

# Anatomo-Histological Structure of Ovaries in Postnatal Ontogenesis of Goats

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## Abstract

The article analyzes the anatomo-histological characteristics of ovaries of goats of different ages. In newborn goats, this allows us to conclude that the organs are divided into the skin and the pulp.

**Keywords:** Postnatal ontogeny, cube, ovary, follicle, goat.

## Introduction

Solving the problems of animal reproduction and knowledge of the development of the reproductive system remains one of the most important problems of biology and is of great theoretical and practical importance.

Analysis of the literature showed that there are many works devoted to the study of the genital organs of female animals [4, 5, 7, 8]. However, the information about the morphology of these organs in goats is limited by the very brief information presented in the literature of the past years [2, 3, 6].

Puberty in goats, according to the literature, occurs at 6-7 months of age [1].

In this regard, we studied the morphological characteristics of the structure of the genital organs of goats at different ages.

**Materials and methods.** The material for the research was the female genital glands of newborn, 6–7-month-old and 5–6-year-old goats in Surkhandarya region.

## Research Results

We found that the ovaries of newborn goats are smooth, flat-oval in shape and white in color. They are located at the level of the middle length of the first coccygeal vertebra, on the side of the initial division of the uterine horns, and are connected with them by the ligaments of the ovary.

The surface epithelium is cuboidal, with a white membrane underneath. In the cortical layer of the ovary of newborn goats, there are many primitive follicles, which are large oocytes surrounded by a single layer of cuboidal follicular cells. At this age, we determined the presence of atresia events. In addition, there are primary follicles represented by oocytes surrounded by stratified cuboidal

epithelium. Vesicular follicles are located in the deep part of the shell. They have a cavity containing eosinophilic content. The oocyte is surrounded by a clear membrane and around it is coronal - radiata cells.

The stomach is made of connective tissue with many blood vessels.

In 7-month-old females of puberty, the ovaries are oval in shape and have a convex surface. They are located in the pelvis at the level of the hip joint. Vesicular follicles protruding to the surface in some follicles are significant.

From the outside, the ovary is covered with a single-layer cuboidal epithelium, under which is the tunica albuginea. Much thicker than newborn goats. It consists of fibrocytes and fibrous elements. The cortex is represented by a stroma consisting of connective tissue and follicles of different levels of maturity.

Under the tunica albuginea, there are primary and primary follicles, and closer to the medulla - secondary follicles, most of which are atretic. The stroma of the bark fills the entire space between the follicles with atretic bodies.

The width of the bark increases significantly compared to the previous age. Tertiary follicles differ in size, some are located close to the surface of the ovary. The granular membrane of such follicles consists of 1-2 layers of cells. They are well expressed. In the bark there is a yellow body of the sex cycle. They are surrounded by connective tissue that enters the corpus luteum. The parenchyma of the corpus luteum is represented by many luteocytes surrounded by a dense capillary network. The medulla contains atretic follicles and a large number of large blood vessels.

In 5-6-year-old goats, the ovaries have a round shape, and mature follicles are visible on the surface in the form of light spots - yellow bodies. Ovaries are located on the sides of the uterine horns, at a distance of 1.1 to 2.3 cm from their lateral edge.

Some differences were noted in the histostructure of the ovaries of adult goats compared to the ovaries of 6-7 months. The surface epithelium consists of a single layer of cuboidal cells. Tunica albuginea thickens significantly. All types of follicles are located in the cortex - from the beginning to preovulation. The number of primary follicles is significantly less, but the number of atretic ones increases. The presence of a corpus luteum covered with a connective tissue capsule, which contained relatively large luteocytes and capillaries, was noted.

There are many large blood vessels in the medulla, and their walls are significantly thickened.

## Conclusions

Thus, the analysis of the results of the histology of the anatomy of the ovaries of goats of different ages allows us to conclude that these organs are divided into the cortex and the pulp in newborn goats. Intensive folliculogenesis is observed before the formation of vesicular follicles, but all follicles undergo atresia.

In goats at 6-7 months of age, the presence of a corpus luteum, a sufficient number of pre-ovulatory follicles and intensive vascularization of the ovaries characterize the onset of puberty.

In mature goats, there are significant changes in the ovaries related to their functional state.

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