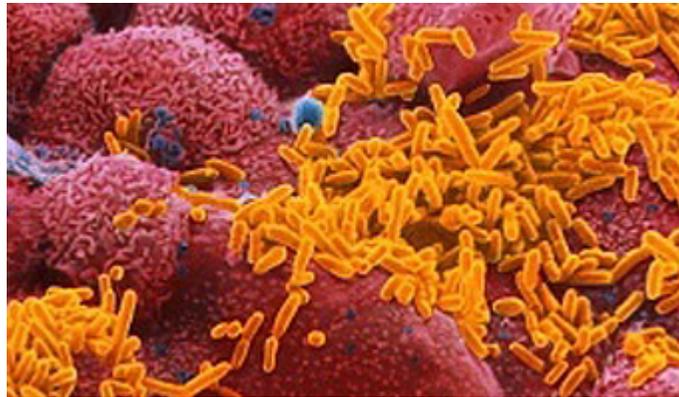




Is your injured worker at risk for repeat surgical debridement to treat septic arthritis?

By Michael H. Weier • April 15, 2015

A decade retrospective case-study review of patients who underwent debridement for acute septic arthritis addressed the risk factors and prevalence of failure of a single surgical debridement for acute septic arthritis.¹ The researchers reported patients with a history of inflammatory arthropathy,² previous infection or history of diabetes mellitus had a higher risk of failure on



Staphylococcus Aureus

single debridement of an infected joint. The study also revealed thirty-eight percent of all patients required two or more debridements.

Septic or infectious arthritis is inflammation of a joint caused by bacterial infection.³ Bacteria can enter the body through an open

wound or surgical site near the joint, or it can enter the joint through the blood stream from another part of the body. The body's immune response to joint infection may be so severe and overwhelming as to cause sepsis — life-threatening inflammation that affects multiple organs of the body.

Lubrication of the joint to ease movement occurs through surrounding synovial fluid. Though typically sterile, an infected joint will have bacteria in the synovial fluid. Bacteria that commonly cause septic arthritis are haemophilus influenzae, staphylococcus aureus and streptococcus. The joints most likely to become infected are the knee, hip, shoulder, elbow and wrist.

Diagnosis of septic arthritis is made upon clinical findings of acute onset of joint pain, inability to bear weight or move the affected joint, fever and joint effusion.⁴ Confirmation of diagnosis may occur through joint aspiration of the synovial fluid and laboratory analysis of cultures to reveal bacterial growth should confirm the diagnosis.

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Is your injured worker at risk for repeat surgical debridement (continued)

Dead or infected tissue provides a medium for bacterial growth and ischemia (low oxygen). Removal of the affected tissue should increase oxygen to otherwise healthy tissue, improve healing and reduce the likelihood of sepsis. Patients at higher risk, however, may require a second or third debridement for adequate healing.

The recent study should provide a cautionary reminder for workers' compensation administrators to monitor medical histories of injured workers diagnosed with septic or infectious arthritis. Injured workers with histories of rheumatoid arthritis, degenerative vertebral joint disease, previous infection or diabetes mellitus are more likely to require a second or possibly a third debridement procedure. Claim reserves may require adjustment to address additional treatment costs and extended periods of disability for the higher-risk injured worker suffering from septic arthritis. ■

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- ¹ Joshua G. Hunter, et al., Risk Factors for Failure of a Single Surgical Debridement in Adults with Acute Septic Arthritis, *J Bone Joint Surg Am*, 2015; 97:558 (Apr 1, 2015)
 - ² Examples include rheumatoid arthritis (chronic autoimmune inflammatory disease of the small joints of the hands and feet) and spondyloarthritis (degenerative joint disease of the vertebral column of the spine)
 - ³ William C. Shiel, Jr., MD, FACP, FACR, Septic Arthritis (Infectious Arthritis), *MedicineNet.com*, <http://www.medicinenet.com/script/main/art.asp?articlekey=6882>, April 6, 2015; John L. Bruschi, MD, FACP, Septic Arthritis, *MedScape*, <http://emedicine.medscape.com/article/236299-overview>, Mar 28, 2014; Steven Schmitt, MD, Infectious Arthritis (Septic Arthritis), *Merck Manuals*, http://www.merckmanuals.com/home/bone_joint_and_muscle_disorders/bone_and_joint_infections/infectious_arthritis.html, May 2013; Diseases and Conditions: Septic Arthritis, *Mayo Clinic*, <http://www.mayoclinic.org/diseases-conditions/bone-and-joint-infections/basics/definition/con-20029096>, Jan 17, 2013
 - ⁴ Fluid in the tissue surrounding the joint

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