

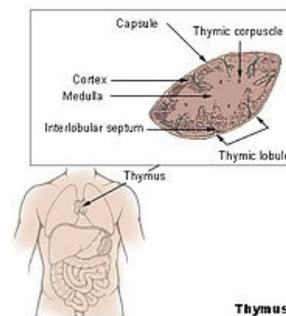
Non-neoplastic disease of the thymus

Hyperplasia

Hyperplasia is characterized by the formation of **lymphatic follicles**, which are absent in normal thymic tissue. Hyperplasia is typical in patients with autoimmune disease (myasthenia gravis, lupus erythematosus, and rheumatoid arthritis).

Dysgenesis

Dysgenesis, or impaired development of the thymus, is part of primary immunodeficiency states. Especially in DiGeorge and Nezelof syndromes, when cellular immunity is impaired. In these diseases, the thymus is replaced **by a fibrous cord**, or **is completely absent**.



Regressive changes

- **Physiological involution (lipomatous atrophy) begins during puberty, when lipocytes** begin to accumulate in the thymus. During involution, there is a reduction in the number of **thymocytes** and at the same time **calcification of Hassl's bodies**. The thymus does not completely disappear during adolescence, a residue can be found even during adulthood.
- **Acute thymic involution** is a disease caused by adrenal steroids. It arises when the organism is stressed, for example during malignant tumors, infections, starvation and cachexia. There is **fragmentation and clustering of thymocytes**, as well as **proliferation of macrophages and cystic transformation of Hassal's bodies**.

Links

Related articles

- Thymus
- Thymus (preparation)

References

- POVÝŠIL, Ctibor – ŠTEINER, Ivo. *Speciální patologie*. 2. edition. Galén, 2007. 430 pp. ISBN 978-807262-494-2.
- FRCPATH, Vinay Kumar MBBS MD – MBBS, Abul K. Abbas – MD, Jon Aster. *Robbins Basic Pathology*. 9. edition. Elsevier Books, 2012. ISBN 1437717810.