

The Study of Histological Differences in the Tissues of the Auricle in the Age Aspect

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The relevance of the study of histological differences in the tissues of the auricle in the age aspect is due to the need to understand age-related changes in tissues, which is important for the diagnosis and treatment of diseases, as well as for planning surgical interventions and improving aesthetic and functional results.

Keywords: histological differences, auricle tissues, age aspect, tissue aging, auricle, age-related changes

The materials and methods of the study were samples of soft tissues of the auricle of rabbits of different ages and their histological examination.

Results of the study: despite a significant amount of research on the anatomy and histology of the auricle, there are many aspects that are not fully understood regarding changes in the structure of cartilage in different periods of human life. These issues are beginning to be solved thanks to the introduction of modern research methods with a high degree of informativeness. New data on age-related structural features are important not only for morphologists and histologists, but also for a wide range of medical specialists. The analysis of the samples revealed age-related changes in the tissues of the auricle. So, in adult rabbits, chondrocytes are located in deep layers of cartilage, surrounded by an intercellular substance consisting of collagen fibers. These fibers form a dense three-dimensional network that gives cartilage strength and flexibility. At the same time, there is a thickening of the cartilaginous plate, an increase in the zone of mature cartilage, a reduction in the area of young cartilage and the formation of isogroups of 4-5 chondrocytes.

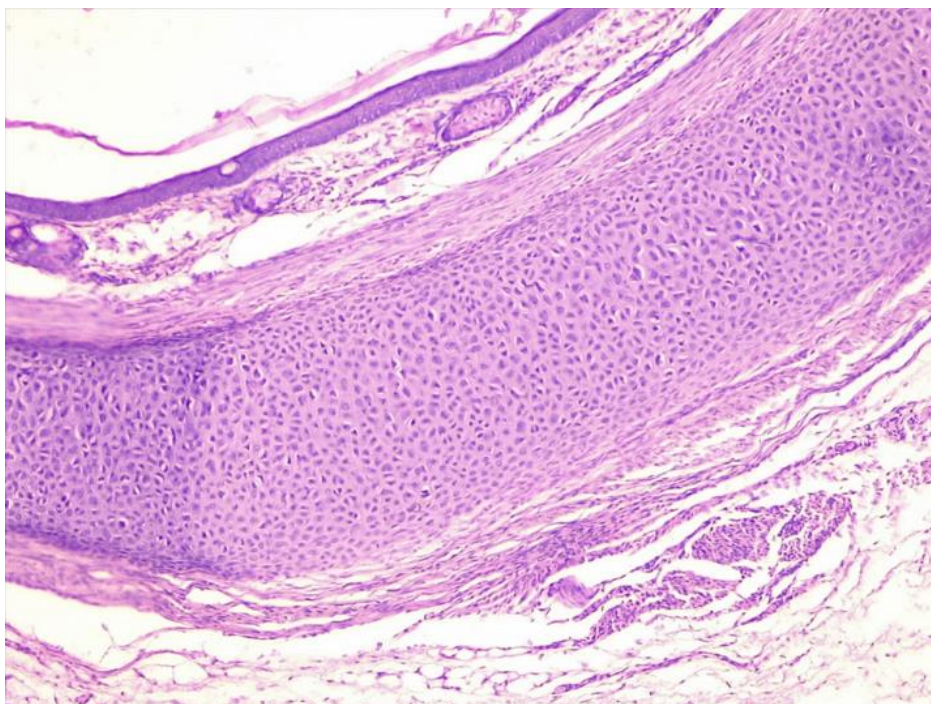


Fig. 1. The tissue of the auricle of an adult rabbit.

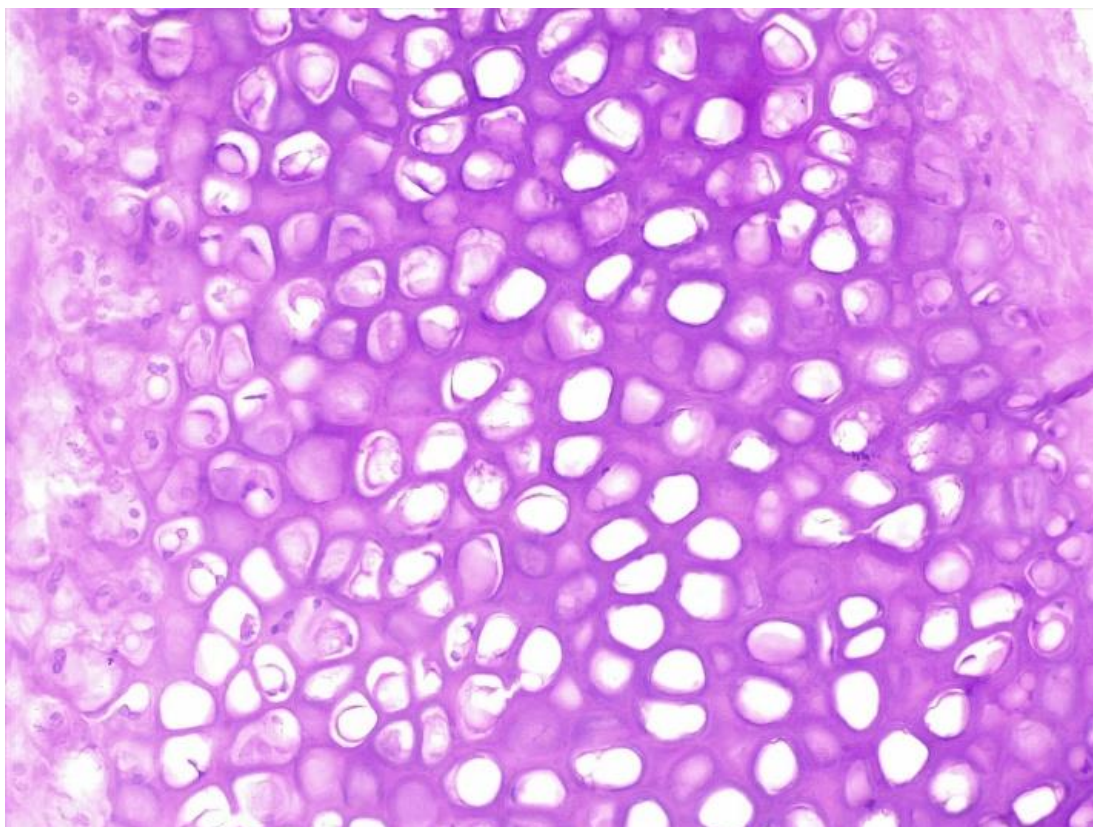


Fig. 2. The tissue of the auricle of a 6-day-old rabbit.

With age, the structure of the cartilage of the auricle undergoes changes, including thickening of the cartilaginous plate, modifications in the area of young cartilage, an increase in the numerical density of chondrocytes, as well as changes in the intercellular substance. These data may be important for understanding both normal and pathological processes occurring in the cartilaginous tissue of the auricle at various stages of human life.

Conclusion: The study of histological differences in the tissues of the auricle in rabbits of different ages showed significant age-related changes in the structure of cartilage. In adult rabbits, there is a thickening of the cartilaginous plate, an increase in the zone of mature cartilage and the formation of groups of chondrocytes, which indicates the development and maturity of cartilage tissue. These data are important for understanding age-related changes in the tissues of the auricle, which can help in the diagnosis and treatment of diseases, as well as in the planning of surgical interventions.

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