

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



## **МАТЕРІАЛИ**

**105-ї підсумкової науково-практичної конференції  
з міжнародною участю  
професорсько-викладацького персоналу  
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ  
присвяченої 80-річчю БДМУ  
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Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

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У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

Загальна редакція: професор Геруш І.В., професорка Грицюк М.І., професор Безрук В.В.

Наукові рецензенти:

професор Братенко М.К.

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професор Юзько О.М.

професорка Годованець О.І.

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structure of the liver is created as a result of the complex correlative relationships of vessels, mesenchyme, and cell bundles of beams.

**Komar T.V.**

## **STRUCTURAL ORGANIZATION OF SUBCUTANEOUS ADIPOSE TISSUE OF THE SHIN IN HUMAN FETUSES**

*Department of Pathological Anatomy*

*Bukovinian State Medical University*

**Introduction.** Every year, the prevalence of metabolic disorders among the population of different ages is increasing. A few decades ago, obesity was a disease of adults, but today, society is facing the problem of the metabolic disorders frequency increasing in children. That is why the interest of researchers in the peculiarities of the formation of adipose tissue has increased. Recent studies have proved the existence of three types of fat cells in humans: white, beige and brown adipocytes.

**The aim of the study.** The aim of the study is to investigate the adipose tissue formation features of the shin in human fetuses of 5-6 months.

**Material and methods.** A microscopic examination of preparations of the upper, middle, and lower thirds of the lower leg of 12 human fetuses with a parietal-coccygeal length (PCL) of 136.0-230.0 mm was carried out. Staining of histological sections with hematoxylin and eosin was used. A histochemical study of the protein with bromophenol blue according to Mikel Calvo' method was used for a better contrast of the protein elements of the structures. The percentage of multilocular cells was calculated on digital copies of optical images in the environment of the computer program ImageJ 1.53t (2022) with subsequent statistical processing of quantitative data using the open software "PAST" (Paleontological statistics, version 4.9 2022).

**Results.** During the microscopic examination of the structures of the shin in human fetuses of 5-6 months, structure features and adipose tissue location were revealed. In 5-month-old human fetuses, the adipose tissue of the upper third of the shin is represented by single cells, which are mainly localized around blood vessels and nerves. It is interesting that in fetuses of this age, the majority of adipocytes was found at the level of the lower third of shin, which formed flat plaque-like clusters of single and multilocular cells, and in most cases they were localized near blood vessels. Such adipocytes clusters are clearly separated from neighboring structures by the loose connective tissue. The percentage of multilocular adipocytes is  $85.3 \pm 0.92\%$  (confidence interval 70.8-94.4% at  $p=0.05$ ). In 6-month-old fetuses, the subcutaneous tissue of the shin has the appearance of elongated flat plaque-like clusters located in one row. The adipose tissue is well vascularized and clearly separated from neighboring structures. Multilocular adipocytes prevail quantitatively,  $93 \pm 0.12\%$  (confidence interval 88.7-96.0%,  $p=0.05$ ).

**Conclusions.** Subcutaneous adipose tissue in human fetuses of 5-6 months is heterogeneous and is represented by single and multilocular cells. During the fetal stage, the number and proportion of fat cells types changes. In 5-month-old human fetuses, adipocytes are located singly, with a predominance in the lower third of the shin; in 6-month-old fetuses, they already form elongated clusters.

**Lavriv L.P.**

## **ANATOMY OF THE PAROTID GLAND**

*Department of Anatomy, Clinical Anatomy and Operative Surgery*

*Bukovinian State Medical University*

**Introduction.** Formation of the organs is a very complicated process which is not definitively studied nowadays. It is very important to study the structure of the organs and systems in association with the basic processes of morphogenesis on the basis of the findings of embryogenesis. The study of the development and forming of the topography of the parotid gland during the prenatal period human ontogenesis is of great importance for integral understanding of the structural – functional organization of the salivary apparatus and the oral cavity on the whole.