

PECULIARITIES OF THE FUNCTIONAL CONDITION OF THE CENTRAL NERVOUS SYSTEM OF SCHOOLCHILDREN WITH DIFFERENT DEAFNESS LEVELS

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Adaptation of a child with auditory deprivation to environmental conditions is achieved by active participation of central nervous system (CNS), sensory system, among which visual analyzer, vestibular system, proprioceptive sensibility, providing accurate and speed characteristic of movements and also maintaining of body position, play an important role.

Aim of the work is the research of the functional condition of the central nervous system of schoolchildren with different deafness levels.

47 schoolchildren with different deafness levels aged 8 -12 years, studying in special (corrective) educational institutions "Boarding schools I-II type" of Krasnodar region, were examined.

To characterize functional condition of CNS in children with auditory deprivation tapping-test was used by filling in maximum dots on a sheet of a paper with 6 squares upon visual command. After calculating dots in squares the lability of nervous processes was estimated (T-10- dot quantity during first 10 sec, T-30 – 30 sec, T-mark – tapping test estimation in marks), speed endurance (T-60 – 60 sec), results of nervous processes strength and fatigability (Q – coefficient of fatigability) (V.A. Romanenko, 2005).

As a result of the undertaken research it was determined that hearing-impaired schoolchildren in comparison to a group of almost healthy peers had lower ($p<0,05$) tapping-test results (T-10, T-30, T-mark). The same data were obtained while analyzing speed endurance results ($p<0,001$). In its turn fatigability coefficient in children with auditory deprivation was higher than in healthy peers ($p<0,05$).

Thus, the undertaken research detected that children with different deafness levels have low endurance level and speed- strength characters of complex-coordination CNS activity.

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ENZYMIC PROFILE IN PATIENTS WITH NEURODYSTROPHIC FORM OF LUMBAR ISCHIALGIA AND OSTEOCHONDROSIS OF LUMBAR SPINE

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It is known that every fifth inhabitant of our planet aged after 30 suffers from these or those presentations of spinal osteochondrosis, and at the age of 60 and older spinal osteochondrosis appears in almost 100% of cases (Antonov I.P., 1985). Osteochondrosis occupies first place among reasons of temporary disablement (Yumashev G.S. and etc., 1984). Moreover, immune-biochemical blood status in comparison to other internal diseases is not enough studied and pathogenetic mechanisms of osteochondrosis and the pain syndromes are in many ways unknown.

Aim of the work: to study activity of some enzymes of purine metabolism and antioxidant hemic system in patients with neurodystrophic form of lumbar ischialgia and osteochondrosis of lumbar spine.

Material and methods. There were 47 patients with neurodystrophic form of lumbar ischialgia and osteochondrosis of lumbar spine. The diagnosis was verified on the basis of anamnesis, complaints, data of clinical examination and roentgenologic, functional and reovasographic testing results. According to Russian classification of osteochondrosis of lumbar spine (Veselovsky V.P., 1977) all patients were detected neurodystrophic form of lumbar ischialgia (special gathering of patients). Men dominated among the patients (72,3%). Average age -43,7+ 1,1 years, disease duration - 5,28 +_ 0,2 years. Progredient type was detected with 16 patients, stable – with 25 and regredient – with 6 patients.

Enzym activity: xanthine oxidase (XO), xanthine dehydrogenase (XDH), guanase (G), purinenucleosidephosphorylase (PNP), adenosine desaminase (ADA), adenosine monophosphate- deaminases (AMPDA), superoxide dismutase (SOD), glutathione peroxidase (GP), glutathione reductase (GR), content of malondialdehyde (MDA), uric acid (UA) were detected in blood serum and hemolysate with the help of standard methods (Caraway W., 1966; Martinek R., 1963; Robertson B. et al., 1973; Lankin V.I. and others 1983; Cheviri S. and others 1985).

Research results. In blood serum of healthy people activity of ADA was $8,02\pm 0,16$ IU, AMPDA - $1,98\pm 0,12$ IU, G - $1,27\pm 0,13$ IU, PNP - $0,76\pm 0,07$ micromole/l/min, XO - $3,75\pm 0,06$ micromole/l/min, XDH - $5,81\pm 0,1$ micromole/l/min, SOD in erythrocytes $36,9\pm 1,5$ units, SOD in plasma- $5,15\pm 0,09$ units, GP in erythrocytes