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SEPTIC ARTHRITIS

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Updated 2002 by George Ho, Jr., MD & Andra Showalter, MD
Updated 2003 by Nathalie Roy, MD and Carol-Anne Yeadon, MD

1. Keefer CS, Parker F,Jr., Myers WK: Histologic changes in the knee joint in various infections. Arch Pathol 1934; 18:199-215.

A classic monograph on the pathology of acute bacterial arthritis.

2. Williams RJIII, Smith RL, Schurman DJ: Septic arthritis. Staphylococcal induction of chondrocyte proteolytic activity. Arthritis Rheum 1990;33:533.

This study demonstrates the role of cartilage-enzyme interactions in the rapid joint destruction associated with bacterial arthritis.

3. Goldenberg DL, Reed JI: Bacterial arthritis. N Eng J Med 1985;312:764-71.

Review of the major clinical, microbiologic and therapeutic issues of bacterial arthritis.

4. Kaandorp, CJ, Dinant HJ, vandeLaar MA, Moens HJ, Prins AP, Dijkmans BA:

Incidence and sources of native and prosthetic joint infection: A community based prospective survey. Ann Rheumatic Dis 1997;56:470-75.

An epidemiologic survey from the Netherlands.

5. Goldenberg DL: Septic arthritis. Lancet 1998;351:197-202.

A recent review of nongonococcal and gonococcal arthritis.

6. Baker DG, Schumacher HR,Jr.: Acute monoarthritis [review]. N Eng J Med 1993;329:1013-20.

An excellent review of the differential diagnosis of acute monoarthritis, including infectious arthritis.

7. Kaandorp CJ, Krijnen P, Moens HJ, Habbema JD, van Schaardenburg D: The outcome of bacterial arthritis: a prospective community-based study. Arthritis Rheum 1997;40:884-92.

Looks at the important outcome variables of septic arthritis.

8. O'Brien JP, Goldenberg DL, Rice PA: Disseminated gonococcal infection: a prospective analysis of 49 patients and a review of pathophysiology and immune mechanisms. Medicine 1983;62:395-406.

Discusses the clinical, bacteriologic and immune aspects of gonococcal arthritis.

9. Liebling MR, Arkfeld DG, Michelini GA, et at: Identification of Neisseria gonorrhoeae in synovial fluid using the polymerase chain reaction. Arthritis Rheum 1994;37:702-709.

The initial research demonstrating organisms when routine cultures were negative.

10. Cucurull ER, Espinoza LR: Gonococcal arthritis. Rheum Dis Clin N Am 1998;24:305-22.

Complete review of gonococcal arthritis including the more recent antibiotic recommendations.

11. Saraux A, Taelman H, Blanche P, et al: HIV infection as a risk factor for septic arthritis. Br J Rheumatol 1997;36:337-37.

HIV infection has become an important risk factor for septic arthritis.

12. Zimmermann III B, Mikolich DJ, Ho Jr,G.: Septic bursitis. Semin Arthritis Rheum 1995;24:422-43 1.

This is a very detailed review of septic bursitis, including treatment principles.

13. Donatto KC: Orthopedic management of septic arthritis. Rheum Dis Clin N Am 1998;24:275-86.

Excellent review of surgical therapy.

14. Tunney MM, Patrick S, Gorman SP, et al: Improved detection of infection in hip replacements. A currently underestimated problem. J Bone Joint Surg [Br] 1998;80:568-72.

Looks at ways to improve the diagnosis of septic arthritis in prosthetic hips.

Septic Arthritis – 2002 Additions:

1. Wysenbeek AJ, Volchek J, Amit M, et all: Treatment of Staphylococcal Septic Arthritis in Rabbits by Systemic Antibiotics and Intra-articular Corticosteroids. Ann Rheum Dis 57:687-690, 1998.

An animal model that evaluates systemic antibiotics +/- intra-articular steroids. There was improvement in histopathologic and histochemical evaluation of involved joints treated with steroids.

2. Lossos IS, Yossipowitch O, Kandel L, et al: Septic Arthritis of the Glenohumeral Joint: A Report of 11 Cases and Review of the Literature. Medicine 77:177-187, 1998.

A review of glenohumeral joint infections.

3. Van der Heijden IM, Wilbrink B, Vije AEM, et all: Detection of Bacterial DNA in Serial Synovial Samples Obtained During Antibiotic Treatment From Patients with Septic Arthritis. Arthritis Rheum 4:2198-2203, 1999.

In septic arthritis, bacterial DNA from joint fluid can be detected by PCR. This may be useful in future diagnosis/treatment and may be faster than culture.

Septic Arthritis – 2003 Additions:

1. Dubost JJ, Soubrier M, et al. No changes in the distribution of organisms responsible for septic arthritis over a 20-year period. Ann Rheum Dis 61: 267-269, 2002.

An epidemiologic survey on the distribution of pathogens causing septic arthritis over a 20 year period (from 1979 to 1998).

2. Shirtliff ME, Mader JT, et al. Acute septic arthritis. Clin Microbiol Rev 15 (4): 527-44, 2002 Oct.

Excellent and very thorough review of gonococcal and non-gonococcal arthritis, including pathogenesis, risk factors, diagnosis and treatment.

3. Gupta MN, Sturrock RD, and Field M. A prospective 2-year study of 75 patients with adult-onset septic arthritis. Rheumatology 40: 24-30, 2001.

Interesting for its prospective identification of risk factors and predictors of poor prognosis in septic arthritis.

4. Ho, G., Bacterial arthritis. Current Opinion in Rheumatology 13: 310-314, 2001.

Looks at septic arthritis complicating RA and prosthetic joints, septic arthritis of the lumbar facet joints, septic arthritis caused by foreign objects, and septic arthritis in the immunosuppressed host.

5. Donatto, KC. Orthopedic management of pyogenic arthritis. Comp Ther 25 (8/9/10): 411-417, 1999.

Good "to the point" review of surgical therapy of septic arthritis.