

Septic arthritis with negative bacteriological findings in adult native joints: a retrospective study of 74 cases.

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Abstract

BACKGROUND:

No microorganism is identified in 7-35% of cases of septic arthritis. The diagnosis is, therefore, only presumptive. We reviewed our cases of septic arthritis in adult native joints to determine the frequency of negative cultures, disease characteristics and the frequency of misdiagnosis of septic arthritis.

METHODS:

This retrospective study included all patients admitted to our department from 1979-2005 with arthritis, diagnosed and treated as septic.

RESULTS:

No microorganism was isolated from synovial fluid or blood samples from 74 out of 398 (19%) patients with presumed septic arthritis. Patients without microorganisms were younger (54 vs 62 years), less likely to have risk factors for septic arthritis (31% vs 41%) and had lower mortality (0 vs 5%) than patients with positive cultures. Long-term outcome was known for 48 patients. A retrospective analysis of all data and long-term outcome concluded that septic arthritis was probable in 18 patients and improbable in 13. Ten of the latter developed rheumatic disease after a mean time of 6 months: rheumatoid arthritis (n=3), spondyloarthropathies (n=3), unclassified rheumatic disease (n=2), Wegener granulomatosis (n=1) and cytosteatonecrosis (n=1). Fever and signs of inflammation were more frequent and synovial fluid cell counts were higher in patients with improbable septic arthritis. Conversely, radiological signs were more common in patients with probable septic arthritis.

CONCLUSION:

At least 14% of patients diagnosed with septic arthritis with negative bacteriological results subsequently develop rheumatic disease. This pseudoseptic arthritis is indistinguishable from true septic arthritis. When no microorganism is identified, the diagnosis remains presumptive and follow-up is necessary to screen for other diseases, especially rheumatic diseases.

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