

Improving Flexion in Knee Replacement - non-surgical aspects

Andy Williams
London



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Stiffness After Knee Replacement

- Infection
- Technical error
- Biological



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Pre-op factors

- 'Pick a winner'
- Pre-op range of flexion- **warn patient**
- The disease- **warn patient**
 - Diabetes
 - Psoriatic arthropathy
- 'Pre-hab' physio? Aust J Physio 2004

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Pre-op factors

- 'Pick a winner'
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 - Psoriatic arthropathy
- 'Pre-hab' physio- *no evidence of benefit*

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Intra-op factors

- Tourniquet
- Surgical technique influences post inflammation
- Haemostasis
 - Nature's glue
 - Tranexamic acid
 - From pt blood autologous Platelet gel and fibrin glue introduced after implantation
 - ↑Hb / flexion 92° cf 79° at 5d and ↓ later stiffness 2% cf 10%

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Early Post-Op Factors

- Avoid the 'angry knee'
- Thromboprophylaxis
 - LMWH- *associated with early stiffness*
 - Warfarin- *associated with stiffness x3 risk of MUA*
- Analgesia
 - Needs to be good – 'multimodal'
 - Cox2

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Early Post-Op Factors


- C.P.M.?
- Physio



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Early Post-Op Factors

- C.P.M.?
 - No benefit, Cochrane review: 20 RCTs and 1335 pts: 'benefits too small to justify the use of CPM routinely post-TKR'
- Physio
 - Must be 'intensive' not 'aggressive'
 - Start on 1st day better than at 2-3d
 - Multidisciplinary rehab in hospital helps (Cochrane 2008)
 - Out patient physio – no help (Mockford 2008)!!



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Early Post-Op Factors

- 'Education' = positive psychology
 - Understanding
 - Pt invests in recovery with commitment

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Treating the Knee With Evolving Stiffness

- Splinting / Braces
 - Bonutti et al, KSSTA 2010: 25 pts <90° flexion; brace 30mins x3/day → av. gain 25° after 7m
- Physio
 - 'intensive' not 'aggressive'
- Injections eg steroids
 - Esp young patients
- Oral steroids?



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