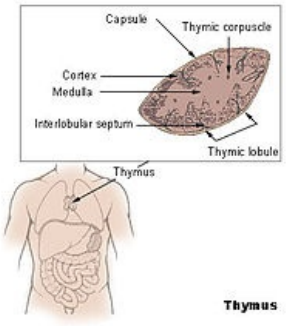
Non-cancerous diseases of the thymus

Hyperplasia



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

Dysgenesis

Dysgenesis, or impaired thymic development, is part of the primary immunodeficiency states. Especially in syndromes like DiGeorge syndrome and Nezelof, 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 the involution, the number of **thymocytes** decreases and at the same time the **calcification** of **Hassl's bodies** occurs. The thymus does not completely disappear during adolescence, the residue can be also found during adulthood.
- **Acute involution of the thymus** is a disease caused by adrenal steroids. It is caused by stress in the body, such as malignant tumours, infections, starvation and cachexia. **Thymocyte fragmentation and aggregation** occurs, as well as **macrophage proliferation** and **cystic transformation of Hassal's bodies**.

Links

Related articles

- Thymus
- Thymus (preparát)

References

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- FRCPATH, Vinay Kumar MBBS MD – MBBS, Abul K. Abbas – MD, Jon Aster, et al. *Robbins Basic Pathology.* 9. edition. Saunders : Elsevier Books, 2012. ISBN 1437717810.