

centration of it have persons with optimal ADP, and the lowest – those with high normal ADP. Diastolic pressure correlated with CNN among the young men with optimal ADP ( $r = -0,38$ ,  $p = 0,0144$ ), and among those with high normal pressure – with IRST ( $r = 0,79$ ,  $p = 0,0327$ ).

The results' analysis among the young women showed us that the majority of the studied has an optimal ADP level. Differences in height and mass were unreliable, a trend towards body mass growth was observed among the patients with high normal ADP. Persons with high normal pressure had higher indexes of neurotism, stress-reactivity, including high IRST parameters. Differences in CNN carries a character of trend – the highest concentration was observed among the patients with optimal ADP.

According to the described data we can suppose that for young men humoral factors, particularly nitrous oxide production are more important in the process of dualistic pressure regulation, while for women stress prevails the stress factor. Besides, young women with normal pressure, obviously, form even higher risk group than persons with high normal pressure. However, additional research is required for more detailed answer to this question.

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#### **MRI OF ADRENAL GLANDS IN PATIENTS WITH HYPERTENSION-VERGE NORMS AND PATHOLOGY**

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Adrenal condition assessment in patients with hypertension by MRI has certain characteristics, because the shape, size and position of the adrenal gland are different. At present, information on how to conduct a survey of the adrenal gland based on morphological (death), as well as norms derived with x-ray computer tomography. Simple transfer of the data on MRI survey on low-floor systems cannot be applied because the dimensions obtained when CT and MRI are significantly different, so much so that the definition of a number of parameters for CT for frontal sections without reconstruction images difficult. In particular this applies to the frontal or sagittal sections, where not only describes the rules for the adrenal glands of these cross-sections, but even among the MRI CT they may vary in degrees of intensity signal from cerebral and brain substance evaluation used sequences of sections and the thickness of the slices.

Therefore we have decided to describe along with pathologies in patients with hypertension, normal values of the adrenal gland, which could then be used in the practice of doctors.

Adrenal survey conducted among 470 healthy persons (M-226, W-244) between the ages of 20 to 60 years. In the categories of age range with a difference at 10 years old were assessed the shape and dimensions of the adrenal gland in axial and frontal cross-sections at thickness of slices, 5 and 7 mm in T1 and T2 sequences with the parameters of the protocols used for kidney and adrenal glands. In axial and frontal cross-sections determined the height of the medial leg right and the left adrenal gland and the length of lateral leg. These two sections are determinative, since the legs of the adrenal gland can be arranged at an angle to each other and, consequently, sizing only one axial sections, may make the error in measurement.

Lateral leg length is measured from the beginning of the adrenal gland to visualization its merger with the medial leg at the level of the body in front and axial cross-sections; the height of the medial – maximum of visualization on axial and front-end transects To average the data standards for adults, we have combined age ranges 21-40 years and 51 and older in two groups, to some extent through simplification. This is done specifically because the age range of 1 to 20 law requires individual interpretation due to the growth of the organism. In the old, i.e. over 51 years during the life of the accumulated negative factors (weight gain, osteoporosis, reaction to stressful situations, metabolic diseases, etc.), including the individual modalities reaction of the adrenal gland that can cause changes in their form and structure.

According to the results of the measurements of the height of the medial leg right adrenal gland in the age group 21-40 years in the front rail was  $19,06 \pm 4,79$  mm; the length of the lateral –  $13,3 \pm 3,37$  mm. The dimensions of the medial leg left adrenal gland in norm in front-end transects were: the height of the medial leg –  $23 \pm 3,72$  mm; length of lateral leg –  $12,9 \pm 2,36$  mm.

In the older age group 51 years and more, these indicators were: the height of the medial leg right adrenal gland –  $21,54 \pm 3,23$  mm; length of lateral leg –  $12,63 \pm 3,44$  mm; the height of the medial leg left adrenal gland in front of cross-sections –  $22,2 \pm 5$  mm; length of lateral leg –  $16,66 \pm 3,71$  mm.

In axial transects the height of the medial leg right adrenal gland in the Group of 21-40 years old  $22,48 \pm 4,49$  mm; length of lateral leg right adrenal gland –  $13,34 \pm 3,51$  mm. Dimensions-height medial leg left adrenal gland in axial sections  $20,5 \pm 4,32$  mm; length of lateral leg left adrenal gland in axial transects  $14,94 \pm 3,54$  mm. In the older age group, the height of the medial leg left adrenal gland in axial transects was  $21,74 \pm 4,73$  mm; length of lateral leg –  $13,82 \pm 4,11$  mm.

If you take the averages for all age groups 20-60 let, the size of normal adrenal gland in front of cross-sections are estimated to be: the height of the medial leg right adrenal gland –  $19,2 \pm 4$  mm; length of lateral leg right adrenal gland –  $12,6 \pm 3$  mm. The height of the medial leg right adrenal gland in axial transects –  $22,19 \pm 5,65$  mm; length of lateral leg right adrenal gland in axial cross-sections –  $12,41 \pm 4$  mm.

The averages for the left adrenal gland for all age groups were: the height of the medial leg left adrenal gland in front of cross-sections –  $21,39 \pm 4,44$  mm; length of lateral leg left adrenal gland in front of cross-sections  $12,91 \pm 3$  mm. Size of left adrenal gland for all age groups – 20-60 let in axial transects were: the height of the medial leg –  $20,14 \pm 4,68$  mm wooden; length of lateral leg left adrenal gland –  $15,0 \pm 4,68$  mm wooden. On the basis of received data can be concluded that the normal left adrenal gland normally more right ( $p < 0,01$ ). These data do not conflict with pat morphological descriptions.

When the characteristic form of the adrenal gland, remember that they are in front of cross-sections in the form of inverted «Y», a long wing which is medial foot and short-lateral. In axial transects form adrenal gland is either in the form of «birds» or inverted or lying on its side of the letter «V»; less frequently, about 3-5% of cases in axial cross-sections it has branching type of building, contains 2 lateral leg as brush hanging down in parallel. Lateral leg right adrenal gland located close to the bottom of the hollow Vienna and, usually, is welded with it. In the structure of adrenal gland in norm no hypo intensive inclusions, clearly defined cortical and cerebral substance, but may be elements of a lipid infiltration.

The angle of the bland-lateral leg from medial in the frontal plane may be different. For axial cross section it does not matter, while the front rail lateral foot may not completely fit within the plane of the section, i.e. look shorter than it actually is. This explains the diversity of forms of adrenal gland when researching in front of cross-sections. Sometimes lateral foot is angled towards the top, and we are dealing with a variant form, resembling the letter «Y». In axial transects better viewing structure of cerebral and brain substance adrenal gland, and diligence it to the bottom of the hollow Vienna.

Form of adrenal glands, which differ from the norm, but do not have nodular or diffuse hyperplasia, attributed to adenopathy. From the perspective of clinic's – adenopathy – is a condition of endocrine glands, which in the future, under certain conditions, can be transformed into nodular or diffuse hyperplasia or hypertrophy gland or under the influence of any factors (e.g., treatment) to return to normal. In this sense, adenopathy is a term more closely explains a valid functional and morphological range of deviations from the norm. In our study, such changes are identified by 257 sick AG, which amounted to 47 per cent to the group as a whole.

However, even if you have high blood pressure, approximately 21 % of patients with adrenal glands do not exceed in size beyond the limits of admissible norm and had no structural abnormalities.

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**PECULIARITIES OF PHYSICAL  
DEVELOPMENT OF JUNIOR  
SCHOOLCHILDREN OF COMPREHENSIVE  
SCHOOL AND SPECIALIZED  
EDUCATIONAL INSTITUTION  
OF COMPENSATING TYPE IN  
KRASNODAR KRAI**

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A special role at the complex of actions that form full-fledged personality of child belongs to the physical development. But as the analysis of literary sources shows, the comparison of the level of child's physical development occurs within the middle-aged rates of physical condition in any single Russian region, usually in Moscow and its area. The aim of this research is examination of morphological peculiarities of physical development of junior schoolchildren of comprehensive school and specialized educational institution of compensating type in Krasnodar krai. For solving this problem in this research there was applied anthropometric method. We used generally accepted anthropometrical instruments: easel wooden stadiometer (for length of the body measurement), metallic auxanometer of Martin, centimeter tape, floor electronic balance. For every child there was created a special «Chart of anthropometric facts», in which there were entered showings, received at the result of measurements. At the experiment there took part children of junior school age about 8–11 years old in quantity of 123 persons, 82 of them were students of Krasnodar comprehensive school № 12 (48 girl and 34 boys) and 41 of them were students of State specialized educational institution of compensating type of Belaya Glina village in Krasnodar krai (20 girls and 21 boys). As the result of research there was stated that the dynamics of average length of the bodies within 8–11 years old children of specialized educational institution of compensating type has positive tendency and is identical to the development of this characteristic within their peers of comprehensive school; by the average showings of body weight student of specialized educational institution have low values in comparison with children of comprehensive school. Thereby, received anthropometrical showings, which characterize physical development of junior schoolchildren of comprehensive school and specialized educational