

The articular cartilage in familial chondrocalcinosis. Light and electron microscopic study

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Cartilage has been studied from 12 patients with different degrees of chondrocalcinosis.

Degenerative changes and patches of decreased safranin O staining were present even in areas without calcium deposits. Alkaline phosphatase was identified only in the basal layer and was slightly decreased. By electron microscopy mildly involved cartilage showed small diameter isolated crystals lying in a finely granular material. Similar granular material, staining dark with ruthenium red, was present around the crystalline deposits of the knee menisci. No intracellular crystals were seen and no relationship between crystals and the matrix vesicles was observed. This study suggests that the initial deposition of calcium pyrophosphate crystals is in the interstitium of the cartilage. The smallest deposits lie in a yet unidentified dense material that may be glycosaminoglycan. Copyright

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