

Atresia of Cavity Follicles in Karakul Sheep in Ontogenesis

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Annotation: The article presents the results of studies is given and studied characteristic ovo-follicle and lutiogeny ovarian function seep, and set to seasons and whatever the state of the formation of primordial sexual function, secondary and tertiary follicles with the restoration of reproductive function.

Keywords: Follicles, atresia, ovulation, cytoplasm, interstitial gland, ketosis, ovary, granulosa cells, ontogenesis.

Introduction

Many researchers who have studied human and animal ovaries have described follicular atresia, which occurs primarily in early-onset ovaries. However, the types of tertiary follicular atresia

during ontogenesis have been insufficiently addressed in the literature.

We studied more than two hundred histological preparations prepared from 86 ovaries of Karakul sheep of different ages and followed atresia occurring in the ovarian follicles throughout the life of the sheep.

It has been established that this physiological process in the ovaries of Karakul sheep of different ages occurs differently. Typically, atresia of the ovarian follicles occurs parallel to their formation.

Follicular atresia in the ovaries of fetuses during the last month of gestation and the first three months after birth revealed that most of the desolate follicles had an irregular, rounded shape. Slit-like spaces were visible between the theca and the granular layer. Atresia begins in the inner layer of the theca, where blood vessels are depleted, the cells of the granular layer lose their connection with it, and their nutrition is impaired. Ovarian follicles are more numerous, undergoing atresia; their nuclei are typically invisible or pyknotic. The granular layer, whose cells are loosely arranged, is knobby on the cavity side. In cross-section, it appears as a wavy line. The cells of this layer undergo desquamation, and their derivatives randomly fill the follicle cavity. This type of atresia is obliterative, meaning it occurs primarily in the follicles of the young ovary, forming an interstitial gland with an endocrine function that delays ovulation and stimulates other parts of the reproductive tract. In young Karakul ewes aged 6 months to 3.6 years, atresia of the cystic follicles occurs primarily through cytic degeneration, which causes fluid resorption, causing the follicular cavity to reach significant size. Granulosa cells die, the granular layer thins, and its cells loosen.

The follicle cavity enlarges, and its contents become colorless. In atretic follicles, the cells of the ovarian tubercle are thinner.

Fine-grained inclusions are visible in its cytoplasm. The radial arrangement of follicular cells is disrupted. It should be noted that atretic follicles have a fairly clearly differentiated inner and outer theca layer. The former is composed of loosely arranged cells with oval nuclei, while the latter consists of cells with spindle-shaped and rod-shaped nuclei, nuclei, and collagen fibers and lacks a clear boundary with the surrounding tissue.

In Karakul ewes aged 4.6-5.6 years, atresia of the cystic follicles occurs through both cystic degeneration and luteinization; in the ovaries of older Karakul ewes (6.6-8.6 years), luteinization of the follicles primarily occurs. This type of atresia is characterized by the cystic follicles assuming an irregular, often oval, shape. In some follicles, there is an "influx" of cells from the internal theca, as well as the granular layer, into the follicle cavity from one of its poles. As a result, the boundary between the granular layer and theca is smoothed. The follicle cavity contains two types of cells: the first type of cell is larger, 11-14 microns, with a nucleus occupying almost the entire cell; the second type of cell is approximately half as small. The cells have an irregular, round, oval shape, reminiscent of the lutein cells that form the basis of the cellular layer of the theca lutea. In most cases, the lumen of atretic follicles is almost completely filled with these cells.

Conclusions. Thus, the indicated types of atresia of cystic follicles in the ovaries of Karakul sheep indicate a change in the process of degeneration of follicles during ontogenesis and are characteristic of Karakul sheep breeds of different age groups.

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