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CHANGES IN THE LACRIMAL GLAND, ULTRASONOGRAPHIC FEATURES

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The human lacrimal gland combines two functions: exocrine and immune surveillance in orbit. The combination of two important physiological functions explains the high frequency of involvement of this glandular organ in various pathological processes: inflammatory, autoimmune and neoplastic. Clinical symptoms of these diseases at certain stages of development are so similar that it is sometimes not possible to differentiate one process from another on the basis of one clinical picture. Meanwhile, for the diagnosis and determination of adequate tactics of therapeutic measures, the assessment of the state of the lacrimal gland is necessary.

Material & Methods: The study is based on clinical and functional investigation of 120 patients (240 orbits) during 2005-2018 years. The age of participants ranged from 13 to 75 and averaged 45.1 years. Women prevailed in numbers (66%), while men constituted only 34%. Physical, laboratory, and instrumental examinations includes transbronchial lymph node biopsy, MRI and CT.

Results & Discussion: The unchanged lacrimal gland was defined as an elongated moderately-hypo-echogenic structure located in a space limited by ultrasound sections of the upper-outer edge of the orbit and the eyeball, while depending on the shape and size of this space, it occupied a different longitudinal position, transverse and oblique most commonly found longitudinal location of the lacrimal gland. Form of the lacrimal gland on the ultrasound section irregular oval, triangular, pear. Lacrimal gland was separated from the surrounding tissues by a narrow moderate-hyperechogenic capsule. Echographic features of the lacrimal gland in disease and Sjogren's syndrome. Examined were 35 patients, the average age of patients were 49 ± 17 years, and among the examined patients prevailed females (87.2%) in all patients of this group the diagnosis was verified on the basis of the results of clinical and laboratory instrumenter survey. 12 patients were visualized precise contours of the lacrimal glands; in 23 cases, the lacrimal glands did not have clear contours; in 2 patients, the capsule surrounding the lacrimal glands was well traced in most patients of this group (23 people), a significant decrease in the size of the lacrimal glands, an increase in their density, a decrease in the vasculogenesis index. Echographic features of the lacrimal gland in acute dacryoadenitis. 15 people with clinical manifestations of acute unilateral dacryoadenitis. Lacrimal gland was visualized in the form of moderately hypoechogenic, often with indistinct contours and inhomogeneous echostructure. In all cases there was an increase in the size of the lacrimal gland with normal values of the average longitudinal size was 2.08 ± 0.22 cm, the transverse dimension of 1.07 ± 0.17 cm figure, ultrasonic density ranged from 58 to 69 UE, and averaged 60 ± 11.1 .

Conclusion: Modern diagnostic ultrasound technologies also provide the opportunity for intravital assessment of the lacrimal gland and evaluation of possible changes in its condition. They allow measuring dimensions of the gland, determining its shape and structure, as well as topographic relationship with other orbital structures. Different systemic diseases, can affect the gland both directly and indirectly, causing structural changes in its tissue or a functional reaction, characteristic for organs of immune surveillance.

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