Tenosynovial Cysts and Pseudogout

To the Editor:

Notable for mimicry of other arthritides (1), pseudogout (PsG) may resemble rheumatoid arthritis (RA) in the hands and wrists, sharing features such as narrowed radiocarpal and metacarpophalangeal joints (2), synovial swelling at the wrists (3-5), interosseous atrophy (6), and ulnar deviation (6). Tenosynovial swelling at the wrist, however, was not observed in one reported series of 18 patients with PsG and synovitis of the wrist (4). A patient has been reported with PsG and a "small ganglion" on the dorsum of the wrist (1). Except for popliteal (Baker's) synovial cysts (7), cystic

lesions have not been mentioned in clinical descriptions of PsG. This is a report of protuberant, dorsal tenosynovial cystic swelling at the wrists in two men with PsG (Table 1).

In both patients, calcium pyrophosphate dihydrate (CPPD) crystals were present in repeated aspirates, whether from the knees or dorsal wrist tenosynovium (Table 2).

Marked by chronic pain in the wrists and knees as well as dorsal tenosynovial swelling at both wrists, the disease in patient A had been diagnosed as RA and treated with corticosteroids for 20 years. When encountered currently, both patients had type I non-inflammatory synovial fluids, good mucin clots, negative

Table 1. Clinical Data of Two Patients with Pseudogout and Tenosynovial Cysts

Patient	Year of Birth	Onset of Arthritis		Dorani Wrist	Chondro- calcinosis	Rheumatoid
		Knees	Wrists	Dorsal WristCysts	by X-ray	Factor
A	1894	1946	1952	Bilateral	K nees, wrists	Neg
В	1892	1950	1971	Left	Wrists, symphysis pubis	Neg

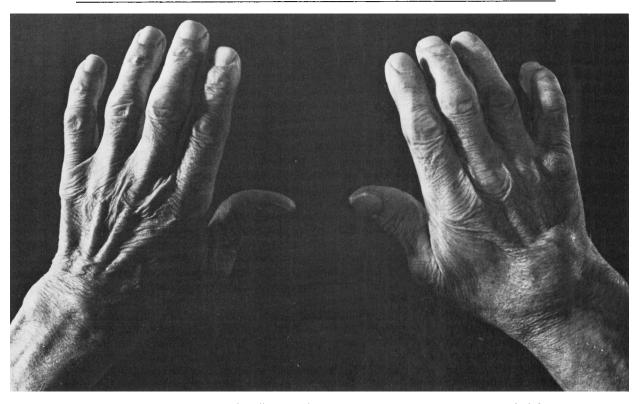


Fig. 1. Patient A. Dorsal tenosynovial swelling at right wrist and similar, less marked swelling at the left wrist.

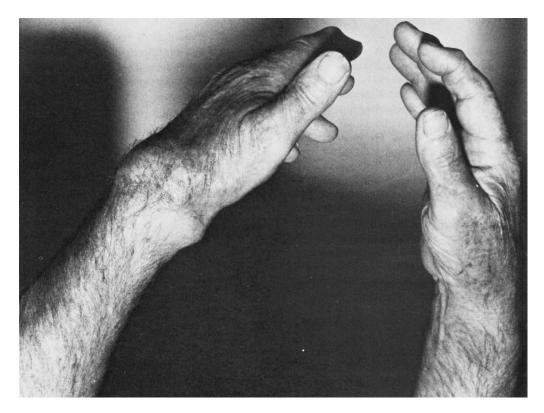


Fig. 2. Patient B. Dorsal tenosynovial swelling at the left wrist, as well as ventral hypertrophic bony swelling at radius.

Table 2. Synovial Fluid Data

Patient	Site	Viscosity	Mucin Clot	WBC†	Positively Birefringent Rhomboid Crystals
A	Knee	Normal	Good	900	Yes*
	Tenosynovial cyst, wrist	Normal		1,300	Yes
В	Knee	Normal	Good	626	Yes
	Tenosynovial cyst, wrist	Normal			Yes

^{*} X-ray diffraction, kindly performed by Frank B. Johnson, M.D., Armed Forces Institute of Pathology, identified crystals as calcium pyrophosphate dihydrate.

tests for the rheumatoid factor, and absence of "rheumatoid" juxtaarticular erosions by x-ray, features that reduce the likelihood of concurrent RA.

Although CPPD deposits are found chiefly within joints, crystals have also been identified in tendons and ligaments well away from articular synovium and cartilage (8,9). The crystals aspirated from the dorsal tenosynovium near the wrists in the present pa-

tients, however, could merely have come from intraarticular cartilage. Arthrograms often demonstrate communications between the intraarticular compartment of the wrist and adjacent dorsal tenosynovium (10).

ARMIN E. GOOD, M.D. Rheumatology Section Department of Medicine

ROBERT RAPP, M.D.

Department of Radiology

Ann Arbor Veterans Administration Hospital

University of Michigan Medical Center

Ann Arbor, Michigan 48105

REFERENCES

- McCarty DJ: Diagnostic mimicry in arthritis: patterns in joint involvement associated with calcium pyrophosphate dihydrate crystal deposits. Bull Rheum Dis 25:804-809, 1974-1975
- 2. Martel W, Champion CK, Thompson GR, et al: A roentgenologically distinctive arthropathy in some patients

[†] WBC = leukocyte count/mm³.

- with the pseudogout syndrome. Am J Roentgen 109:587-605, 1970
- 3. Moskowitz RW, Harris BK, Schwartz A, et al: Chronic synovitis as a manifestation of calcium crystal deposition disease. Arthritis Rheum 14:109-116, 1971
- 4. Utsinger PD, Resnick D, Zweifler NJ: Wrist arthropathy in calcium pyrophosphate dihydrate deposition disease. Arthritis Rheum 18:485-491, 1975
- Menkes CJ, Simon F, Delrieu F, et al: Destructive arthropathy in chondrocalcinosis articularis. Arthritis Rheum 19:329-348, 1976
- Reginato AJ, Valenzuela F, Martinez V: Polyarticular and familial chondrocalcinosis. Arthritis Rheum 13:197-213, 1970
- 7. McCarty DJ Jr, Kohn NN, Faires JS: The significance of calcium phosphate crystals in the synovial fluid of arthritis patients. The "pseudogout syndrome." I. Clinical aspects. Ann Intern Med 56:711-737, 1962
- McCarty DJ: Calcium pyrophosphate dihydrate crystal deposition disease 1975. Arthritis Rheum 19:275–285, 1976
- Gerster JC, Baud CA, Lagier R, et al: Tendon calcifications in chondrocalcinosis: a clinical, radiologic, histologic, and crystallographic study. Arthritis Rheum 20:717-722, 1977
- 10. Trentham DE, Hamm RL, Masi AT: Wrist arthrography: review and comparison of normals, rheumatoid arthritis and gout patients. Sem Arthritis Rheum 5:105-120, 1975

Radiographic Arthritis Survey

To the Editor:

Radiography plays a critical role in the evaluation of the patient with an arthritic disorder; it may provide the clue to the diagnosis in the patient with early disease or be of value in one with advanced disease in whom the change in the radiographs is an index of the efficacy of drug treatment. It is necessary to radiograph multiple joints since the *distribution* of findings is often the key to the correct differential diagnosis. The radiographic search for abnormality is, however, often haphazard and expensive; nonessential radiographs expose the patient to excessive radiation.

We have formulated a "Radiographic Arthritic Survey" (1) that provides abundant diagnostic information yet takes into account the need to control the rising cost of medical care and to reduce radiation exposure. The survey consists of: 1) posteroanterior and oblique views of both hands, including the wrists; 2) anteroposterior and lateral views of both feet, including the ankles; 3) posteroanterior standing views of both knees; 4) voluntary lateral flexion view of the cervical spine; 5) posteroanterior view of the pelvis; 6) posteroanterior and lateral views of the chest.

Radiography can proceed rapidly and efficiently once the patient is in the x-ray room; the time taken to complete the examination is considerably less than if the patient returned on six different occasions. We therefore charge a fee that is 60% of the sum of the expected individual charges.

We suggest that the Radiographic Arthritis Survey is a practical, efficient, and economical tool which, in our experience of over 3,000 cases, has provided sufficient information to allow formulation of a differential diagnosis and assessment of disease severity.

JERROLD MINK, M.D.

Assistant Professor in Residence, UCLA
Head, Section of Bone Radiology
RICHARD GOLD, M.D.

Associate Professor of Radiology, UCLA
Chief, Diagnostic Radiology
RODNEY BLUESTONE, M.B., M.R.C.P.
Chief, Rheumatology Section
Wadsworth VA Hospital
Professor of Medicine
UCLA School of Medicine

REFERENCE

1. Mink JH, Gold RH, Bluestone R: Radiographic Arthritis Survey. Submitted for publication

Reversal of Azotemia in Lupus Nephritis by Megadose Corticosteroid Therapy

To the Editor:

Extreme deterioration of renal function in systemic lupus erythematosus is almost always irreversible and leads to death or maintenance hemodialysis. The following case is reported because megadoses of dexamethasone (260 mg daily) were associated with dramatic restoration of renal function and resolution of parenchymal lung disease when death seemed imminent. This therapeutic approach was suggested by Cathcart and coworkers (1); in one of their patients renal deterioration was almost as severe as that in the patient reported here.

Since 1968 a 39-year-old Chinese woman had had five psychotic episodes, keratoconjunctivitis sicca, excessive hair loss, recurrent oral ulcers, polyarthralgia and positive reactions to tests for antinuclear antibodies and rheumatoid factor. In November 1975 acute hemolytic anemia appeared, together with proteinuria and microhematuria. By January 1976 serum creatinine had risen to 1.8 mg/100 ml and creatinine clearance was 40 ml/minute; LF cell preparations were now positive. Renal biopsy in April 1976 showed diffuse pro-