MORPHOLOGICAL CHANGES OF THE THYMUS IN THE FETAL STAGE AND ITS CLINICAL SIGNIFICANCE


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During the fifth week of gestation, appears the third branchial pouch that will migrate originating the thymus and the superior parathyroid glands. Thymus growth and development will continue after birth until puberty, and always occupying a cervico-thoracic position. In this study we show shape and size variations of fetal thymus, and the correlation between its macroscopic aspect and clinical variations. We studied 80 fetuses between 14 and 21 weeks of gestation. The thymus was dissected respecting the relationship with the main anatomical structures. We demonstrated that the gland length suddenly grows between the week 17th and 18th. After that length growth continues progressively. Thymus breadth evidently grows between the weeks 15th and 16th. General growth of the gland, between the weeks 14th and 21st was 74.96% in length and 119.5% in breadth. Considering these data it appears as evident that the increasing in length and breadth of the thymus is related to the anatomical development of the cardio-vascular and respiratory systems respectively, in the same stages, confirming the relationship between the thymus capsule, pleura and pericardium, that determines the morphology of this growth by “traction”. We emphasize the study of thymus measures in pregnant controls as a predictive parameter for the detection of pathologies associated to the immunological system and other related organs or systems.

Key words: embryology, pleura, pericardium, thymic capsule, fetal morphology

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