wrist bones through 25 years occurred in Abkhazia. The results of skeletal age of Abkhazian children in 2004 showed significant acceleration of maturation rates in the long-lived population of the Abkhazians. The changes are more evident in the population of the Ochamchiry region as compared to Gudauta region. The differences between longevity population of Chlow with the delayed rates of physical development and the control group from Duripsh, revealed in the 1970 – 1980 study, almost disappeared. Child groups of Central Asia, Khalkha-Mongolians and Tuvinians had the slowest maturation rate of hand skeleton, 0.8 years less than British standards. Altaians and Stolypin's migrants descendants are characterized by the accelerated rate of physical development and high maturation rates of hand skeleton (0.4 years above the standard). In the Middle Asian region the highest maturation rates belong to the Turkmen urban school children from Chardzhev, the lowest maturation rate in this region is seen in the rural Tajik children from Varukh. Growth and maturation rates depend on various environmental factor: climatic, geographic and social. Differences of skeletal maturation in the observed groups may be interpreted in the context of maintaining (Khalkha-Mongols, Tuvinians, and Tajiks) or transformation (Turkmen, Chuvashs, Bashkirs, Altaians, Russians) of the traditional way of life. Social stress, connected with the military actions, caused the acceleration of maturation rates in the longevity group of the Abkhazians. Longevity populations were traditionally characterized by the low rates of growth and development (Abkhazians till 1991, Belorussians).

Key words: *skeletal age, TW-2, maturation rates, human ecology*

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CRANIOFACIAL GROWTH TRENDS IN THE FIRST YEAR OF LIFE BASED ON CT DATA

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The first year of life is a crucial period of craniofacial growth during which most of the main individual and racial features of the facial skeleton are formed. But these important growth changes are still relatively poorly described due to bad preservation of skulls of children of this age in archeological skeletal samples, absence of this age cohort in X-ray longitudinal studies as well as rarity of appropriate CT data. Importantly, quantitative description of growth trends expressed as "normal values" of craniofacial measurements in 3D is lacking. In the present study more than one hundred CT scans of boys and girls of the first year of life were digitized to produce numerical values and growth curves for 30 linear measurements of the mid-face. The children are skeletally normal patients of several hospitals in Moscow, Kaluga and Lipetsk, most of the subjects are ethnically Russians. Slice thickness of the scans ranges from 0.3 to 1.5 mm. 40 landmarks were being placed on 3D surface reconstructions by the first author and their coordinates were further converted into linear distances between the landmarks. In order to construct growth curves the sample was divided into four age groups (newborns, 1-2 months, 3-6 months and 7-11 months) separately for each sex as to account for sexual dimorphism as well. Reliability of our data has been additionally confirmed by very good congruence of our results and those obtained previously on forensic material. The results numerically describe main ontogenetic trends of this period of ontogeny such as slow growth of the upper face in height and length compared to width, very rapid vertical orbital expansion, relatively subtle changes in nasal and mid-facial protrusion. But the study also provides more detailed picture of growth processes and interplay between different mid-facial structures.

Key words: *craniofacial growth, computed tomography, children*

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