

HISTOMORPHOLOGICAL SIGNIFICANCE OF TUMORS EXTERNAL EAR

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ТАШҚИ ҚУЛОҚ ЎСМАЛАРИНИНГ ГИСТОМОРФОЛОГИК АҲАМИЯТИ

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ГИСТОМОРФОЛОГИЧЕСКОЕ ЗНАЧЕНИЕ ОПУХОЛЕЙ НАРУЖНОГО УХА

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Резюме. Мақола ташиқи қулоқ ўсмаларининг морфологик тавсифига бағишланган. Аниқланишича, ташиқи қулоқ ўсмалари таркибида қупчиликни яшии сифатли ўсмалар ташиқил қилган, улар асосан 30 ёшгача бўлган шахсларда қузатилган ва асосан ташиқи эшитув найининг тоғай қисмида жойлашган. Асосий қисми келоид, гломусли ангиома ва липомалардан иборат. Ҳозирги босқичда ўсмалар диагностикасида морфологик услублар муҳим бўлиб, жумладан гистологик текширувлар катта аҳамиятга эга. Қайд этилишича, уларни уз вақтида қўллаш, ташиқи қулоқ яшии сифатли ўсмаларини олдини олишида ёрдам беради.

Калит сузлар: ташиқи қулоқ ўсмалари, келоид, гломусли ангиома, липома, морфологик тавсифи.

Abstract. The article is devoted to the morphological picture of tumors of the outer ear. It was found that benign tumors predominate in the structure of tumors of the outer ear, which are most often found at the age of 30 years and are localized in the cartilaginous part of the external auditory canal and external ear. The main part consisted of keloids, glomus angiomas and lipomas. An important role in the diagnosis of tumors at the present stage is played by morphological methods, in particular, histological examination. It is noted that their timely use will contribute to effective prevention of benign tumors of the external ear.

Key words: tumors of the outer ear, keloid, glomus angioma, lipoma, diagnosis, morphological picture.

Relevance. Currently, the number of patients with ear tumors has been gradually and steadily increasing over the past 15-20 years [2, 12]. When talking about otolaryngological oncology, we are referring exclusively to malignant tumors and forgetting about benign ones, which occur almost ten times more frequently than malignant ones. Many benign tumors behave clinically like malignant ones, demonstrating destructive growth and a tendency towards frequent recurrences [1, 3, 9]. At the same time, over the past 15-20 years, there has been a noticeable increase in the frequency of new formations in this area, leading to complications and even hearing loss [4, 7]. Benign tumors are more common and diverse in terms of localization and histological structure, but apart from a few tumors, they are poorly studied [5, 8, 11]. Even less studied than benign tumors are tumor-like formations, precancerous conditions, and processes resembling skin lesions [6, 10]. Therefore, the timely detection and early removal of tumor-like

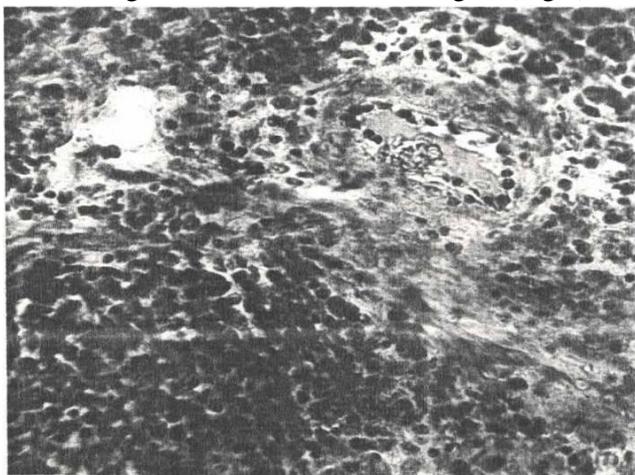
formations and benign tumors of the external ear should not only maintain or restore the functional state of the ear but also be considered as an effective way to combat the possibility of malignant transformation, which determines the relevance of the problem we are studying.

Research aim - to study the morphological structure of tumors of the external ear.

Materials and methods. Biopsies taken from patients undergoing inpatient treatment in the otolaryngological department of the SamMU clinic from 2022 to 2024 were considered as material. In particular, the medical histories of 12 (57%) patients (archival material) were studied, and 9 (43%) patients were examined and treated with our direct involvement. Traditional otolaryngological examination methods (otoscopy, radiography, computed tomography, and histological examination) were mainly used, but microscopy and computed tomography were also used for patients with benign ear tumors.

Results and Discussion. The data obtained indicate that the number of benign tumors has increased, while the number of patients with tumors of the periauricular region has slightly decreased. Keloids - 5 (23.8%), hemangiomas - 4 (19.0%), atheromas - 3 (14.2%), lipomas - 3 (14.2%), osteomas - 3 (14.2%), and the least were cysts - 1 (4.7%), adenomas - 1 (4.7%), and polyps. The majority of the 10 cases (47.6%) were in the age group of 21-30 years, 4 (19%) were in the age group of 1-20 years, and 3 (14%) were over 50 years old. The fewest cases were in patients aged 0-10 years (9.5%) and one case (4.7%) in the age group of 41-50 years. Glomus tumors are usually localized in the tympanic cavity and external auditory canal. Despite not being classified as malignant based on their morphological features, they can metastasize and pose a significant danger to neighboring vital organs. This danger is due to the tumor's invasion and absorption into surrounding tissues as a result of toxic substances released from the tumor's surface.

The hemangioma- is characterized by a predominantly developed vascular component of the tumor, similar to capillary hemangiomas. The glomus component is relatively small, rarely appearing as small clusters, sometimes separated by connective tissue layers, but it is present in close proximity to the endothelium of capillaries and sinuses. This type is the most complex for diagnosis since glomus cells are few, and the overall structure of the neoplasm mimics a vascular tumor. Overall, the study provides valuable insights into the morphological structure of tumors of the external ear, highlighting the diversity of benign tumor types and their potential implications for patient management and treatment strategies (Fig.1).



x 200

Fig. 1. Glomus angioma. Stained using the Van Gieson method

If the tumor continues to develop, the eardrum is destroyed, and the tumor protrudes into the ear canal. Here, the tumor is identified as a red-blue formation. When touched with a probe, the formation easily bleeds.

Keloid - an excessive formation of mature scar tissue at the site of injury, which extends beyond the injury (keloids differ from hypertrophic scars). They are more common in women and can occur after injuries, burns, and tattoos. The predominant location of keloids is the earlobe (often associated with piercing). They appear several weeks or months after the injury has healed. In the case of keloids on the outer ear, small nodular thickenings usually form instead of a smooth scar surface. The nodules penetrate deep into the dermis and protrude above the skin surface as a dense reddish mass covered with unhealed skin with atrophic epithelium. Keloids often recur. Microscopically, nodular fibrous tissue growth with hyalinized thick collagen fibers is observed (Fig.1). At the periphery of the keloid, there is the formation of blood vessels and proliferation of young fibroblasts, which increases the size of the keloid. In the central part of the keloid, the number of fibroblasts is small. At the border with healthy tissue, an infiltrate of lymphoplasmacytic cells is observed. Keloids should be differentiated from dense fibromas and hypertrophic scars.

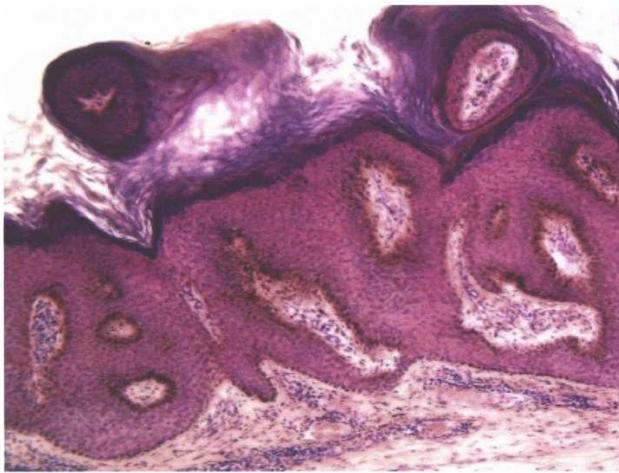


x 200

Fig.2. Keloid. Stained with hematoxylin and eosin

Among the neoplasms of the external ear, epithelial tumors predominate, with squamous cell papilloma being common. Papillomas can be congenital or acquired. Macroscopically, papillomas resemble condylomas of the external auditory canal. The tumor grows slowly over years, localized exclusively in the cartilaginous part of the ear (auricle, cartilaginous part of the external auditory canal).

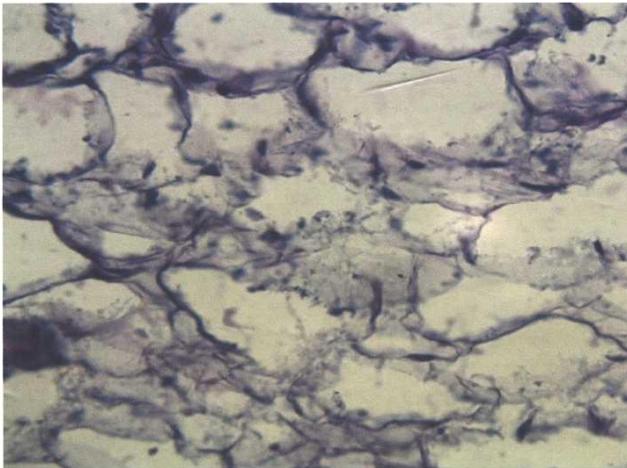
Lipomas are connective tissue tumors that arise in the subcutaneous connective tissue layer and can spread deep between muscle and vascular bundles to the periosteum. The vascular bundle reaches the periosteum, and the tumor is soft in consistency, completely painless, and easily movable. It grows slowly. Lipomas are often located in areas with little adipose tissue. Externally, lipomas appear as yellow, soft nodules, usually lobular in structure, with normal adipose tissue separated by a fibrous layer, and sometimes a thin outer capsule. Superficial (cutaneous) lipomas can be multiple (Fig.4). Deep lipomas consist of normal adipose tissue with multinucleated cells located between single-layered adipose cells.



x 400

Fig.3. Squamous cell papilloma. Stained with hematoxylin-eosin

Adipose cells stain positively for neutral lipids. In addition to "pure" lipomas, there are also lipomas containing various more or less developed mesenchymal components, often positive. They are classified as mesenchymal lipomas or fibrolipomas, spindle cell lipomas, angioliipomas, bone marrow lipomas, angiomyoliipomas, and chondroid lipomas. It has also been established that lipomas grow not due to excessive fat deposition in adipocytes but due to the blockage of lipolytic pathways.



x 400

Fig.4. Lipoma. Stained with hematoxylin and eosin

Conclusion: benign tumors predominate in the structure of external ear tumors. Tumors of the external ear often occur before the age of 30 and are localized in the external auditory canal and cartilaginous part of the external ear. The majority are keloids, hemangiomas, and lipomas. In the diagnosis of tumors at the present stage, morphological methods, especially histological examination, and instrumental methods play an important role. Timely application of these methods will contribute to effective prevention of benign tumors of the external ear.

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Резюме. Статья посвящена морфологической картине опухолей наружного уха. Установлено, что в структуре опухолей наружного уха преобладают доброкачественные опухоли, которые чаще всего встречается в возрасте до 30 лет и локализуются в хрящевом отделе наружного слухового прохода. Основную часть составили келоиды, гломусные ангиомы и липомы. Важную роль в диагностике опухолей на современном этапе играют морфологические методы, в частности гистологическое исследование. Отмечено, что своевременное их применение будет способствовать эффективной профилактики доброкачественных опухолей наружного уха.

Ключевые слова: опухоли наружного уха, келоид, гломусная ангиома, липома, морфологическая картина.