Orthopaedic Infection: Diagnosis And Treatment

Robert P Gruninger Ramon B Gustilo Dean T Tsukayama

Orthopedic hardware infections are much feared and costly complications that can occur when these devices are implemented both in traumatic cases as well as in joint replacement surgery. Because these infections can lead to great morbidity, it is important to understand their pathophysiology as well as the principles behind their diagnosis and initial treatment. Plastic surgeons are frequently consulted as part of a multidisciplinary team to provide stable soft tissue coverage of the associated defects that result from these infections. Orthopedic implants have revolutionized treatment of bone fractures and noninfectious joint arthritis. Today, the risk for orthopedic device-related infection (ODRI) is <1%–2%. However, the absolute number of patients with infection continuously increases as the number of patients requiring such implants grows. Treatment of ODRIIs most frequently includes long-term antimicrobial treatment and removal of the implant. Recent evidence from observational trials and 1 randomized clinical trial indicate that a subset of patients can be successfully treated with retention of the implant.
Orthopedic hardware infections are much feared and costly complications that can occur when these devices are implemented both in traumatic cases as well as in joint replacement surgery. Because these infections can lead to great morbidity, it is important to understand their pathophysiology as well as the principles behind their diagnosis and initial treatment. A review of the existing literature was performed to identify the potential causes of these infections, to provide established diagnostic criteria guidelines, and to explain how these prosthetic infections are managed from an orthopedic surgery perspective prior to consulting the plastic surgery team. KEYWORDS: diagnosis; management; orthopedic prosthetic infections. PMID: 27152098. Orthopaedic Infection: Diagnosis and Treatment. Philadelphia: WB Saunders; 1989. 66-74. Yoo J, Lee S, Han C, Chang J. The modified static spacers using antibiotic-impregnated cement rod in two-stage revision for infected total knee arthroplasty. Clin Orthop Surg. 2011 Sep. 3 (3):245-8.Â Treatment of staphylococcal prosthetic joint infections with debridement, prosthesis retention and oral rifampicin and fusidic acid. Clin Microbiol Infect. 2007 Jun. 13 (6):586-91. [Medline]. Drew RH, Perfect JR, Srinath L, Kurkimiilis E, Dowzicky M, Talbot GH. Treatment of methicillin-resistant staphylococcus aureus infections with quinupristin-dalfopristin in patients intolerant of or failing prior therapy.