ORIF versus acute arthroplasty for fractures around the knee:

What does evidence-based medicine tell us?

Andrew H. Schmidt, M.D.

Hennepin County Medical Center

Goals of Fracture Care

• Biomechanically sound reduction
• Stable fixation
• Early rehabilitation of limb/patient

Unique Problems of the Elder

• Osteopenic bone
• Increased incidence pre-existing OA
• Poor balance and strength
  – Inability to protect wt-bearing
• Lack of social support
  – More likely to be dependent on others for cares

As in the hip, shoulder, and elbow, some of these fractures in these patients might be best treated with immediate arthroplasty. The purpose of this presentation is to apply an EBM-approach to understanding the role of ORIF and TKA in the elderly patient with a fracture
about the knee.

Current ORIF Options
• Locking Plate
• Retrograde IM Nails

Current Arthroplasty Options
• Primary TKA with stems
• Hinged TKA
• Distal Femoral/ Proximal Tibial replacement
• Mega-prosthesis
• Tumor-prosthesis

Conclusions
• The available literature consists almost entirely of Level IV (non-controlled) studies, with small numbers of patients and short follow-up. Thus, comparisons between different approaches can only be inferred.
• From a true EBM perspective, one can only conclude that both ORIF and TKA are feasible options for the elderly patient with a peri-articular knee fracture.
• Outcomes and complications seem similar.
• Although data do not exist for this scenario, arthroplasty is more expensive in the short-term. Is this increased cost offset by less need for prolonged rehab services, fewer complications, and/or better outcomes?

• Immediate knee arthroplasty for a peri-articular fracture does seem to be associated with better outcomes than delayed arthroplasty, with the possible exception of cases that have been treated with IM nailing.

Questions that remain…

• Is Immediate arthroplasty better than either plate fixation or IM nailing?

• If not, which is better for initial management – a nail or a plate?

• Does the use of acute arthroplasty allow accelerated rehab?
  – immediate or more early time-to-WB
  – Less need for sub-acute rehab
  – Greater return to independent living

References: