UDK: 636.5:619

POSTNATAL MORPHOGENESIS OF REPRODUCTIVE ORGANS AND ADRENAL GLAND OF CHICKEN IN EGG DIRECTION

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Summary: *The article analyzes the scientific literature on the postnatal morphogenesis of the reproductive organs and adrenal glands of laying hens. The conclusion about the purposes of research works is given.*

Key words: *morphogenesis, postnatal, reproductive, adrenal gland, ovary, poultry, functional, morphology, dynamics, oviduct, physiological, protein part.*

Relevance of the topic: Poultry is one of the most efficient, highly profitable and promising branches of animal husbandry, because, unlike other branches, it does not have seasonality and occupies a leading position in satisfying the population with food throughout the year. Poultry is currently the most rapidly developing branch of agriculture and supplies the population with the largest percentage of products that are a source of complete animal protein.

Reproductive organs of female birds, especially birds, undergo significant morphological and functional changes during ontogeny. The interest in studying the structural and functional dynamics of poultry ontogeny, especially chicken reproductive organs and adrenal glands, is growing due to the widespread use of poultry farming using technologies with different feeding and storage conditions [4,5].

In this regard, one of the main tasks of improving selection and breeding work is to study the functional morphology of birds. Knowing the age-related structural and functional characteristics of the reproductive organs and the adrenal gland is useful for developing theoretical generalizations of age-related morphology, increasing productivity, increasing the number of herds, and timely differential diagnosis of diseases of the reproductive organs and the adrenal gland. necessary to solve practical problems.

There are significant gaps in scientific knowledge about the ontogenesis of reproductive organs, there is no modern periodicity of the development of these organs, the important stages of the formation of reproductive organs, as well as the mechanisms of differentiation of the ovaries and fallopian tubes of chickens in the egg direction have not been determined.

According to the morphological characteristics and physiological functions of the fallopian tube, it is divided into five parts: funnel, proteinaceous part, neck, uterus and vagina [1].

Before laying eggs in chickens, the length of the oviduct is 10-20 cm, the diameter is 0.3-0.8 cm. After maturity, its length reaches 40-60 cm, diameter reaches 10 cm [13]. After egg-laying stops, the length of the oviduct decreases, the boundaries between parts are smoothed. In sexually mature birds, the wall of the oviduct is made of mucous, muscular and serous membranes [3].

The mucous layer of the fallopian tube is composed of a covering epithelium and a private plate, and the pores are formed from connective tissue. In the covering epithelium, ciliated and goblet cells are distinguished. The upper part of the mucous layer consists of folds. Submucosa is not developed[6].

The walls of the mouth of the funnel are thin and slightly bulging, forming its lips and connected to the abdominal wall by muscle fibers. Thanks to these ligaments, the funnel moves back and forth, after ovulation it pulls the egg from the yolk sac [9].

The ovary is supplied with blood by the ovarian, iliac and internal arteries. The anterior, middle and posterior ovarian arteries branch from them. They enter the fallopian tube at different levels and branch on its wall, after which they gather in several veins, which exit from different parts of the fallopian tube [10] .

The funnel is the front part of the fallopian tube, opens in the wide bell-shaped ovarian part. Based on the morphofunctional feature, they are divided into a private funnel and its neck. The funnel itself is thin-walled, cone-shaped, and opens towards the ovary. Its diameter is about 8-9 cm. The length of the funnel varies from 4 cm to 14 cm [12].

The protein part is the longest and widest part of the oviduct, and the protein part of the egg is formed in this part. The length of the white part varies from 25 to 40 cm [7, 8].

At the bottom and sides of the folds of the mucous membrane of the white part, a large number of glands with branched ends are opened. They are located very deep, so the private plate of the mucous membrane is almost invisible in chickens in the direction of the egg. The glandular epithelium is single-layered and columnar [11].

The diameter of the neck of the fallopian tube is small and not long, but it is distinguished by the thickness of the ring-shaped muscles. The neck is very similar to the protein part in its appearance and histological structure [2].

Adrenal glands are paired oval, pyramidal or triangular glands, weighing 150-500 mg, on the ventral side of the cranial lobe of the kidneys, connected to the lungs and testicles in male animals, with the left ovary in female animals. covered. The parenchyma of the gland consists of an undifferentiated bark and pith. [14].

In the adrenal glands, bark and pith are distinguished; each of them should be considered as a separate organ of internal secretion. They are formed from different tissues and produce different hormones, but in the process of development they were united into one organ. Adrenal gland of birds is a double parenchymatous organ of zonal type. From the outside, it is covered with a capsule of dense fibrous unformed tissue, the layers of which spread deep into the organ - trabeculae [15, 16].

Adrenal glands are gray-yellow, orange or light red, depending on the content of pith and bark, as well as the ratio of iron and lipochrome. In adult birds, they are dark brown and are located on the ventral surface of the kidneys on both sides of the abdominal aorta.

The right adrenal gland is larger than the left adrenal gland, so in adult chickens, the right adrenal gland weighs 0.10 g, and the left one 0.08 g. is provided by [14, 16].

Conclusion. In the study of the anatomical structure of the reproductive organs and adrenal glands of chickens, the literature data showed that there are significant gaps in scientific knowledge about the ontogenesis of reproductive organs, there is no modern periodicity of the development of these organs, the important stages of the formation of genitals have not been identified. Also, mechanisms for differentiating the ovaries and fallopian tubes of laying hens have not been established. It serves as a basis for the study of the reproductive organs and adrenal glands of chickens in the egg direction in postnatal ontogeny and has great theoretical importance for age-related morphology and reproductive biology and endocrinology.

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