Circumflex artery (CA), anterior interventricular artery (AIA) and GCV form the arterio-venous triangle beneath the left auricle.

Material and Methods. Thirty two formalin-fixed adult human hearts were examined.

Results and Discussion. The arterio-venous triangle was formed in 29 (91%) specimens. Mostly (n=19; 66%) there was «open inferiorly» triangle with the GCV and AIA went in parallel. In the coronary groove the GCV ran over (n=12) or under (n=7) the CA. In 4 cases diagonal artery entered the «open inferiorly» triangle and crossed GCV. Three patterns of the arterio-venous relationship were observed at the 6 of 29 hearts (21%) with «completely closed» triangle. In four cases the GCV was under the AIA and superiorly to the CA. In one specimen the GCV was located superiorly to the both arteries, and in one case the GCV was superiorly to the AIA and under the CA.

Conclusions. «Completely open» triangle was in 4 cases. An «open superiorly» triangle was absent.

SHAPE OF MAMMARY GLANDS IN YAKUT WOMEN IN VARIOUS AGE GROUPS

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Key words: *form of mammary glands, Yakut women, corrective mammoplasty, age aspect*

Aim. Revealing the variability of the form of mammary glands in Yakut women in the age aspect for recommendations on the selection of implants for corrective mammoplasty.

Material and Methods. Morphometry of mammary glands was carried out in adult women of indigenous nationality who applied to a private clinic in Yakutsk for corrective mammoplasty. The examined women were divided into four age groups. The measurements were taken by the system for the selection of breast implants — Body Logic (Mentor Medical Systems B. V. — USA).

Results and Discussion. Analysis of the results of the study of the shape of the breast showed that the round form was most common in women aged 31–35 years, less often at 36–40 years. The round MG (mammary gland) is characterized by a uniform distribution of the gland tissues relative to the nipple-areolar complex, with relative bilateral symmetry. The broad form of MG was most often seen at the ages of 36–40 years, less often at the ages of 20–25. The wide form of the breast is characterized by a wide transverse base and a short vertical length, and an expansion of the nipple-areolar complex. The glandular tissue is denser; the skin varies widely from dense to flabby. The conical form of MG was more common in the age group of 26–30 years and less often in the first age group. This form of MG is characterized by a conic-shaped apex, directed downwards and to the sides. The glandular tissue is thin; the skin is flabby. In this case, bilateral asymmetry is observed more frequently. The tubular form of MG was less common in all age groups. The tubular form of the mammary gland is characterized by the protrusion of the mammary gland tissue mainly in the area of the nipple-areolar complex, the extended pacifier-aeroleolar complex, the hypertrophy of the nipples, and the pronounced restrictive properties of skin, especially in the lower pole of the mammary gland.

Conclusions. For anatomically substantiated planning of corrective mammoplasty tactics, adequate selection of the implant, and prevention of unwanted postoperative aesthetic complications in the long-term postoperative period, it is critically important to take into account the age and ethnicity of women.

MORPHOLOGY OF THE THYROID GLAND IN THE MALE POPULATION OF YAKUTIA IN DIFFERENT SEASONS OF THE YEAR

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Key words: *thyroid gland, morphometry, structural components, Yakutia, seasons of the year*

Aim. Establishing morphological functional features of the structural organization of the thyroid gland in men of indigenous and non-indigenous nationality of the Sakha (Yakutia) Republic in different seasons of the year.

Material and Methods. The subject of research was thyroid glands of practically healthy men of indigenous and non-indigenous nationality who died from various acute injuries incompatible with life, excluding neck injuries, in the territory of the Sakha (Yakutia) Republicin the period from January 2007 to August 2012. During research, methods of macro-and micromorphometric and immunohistochemical studies of the thyroid gland were used in the summer and winter periods of the year.

Results and Discussion. Morphometric examination of the thyroid gland in men of indigenous and non-indigenous nationality in different periods of the year (summer, winter) in virtually all glands determined areas with signs of increased and decreased activity — the thyroid gland was in continuous cyclic restructuring with periodic states of activity and rest. The histomorphological changes occurring in the

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-