[4] Traumatic damages of the spine and SC. Osteochondrosis of the spine

An 18-year-old boy is brought into the emergency room after a diving accident. He is awake and alert, has intact cranial nerves, and is able to move his shoulders, but he cannot move his arms or legs. He is flaccid and has a sensory level at C_5. Appropriate management includes **[1]**:

1. *Naloxone hydrochloride*
2. *Intravenous methylprednisolone*
3. *Oral dexamethasone*
4. *Phenytoin 100 mg*
5. *Hyperbaric oxygen therapy*

A patient of 28 years got a severe vertebrospinal trauma while diving into the water with his head first. Objectively at the examination the patient has tetraparesis, disorders of sensitiveness on the upper and lower extremities, dysfunctions of the pelvic organs after the type of ischuria. What pathology can be suspected in the patient? Which of the auxiliary methods of investigation are most informative in making the diagnosis **[3]**?

1. *Vertebrospinal trauma with the cervical spinal cord injury*
2. *Craniocerebral injury*
3. *Peripheral nervous system injury*
4. *LP*
5. *X-rays, CT*
6. *MRI*

A patient of 40 years got a severe vertebrospinal trauma as a result of a traffic accident. At checkup with the help of roentgenography and computer tomography, the diagnosis has been made: a fracture-dislocation of C_6-C_7 segment, a compressive-fragmental fracture of C_6-C_7 segment. An operation of decompression of the spinal cord, spondylolisthesis has been performed using a titanic fixative system. The prophylaxis of what complications must be performed for the patient **[1]**?

1. *Trophic disorders*
2. *Infectious-inflammatory processes*
3. *Dysfunction of the pelvic organs*
4. *Deformation of the locomotorium*
5. *All listed*

In a patient of 38 years there developed symptomatology of compression of the spinal cord at the level of Th_{12} vertebra as a result of falling down from the height of a two-storeyed block of flats. For the specification of the nature of the process there was performed lumbar puncture with CSF-dynamic tests for the patient. What CSF-dynamic changes can be revealed in the patient **[2]**?

1. *CSF pressure decrease*
2. *CSF pressure increase*
3. *Normal pressure of the CSF*
4. *CSF-dynamic block at Th_{12} level*

A patient dived into the river with his head first, came to the surface, bur failed to go out of the water on his own. He was given aid by some strangers. When an ambulance car arrived, the patient was in clear consciousness, but active motions in the extremities were absent. What disease can be suspected in the patient **[1]**?

1. *Vertebrospinal trauma with the cervical spinal cord injury*

2. *Craniocerebral injury*
3. *Peripheral nervous system injury*
4. *Tumour of the spinal cord*
5. *Tumour of the brain*

In a patient of 32 years, as a result of falling down on the back, there appeared pain in the lumbus which irradiates along the lateral surface of the right thigh and lower leg after the "stripe" type. Objectively at the examination - a sharply positive Lasegue's symptom in the area of innervations of L_5 root on the right, moderately apparent paresis of the dorsal flexion of the right foot. What preliminary diagnosis can be made **[2]**?

1. *Traumatic injury at the level of L_2 vertebra*
2. *Traumatic injury at the level of L_3 vertebra*
3. *Traumatic injury at the level of L_4 vertebra*
4. *Traumatic injury at the level of L_5 vertebra*
5. *Traumatic injury at the level of S_1*

A patient was wounded with a knife during a fight. At examination, the patient complains of a pain in the thoracic part of the spine, weakness in the left leg, stupor in the right leg. Objectively - a cut wound of 2 cm paravertebrally in the area of Th_3 vertebra on the left, monoparesis of the left leg, a decrease of pain and temperature sensitiveness on the right after the hemitype from the level of Th_5 segment. What pathological state can be suspected in the patient **[2]**?

1. *Brown-Séquard syndrome*
2. *Claudt-Bernar-Horner`s syndrome*
3. *Slader`s sign*
4. *Total section (cutting) of the spinal cord*
5. *Lateral hemisection (cutting) of the spinal cord*

A patient of 47 years fell down from the tree. After falling down, he got his motions in the extremities disappeared, is troubled with a pain in the cervical department of the spine. In spondylography, there was revealed a fracture-dislocation of C_6, at lumbar puncture - a complete CSF-dynamic block. What treatment is indicated for the patient **[1]**?

1. *Analgetics*
2. *Intravenous methylprednisolone*
3. *Surgical treatment*
4. *Skeletal extraction*
5. *Hyperbaric oxygen therapy*

A patient has fallen from the 4th floor. Physical examination: the lower paraplegia with pains at the level of 9-10 thoracic spondyles, function of the pelvic organs disrupted of the central type. What should we begin the treatment with **[1]**?

1. *Struggle against hypoxia*
2. *Introduction of methylprednisolone*
3. *Dehydration therapy*
4. *Surgical intervention*
5. *Extension by parietal tubers*

A patient had the spinal trauma in a transport accident. At the place of the accident the doctor ascertained the lower spastic paraplegia, disorders of sensitivity of conduction type, manifestation of a lesion of the brachial plexus, Horner's syndrome. What level is the traumatic lesion of the spinal cord situated at **[1]**?

1. *At the level of segments C_4-C_5*
2. *At the level of segments C_5-C_7-Th_1*
3. *At the level of the thoracic part*
4. *At the level of the lumbar thickening*
5. *At the level of the cone of the spinal cord*

What is a criterion of penetrating trauma of the spine **[1]**?

1. *Damage of the skin*
2. *Damage of the dura mater of the spinal cord*
3. *Disorder of integrity of the intrinsic wall of the vertebral canal*
4. *Damage of the spondyle arches*
5. *Damage of the ligament apparatus*

A patient had the spinal cord trauma in a transport accident. The slight disorders in the lower extremities, dissociative disorder of sensitivity, and disorder of diaphoresis of segmental type are revealed. The CSF-dynamic tests have not revealed changes. What is preliminary diagnosis **[1]**?

1. *Spinal cord shook*
2. *Contusion of the spinal cord*
3. *Hematomyelia*
4. *Compression of the spinal cord*
5. *Concussion of the spinal cord*

Specify the basic clinical forms of the spinal cord trauma **[3]**:

1. *Hydrocephaly*
2. *Concussion*
3. *Contusion*
4. *Hematomyelia*
5. *Traumatic epilepsy*
6. *Parkinson's syndrome*

Specify the signs of the spinal lumbar part hematomyelia **[2]**:

1. *Tetraplegia*
2. *Lower central paraparesis*
3. *Lower languid paraparesis*
4. *Alternative syndromes*
5. *Stagnant disks of optic nerves*
6. *Segmentary type of disturbance of sensitivity*

Specify the kind of trauma of a spinal cord, at which possible the persistent paresis of extremities **[2]**:

1. *Subarachnoidal hemorrhage*
2. *Concussion*
3. *Contusion*
4. *Hematomyelia*

Name the basic symptoms of the spinal cord contusion **[3]**:

1. *Paresis finitenesses*
2. *Jackson's epilepsy*
3. *Conductive type of disturbance of sensitivity*
4. *Speech disturbance*
5. *Alternating syndromes*
6. *Disturbance urination*

Weakness in one hand or foot can depend from all followed below, except **[1]**:

1. *Partial rupture in cervical department of spinal cord*
2. *Nucleus pulposus herniation from the intervertebral disk*
3. *Acute humeral plexitis*
4. *Disturbance of peripheral nerves*
5. *Polyneuropathy*

Weakness and muscles atrophy, their spasticity, fasciculation, positive Babinski's sign and a hyperreflection allow assuming **[2]**:

1. *Disease of dorsal spinal roots*
2. *Disease ventral spinal roots*
3. *Damage of bow-shaped bunches*
4. *Motor neurones pathology*
5. *Damage of Purkinje's cells*

The atrophy of dorsal interosseous muscles testifies when defeat **[2]**:

1. *C_5 and C_6 spinal roots*
2. *C_6 and C_7 spinal roots*
3. *C_7 and C_8 spinal roots*
4. *C_8 and Th_1 spinal roots*
5. *Th_1 and Th_2 spinal roots*

At full break of a spinal cord at C_5 level in the acute period in the absence of movements there is hyporeflection and hypotonia, usually replaced by a hyperreflection and spasmodic during **[1]**:

1. *2-4 months*
2. *1-2 months*
3. *From 3 days to 3 weeks*
4. *From 1 till 3 o'clock*
5. *From 5 to 35 minutes*

After biopsy of lymphatic nodes on the neck, the 23-year-old woman has felt the instability in position of her shoulders. Neurologic examination has revealed “winging scapula” (“pteroid”). What structure was damaged **[1]**?

1. *Deltoid muscle*
2. *Long thoracic nerve*
3. *Forward scalene muscle*
4. *Suprascapular nerve*
5. *Inguinal nerve*

Fracture of the lumbar (lower) spine can be **[1]**:

1. *Flexion*

2. *Extension*
3. *Rotation*
4. *Spinal malignancy*
5. *Pathologic weakening of the bone (osteoporosis)*
6. *All listed*

Lissauer's zone (posterolateral tract) in the spine cord initially consists of fibers **[3]**:

1. *The vegetative*
2. *The painful*
3. *The motor*
4. *Proprioception*

At Brown-Séquard's syndrome when the spinal cord was cut on a half, spastic paralysis and loss of vibration and proprioception (position sense) and fine touch develops **[1]**:

1. *At the lesion side on the lesion level*
2. *At the opposite side on the lesion level*
3. *At the lesion side lower from the lesion level*
4. *At the opposite side lower from the lesion level*

Atlantooccipital subluxation can develop as complication far the come process **[1]**:

1. *Lateral amiotrophical sclerosis*
2. *Siringomyelia*
3. *Rheumatic arthritis*
4. *Olivopontocerebellaris degenerations*
5. *Neurophibromathosis*

Squeezing of spinal root C_8 is accompanied by nerve damage **[3]**:

1. *Ulnar nerve*
2. *Axillar nerve*
3. *Median nerve*
4. *Radial nerve*
5. *Long thoracic nerve*

In a patient of 38 years after lifting a great weight there appeared a pain in the lumbus with the irradiation along the external surface of the left leg. Because of the pains the volume of motions in the lumbar part of the spine became restricted. Make a preliminary diagnosis, define the tactics of the checkup of the patient **[1]**.

1. *Hernia of the intervertebral disc of L_3-L_4 with disorder of the root L_4, CT & MRI*
2. *Pathology of the intervertebral disc at the level L_5-S_1 with disorder of the root S_1, MRI*
3. *Hernia of the intervertebral disc of L_4-L_5 with disorder of the root L_4, CT & MRI*
4. *Pathology of the intervertebral disc at the level L_5-S_1 with disorder of the root L_4, CT*
5. *Pathology of the intervertebral disc at the level L_4-L_5 with disorder of the root L_5, MRI*

In a patient of 40 years after a long-term physical stress there appeared a pain in the lumbus. Appealed to the specialists in manual therapy. After manipulations the pain in the lumbus disappeared, but there appeared stupor in the anogenital area and along the inner surface of the thighs, enuresis and encopresis.

What pathology should one think first of all, and what tactics in the checkup should be applied **[1]**?

1. *Hernia of the intervertebral disc of L_2-L_3 with disorder of the root L_3, CT & MRI*
2. *Hernia of the intervertebral disc at the level L_4-L_5 with disorder of the root L_5, MRI*
3. *Hernia of the intervertebral disc of L_3-L_4 with disorder of the root L_4, CT & MRI*

4. *Hernia of the intervertebral disc at the level L_5-S_1 with disorder of the root S_1, CT*
5. *Hernia of the intervertebral disc at the level L_1-L_2 with disorder of the root L_2, MRI*

A patient of 36 years complains of weakness in the lower extremities, difficulties in walking, occasional moderate pains in the lower thoracic part of the spine. At the examination there was revealed a lower paraparesis, the muscular tone is decreased, knees and Achilles reflexes are inhibited. Sensitive disorders are absent. Functions of the pelvic organs are not disturbed. In roentgenograms of the thoracic part of the spine there was revealed an extensive osteochondrosis.

Make a differential diagnosis with the use of auxiliary methods of research **[1]**.

1. *Hernia of the intervertebral disc of C_7-C_8 with disorder of the root C_8, MRI*
2. *Tumour of the spinal cord, CT & MRI of the thoracolumbar part of the spine*
3. *Discopathy at the thoracolumbar level of the spine, CT & MRI of the thoracolumbar part of the spine*
4. *Discirculatory myelopathy, MRI*
5. *Pathology of the intervertebral disc at the level L_1-L_2, MRI*

A patient of 46 years is disturbed weakness in the lower extremities, more apparent in the right leg, difficulties in walking, the feeling of stupor in the left leg from the foot to the inguinal area, the feeling of crawling of small ants in the right leg, from the foot to the level of the median third of the thigh, often feelings of urination. Has been ill for a year.

Make a preliminary diagnosis, define the tactics of the checkup of the patient **[1]**.

1. *Hernia of the intervertebral disc of L_4-L_5 with disorder of the root L_5, MRI*
2. *Tumour of the spinal cord, CT & MRI of the thoracolumbar part of the spine*
3. *Discopathy at the thoracolumbar level of the spine, CT & MRI of the thoracolumbar part of the spine*
4. *Discirculatory myelopathy, MRI*
5. *Pathology of the intervertebral disc at the level L_1-L_2, L_2-L_3, MRI*

A patient felt an acute pain in the lumbar region with irradiation into the anterior surface of the femur during work. The pain is localized on the anterior surface of the femur and shin; the knee reflex is absent, paresis of the quadriceps of the femur. On spondylograms there is a narrowing of the intervertebral fissure between L_3-L_4. What is the clinical diagnosis **[1]**?

1. *Hernia of the intervertebral disc of L_3-L_4 with disorder of the root L_4*
2. *Tumour of the spinal cord*
3. *Discopathy at the cervical level of the spine*
4. *Discirculatory myelopathy*
5. *Pathology of the intervertebral disc at the level L_4-L_5*

A patient has been suffering from lumbosacral radiculitis for about 10 years. Last exacerbation was about 5 months ago. The pains irradiate into the external surface of the femur, shin, through the foot back to the big toe. There is weakness of the back flexion of the big toe. The reflexes are preserved. What is the preliminary diagnosis **[1]**?

1. *Discopathy of L_5-S_1*
2. *Discopathy of L_4-L_5*
3. *Tumour of the spinal cord*
4. *Myelitis*
5. *Discirculatory myelopathy*

A patient has been brought to the clinic with the complaints of sharp pains in the lumbar region with irradiation into the back surface of the femurs and shins. There is weakness of the plantar flexion of the feet, hypalgesia on the external surface of the shins, feet. On spondylograms there is a narrowing of the intervertebral fissure between L_5-S_1. What is the clinical diagnosis **[1]**?

1. *Tumour of the spinal cord*

2. *Myelitis*
3. *Discirculatory myelopathy*
4. *Discopathy at the level of L_5-S_1*
5. *Hemangioma L_5*

A 48-year-old patient, a stevedore, was admitted to the clinic with the complaints of the pain in the lumbar region irradiating into the anterior, anteriointernal surface of the femur and shin with irradiation into the medial part of the foot. There are marked hypesthesia with hyperpathia in the same region. Which spinal cord root is damaged **[1]**?

1. *Root of L_5*
2. *Root of L_4*
3. *Root of S_1*
4. *Roots of L_5-S_1*
5. *Roots of S_2-S_5*

A 34-year-old patient, a driver, was admitted to the clinic after a weight-lifting with the complains of the pain on the external surface of the femur and shins irradiating into the region of the 2nd-3rd toes, weakness of the back flexion of the foot and first toe. Which spinal cord root is damaged **[1]**?

1. *Root of L_5*
2. *Root of L_4*
3. *Root of S_1*
4. *Roots of L_5-S_1*
5. *Roots of S_2-S_5*

A patient has jumped from the height of 3 meters and felt a sharp pain in the lumbosacral region. The pain on the posterolateral surface of the femur, shin irradiating into the heel and the external surface of the foot involving the 5th, 4th toes developed later. There are sensitive disorders in the same region. Which spinal cord root is damaged **[1]**?

1. *Roots of S2-S5*
2. *Root of L2*
3. *Root of SI*
4. *Root of L5*
5. *Root of L4*

What sign has the greatest diagnostic value in lumbosacral radiculitis **[1]**?

1. *Marinesko-Radovichi's sign*
2. *Kernig's sign*
3. *Lasseg's sign*
4. *Claudt-Bernar-Horner's sign*
5. *Braun-Secar's sign*

A patient had suddenly developed persistent flaccid paralysis of the legs with disfunctions of the pelvic organs. One month before the transient motor, sensitive and pelvic disorders were observed. How is the described syndrome called **[1]**?

1. *Claudt-Bernar-Horner's sign*
2. *Braun-Secar's sign*
3. *Sluder's sign*
4. *Syndrome of radiculomyeloischemia*
5. *Bruns's syndrome*

A patient is a bus driver, he felt a sharp pain in the lumbar area during work with the irradiation into the anterior surface of the hip. He was treated at the polyclinic. Because of increase of the painful syndrome, he was admitted to the neurosurgical department. The pain is located on the anterior surface of the hip and shin. The knee reflex is absent, paresis of the quadriceps of the hip. On the roentgenogram of the spine there is a narrowing of the intervertebral fissure between 3 and 4 lumbar vertebrae. The clinical diagnosis **[1]**:

1. *Pathology of the intervertebral disc at the level of L_3-L_4, with damage of the root L_4*
2. *Tumour of the spinal cord at the level of the chest part*
3. *Discopathy at the level of the cervical part of the backbone*
4. *Discirculatory myelopathy*
5. *Pathology of the intervertebral disc at the level of L_4-L_5*

A patient has been suffering from a lumbosacral radiculitis for about 10 years. Last aggravation was about 5 months. Pains irradiate on to the external surface of the hip, shin through back of the foot to the big toe. There are a paresis of musculus gastrocnemius, weakness of back flexion of the big toe. Reflexes are preserved. A preliminary diagnosis **[1]**:

1. *Discopathy of L_5-S_1*
2. *Pathology of the intervertebral disc at the level of L_4-L_5*
3. *Tumour of the spinal cord*
4. *Myelitis*
5. *Discirculatory myelopathy*

A patient has been brought by an ambulance to the neurosurgical department with complaints of sharp pains in the lumbar region irradiating into the back surface of hips and shins. There are weakness of plantar flexion of the feet, paresis of musculus gastrocnemius, hypalgesia on the external surface of shins, feet. There is a radiological picture of pathology of the intervertebral disc at the level of L_5-S_1. The clinical diagnosis **[1]**:

1. *Tumour of the spinal cord*
2. *Myelitis*
3. *Discirculatory myelopathy*
4. *Discopathy at the level of L_5-S_1*
5. *Hemangioma of L_5-S_I*