

relationship with gender, age, and handedness were assessed.

**Results and Discussion.** The most common and uncommon form of corpus callosum were splenial bulbosity form (35.6%) and arch mid-body form (7.2%) respectively. Maximum anterior — posterior (AP) distance of corpus callosum was longer in male and older age individuals compared to female and younger ones respectively. No significant differences were seen in AP distance of corpus callosum between right and left handers. Area of corpus callosum was widened in male and younger age individuals compared to female and older ones respectively.

**Conclusions.** The findings of this study show morphology of corpus callosum in Iranian population. Morphometric parameters of AP and area of corpus callosum are related to sex and age but no to handedness.

#### VARIABILITY OF RAMIFICATION AND CONNECTIONS OF THE CERVICAL BRANCH OF THE FACIAL NERVE

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**Key words:** *facial nerve, cervical branch, connections*

**Background.** Superficial location of the cervical branch (CB) of the facial nerve makes it vulnerable to injuries in surgery of the neck and might result in weakening of the platysma muscle with lip motion impairment and asymmetric smile.

**Aim.** The purpose of our study was to establish ramification and connections of the CB of the facial nerve.

**Material and Methods.** Thirty-two adult cadaveric semiheads 18 right and 12 left ones, fixed in formaldehyde solution were dissected at the Chair of Human anatomy of Nicolae Testemitanu SUMPh and variations of ramification and connections of the CB of the facial nerve were marked out.

**Results and Discussion.** Both sides of the head have been dissected on the 20 of those samples. Similar ramifications of the CB on both sides in the same individual were marked out, only in 3 cases. In 5 cases CB was double and in one case multiple. In 4 cases — there were double connections with the transverse cervical nerve. In 8 cases there were connections with the greater auricular nerve and 2 of those connections were double. In 19 cases there was a single connection with the ramus marginalis mandibulae, in one case — double connections, and in 12 cases there were no connections between those branches.

**Conclusions.** The CB of the facial nerve is variable both in number of ramifications and ways of connections.

#### PECULIARITIES OF SOMATHOMETRIC CHARACTERISTICS IN EARLY ADOLESCENCE LIVING IN THE KRASNODAR TERRITORY AND KABARDINO-BALKARIAN REPUBLIC

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**Key words:** *somathometric characteristics, stress resistance index, early adolescence, Krasnodar Territory, Kabardino-Balkarian Republic*

**Aim.** To find out peculiarities of somathometric characteristics, in early adolescence living in the Krasnodar territory and Kabardino-Balkarian Republic (KBR).

**Material and Methods.** Data of body height, weight, arterial blood pressure and pulse in 140 children (70 girls and 70 boys) at the age of  $13.2 \pm 1.6$  years living in Kabardino-Balkarian Republic and also 137 children (70 boys and 67 girls) at the age of  $13.4 \pm 0.1$  years living in the Krasnodar territory are collected and subjected to the statistical analysis. The due number of cardia contraction, body surface, level of the stress were started by the formula developed by Yu. R. Sheykh-Zade. Statistical material was processed by method of variation statistics within the StatSoft Statistica 10.0 program.

**Results and Discussion.** The carried-out statistical analysis has proved that in the thirteen-year old boys living in KBR in comparison with inhabitants of various districts the Krasnodar territory lower anthropometric parameters were revealed: body weight (respectively,  $47.63 \pm 1.75$  and  $52.56 \pm 1.02$  kg), body surface (respectively,  $14279.54 \pm 176.54$  and  $15109.95 \pm 181.67$  cm<sup>2</sup>), index of body weight (respectively,  $19.12 \pm 0.21$  and  $20.43 \pm 0.30$  c.u.). In the thirteen-year old girls living in KBR in comparison with inhabitants of the Krasnodar territory lower physiological parameters were revealed: appropriate heart rate (respectively,  $68.31 \pm 0.54$  and  $70.78 \pm 0.39$  min<sup>-1</sup>), stress resistance index (respectively,  $1.14 \pm 0.23$  and  $1.28 \pm 0.05$  c.u.).

**Conclusions.** Gender differences of anthropometric and physiological parameters in early adolescence were stated comparing the regions (the Krasnodar territory and KBR).

#### ULTRASONIC METHOD OF INVESTIGATION OF THE LOWER ALVEOLAR ARTERIES

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**Background.** The lower alveolar arteries are located in the canal of the jaw and are difficult

to access, variable, and often located with facial ones in one area, which are larger in caliber and can «hinder» the search for lower alveolar arteries.

**Aim.** Therefore, the purpose of our study was the development of the method of ultrasound examination of these arteries and the study of their blood circulation parameters in the norm.

**Results and Discussion.** We performed ultrasonic triplex scanning of the lower alveolar arteries of 20 healthy people using the «Vivid E9» device of the company «GE Health Care», the blood flow parameters were determined. To interpret the parameters, we compared them with the parameters of the facial arteries. In the study of the facial arteries the following results were obtained: PS —  $55.7 \pm 0.9$  cm/sec, ED —  $10.15 \pm 0.3$  cm/sec, TAMX —  $52.0 \pm 1.1$  cm/s, PI —  $1.32 \pm 0.06$ , RI —  $0.77 \pm 0.03$ , PS/ED —  $2.30 \pm 0.1$ , HR —  $35.36 \pm 1.9$  bpm.

The parameters of the lower alveolar arteries: PS blood flow  $57.96 \pm 0.7$  cm/s; ED  $5.47 \pm 0.1$  cm/s; TAMX  $17.22 \pm 0.5$  cm/s; PI  $3.05 \pm 0.1$ ; RI  $0.91 \pm 0.05$ ; PS/ED  $10.60 \pm 0.2$ ; HR  $69.48 \pm 0.4$  bpm.

Comparing the parameters, the peak systolic velocity, the pulsation index, and the resistance of the lower alveolar arteries were not significantly different from the indices of the facial arteries. The final diastolic blood flow velocity was 2 times lower in the lower alveolar arteries, the mean maximum speed was 2.5 times greater in the facial arteries, the systolic-diastolic ratio was 4 times higher in the lower alveolar arteries, the resistance index was 2 times greater in the lower alveolar arteries.

**Conclusions.** Thus, we developed a technique for studying the lower alveolar vessels, blood flow indicators were obtained in them, which can be taken as average normal ones.

#### COMPOSITION OF THE ANTERIOR WALL OF THE EXTERNAL ANAL SPHINCTER IN FEMALE: SUPPORTING SYSTEM BY TWO MUSCLE SLINGS

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**Key words:** external anal sphincter muscle, superficial transverse perineal muscle, puborectalis muscle, bulbospongiosus muscle, anal canal

**Background.** The external anal sphincter (EAS) is generally recognized as the oval tube of the striated muscle, and it is well known that EAS is partly adjoined by the superficial transverse perineal muscle (STP) anteriorly and the puborectalis (PR) poste-

riorly. However, it is still unclear the arrangements of the muscle bundles of EAS.

**Aim.** The aim of this study is to clarify the precise morphological structure of EAS especially the anterior region.

**Material and Methods.** We used 19 pelvic halves from 11 female cadavers (average 81.3 years old). The muscles of the pelvic floor were dissected from the inferior aspect. Then, the perineal muscles and organs were removed from the coxal bone en bloc to dissect from the inner surfaces.

**Results and Discussion.** The bulbospongiosus (BS) attached to the anterolateral surfaces of lower part of EAS. The anterior wall of EAS was composed of three muscle bundles, and they were arranged in parallel in order from the top: 1) anterior bundle of PR as the upper bundle; 2) STP and 3) the proper circular muscle. The STP ran on the superomedial surface of BS to run between PR and the proper circular muscle. The anterior bundle of PR and STP were connected with the same muscle bundle on the contralateral sides. The posterior bundles of PR formed a muscle sling on the posterior part of the anal canal.

**Conclusions.** The anterior region of the anal canal is supported by the two muscle slings by the anterior bundles of PR and STP.

#### PERIODS OF BRAIN GROWTH IN POSTNATAL ONTOGENESIS

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**Key words:** brain, post-natal ontogenesis, morphogenesis, adulthood

**Aim.** Aim of the investigation: to determine vital brain size in different periods of post-natal ontogenesis and to reveal the main stages of brain morphogenesis.

**Material and Methods.** The examining of the patients was carried out in 23 groups from 1 to 25 years of age. Archival MR tomograms of the patients without signs of organic lesions of the brain were verified.

**Results and Discussion.** The enlargement of the longitudinal size of the brains occurs within 3 periods with different intensity in each. In males the following stages are marked: 1<sup>st</sup> stage (1–8 years of age), 2<sup>nd</sup> stage (9–14 years of age), 3<sup>rd</sup> stage (15–20 years of age). In females these stages have proved to be different: 1<sup>st</sup> stage (1–6 years of age), 2<sup>nd</sup> stage (7–14 years of age), 3<sup>rd</sup> stage (15–21 years of age).

After 1<sup>st</sup> year of life the length and the width of the head still enlarges distinctly up to 3–4 years of age. At the age of 5–6 years of age growth