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DEGENERATIVE CHANGES IN THE CERVICAL SPINE

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Abstract: The diagnosis of "cervical osteochondrosis" is often made if a person complains of neck pain. Some also attribute dizziness, memory loss, numbness of the hands and other unpleasant symptoms to it. It is mistakenly believed that the disease is associated with wear and age-related deformation of the intervertebral discs and other elements of the spinal column.
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Introduction. Intervertebral discs consist of a gel-like nucleus and a dense fibrous ring surrounding it, covered by a layer of cartilage on top. They perform a shock-absorbing function, preventing damage to the vertebrae during running, walking and jumping, and also contribute to the mobility and flexibility of the entire spinal column.

In the process of natural aging, as well as in conditions of increased load, there is a gradual decrease in the height of the intervertebral disc. The metabolism in its nucleus is disturbed, cracks appear in the surrounding fibrous ring. Disc bulges appear - protrusions and herniations. As the disease progresses, it involves cartilage tissue and bone, there are osteophytes - bone overgrowths, which become the cause of restricted mobility and a pronounced pain syndrome. Since pathological changes take place in close proximity to the spinal cord and its roots, this leads to their compression and inflammation, as well as reflexive development of muscle spasm. As a result, a person experiences characteristic symptoms, by which the disease can be suspected.

Causes

Osteochondrosis of the cervical spine refers to multifactorial diseases. It occurs against the background of a whole complex of factors, each of which aggravates the course of pathology. The list of causes includes:

excessive body weight;
sedentary lifestyle;

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sedentary work;
incorrect posture;
chronic diseases of the musculoskeletal system (scoliosis, flat feet), which contribute to uneven distribution of load on the spine;
congenital abnormalities in the development of the spinal column, as well as trauma;
excessive, repetitive stress on the spine;
hereditary predisposition.

Symptoms and syndromes

Symptoms of cervical osteochondrosis do not appear immediately and, often, are masked under other diseases.

The most common signs include:

dizziness: as a rule, with osteochondrosis it is systemic, ie, it seems to a person that surrounding objects rotate in front of his eyes;
pain in the back of the head, neck, collar zone: its intensity depends on the degree of development of the disease, light and episodic at an early stage, it spreads to the whole head and becomes constant, periodically attacks become unbearable, as a result of which a person can not even move his head;
tinnitus or ringing in the ears: occur when changing position after a long period of immobility, often accompanied by dizziness;
sensation of shortness of breath, inability to take a deep breath; in severe cases, severe shortness of breath develops;
nausea and vomiting: associated with impaired blood circulation in certain areas of the brain, intensified when trying to turn the head;
decreased visual acuity, flickering flies or fog in front of the eyes: indicate insufficient blood supply to the brain; occur in advanced stages of the disease;
fluctuations in blood pressure that are not easily correctable with medications;
sudden fainting due to vasospasm;
sensation of a lump in the throat, fever, dryness, problems with swallowing: often one of the first signs of pathology.
shoulder pain
numbness in the fingers

In addition to the general signs of cervical osteochondrosis, distinguish several syndromes characteristic of this disease.

Vertebral syndrome

The complex of symptoms is associated with the lesion of the bones and cartilage of the spinal column. It includes:

impaired mobility in the cervical region;
pain when turning the head;
radiologic signs of damage to the vertebrae themselves and the space between them.

Vertebral artery syndrome

Symptomatology is due to narrowing or spasm of the vertebral arteries, which are partially responsible for the blood supply to the brain. Manifested by the following signs:

tinnitus;
dizziness;
spikes in blood pressure;
nausea and vomiting;

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headaches;
visual disturbances;
decreased efficiency;
drowsiness;
fainting.

Cardiac syndrome

Resembles the condition when the heart muscle is affected and includes:
pain or burning sensation behind the sternum;
weakness and fatigue;
rapid pulse.

Spine syndrome

The condition is associated with a lesion (compression or pinching) of the nerve roots coming out of the spinal column in the cervical region. Depending on the level of the lesion, a person may feel:
numbness or pain in the area of the back of the head;
numbness of the tongue;
pain in the clavicles, difficulty swallowing, hiccups;
discomfort in the shoulder area, increasing with arm movements;
soreness in the shoulder blades and forearms;
numbness of the index and middle fingers;
numbness of the ring finger and little finger.

Most often, several nerve roots are involved in the pathological process at once, as a result of which several characteristic symptoms are observed at once.

Stages

In the process of development, cervical osteochondrosis passes through four consecutive stages (degrees), which determine the severity of symptoms and the general condition of the patient.

Stage 1. The thickness of the intervertebral discs slightly decreases. Symptoms are practically absent, sometimes there is a slight discomfort in the neck, for example, when staying in an uncomfortable position for a long time.

Stage 2. The height of the disk becomes even smaller, pathological overgrowth of cartilage tissue begins, there are protrusions (bulges). Pain becomes stronger, it is joined by stiffness in the cervical region.

Stage 3. The fibrous ring surrounding the nucleus of the disk is ruptured, an intervertebral hernia is formed. The spinal column is visibly deformed, the risk of dislocation and subluxation of vertebrae increases. Pain becomes constant, it is joined by other symptoms of osteochondrosis.

Stage 4. Irreversible changes occur in the spinal column: there are bone overgrowths, the intervertebral disc is replaced by scar tissue and loses the ability to cushion the load. Symptoms become pronounced and have a significant impact on the patient's lifestyle and well-being. Quality of life is reduced.

Diagnosis

In search of the causes of pain or dizziness, the patient can turn to doctors of various specialties: therapist, cardiologist, gastroenterologist, neurologist. Diagnosis of osteochondrosis requires a comprehensive examination, which includes:

X-ray and computed tomography: effective only at late stages of the disease, when changes become clearly visible;

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magnetic resonance imaging: due to the high degree of visualization, allows you to see even the initial changes; is currently the main method of diagnosis;
duplex scanning of the arteries of the head and neck: allows you to assess the quality of blood flow, identify narrowing of vessels; used to determine the causes of headaches and dizziness.
It is mandatory to interview and examine the patient, determine the areas of pain and the degree of mobility of the spinal column, assess the quality of reflexes. For differential diagnosis with other diseases with similar symptomatology, may be appointed:
ECG, cardiac ultrasound;
daily monitoring of ECG and blood pressure;
X-ray of the chest organs;
consultations of narrow specialists: cardiologist, ENT.
Treatment
Treatment of cervical osteochondrosis requires a comprehensive approach and includes:
medication;
physiotherapy;
physical therapy;
massage;
surgical treatment.
Medical treatment

The main goal of drug treatment is to relieve pain and dizziness, restore the normal functioning of nerve roots, and if possible, stop or slow down the destruction of cartilage tissue. Depending on the situation are prescribed:
non-steroidal anti-inflammatory drugs (meloxicam, diclofenac, nimesulide, etc.): aimed at relieving pain syndrome and inflammation; used in the form of tablets, injections, ointments, patches;
steroidal drugs (hydrocortisone, dexamethasone): also used to relieve inflammation when NSAIDs are ineffective;
myorelaxants (midocalm): drugs that eliminate reflex muscle spasms, which reduces pain and improves blood circulation;
B vitamins in the form of injectable or tablet preparations (milgamma, neuromultivit): help improve the conduction of nerve impulses;
sedatives for severe pain syndrome to improve sleep and reduce the emotional component of pain;
anti-edematous agents in case of nerve root impingement;
chondroprotectors: drugs that help to restore cartilage tissue.
Depending on the symptoms, drugs to improve microcirculation in the cerebral vessels, drugs to block nausea and dizziness, etc. may also be prescribed.
Non-medicamentous treatment
Non-medicamentous methods of treatment are used outside the exacerbation. Depending on the clinical situation, they are used:
physiotherapy:
laser therapy;
magnetotherapy;
UHF therapy;
phonophoresis and electrophoresis;
massage;

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physical therapy;
acupuncture;
manual therapy;
underwater traction.
Non-medicamentous treatment helps to reduce the severity of symptoms and reduces the frequency and severity of exacerbations. It acts indirectly:
improves blood supply to the affected area, metabolism and regeneration processes;
strengthens the action of drugs;
helps strengthen the muscular framework and stabilize the spinal column;
reduces the load on the spinal discs;
eliminates muscle spasms and blocks.
Surgical treatment
The help of surgeons is necessary in neglected cases of the disease, when medication methods are no longer effective. Several surgeries are currently used:
surgical removal of a herniated disc (microdiscectomy, endoscopic or transfacet surgery);
laminectomy: removal of the spinous process or the vertebral arch, which reduces the load on the spinal cord root;
nucleoplasty: repair of a herniated disc by removing part of the nucleus of the intervertebral disc.

Conclusions: If you pay attention to the prevention of cervical osteochondrosis, even with existing changes, their progression will be significantly slowed. We recommend to lead an active lifestyle, avoid hypodynamia, minimize or eliminate weight lifting, sleep on an orthopedic mattress and pillow, regularly warm up when it is necessary to work for a long time at the computer.

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