Managing Hardware-Related Infections: Evidence Based Strategies

Outline

Michael D. McKee
Professor, Division of Orthopaedic Surgery
Department of Surgery, St. Michael’s Hospital and the University of Toronto, Toronto, Canada

Factors determining treatment:
1. Host (age, diabetes, immunodeficiency, co-morbidities)
2. Bacteria (resistant: i.e. MRSA, VRE, polymicrobial)
   (low-grade, i.e. susceptible: p. acnes, staph. epi,)
3. Acuity (acute < 3 weeks, subacute 3-6 weeks, chronic > 6 weeks)
4. Bone (i.e. union, delayed union, nonunion)
5. Magnitude of intervention required (i.e. simple HR, complex reconstruction)

Treatment Options
1. Simple hardware removal, irrigation and debridement
2. Hardware removal and revision fixation (ex-fix, ORIF)
3. Local antibiotics (pellets, powder, PMMA, antibiotic nail)

References
Preoperative diagnosis of infection in patients with nonunions.
Stucken C, Olszewski DC, Creevy WR, Murakami AM, Tornetta P.

Maintenance of Hardware After Early Postoperative Infection Following Fracture Internal Fixation
Marschall Berkes, MD, William T. Obremskey, MD, MPH, Brian Scannell, MD, J. Kent Ellington, MD, Robert A. Hymes, MD, Michael Bosse, MD,