7:30 – 8:25 am

SESSION 1:
ARTICULAR COMPLICATIONS OF ANKLE FRACTURES

Moderators:

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Pilon fractures are often complex injuries with devastating outcomes for patients. Management is technically demanding with variable injury patterns. Outcomes and complications may be unpredictable and are associated with the initial fracture characteristics, soft tissue injury, certain patient factors, and surgeon experience (technical factors).

High energy, severely comminuted fractures with significant cartilage damage have worse outcomes. Residual joint incongruity is associated with the development of early post traumatic osteoarthritis; however an anatomic reduction does not guarantee a good outcome due to initial articular injury. The degree of soft tissue injury affects the timing of surgery and the potential for post operative wound complications. Outcomes are also closely associated with patient factors including socioeconomic factors, tobacco use, secondary gain and osteoporosis. Because these fractures are technically challenging better outcomes can also be tied to the surgeon’s experience with these fractures.

Common complications include malunion, nonunion, wound complications, and post traumatic osteoarthritis. High rates of wound complications were found in several series following immediate definitive internal fixation using open techniques. The use of staged protocols employing an initial spanning external fixation with or without fibular ORIF has significantly decreased wound healing complications and rates of deep infection. Many of these complex fractures require multiple incisions to address the comminuted fragments. The minimal skin bridge between incisions is unknown. Incisions <7cm may be safely employed however these incisions must be carefully planned. Malunions are most closely associated initial fracture comminution and the use of spanning external fixation. The presence of posterior comminution markedly increases the risk of malunion and addressing these fragment through a posterior incision is essential. Undoubtedly, surgeon experience also plays a large role in the ability to achieve an anatomic reduction. Nonunions are rare and most often occur in the metaphyseal/diaphyseal junction following spanning external fixation. Post-traumatic osteoarthritis is common regardless of treatment however may be minimized by an accurate reduction and the avoidance of wound complications.

References:


