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INTERRELATION OF ANTHROPOMETRICS AND MORPHOMETRIC FEATURES OF SOME URINARY ORGANS OF THE ADULTS

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To this date the merge of fundamental and functional approaches to the modern morphological researches is one of the paramount. Identifying consistent patterns in the process of body growth and formation is one of the primary goals of the ontogenesis study. Numerous researches of renal anatomy and topography have been conducted in the past decades. Among other works, individual anatomical inconstancy of renal calices has been substantiated, anatomy of kidney hilum of the adults and during various stages of ontogenesis have been researched and systematically classified, as well as attempts have been made to survey the anatomically-morphometric features of renal pyramid of the human-beings. The above stated researches lacked the systematization of somatic-organometry interrelations as well as interrelations of morphometric features with the human body composition and constitution (somatotype). Researching human body integrity requires equally due consideration of all of its components, without dividing them to more or less important ones. In-depth analysis of the human body composition based on radiographic visualization is given in. Ontogenesis patterns depend on the amount of fat deposition; it has been noted that age-specific changes of the fat component were not adequately investigated, and the pace of age-related changes and sexual dimorphism not clarified.

The objective of this research was to investigate the interrelation of anthropometrics with organometric and morphometric features of urinal system of the adults (using kidney as a case study).

Research materials and methods. Anthropometry and measurements of structural parameters of the human body (bones, muscles and fat components) were conducted by using special methods for defining the corresponding components among the 82 adults (aged 21-60). For organs measurements, sectional morphometry has been conducted using 153 kidneys of the adults. Source data and morphometric data in terms of somatometry, organometry and morphometry of the kidneys have been analyzed according to the generally accepted human age periodization.

Research results and discussions. Morphometric interrelations have been researched at the level of somatometric data analysis and kidney organometric measurements as well as kidney hilum morphometric measurements. Component correlation analysis allowed to quantify the interrelation between somatometric figures and morphometric indices of kidney hilum.

Kidney organometric figures significantly affect linear parameters and surface of kidney hilum that can qualify the degree of individual anatomical structure inconstancy of human kidney hilum on the various stages of postnatal ontogenesis. Additionally, internal correlational interrelations between various morphometric indices of kidney hilum have been researched and correlational grid thereof have been drawn. Taken as a whole, the component analysis of somatometric, kidney organometric and kidney hilum morphometric results has brought to light the system of morphometric interrelations displayed by means of polyfactorial corelogram. The closest interrelation between morphometric data has been determined on the level of anatomical structure – kidney hilum. The second by their efficacy are somatometric data, and the third are kidney organometric.

According to the results of human body compositional analysis (with obtaining corresponding readings in points and kilograms) pairwise correlational coefficients between them and kidney organometric figures have been calculated. Considering the extraordinary clinically-morphological importance of "Anatomical section surface" figure, a correlation coefficient between this figure and compositional analysis figures has been calculated. The above stated witnesses in favor of polycomponent influence of body structure on morphofunctional state of renal parenchyma.

Conclusions.

1. The interrelation between kidney organometric figures and morphometric figures has been quantified.

2. Direct functional correlation between anthropometrics and kidney morphometrics has been substantiated (r_{XY}>0,9), kidney hilum width to coastal angle (r_{XY}=+0,955), as well as string correlational interrelation between Quetelet index and morphometric indicators of kidney hilum (r_{XY}=0,642ч0,843).

3. Interrelation between kidney organometircs and body composition of the adults has been established: kidney height displayed a strong correlational interrelation with muscle bulk expressed in kilograms

(r_{XY}=+0,730), whereas kidney width displayed a moderate correlational interrelation with fat bulk expressed in kilograms (r_{XY}=+0,685), and its thickness– with endomorphic index (r_{XY}=+0,649).

The aspects of further researches of interrelations between antropometrics, somatometrics and morphometrics of urinal system should be directed towards the analysis of consistent patterns of individual anatomical inconstancy from a perspective of the integration approach taking into account human-being's sex and stages of the ontogeny.

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SOMATOTYPE AND ITS INTERDEPENDENCE WITH THE CHARACTERISTICS OF THE ANATOMICAL TOPOGRAPHY OF THE HUMAN'S STOMACH

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Researching viscera spatial organization and the factors determining anatomical structure thereof is the issue of the day in the modern morphology. The clinical relevance of this problem is closely related to the promising integration development of the diagnostic and screening technologies. Despite the great number of publications on the human's stomach anatomy the characteristics of its topography in different age groups are clarified incompletely. Detailed data concerning age-related changes of the stomach internal and external structures is missing in the scientific literature. Thus, applicability of this research is dictated by the significance for medical science in general of the data on the general regularities of the constitution (shape, position) of the human body organs on various stages of their formation.The objective of this research was to investigate comprehensively the occurrence of various stomach shapes and positions among the subjects of different somatotypes.

Research materials and methods.According to the conceptual provisions of the research program the stomach anatomy has been research in linkage to basic somatometric properties. Somatotype, height, bodyweight, Quetelet index, as well as stomach shape and position were defined in the course of this research, following which the angle created between the cardia at the entrance to the stomach, and the esophagus (the angle of His) of the digestive tracts sections of the humans was calculated, with a preliminary

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