

Large Subarticular Cysts (Geodes): An Unusual Finding

Daniel Schapira MD ,D.Sc

Department of Rheumatology, Rambam Medical Center and Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel

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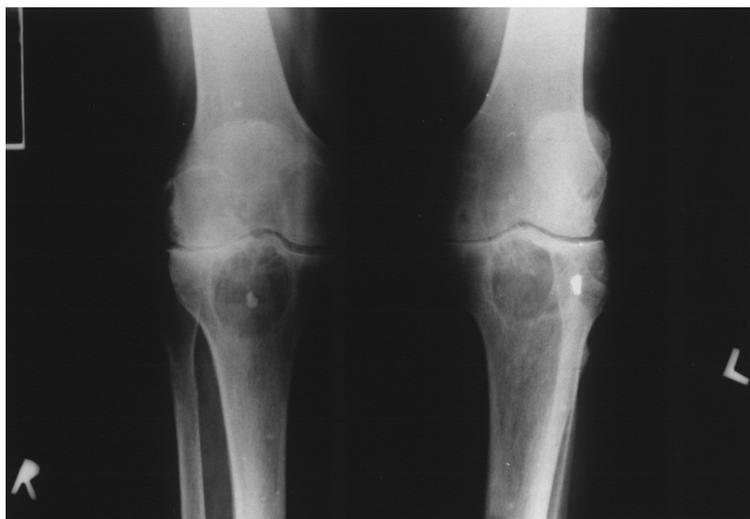


Figure A

We see here radiographs of the knees of a 75-year-old patient with longstanding, severe, seropositive, erosive and nodular rheumatoid arthritis. The physical examination disclosed symmetric polyarthritis that included bilateral effusion and chronic synovitis of the knee joints. The anteroposterior view shows huge subchondral cysts (geodes) of the tibial bones [Figure A], while the lateral projection shows smaller geodes within the femoral bone.

Subchondral geodes may be found in a multitude of conditions: inflammatory joint diseases such as rheumatoid arthritis, psoriatic arthropathy, crystal deposition disease, osteoarthritis, osteonecrosis, osteochondritis dissecans, hyperparathyroidism, hemophilic arthropathy, sarcoidosis, Paget's disease of bone, and in hemodialyzed patients with β_2 amyloidosis deposition [1].

Giant geodes, however, are rare. They seem to be caused by an increase in intraarticular pressure that forces synovial fluid or granulation tissue into the bone.

The many cases in which continuity between the joint space and the cyst has been demonstrated support the theory that cyst formation represents one mechanism of joint decompression. In rheumatoid arthritis the geodes occur mostly in the knees and the coxofemoral joints. Tumoral, infectious or vascular conditions are the main differential diagnosis [2]. Geodes are usually asymptomatic, however in some cases they may be associated with bone pain, joint destruction and/or pathological fractures. In severe and symptomatic cases surgical treatment (synovectomy, cyst enucleation or total joint arthroplasty) is indicated.



Figure B

References

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2. Resnick D, Niwayama G. Rheumatoid arthritis and the seronegative spondyloarthropathies: radiographic and pathologic concepts. In: Resnick D, Niwayama G, eds. *Diagnosis of Bone and Joint Disorders*. Vol. 2, second edition. Philadelphia: W.B. Saunders Co., 1988: 895-953.

Correspondence: Dr. D. Schapira, Dept of Rheumatology, Rambam Medical Center, Haifa 31096, Israel. Tel: (972-4) 854 2268/629; Fax: (972-4) 854 2988; email: d_schapira@rambam.health.gov.il