

Conclusions: the confirmation of the biochemical aspects of pathogenesis of chronic adenoiditis among children and the possibility to correct them has outlined the perspectives of pathogenetic therapy. The GPO and GST correction against the background of complex homeopathic preparation "Tonsilotren" is an indirect predictor of its efficiency. The specified fact gives us title to work out not only a pathogenetically new method of care of chronic adenoiditis, but also rehabilitation programs during the remission period, that is in accord with the principals of immune rehabilitation at chronic infective inflammatory diseases.

The article is admitted to the International Scientific Conference "Fundamental Research", Dominican Republic, 2007, April 10-20; came to the editorial office on 11.01.07

DYNAMICS OF LATE COMPONENT OF BLINK REFLEX AMONG PATIENTS WITH HYPOTHYROIDISM

Vakhytova D., Sh. Vagapova G.R., Falina T.G.,
Anchycova L.I., Gaynutdynov A.R.,
Baranova E.A., Fahurtdynov R.Kh.
*Interregional Clinical Diagnostic Center,
Kazan State Medical Academy
Kazan, Russia*

Physiological effects of thyroid hormones are spread practically onto all aspects of an organism's vital activity. Being under the controlling influence of direct and humorally mediated nervous impulses the thyroid gland, in its turn, affects formidably the processes occurring in different levels of the nervous system. There are the data about a greater sensibility of nervous processes to thyroid hormones compared to those occurring in other tissues of the body. This is known to become apparent especially on the early stages of ontogenesis.

The importance of studying of motor disorders' nature question at the deficit of thyroid hormones circulating in the body was underlined by many clinicians and pathophysiologists. The nature of dyskinesia at hypothyroidism was regarded by different authors according to two main concepts about the mechanism of thyroid

hormones' action – immediately on the muscular tissue or nervous system-mediated.

While considering the effects of thyroid hormones in the whole body, one should take into account the multiplicity of their action's application points, and first of all their influence on the majority of tissues' metabolism. On this basis it is hardly correct to restrict the nature of motor function's disorders at hypothyroidism to soft tissue involvement only. The morphological research showed that there are authentic proofs both for the first and the second points of view.

Movement control is a complex coordinated influence of different levels of nervous system on the end-point organ of motor apparatus – muscles. The deficit of thyroid hormones affects the function of nervous centers, and that can't help playing a significant role in the nature of locomotion disorders.

Until present time the question of the functional state of over-segmental brain parts at hypothyroidism is being open. Meanwhile these data can be of concern for understanding dyskinesia pathogenesis at thyroid gland diseases.

Our work was aimed at studying clinic and neurophysiologic characteristics of reflex action of the neuromotor system among patients with hypothyroidism. To do it we examined 20 people with primary hypothyroidism. 20 healthy volunteers formed the control group. Alongside with general clinical trial and the evaluation of their neurologic state, all patients were subjected to the thyroid gland function test by IFA methods, ultrasound investigation and biochemical analysis of blood with lipid specter defining.

Among the surveyed patients with hypothyroidism there were 3 men and 17 women, that confirms the data about the greater frequency of the disease among women. The majority of the patients were 45-50 years old. The research included the patients with new-onset primary hypothyroidism and long-term noncompensated ones. The level of free T4 was $6,8 \pm 2,7$ pmol/l (norm is 10-35), the level of TTG - $17,05 \pm 2,7$ mcME/ml (norm is 0,3-4,0).

The patients complained of muscle weakness, fatigability and slowness of movements that lead to fall off in working efficiency. In the neurologic state the muscle

strength and tendon reflex reduction came under notice.

The reflex activity of over-segmental parts of the nervous system was studied on the neurophysiological complex «Viking IV M» of the firm Nicolet. The blink reflex was analyzed and registered. A blink reflex is a clinical phenomenon having diagnostic consideration at various forms of neurologic pathology. Contrary to the direct response of the orbicular muscle of eye registered at facial nerve stimulation, the blink reflex is a reflexory response and consists of 2 components: early (R1) and late (R2) ones. The reflex arch of the blink reflex includes the afferents of the trifacial nerve's first ramus, the afferents of the facial nerve, the nuclei of these cranial nerves and also the neurons of reticular formation of brainstem. The late response of the blink reflex reflects reflex activity of the brainstem reticular neurons.

The registration of the blink reflex was carried out by means of pickup electrodes, placing them on the orbicular muscle of both eyes. The stimulation was carried out in the output point of the trifacial nerve's first ramus from the one and then from the other sides. Measuring of the latencies R1 and R2 was carried out from the stimulus beginning and up to the beginning of the departure from the null line.

The results of the blink reflex research showed that there were authentic parameter changes of its late component (R2). First, lengthening of the latent period occurred, that was $32,2 \pm 1,7$ msec ($P < 0,05$) on the average; in its turn, this showing was in the range of $27,8 \pm 0,7$ msec in the healthy people. Second, the boundary of the blink reflex induction was $4,3 \pm 0,5$ mA ($P < 0,01$) in the hypothyroid patients; in its turn, the beginning of the reflexory response registration occurred at the stimulation intensity of $2,8 \pm 0,5$ mA in the healthy people.

Thus, the carried out research allows assuming that in hypothyroid patients the abirritation of over-segmental structures participating in the realization of brainstem reflexory activity occurs. These changes are associated with the thyroid hormones' deficit which causes the intensification of inhibitory control mechanisms participating in the brainstem reflexory activity realization.

The article is admitted to the International Scientific Conference "Modern High Technologies", Spain, Tenerife, 2006, November 20-27; came to the editorial office on 13.02.07

ANTIMICROBIAL EFFECTS OF SODIUM HUMAT FROM PEAT

Ismatova R.R.

Kazan State Medical University, Russia

The study of antimicrobial effects of sodium humat is considered to be important because the majority of extracted strains of conventionally pathogenic bacteria are resistant to many broad-spectrum antibiotics.

For this purpose the following cultures were used: *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Klebsiella* spp., *Citrobacter diversus*, *Staphylococcus aureus*. Cultures were grown on meat peptone agar. The filter disks soaked with 1%, 5% sodium humat solution were placed in a Petri dish with culture and then into a thermostat at 37° C. The findings were counted after 24 hours. The experiments showed that the agent had a bacteriological effect.

Rats were used for in vitro experiments. Incised flat wounds were made on their backs to make an experimental model of bacterial infection. One ml of 18-hour cultures grown on Hottinger broth (pH 7,2 - 7,4) with an optic density of 100 mln – 1 mld of colony forming units was placed on the wound. After a 4-day period, suppurative wounds of the experimental animals were treated with the ointment containing sodium humat at a concentration of 1%, 5% as well as a polyethyleneglycol ointment basis and synthomycin emulsion. After 3-7 days following the wound treatment with sterile tampons, the purulent material was taken and seeded in universal and differential-diagnostic media. Clean cultures were isolated and identified according to their cultural, morphological and biochemical properties.

It has been established that 1%, 5% ointment with sodium humat similar to the synthomycin emulsion has antimicrobial activity as related to *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Klebsiella* spp., *Citrobacter diversus*, *Staphylococcus aureus*. The wound surfaces became pus free during a shorter period of time as compared to control animals. The wound