3. What is the treatment strategy?

36. A 52-year-old patient experienced a severe pain in the epigastric region two days ago, combined with headache, nausea and repeated vomiting. The patient is in a serious condition, agitated. Positive Kernig's, intermittent bilateral Babinski reflex. CSF study revealed no pathology. A therapist has diagnosed acute pancreatitis.

- 1. What are the reasons for studying the patient's CSF?
- 2. Make a clinical diagnosis.
- 3. What is the treatment strategy?

37. An 18-year-old boy has Hodgkin's disease (diagnosed 6 months ago). Recently this patient was admitted to the hospital with symptoms of spinal cord impairment at the level of the C8-Th1 segments.

1. Can those neurological symptoms be a complication of an underlying disease? Explain it.

38. A young patient that suffers from chronic pyelonephritis complains of constant back pain at the lumbar level, which irradiates into the groin. Neurological examination found slightly positive Lasugue test, sensitivity and reflex reduction.

- 1. Make a clinical diagnosis.
- 2. Assign treatment.

#### **RECOMMENDED LITERATURE**

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