

[8] Cerebrovascular Pathology

A patient of 36 years, while working on his country strip, lost consciousness, fell down. Delivered to the clinic in a severe state. After the relatives' words by now has been practically healthy, no complaints. No traumatic damages on the skull have been revealed. Focal neurological symptomatology is absent. There is noted disorder of consciousness after the sopor type, rigidity of occipital muscles is revealed. The arterial pressure is 200/110 mm Hg. At lumbar puncture, CSF is intensively stained with blood, the CSF pressure is 200 mm H₂O. What is the most probable cause of the disease [1]?

- a) *hemorrhagic stroke*
- b) *rupture of arteriovenous malformation of the brain*
- c) *rupture of the arterial aneurysm of the brain, subarachnoidal haemorrhage*
- d) *contusion of the brain*
- e) *haemorrhage in a tumour of the brain*

Aneurysms are usually found [1]:

- a) *in childhood*
- b) *in the adolescent age (boyhood)*
- c) *between adolescence and 40 years*
- d) *after 40 years*
- e) *equally often throughout the life*

A pupil of 15 years while going in for physical training lost consciousness, there were noted seizures mainly in the right extremities. Was delivered to the reception ward. At checkup, there was noted disorder of consciousness after coma type I. The type of coma, reviving of tendinous reflexes, pathological reflexes, recurring periodic seizures in the extremities, an apparent tension of occipital muscles, positive Kernig-Brudzinsky's symptoms. The arterial pressure is 170/100 mm Hg. What is the preliminary diagnosis [1]?

- a) *hemorrhagic stroke*
- b) *rupture of arteriovenous malformation of the brain*
- c) *rupture of the arterial aneurysm of the brain*
- d) *contusion of the brain*
- e) *haemorrhage in a tumour of the brain*

The main extracranial arteries of the head [2]:

- a) *anterior cerebral artery*
- b) *middle cerebral artery*
- c) *posterior cerebral artery*
- d) *internal carotid artery*
- e) *vertebral artery*

What are the main branches of the internal carotid artery [3]?

- a) *anterior cerebral artery*
- b) *middle cerebral artery*
- c) *posterior cerebral artery*
- d) *superficial temporal artery*
- e) *posterior inferior cerebral artery*
- f) *a. ophthalmica*

What are the main branches of the basilar artery [2]?

- a) *superior cerebellar artery*
- b) *posterior cerebral artery*
- c) *middle cerebral artery*
- d) *anterior cerebral artery*
- e) *a. ophthalmica*

Name the etiologic factors of stroke [3]:

- a) *craniocerebral trauma*
- b) *hypertonic disease*
- c) *vasculitis*
- d) *atherosclerosis in association with hypertension*
- e) *atherosclerosis*
- f) *aneurysms of cerebral arteries*

A patient of 43 years got concussion of the brain. In a week after trauma there started to appear bulging of the right eye ball. The patient is troubled by a constant noise in the head which reminds the noise of train. Got concussion of brain. There is noted reddening of the right half of the face, injection of the sclera vessels. Hyperemia of the conjunctiva on the right. What is the most probable diagnosis [1]?

- a) *traumatic damage of the left oculomotor nerve*
- b) *traumatic damage of the left orbit*
- c) *traumatic carotid-cavernous anastomosis*
- d) *rupture of aneurysm of the subclinoidal part of the left internal carotid artery*
- e) *rupture of aneurysm of the supraclinoidal part of the left internal carotid artery*

Name the types of cerebrovascular crises [3]:

- a) *general*
- b) *vegetative*
- c) *cardiac*
- d) *regional (local)*
- e) *combined*

Indicate which of the above symptoms are typical for hemorrhagic stroke [5]:

- a) *significant general cerebral symptoms*
- b) *no general cerebral symptoms*
- c) *decrease of blood pressure*
- d) *skin is pale, pulse weak, arrhythmic*
- e) *meningeal symptoms*
- f) *no meningeal symptoms*
- g) *blood elements in the cerebrospinal fluid*
- h) *slow development of focal symptoms*
- i) *sudden development of focal symptoms*

Name signs of subarachnoid hemorrhage [3]:

- a) *general cerebral symptoms and psychomotor agitation*
- b) *blood elements in the cerebrospinal fluid*
- c) *cerebrospinal fluid is not changed*
- d) *disorders functions of pelvic organs*
- e) *Kernig's symptoms, stiff neck*
- f) *hemiplegia*
- g) *logaphasia*

Note which of the additional methods used for the diagnosis of cerebrovascular diseases [4]:

- a) *CT, MRI*
- b) *spondylography*
- c) *rheoencephalography*
- d) *Doppler ultrasound*
- e) *angiography*
- f) *reflections examination*

The patient fell, hit his head, was a short loss of consciousness. After 2 hours, came pulsing noise in the right half of the head, hyperemia of the conjunctiva of the right eye, right exophthalmos, which is growing, there was a weakness in the left extremities. What caused this clinical picture [1]?

- a) *brain contusion*
- b) *intracranial hematoma*
- c) *carotid-cavernous fistula*
- d) *hydroma*
- e) *brain concussion*

Patient 32 years old when lifting weight lost consciousness and fell. Delivered to the hospital in serious condition. According to his relatives - relatively healthy, had no complaints. Traumatic injuries to the skull were not identified. There is no focal neurological symptoms. After lumbar puncture - cerebrospinal fluid intensely colored blood, CSF pressure 200 mm H₂O. The most probable cause of the disease is [1]:

- a) *meningoencephalitis*
- b) *aneurysm rupture*
- c) *traumatic brain injury*
- d) *brain tumor*
- e) *thrombosis of the middle cerebral artery*

A patient of 63 during the last 15 years has been registered at the therapist's because of hyperlipidemia of type II, atherosclerosis of the aorta, atherosclerosis of coronary vessels. In the morning failed to get up from bed, there was noted a deep paresis in the left half of the body (mainly in the arm), left-side hemihypesthesia. At the checkup there were revealed increased tendinous reflexes on the left, pathological on the left, arterial pressure is 130/70 mm Hg. What is the most probable diagnosis [1]?

- a) *hemorrhagic stroke*
- b) *ischemic stroke*
- c) *rupture of an arterial aneurysm of the brain*
- d) *rupture of arteriovenous malformation of the brain*
- e) *haemorrhage in a tumour of the brain*

A 52-year-old patient complains of attacks of weakness in the left extremities twice a week. The neurological state has no general cerebral and focal signs. On auscultation the systolic sound is heard over the right carotid arteries. What is better to do first of all for the establishment of the cause of the attacks of weakness in the extremities [1]?

- a) *ultrasonic dopplerography of extracranial arteries*
- b) *transcranial dopplerography*
- c) *duplex dopplerography of extracranial arteries*
- d) *CT-scan of the brain*
- e) *rheoencephalography*

A 40-year-old patient complains of a severe headache, photophobia. He fell ill a day ago, when suddenly he had a severe headache, and lost consciousness for a short time. Physical examination: consciousness is 14 points by a Glasgow Coma Scale, a meningeal syndrome is expressed. What is necessary to make for the preliminary diagnosis [1]?

- a) *lumbar puncture*
- b) *CT-scan of the brain*
- c) *cerebral angiography*
- d) *transcranial dopplerography*
- e) *echoencephalography*

A 60-year-old patient has been admitted to the neurosurgical department 3 hours after a sudden loss of consciousness. Physical examination: consciousness is 7 points by a Glasgow Coma Scale, the eyeballs are turned to the left, mydriasis on the left; there are no motions in the right extremities, AP - 200/120 mm Hg. Your diagnosis [1].

- a) *hemorrhagic stroke*
- b) *ischemic stroke*
- c) *rupture of the arterial aneurysm of the brain*
- d) *rupture of arteriovenous malformation of the brain*

e) *haemorrhage in a tumour of the brain*

A patient of 33 years old, suddenly felt a severe headache, weakness in the right extremities, disorder of speech. On physical examination in 6 hours: consciousness is 13 points by a Glasgow Coma Scale, sensor aphasia, hemihypesthesia on the right, moderate central hemiparesis on the right, AP - 130/80 mm Hg. Your diagnosis [1].

- a) *hemorrhagic stroke*
- b) *ischemic stroke*
- c) *rupture of an arterial aneurysm of the brain*
- d) *rupture of arteriovenous malformation of the brain*
- e) *haemorrhage in a tumour of the brain*

A patient of 29 years old hit his head during a transport accident. Physical examination in 1 month after a trauma: consciousness - 15 points, by a Glasgow Coma Scale on the left there is a pulsating exophthalmus, chemosis, ophthalmoplegia, sound disappearing by pressing carotid arteries on the left on auscultation of the head. Your diagnosis [1].

- a) *traumatic damage of the left oculomotor nerve*
- b) *traumatic damage of the left orbit*
- c) *traumatic carotid-cavernous anastomosis*
- d) *rupture of aneurysm of the subclinoidal part of the left internal carotid artery*
- e) *rupture of aneurysm of the supraclinoidal part of the left internal carotid artery*

A patient of 56 years old had physical examination in 2 months after the beginning of the disease: consciousness was clear, partial motor aphasia, moderate hemihypesthesia on the right, moderate central hemiparesis on the right. On a carotid angiography on the left: 90% stenosis of the left internal carotid artery. What is better to do first [1]?

- a) *carotid angiography on the right*
- b) *CT-scan of the brain*
- c) *carotid endarterectomy on the left*
- d) *duplex dopplerography*
- e) *extracranial microanastomosis (by-pass) on the left*

A patient of 58 years old had physical examination in 3 weeks after the beginning of the disease: consciousness was clear, moderate hemihypesthesia on the left, moderate hemiparesis on the left of the central type. A total cerebral angiography established 80% stenosis of the ostium of the right internal carotid artery. What type of operation is indicated to the patient [1]?

- a) *carotid endarterectomy on the right*
- b) *resection of the right internal carotid artery*
- c) *extracranial microanastomosis (by-pass)*
- d) *carotid thrombintimectomy on the right*
- e) *redressing of the right outside carotid artery*

A patient of 35 years old had physical examination in 6 hours after the beginning of the disease: sopor, meningeal syndrome and central hemiparesis on the right. A CT-scan showed haematoma of the left lateral fissure (volume 45 cm³), on the angiography: arterial aneurysm of the left middle cerebral artery. What type of operation is indicated to the patient [1]?

- a) *clipping of aneurysm of the left middle cerebral artery and removal of haematoma*
- b) *occlusion of aneurysm of the left middle cerebral artery by a balloon-catheter*
- c) *occlusion of aneurysm of the left middle cerebral artery by platinum spirals*
- d) *excision of aneurysm of the left middle cerebral artery*
- e) *extracranial microanastomosis (by-pass) on the left*

A patient of 42 years old had physical examination in 2 days after the beginning of the disease: deafness, hemihypesthesia on the left, hemiparesis on the left of the central type. A CT-scan showed

haematoma in the right parietal lobe (volume 50 cm³), on the angiography: arteriovenous malformation of the right parietal lobe. What type of the operation is indicated to the patient [1]?

- a) *extirpation of arteriovenous malformation and removal of haematoma*
- b) *embolization of arteriovenous malformation*
- c) *occlusion of arteriovenous malformation by a balloon-catheter*
- d) *occlusion of arteriovenous malformation by platinum spirals*
- e) *thrombosing of arteriovenous malformation with the help of a gamma-knife*

A patient of 62 years old complains of giddiness, unsteadiness of the gait. Physical examination: the spontaneous horizontal nystagmus in both parts intensified in turning of the head, coordinated - cerebellar failure, on auscultation systolic sound is heard in the left supraclavicular fossa. Your diagnosis [1]:

- a) *stenosis of the left vertebral artery*
- b) *occlusion of the left vertebral artery*
- c) *loop-shaped formation of the left vertebral artery*
- d) *extravasal compression of the left vertebral artery*
- e) *osteochondrosis of the cervical spine*

A patient of 42 years old suddenly felt a bad headache, lost consciousness for a short time. Physical examination: psychomotor excitement, meningeal syndrome, AP - 160/100 mm Hg. A CT-scan showed haematoma of 12 cm³ of a medial part of the right frontal lobe, blood in chiasmal and sellar region and in the right lateral ventricle. Your diagnosis [1]:

- a) *hemorrhagic stroke*
- b) *rupture of arteriovenous malformation of the brain*
- c) *rupture of the arterial aneurysm of the brain*
- d) *contusion of the brain*
- e) *haemorrhage in a tumour of the brain*

A 42-year-old patient had a subarachnoidal haemorrhage a month ago. There are no complaints. In the neurological state there are no meningeal and focal signs. CT-scan of the brain hasn't revealed pathological changes. What is it necessary to make for the specification of the diagnosis [1]?

- a) *total cerebral angiography*
- b) *MRI of the brain*
- c) *transcranial dopplerography*
- d) *lumbar puncture*
- e) *nothing*

A 30-year-old patient fell ill suddenly, when one day before the physical examination a bad headache suddenly developed. Physical examination: deafness, expressed meningeal syndrome, AP - 160/120 mm Hg. A CT-scan showed blood in the basal cisterns of the brain, the third ventricle. What is it necessary to prescribe [1]?

- a) *antagonists of calcium*
- b) *dehydration therapy*
- c) *hemostatic therapy*
- d) *antibiotics*
- e) *beta-adrenoblockers*

A patient isn't able to bend aside, extremities at one side are fixed in Vernike-Mann position, when walking the leg moves aside without bending in the knee, making a semicircumference, touches the floor with toes and puts it toes, there is no movement of the foot, a height of raising of the leg is small, walking is slow, walking upstairs is difficult complicated. Name type of walking [1]:

- a) *torzion-distonic type*
- b) *peripheral paretic type*
- c) *steppage*
- d) *hemyparetic walking of pyramidal type*
- e) *hemiataxic type*

