

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



## **МАТЕРІАЛИ**

**104-ї підсумкової науково-практичної конференції  
з міжнародною участю  
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connective tissue 0.5-0.55 mm thick, from the middle nasal passage - 0.7-0.75 mm, and from the orbit - 0.8-0.86 mm. At the 5th month of fetal development, the variability of the shape of the right and left maxillary sinuses can be traced and they can be represented by the following types: spherical, oval and spherical-oval. The anteroposterior size of the right maxillary sinus is 2.0-2.2 mm, transverse – 0.18-0.21 mm, vertical – 0.25-0.3 mm, and the size of the left maxillary sinus, respectively, is equal to: 1.8-2.0 mm, 0.16-0.19 mm, 0.23-0.25 mm. It should be noted that the sinus is limited by the rigid skeleton of the upper jaw. At this stage of fetal development in the mucous membrane are clearly detected blood vessels and glands.

**Conclusions.** So, based on the study, it can be concluded that the rudiment of the maxillary sinus appears in the middle of the prenatal period of development. In the fetal period there is a further formation of the maxillary sinuses, there are changes mainly quantitative in nature (increasing the size of the maxillary sinuses), and this process continues in subsequent age periods of ontogenesis.

**Olinyk I.Yu.**

**ON THE NEED TO DEVELOP A TOPOGRAPHIC CLASSIFICATION OF THE MANDIBULAR CANAL IN TOOTHLESS PATIENTS FOR PRACTICAL USE BY DENTISTS**

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**Introduction.** During the clinical analysis of topographic and anatomical features of the mandibular canal, practicing dentists often encounter specific difficulties, even if it is possible to use the CT method in their work. When teeth are lost, the neurovascular roots of the same name also undergo pathological changes with reflection on the central neurovascular bundle, which lies in the mandibular canal, which should provide nutrition and innervation of its toothless segments and is a frequent ethiopathogenic factor of irreversible bone atrophy. Under these conditions, it is pretty challenging to differentiate structural anatomical formations (artery, vein, nerve), and to identify the morphological structure of the neurovascular bundle through its degeneration due to tooth loss and "twisting" due to atrophic processes of bone tissue. At the same time, the use of Hounsfield units (Hu) or conventional international grayness units (CIGU) in the analysis of computer tomograms of the patient's lower jaw, despite the availability of these methods for determining the density of hard, soft, and connective tissues, does not remove the relevance of significant discussions among scientists regarding their evidence.

**The aim of the study** is to determine the need to develop an informative classification of the topography of the human mandibular canal in bone atrophy in toothless patients.

**Material and research methods.** We analyzed 109 digital CT scans of toothless distal segments of atrophied bone tissue of the lower jaw, equally on the left and right sides, in male and female Ukrainians aged 25 to 75. Morphometric and 3D reconstruction analyses are summarised using the standardized software "Vatech original 2020". Digital analysis was performed using statistical nonparametric research methods.

By grouping the average values (M) in the studied areas of the left and right sides, in particular, in the projection of 3.6, 3.7, 4.6, 4.7 tooth, the average (MM) morphometric values were obtained using a simple mathematical calculation, which characterizes the laying of the canal in the toothless distal segments.

**Research results.** The morphological development of the human body, in its various ontogenetic periods, is characterized by individual multifactorial processes, has a specific genetic determination, and is characterized by its individuality. However, the comprehensively analyzed statistical material and the obtained digital 3D reconstruction models provide an understanding of the topography of the mandibular canal in bone atrophy caused by tooth loss and emphasize the differences in the canal laying relative to the buccal, lingual sides or the edge of the base of the lower jaw. Bone tissue acquires "unstable" atrophic manifestations in case of the loss of teeth, particularly the masticatory ones, with their inherent anatomical features of the roots and their

location in the alveolar part. Therefore, morphometric values relative to the upper ridge of the alveolar part should not be taken into account in the study. Attention is drawn to the difference in values between the left and right sides, which can be a practical manifestation due to the difference from tooth loss.

**Conclusion.** A detailed study of the topography of the mandibular canal relative to the buccal, lingual sides or edge of the base of the human mandible using computed tomography and 3D reconstruction models confirmed our need to develop a topographic classification of the mandibular canal for practical use by dentists in toothless patients concerning their age, time of tooth loss and gender.

**Proniaiev D.V.**

## **A COMPREHENSIVE STATISTICAL ANALYSIS OF THE MORPHOMETRIC PARAMETERS OF THE INTERNAL FEMALE REPRODUCTIVE ORGANS**

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**Introduction.** In recent years clinical medicine has been approaching to understand more clearly anatomical-physiological peculiarities of age, and apply appropriate methods of diagnostics and treatment. On the basis of the obtained results the stages of a definite structure formation of the internal female reproductive organs are determined by the dynamics of their development as well as by the mechanisms of occurrence of their structural variants.

**The aim of the study.** Conduct for the first time a comprehensive statistical analysis of the morphometric parameters of the internal female reproductive organs between the objects of the study remote in time (I group – 35 specimens of fetuses deceased during 2017-2019; II group – 105 specimens of fetuses).

**Material and methods.** The study was conducted on 140 samples of dead fetuses (from 4 to 10 months) without any external signs of anatomical deviations or abnormalities. The materials were distributed into four groups with 20 specimen each according to the age of fetuses from 4 to 10 months. In the process of conducting the given research up-to-date adequate anatomical and morphostatistical method were combined with the estimated probability of the results obtained including macro- and micropreparation under the control of MBC-10 microscope, injection of vessels with further preparation, contrast angiography and morphometry.

**Results.** Perinatal changes of the uterine shape are observed, a certain shape of the uterine fundus at every stage of the perinatal development is determined. It is confirmed by the determined reliable reverse correlations of average force between the width of the uterine fundus which parameters range from  $6,0 \pm 0,21$  mm to  $6,4 \pm 1,60$  mm, and parietal-calcaneal length of the fetus.

For the first time, morphometric parameters of the internal female reproductive organs in the group of fetuses, remote in time, were analyzed. The length of the left ovary of present 7-month fetuses ( $9,4 \pm 1,06$  mm) and the length of the right ovary of present 8-month fetuses ( $12,9 \pm 1,23$  mm) were evidenced to be reliably shorter ( $p < 0,05$ ) than that of the archival specimens ( $11,6 \pm 1,87$  mm and  $14,7 \pm 1,44$  mm respectively). The width of the left ovary of present 4-month fetuses ( $0,9 \pm 0,06$  mm) appeared to be reliably shorter ( $p < 0,05$ ) than that of the archival specimens ( $1,2 \pm 0,22$  mm). The thickness of the right ovary of present 7 and 10-month fetuses ( $1,8 \pm 0,25$  mm and  $3,8 \pm 0,36$  mm) appeared to be reliably smaller than that in the appropriate groups of the archival specimens ( $2,3 \pm 0,59$  mm and  $4,6 \pm 0,8$  mm respectively). The thickness of the left ovary of present fetuses at the end of the perinatal period is marked to be reliably smaller ( $p < 0,05$ ) than that of the archival specimens ( $3,3 \pm 0,36$  mm and  $4,2 \pm 0,83$  mm respectively).

**Conclusion.** Stages of formation of the uterine tube and convolution during the perinatal period of human ontogenesis are described. Changes of their position from the ascending to descending one are confirmed to be associated with a relative delay in growth of their morphometric parameters, which is evidenced by the reliable reverse correlations of an average force found ( $r = -0,16$  and  $-0,32$ ) between the length of the uterine tubes and fetal parietal-calcaneal length. Morphometric parameters of the right uterine tube length in the period from 7 to 10 months of the intrauterine development were found to increase from  $14,5 \pm 3,77$  mm to  $22,4 \pm 3,38$  mm, and