

Acute gouty arthritis without urate crystals identified on initial examination of synovial fluid

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Nine patients who ultimately proved to have acute gouty arthritis did not have urate crystals demonstrable by compensated polarized light in the first joint fluid aspirated despite leukocyte counts as high as 100,000/mm³. In 6 cases crystals were found in fluid from the same joint 5 hours to 1 day later. Factors that might explain the difficulty in identifying crystals include aspiration of the wrong site because diffuse swelling obscured predominant involvement of a bursa or adjacent small joint, loculation within a joint, crystal dissolution leaving only tiny birefringent chunks, and inexpert or insufficient search. Some cases remain without any tentative explanation. The possibility of acute gouty arthritis should not be excluded if crystals are not demonstrable in the first search of joint fluid. Repeated searches for typical monosodium urate crystals may be required for diagnosis. Copyright © 1975 American College of Rheumatology