

Oral Abstracts

Key Session 6

[O55] PREOPERATIVE ASSESSMENT AND PLANNING IN THE MANAGEMENT OF POST-TRAUMATIC OSTEOMYELITIS

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Management of post-traumatic osteomyelitis is challenging. A detailed plan needs to be developed based on careful assessment of multiple factors involving the affected bone, the existing implants, the condition of the soft tissue envelope, the neurovascular and functional status of the extremity, the pathogen and clinical course of the infection, and the patient.

Bone considerations include anatomic location of osteomyelitis, status of fracture healing, extent of bone involvement, presence and size of bone defects, bone quality and presence of deformity. If implants are in place the treating surgeon needs to decide whether to remove them or not. Implants may be retained in acute post-traumatic infections, if they are providing stability, and be removed following fracture healing.

A well-vascularized soft tissue envelope promotes control of infection and fracture healing. Soft tissue abscesses need to be drained and previous incisions to be taken into account when planning the surgical approach. The need for soft tissue coverage should be evaluated. Neurovascular compromise of the extremity and adjacent joint stiffness may limit the potential for satisfactory function after management of post-traumatic osteomyelitis. The specific pathogen(s) and the previous clinical course of infection are important factors. Information about previous culture results and sensitivities, previous surgical management and antibiotic therapy, and the patient's response should be obtained.

Patient comorbidities affect the risk of recurrence of infection as well as the surgical risk and should be carefully assessed based on the Cierny-Mader classification. The patient should be medically optimized before surgery. Patient functional needs, expectations, compliance, and willingness to undergo potentially prolonged treatment should be evaluated.

Management of post-traumatic osteomyelitis starts with detailed preoperative assessment and planning. This is a multi-disciplinary process that requires the close collaboration of orthopaedic surgeons and infectious disease specialists.