

**COCHLEAR NEURITIS (SENSORINEURAL HEARING DAMAGE) .**

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**Abstract:** Cochlear neuritis - sensorineural hearing loss, is a disease of the inner ear of a non-infectious nature, in which the auditory nerve is damaged. This leads to impaired sound perception. Uncomplicated neuritis of the auditory nerve can be the result of almost any infection in the area of the ENT organs, so children's hygiene and treatment. viral diseases prevent neuralgia in old age.

**Key words:** Cochlear neuritis, infectious neuritis, acoustic injury, sensorineural deafness.

Cochlear neuritis (sensorineural hearing loss) or acoustic neuritis- This pathological condition is manifested by inflammation of the nerve that provides the hearing function of a person. The disease is more common in people who live in big cities, where background noise acts as a constant stimulus. Elderly people and patients with ear diseases are also at risk. The auditory nerve fiber is quickly susceptible to the effects of the internal and external environment, the inflammatory process spreads quickly along the nerve fiber, leading to its death. Etiology. The development of the disease is caused by external and internal factors. Infectious, toxic, post-traumatic and occupational neuritis of the auditory nerve fiber and sensorineural deafness are differentiated depending on which factor develops. Infectious neuritis is the inflammation of the auditory nerve that develops as a complication after influenza, epidemic meningitis, rubella, measles, diphtheria, diarrhoea, encephalitis, ulcers, parotitis. As a result of the negative effect of ototoxic drugs on the sensitive cells of the auditory analyzer, toxic neuritis or toxic sensorineural hearing loss occurs in the patient. Ototoxic drugs include aminoglycosides (monomycin, neomycin, sisomycin, kanamycin, gentamicin, ampicillin, streptomycin, ethacrynic acid, antitumor drugs (cisplatin), salicylates, quinine, etc.) specific pathomorphological changes develop in the receptor cells. Pathological changes start from the base of the cochlear membrane and spread to its apex and lead to impaired ability to receive various sound waves in patients. Under the influence of drugs, the amount of potassium in the endolymph decreases, the amount of sodium increases, the process of hypoxia develops in the tissues of the shell. Under the influence of neomycin, the amount of acetylcholine in the labyrinth fluid decreases and sometimes completely disappears. Heavy metal salts (mercury, lead), phosphorus, gasoline, petroleum products, alcohol and tobacco can also have a negative effect on the auditory nerve.

In mechanical, baro- and acoustic injuries of the brain and ear, the patient may develop neuritis of the last auditory nerve fiber or toxic sensorineural hearing loss. Occupational sensorineural hearing loss develops as a result of continuous exposure to noise and vibration in production facilities. Short-term exposure to strong sound waves (gunshots, explosions, whistles) can also cause damage to the auditory nerve. Sensorineural deafness can be observed in heart and vascular diseases, kidney, endocrine, allergic and hereditary diseases. The gradual decline of hearing in the elderly leads to the development of sensorineural hearing loss. This

condition is often observed in elderly people over 60 years old. Chronic exposure to noise, poor nutrition, atherosclerosis, hypertension, diabetes, genetic predisposition, and treatment with ototoxic drugs contribute to the development of sensorineural deafness. The ability to hear is often high, i.e. in the fields above 2000 Hz, it deteriorates more, and the ability to understand speech is also impaired (the patient hears the speech, but does not understand the words). The process can start from the shell receptor of the vestibular nerve fiber and spread to the vestibule. Patients are advised to use a hearing aid.

**Clinical signs.** The patient complains of hearing loss and tinnitus. When the balance part of the vestibular nerve fiber is damaged, the patient has symptoms of balance disorder and dizziness. Pathological changes in the eardrum are not observed during otoscopy. To make a diagnosis, the patient's hearing is checked. In sensorineural hearing loss, the function of the sound wave reception system is disturbed, that is, the patient develops sensorineural hearing loss. In the audiogram, the lines of bone and air conduction, especially at high frequencies, go down, and the difference between them disappears. The diagnosis is based on the patient's complaints, the onset of the disease, the results of acumetry and audiometry examinations. Audiometry examination helps to identify pathological changes of various parts of the hearing organ - shell cells, ganglion, nerve fiber paths, cores, center in the cerebral cortex. Inflammation of the auditory nerve fiber should be distinguished from neurinoma of the VIII pair of cranial nerve fibers. In sensorineural hearing loss, the patient usually has bilateral hearing loss, while in neurinoma of the VIII pair of cranial nerve fibers, sensorineural hearing loss is unilateral, and the patient has spontaneous nystagmus, caloric areflexia, signs of imbalance, impaired taste perception, clinical features characteristic of cerebellar pathology signs are observed. In addition, in the neurinoma of the VIII pair of cranial nerve fibers, the internal auditory canal expands, which can be seen on a computer tomography or an X-ray of the temporal bone. Objective audiometry, vestibulometry, electrogustometry and meatocisternography examinations are conducted to make a precise diagnosis. In Zach's disease, balance maintenance activity is mainly disturbed, and the changes in the auditory nerve fibers are reminiscent of Men's disease in terms of clinical and audiological features.

Treatment measures are mainly aimed at eliminating the factors that cause inflammation of the auditory nerve fiber. For the purpose of pathogenetic treatment, the patient is given vitamins B, A, E, cocarboxylase, ATF, aloe extract, FIBS, humizol, apilak, nicotinic acid, papaverine hydrochloride, dibazol; drugs that improve the permeability of nerve tissues (galantamine, prozerin), antihistamine drugs (dimedrol, pipolfen, diazolin, tavegil, loratal) are prescribed. Galantamine (nivalin) together with 0.5% novocaine is injected into the ear area through the meatotympanal route for 15 days. It improves impulse transmission in brain cholinergic synapses. In order to reduce and eliminate tinnitus, the patient is recommended to drink betaserk (betagistin) 16 mg 2-3 times for 2-3 months, and 8 mg 3 times after the reduction of subjective symptoms. In addition, acupuncture, electroacupuncture, magnetopuncture, laserpuncture, and anesthetic injections to biologically active points are performed. The method of hyperbaric oxygenation in a barochamber (for 10 days) and treatment with the help of a medical leech also give good results.

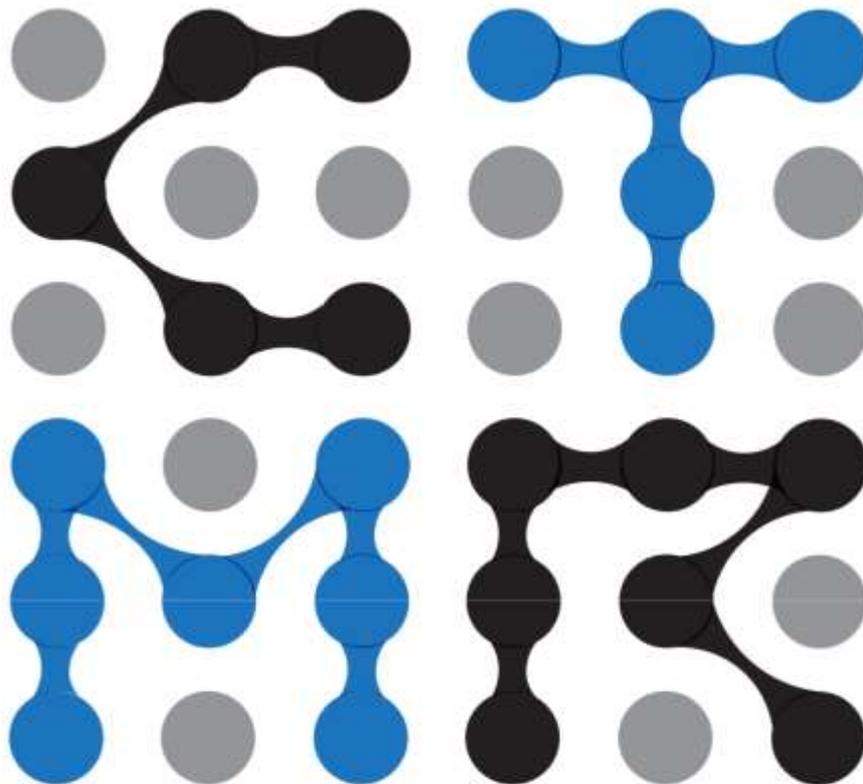
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