

DISORDER OF CALCIUM

HYPERCALCAEMIA

Calcification

Calcium accumulation in tissues other than bone tissue and teeth is called "heterotopic calcification", "pathological calcification" or only "calcification" (calcification).

In calcification, calcium does not accumulate in the form of single ions;

Similar to the hydroxyapatite in the bones, it can be found in the form of calcium carbonate, calcium phosphate and other ions in the form of salts (such as iron).

For this reason, "calcium mineralization" or "mineralization" can be used instead of calcification.

Dystrophic Calcification

Unlike metastatic calcification, which is characterized by the subsequent depletion of calcium salts in degenerated and necrotic tissues, there is no change in calcium metabolism.

It is localized and limited only by the wounded area, which is damaged.

No show any changes in the blood, parathyroid gland, parathyroid gland, or kidneys.

Etiyoloji

1. Granulomatous (productive, proliferative) inflammation

Tuberculosis, Actinomycosis etc.

2. Worn-out parasitic granulomas

Granulomas that eventually result in the death of larvae of the trichin, trematodes, or other parasites in the tissues are calcified over time.

3. Various disorders leading to cell degeneration, degeneration and necrosis in organism

- Excluded, chronic, old thrombosis,
- atheromatous changes in the arterioles (arteriosclerosis),
- Scar tissues
- Degenerations (such as Zenker degeneration in the heart in white muscle disease and foot-and-mouth disease)

Dystrophic Calcification

Pathological Findings

Why it has come to the genus is accompanied by its morphological changes. It's the calcium deposits.

Metastatic Calcification

It's about the disorder of calcium metabolism.

Although localized in a particular tissue, it usually occurs systemically in various tissues.

There is no pre-existing disorder of the calcium deposits.

The main disturbance is attributed to the factors (parathormone, vitamin D, kidneys, phosphorus, etc.) that play a role in calcium metabolism.

After calcium accumulation in the tissues, related disorders arise.

Etiology of Hypercalcemia

1. Hyperparathyroidism,
2. D hypervitaminosis,
3. Bone diseases: primary, secondary bone neoplasms, decreased age-related Ca metabolism, Ca²⁺ mobilization from bones (such as osteomalacia),
4. Excessive Ca intake or excessive Ca administration for treatment.

Calcinosis circumscripta

Mainly seen in dogs, especially German wolf puppy and brahisefalik races. Occasionally, it is also found in cats.

Etiology is unknown.

Macroscopic findings

Often they occur as hard or soft nodules developing subcutaneously in the heel, base and fingers.

The skin on the nodules may become ulcerated.

On its cross-section, it is widely calcified surrounded by connective tissue mass is available.

Microscopic Findings

Around the central calcified material, a structure surrounded by histiocytes and giant cells and the outermost connective tissue is encountered.

In some cases epithelioid cells are overexpressed.

Also calcium phosphate deposits in apocrine gland epithelium and lumen are encountered.

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