Heterotopic Ossification in Orthopaedic Trauma

Definition
The formation of lamellar bone through enchondral ossification within extra-skeletal soft tissues

Clinical settings
In periarticular tissues after fracture or fracture/dislocation (hip, elbow)
In blast injuries, particularly those resulting in amputation
Following burns or electrocution
Following head or spinal cord trauma

Prophylaxis – Acetabular fracture surgery
Incidence – Is prophylaxis necessary and when?
Surgical approach
Other risk factors

Options
Diphosphonates
NSAIDs and radiation
Pros and cons
comparisons
Combination

Treatment: Surgical excision
Timing
Risks
Post-op regimen

New Understandings of the source and mechanism
Osteogenic precursors in sensory peripheral nerves
Neuroinflammatory Response
Substance P, CGRP
Migration through the blood nerve barrier
Transient brown adipose tissue role, MMP9
Mast cells
Tissue resident macrophages
Bone matrix proteins

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