

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

Medvedeva O., Aleksanyants G. and Minko O.

*The Kuban State University of Physical Culture, Sport and Tourism  
Krasnodar, Russia*

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**

Peresykin V. and Peresykin M.

*State Health Care Institution "The Volgograd Region Clinical Centre of Restorative Medicine and After-treatment #2",*

*State Institution The Research department of clinical and experimental rheumatology of Russian Academy of Medical Sciences*

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; Chevri 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

141,1±5,98 units, GP in plasma -0,97±0,04 units, GR in erythrocytes- 141,1±5,98 units, GR in plasma -1,69±0,06 units, content of MDA 3,46±1,08 nmole/ml, UA - 0,29±0,01 mmole/l.

In patients with neurodystrophic form of lumbar ischialgia it was detected in blood serum: increased activity G (p<0,05), PNP (p<0,001), XO (p<0,001), GP in plasma (p<0,001), decreased activity ADA (p<0,001), AMPDA (p<0,001), SOD in erythrocytes (p<0,05), SOD in plasma (p<0,05), GR in plasma (p<0,01), increased content of MDA (p<0,05) and UA (p<0,05). Progredient type of course was characterized by the increase of activity in blood serum of G (p<0,05), PNP (p<0,001), XO (p<0,001), content of MDA (p<0,05), UA (p<0,05), in blood serum decrease of activity ADA (p<0,001), AMPDA (p<0,001), XDH (p<0,05), SOD in erythrocytes (p<0,01) and GR in plasma (p<0,01). In stable course activity ADA (p<0,001), AMPDA (p<0,05), GR in plasma (p<0,05) is lower in comparison to healthy ones and activity PNP (p<0,001), XO (p<0,001), GP in plasma (p<0,001) is higher. In regredient course only activity XDH in blood serum was higher (p<0,05). In patients with progredient course activity in blood serum ADA (p<0,001), AMPDA (p<0,001), SOD in erythrocytes (p<0,001) and GR in plasma (p<0,05) was lower in comparison to stable course, but activity PNP (p<0,001), XO (p<0,001), MDA level (p<0,001), UA (p<0,01) was higher. In comparison to regredient course activity in blood serum G (p<0,05), PNP (p<0,001), XO (p<0,01), MDA level (p<0,001), UA (p<0,001) was higher, activity ADA (p<0,001), AMPDA (p<0,001), SOD in erythrocytes (p<0,001), SOD in plasma (p<0,05) and GR in plasma (p<0,05) was lower. In patients with stable course activity in blood serum G (p<0,05), PNP (p<0,01), was higher in comparison to regredient, but activity ADA (p<0,01), AMPDA (p<0,001), XDH was lower.

Conclusion. The undertaken research of patients with neurodystrophic form of lumbar ischialgia detected the decreased activity of enzymes of antioxidant blood system, strengthening of the lipid peroxidation process, catabolism of purine bases and activity increase of proinflammatory enzyme – XO, conducting to hyperproduction of superoxide radical that may be one of the pathogenetic mechanisms of osteochondrosis of lumbar spine. The studied enzyme blood data conduce to specification of the character of disease course and ordering suitable therapy.

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## PERIVASCULAR LYMPHOID NODULES IN MESENTERY

Petrenko V.

*The St.-Petersburg State Medical Academy named  
after I.I. Mechnikov  
St.-Petersburg, Russia*

Pervascular lymphoid nodules (PVLN) do not comprise of any microdistrict of mesentery hemolymph microvasculature (HLMV). Their quantity, sizes, forms, structure and topography are very variable. PVLN surround gathering venule and its tributaries. PVLN can be dissipated all around the microdistrict, not approaching the edge (main arteriola and venule) or concentrate boundaries (prenodules) or formed, are often specified around postcapillary venule. All listed lymphadenoids can be in one microdistrict – stages of PVLN morphogenesis when functional load increase and proper alteration of HLMV. PVLN is situated between terminal arteriola and gathering venule, and all together with their branches and tributaries compose a complex, “immune” module of HLMV. PVLN may function as counterflow system: antigens come through interstitially channels or lymph capillary with endothelial walls without basal membrane and lymphocytes from postcapillary venule. Inflow of their great quantity in these venules with antigen stimulation may be through arteriola-venule anastomosis, by-passing capillary net with stenopaic. Increase of blood inflow to forming PVLN brings to local growth and magistralization of HLMV.

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## CITROCARD INFLUENCE ON NEUTROPHIL PHAGOCYTOSIS OF PERIPHERAL BLOOD

Samotrueva M.<sup>1</sup>, Tyurenkov I.<sup>2</sup>, Teply D.<sup>3</sup>,  
Serezhnikova T.<sup>1</sup>, Kuleshevskaya N.<sup>4</sup>  
and Bakhtiyarova S.<sup>4</sup>

<sup>1</sup> *The Astrakhan State Medical Academy,  
Astrakhan, Russia;*

<sup>2</sup> *The Volgograd State Medical University,  
Volgograd, Russia;*

<sup>3</sup> *The Astrakhan State University, Astrakhan, Russia;*

<sup>4</sup> *The Non-government Healthcare Organization  
“Clinic”, Astrakhan, Russia*

Taking into consideration an important role of immune disorders in genesis of different pathological processes from the side of central immune system, pharmacological research of psychotropic medication, showing immune modulating properties becomes up to date. Citrocard prepared on the basis of phenibut, is of interest as a psychoimmunomodifier.