



## Morphometric and Anatomical Structure Thymus Gland in Newborn Children

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**Abstract:** Today, one of the most important problems for researchers is the study of the morphology, physiology and pathology of the immune system, which is primarily associated with the demands of clinical medicine; given that new environmental, social and other factors have begun to significantly influence the human body. The thymus gland is the central organ of immunogenesis and the endocrine gland. The structure (macro-microscopic picture) of the thymus was studied on 31 corpses of newborn children. We used anatomical methods (preparation, measurement) and histological methods (histological stain). In the darker, cortical zone, the cells are located very densely; their number is much greater than in the center of the cerebral zone. In the thickness of the medulla, there are single Gassal's bodies, blood capillaries, and lymph gaps. The cortical layer consists of lymphoid elements, very densely located, with mitoses in individual cells. The thymus gland has a delicate thin connective tissue capsule, consisting mainly of elastic fibers, collagen fibers are revealed among the fibers, collagen fibers and interlobular septa are well developed in newborns.

**Keywords:** thymus gland, newborn, morphology, histology, structure.

**Enter.** The thymus gland is considered the central member of the immune system and is an organ that maintains, strengthens and activates biological defense in the human body [1,2,3,10]. Experts in the field of immunomorphology consider the immune system as a set of organs, tissues and cells aimed at protecting the body from various diseases and producing various biological substances affecting the body [4,5,6,9]. The immune system is a barrier to infections that cause infectious diseases (bacteria, viruses, fungi). Immunnaya system yavlyaetsya prepyatstviem na puti infectious (bacterialnyx, viral, fungal). In certain cases, if there are disturbances in the activity of the immune system, the development of the infectious process will escalate, and it will cause the emergence of various autoimmune diseases. Knowing the age-related structure and functions of the immune system, especially the structure and activity of the salivary gland, is considered one of the most urgent problems during the active development of the immune process in the newborn period, and it is necessary to study it in cases that lead to the weakening or complete disappearance of various immunological processes that occur mainly in the postnatal period. . This information is the level of knowledge required in clinical medicine and practice for the correct organization of preventive and therapeutic measures.

**Purpose of work.** It is a more thorough study of the morphological structures and features of the salivary glands of newborns in Samarkand.

**Research materials and methods.** In order to study the morphological and anatomical structures of the pituitary gland, 31 newborns with various causes of death (mainly head - brain injury, asphyxia, etc.) were studied in the corpse. Examination methods: anatomical methods: dissection, weight, measurement, histological methods: hemotoxylin-eosin and Staining according to Van Gieson.

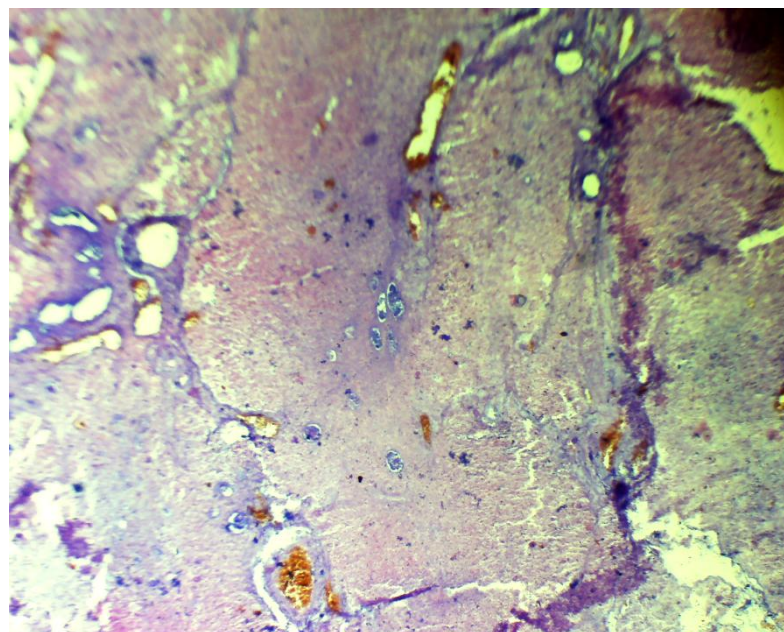


**Test results.** Sebaceous gland is a small pinkish-gray colored organ with a soft consistency and consists of follicles. The longitudinal dimensions of the thyroid gland of a newborn baby are on average 4.5 from 7.5 cm (average 5.8 cm), the left lobe is 4.8 to 5.5 cm (average 5 cm), and the daily dimensions of the right lobe are 1.7 to 2.3 cm (average 2 cm), the left lobe is 1 It produced .6 to 3.4 cm (average 2 cm). The thickness of the right lobe was from 0.8 to 1.4 cm (average 1 cm).

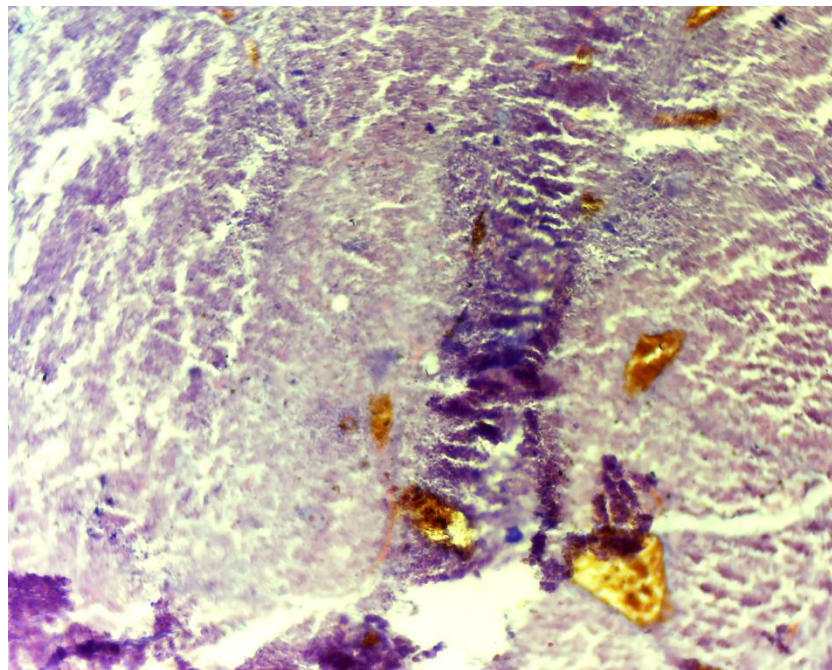
The upper border of the thyroid gland is located in the groove (less) on the handle of the temporal bone or 1.5-2.5 cm above this point. The border of the right lobe is slightly higher than the left lobe. The lower border of the thyroid gland slightly protrudes from the shaft and body of the temporal bone, that is, from 0.5 to 2.0 cm (average 1 cm), from 1 to 1.2 cm (average 1 cm) from the left.

The sebaceous gland is covered by a capsule of thin, delicate connective tissue, which consists mainly of elastic collagen fibers (Fig. 1). The cortex consists of a large number of densely located lymphocytes. Lymphoblasts are found in 18-20% of the peripheral areas of the cortex under the capsule. Lymphoblasts (20%) are also found in the medulla, but less than in the cortex (48-50%). Gassal corpuscles (60-65%) are mainly found in the medulla, and in the center of the lobes (8-10%) Gassal corpuscles are found in large size (Fig. 2). The entanglement of lymphatic vessels is formed in the intercellular barriers of the tissue. Its vascular wall is thickened and sclerosed in 1.5-2% of cases. The quantity-dynamics (number, location, shape) of cells in the cortical layer of the lobe of a newborn baby is shown in Table 1 (Fig. 2, 3). The number of lymphoblasts in the salivary gland of a newborn baby in Samarkand is  $25.5 \pm 3.0$ , small-sized lymphocytes are  $27.8 \pm 0.7$ , the medulla is  $26.6 \pm 0.6$ , and the stereometric classification is  $63.5 \pm 0.4$  organized.

**Summary.** Thus, the member has a granular structure, the dimensions of which vary. Between the pieces there is a thin, delicate connective tissue consisting mainly of elastic fibers. Gassal corpuscles in the tissue are mostly found in the medulla. Lymphoblasts accumulate in various places and form specific fields. The walls of some vessels around the organ are infiltrated with lymphoblasts.



**Figure 1. Cervical floor. Pigment granules and large Hassal corpuscles. Lens 40, eyepiece 20.**



**Figure 2. Cervical floor. large Hassal corpuscles. Lens 40, eyepiece 20.**



**Figure 3. Collagen and reticular fibers. Lens 40, eyepiece 20.**

**Table 1** *The dynamics of the composition of cells determined on the surface of the conditioned area of the cortex of the sebaceous gland*

Cellular composition	Samarkand city.
Lymphoblasts	2 5 , 5 ± 0.5
Medium size lymphocytes	5 3 .5± 0, 7
Small size lymphocytes	29 4 .0± 1, 4
Apoptotic cells	6 7 .5± 1, 3
Mitoses	2 2 , 7 ± 0.5
Macrophages	7, 6 ± 0.3
Gassal corpuscles	6, 2 ± 0.3



Total cell count	47 3 , 4 ± 1, 7
Stereometric classification of the gland (M ± m ) %	
Bark layer	7 3 , 6 ± 0, 4
Cervical floor	2 7 .5± 0.6
Interparticle barriers	2, 8 ± 0.2

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