thyroid gland in the group of indigenous and non-indigenous in the winter period of the year, in comparison with the summer period of the year, are regarded as compensatory adaptive reactions aimed at maintaining the temperature homeostasis. The obtained results confirm the assumption that in the winter period the inhabitants of the northern regions of the country are in a state of increased stress caused by adaptation of the organism to the cold. At the same time, according to our data, in the winter of the year the group of indigenous people changed the part of the follicular apparatus of the thyroid to a state of increased secretory activity to a lesser extent than the non-indigenous group, which can be regarded as a functional glandular strain in non-indigenous men, necessary to maintain the optimal level of life-sustaining activity in this period of the year.

Conclusions. In the extreme climatic conditions of the Far North, it is necessary to monitor the functional state of the thyroid gland in different seasons of the year, both in the adult population and in children of older age groups for early detection and secondary prevention of thyroid pathology.

CYTOARCHITECTONICS OF THE LARYNX IMMUNE TISSUE IN LOW TEMPERATURES

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Key words: *cells of lymphoid tissue, larynx, hypothermia, Yakutia*

Aim. Studying diffuse lymphoid tissue of the laryngeal mucosa in hypothermia conditions.

Material and Methods. For research we used pieces of the larynx of the lining of the vestibule, left and right ventricles and the infraglotic area recovered from the bodies of the deceased men in the territory of Yakutia. The material was taken in the summer and winter seasons on the basis of the State Bureau of Forensic Medical Examination of Sakha (Yakutia) Republic. The preparation of histological preparations was carried out according to the generally accepted method.

Results and Discussion. During research of micropreparations of a group of people who died from general hypothermia of the organism in the climatic conditions of Yakutia, we found that when affected by low temperatures, the multilayered flat epithelium swells, a large amount of mucus is deposited in epitheliocytes, the mucosa itself is swelling, the glands and ducts widen; in the lumens there is a conglomeration of mucus. There significant changes in the cellular composition of diffuse lymphoid tissue in the walls of the larynx in males under the influence of low temperatures when compared with the data of the summer period of the year. Thus, it was established that the diffuse lymphoid tissue of the laryngeal mucosa in persons who died from hypothermia is depleted, which is manifested by a decrease in the number of immunocompetent cells in comparison with the indices of a group of people who died in the summer, which is characterized by a decrease in the number of T lymphocytes, B lymphocytes, plasma cells, and also a significant increase in the number of destructively altered cells and macrophages. In addition, under the influence of hypothermia compared with the summer period of the year, there is a significant suppression of lymphocytopoietic processes, which is manifested in a decrease in content of lymphoblastic cells and cells in the state of mitosis.

Conclusions. Peripheral immune structures have a high sensitivity to the effect of low natural temperatures, which manifests itself in the form of pathomorphological changes in diffuse lymphoid tissue in the mucous membrane of the larynx, as well as suppression of cellular and humoral immunity.

ANTHROPOMETRY AS A CHARACTERISTIC OF A BIOLOGICAL AGE OF THE CHILD

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Key words: *anthropometry, biological age, development, children*

Background. The biological age is closely connected with a number of morphological and functional indicators. Dynamics of physical development is an indicator of biological age of the child.

Aim. The research objective is to estimate a biological maturity of children using anthropometrical measures.

Material and Methods. This research is based on studying and analysis of 146 organized children from 2 to 7, 5 years of Samara.

Results and Discussion. During research we observed disharmonious development. At the examined children in 25.8% of cases it has been revealed excess body weight, especially in group of boys. In 42% of observations high growth has been noted where the ratio of boys and girls was identical. The average ratio of the head circumference to the tho-

rax circumference decreased with increase in age group. Average values of the leg length at children prevail over average values of femur length from 4.6 to 14.6 mm. This difference is most expressed at children of 2–3 and 4–5 years. The ratio of average values of growth and average values of femur length with increase in age of children decreases from 5.11 to 4.41. The same dynamics is received also for the leg — from 4.76 to 4.41.

Conclusions. Thus, growth and body weight, lengths of parts of the lower extremities and the thorax and head circumferences are in proportion connected and are reflection of biological maturing of the person.

QUOTATION AND CITATION BETWEEN SIMILARITY AND PLAGIARISM

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Key words: *copyright, quotation, citation, publication*

Plagiarism is considered an act of academic dishonesty; a sort of copyright infringement. It could be used to define passing off someone's words as their own, adding paragraphs from other's publication without adding citations and using quotations without citing the source. Being an frowned upon unethical crime, plagiarism by students is usually considered a very serious offense that can result in punishments such as failing the course. Detecting plagiarism yet poses a bit of a dilemma so many educational institutions started using plagiarism detecting software. Despite being such an offense, efforts need to be done in order to make both the staff and the students fully understand the gravity of such act. So given the seriousness of plagiarism, there has been a call for education for both the students and academic staff.

SURGICAL ANATOMY OF POSTERIOR-MEDIAL SURFACE OF THYROID GLAND

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Key words: *posterior-medial surface of thyroid gland, retrothyroidei processes*

Aim. To study the clinical anatomy of the lateral lobes posterior surface of the thyroid gland, using a complex of morphological techniques.

Material and Methods. The morphological part of the study: 426 — unfixed corpses of people, who died suddenly from diseases, not related to the pathology of the neck at the age of 18–85 years (52±16) — 290 of males, 136 of females.

Results and Discussion. Retrothyroidei processus (RTP) met in 209 organocomplexes of 426 (49%). On 42 (10%) preparations, RTP were discovered simultaneously at the right and left of the median line. In both sexes, the height of the RTP was larger than the width, and the width was greater than the thickness. In both men and women, the predominant location of the RTP at the level of the upper third of the lateral lobes was four times more frequent than at the lower third and 1.5 times more often than at the middle third level.

Conclusions. Thus, in half of all observations in norm on the posterior surface of the lateral lobes, formations of various shapes and sizes were found, closely associated with the underlying tissue of the thyroid gland, the so-called retrochite processes. Most often they are at the level of the upper third of the height of the right lateral lobe. In thyroid surgery, the posterior surface of the lateral lobes of the thyroid gland should be carefully inspected to prevent the incomplete removal of the RTP with possibly localized neoplastic nodes.

BRAIN REWARDING CIRCUITS IN MECHANISMS OF PLEASURE AND ADDICTION: IMPLICATIONS FOR PSYCHOSURGERY

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Key words: *brain rewarding circuits, brain mechanisms of addiction, psychosurgery*

Background. Several psychiatric disorders like Obsessive-compulsive disorder, Eatting behavior disorders and refractory Drug Addiction, share some neural mechanisms that are based on the brain circuitry that regulate reward and pleasure, the so-called Brain Rewarding Circuits. These circuits were first studied in experience animal during the fifties in the XX century, but only later they have been extensively investigated in the human brain: the structures, the pathways, the neurotransmitters, the way they interact and the clinical manifestations for which they are responsible. There are many involved structures and paths, namely the Ventral Tegmental Area, the Nucleus Accumbens, the Amygdala and the Stria Terminalis, the Hypothalamus, the Prefrontal Cortex, the Medial Forebrain Bundle; these are the main ones among several others interesting the limbic system and more.

Conclusions. The author presents an updated review of these aspects and their major clinical implications respecting the above mentioned disorders, including his own experience on Deep Brain Stimulation (DBS) to treat Refractory Drug Addiction.