

Ochronotic arthropathy with calcium pyrophosphate crystal deposition a light and electron microscopic study

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Synovial fluid from a patient with ochronotic arthropathy and calcification of the capsule of the right knee contained calcium pyrophosphate crystals and dark debris. Microscopic examination of an unstained fresh preparation showed these dark fragments to have a brown or golden brown color typical of ochronotic pigment. By electron microscopy there were identifiable cartilage fragments in the synovial fluid. These contained clumps of dense material deposited on the surface of collagen fibers. Similar brown staining and electron dense material probably representing ochronotic pigment was seen in synovial membrane and synovial fluid cells. Some of the intracellular calcium pyrophosphate crystals were in close relation with probable pigment. Copyright © 1973 American College of Rheumatology