

## MINERAL DYSTROPHIES. DISORDERS OF CALCIUM METABOLISM

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Relevance. Disorders of calcium metabolism lead to the development of mineral dystrophies in various tissues.

This process results in structural changes and calcification in bones, muscles, and soft tissues. Consequently, cellular function becomes impaired, and pathological alterations occur in tissues.

Mineral dystrophies have important diagnostic value, as their detection allows for early diagnosis of diseases and prevention of complications.

Studying processes associated with calcium deposition helps to better understand cellular changes.

Therefore, investigating calcium metabolism disorders and their consequences is scientifically and clinically significant.

Objective of the study.

The aim of this study is to investigate calcium metabolism disorders in the development of mineral dystrophies and to identify tissue changes.

During the research, calcium accumulation and structural alterations in bone, muscle, and soft tissues were analyzed. In addition, disturbances in cellular function and pathological processes in tissues were examined.

Materials and methods.

The study was based on scientific literature, textbooks, and microscopic analyses. Calcium deposition and structural changes in tissues were examined using both macroscopic and microscopic methods.

Cellular and tissue structures were studied with the help of histological staining techniques.

Furthermore, processes associated with calcium metabolism disorders and pathological tissue changes were analyzed.

The research included theoretical analysis, comparison, and integration of various scientific data. Calcification in tissues and changes in cellular function were studied in detail.

The results were systematically analyzed, allowing the identification of mechanisms underlying the development of mineral dystrophies.

These methods provided a scientific basis for understanding pathological processes caused by disturbances in calcium metabolism.

Conclusion.

Mineral dystrophies are characterized by the accumulation of calcium salts in tissues as a result of impaired calcium metabolism.

This process leads to various structural changes in cells and tissues, ultimately disrupting normal organ function. Early detection of such processes plays a crucial role in timely diagnosis of diseases and in reducing their complications.