

ABSTRACTS

FUNDAMENTAL SCIENCES SECTION

1. VARIANT ANATOMY OF THE CORONARY ARTERIES AND THEIR BRANCHES. MATHEMATICAL CALCULATIONS TYPE BLOOD SUPPLY HEART BASED MORPHOMETRIC PARAMETERS.

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Introduction: Despite the long history of the study of the heart as the central organ of cardio-vascular system, the problems associated with the pathology of coronary arteries (CA) and their branches do not lose their relevance to this day. For many years, the focus was research CA, in various pathologies, the results of which do not provide a complete picture of architectonic features and morphometric characteristics. Equally important is to determine the blood supply of the heart (TBSH). The classical definition of TBSH describes exclusively anatomical features architectonic vessels and does not give the amount of blood flowing through the vessels and the blood supply to the area. "White Spots" to explore issues underscore the urgency of research topics in theoretical and clinical relationships.

Purpose and objectives: To determine the particular variant anatomy and subepicardial vascular branching CA, as well as mathematically calculated based on the type of blood supply to the morphometric data.

Subjects: 58 human heart preparations of both sexes. Methods: Makrodissection, mikrodissection, morphometry, the statistical method, mathematical modeling.

Results: During the study it was found that the left coronary artery (LCA) has three options architectonics: typical - bifurcation, with the division into two branches (anterior descending branch (ADB) and the circumflex branch (CB) - 75%), trifurcation (ADB, CB and left marginal branch (LMB) - 23%), kvadrifurkatsiya (ADB, CB, LMB and branch cone (BC) - 2%).

ADB for the anterior interventricular sulcus also has 3 options architectonics: 1 - reaches apex of the heart - 55 % 2 - disappears between the middle and lower third of the anterior interventricular sulcus - 15 % 3 - goes around the top of the heart and extends into the lower third of the posterior interventricular sulcus - 30 %.

As well, we have developed an algorithm of actions and calculations, allows us to calculate TCS from a mathematical point of view, given the above mentioned morphometric parameters.

Conclusion: The method proposed for the determination of blood supply with the help of mathematical calculations, to determine the TBSH based not only on the anatomical structure as well as on the morphometric parameters of the heart.

Data on structural - functional organization and topographic - anatomical relationships VA obtained using modern research techniques, including computer programs, can be used in anatomy - in particular, in addition to the guidelines, as well as in cardiology and cardiac surgery.

Keywords: variant anatomy, coronary arteries, blood supply heart.

2. EIGHT CHANNEL AUDIOSYSTEM TO CONTROL THE COURSE OF NEUROPHYSIOLOGICAL EXPERIMENT

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Introduction: Visualization of processes that are happening in an organism is implemented by means of rapid progress of electronics and computer systems. Especially valuable is visualization of physiological processes in central nervous system as they are short-term, unexplored and complicated in