



Controversies in ACL rupture management



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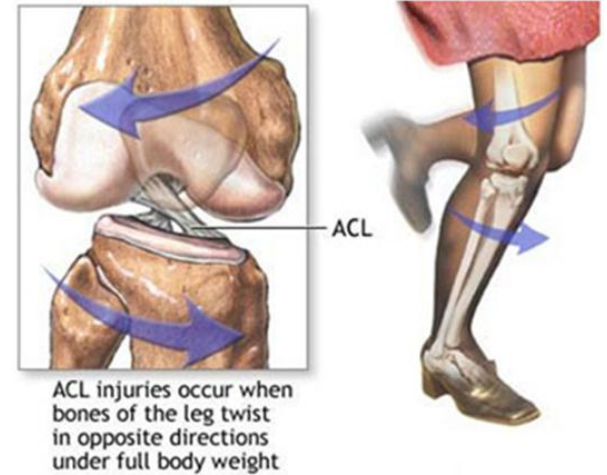
Wolfson College, Oxford

ACL Injury



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- 250,000 pa in US (Griffin et al, 2006)
- > 70% cases non contact mechanism (Hernandez 2006)
- Decreased activity level (Arden, et al, 2014)
- Poor reported Q of L (Spindler, 2008)
 - Irrespective of management strategy (Filbay, 2016)
- Predispose to Osteoarthritis (Øiestad, 2009)
 - 13% isolated ACL ruptures / 48% with associated meniscal injuries will develop knee OA early as 10 yrs after injury



ACL Reconstruction



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- Restores kinematics of the tibiofemoral joint
 - Reduce risk of joint instability
 - Possibility of secondary joint damage (Andernord et al, 2013)
 - Development of osteoarthritis (Oiestad et al, 2009)
- Provides adequate stability to enable return to high level function
 - Pivoting sports (Renstrom, 2013).



Rehabilitation



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- Provide similar outcomes (Kostogiannis et al, 2007, Moksnes et al, 2008, Frobell et al, 2013)
- Enables return high activity (Smith et al, 2010, Weiler et al, 2015)
- No risk of operative complications
 - arthrofibrosis, infection, graft failure, donor site morbidity & pain (kwok et al, 2013)
- Surgical costs



Evidence



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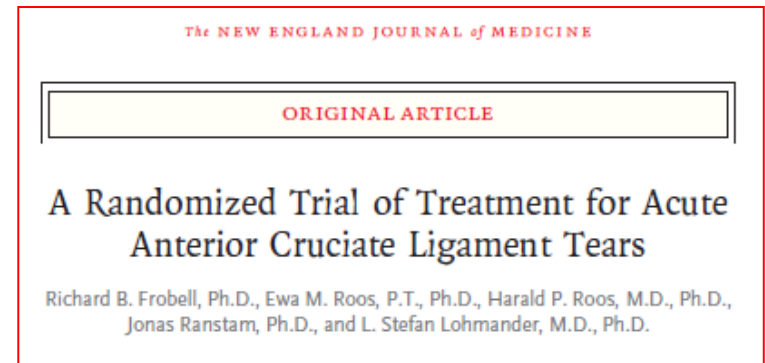
- Systematic review (Smith et al, 2013)
 - Search – 943 records (RCTS or non RCTs)
 - Outcomes: Functional (Lysholm, IKDC, Tegner / hop -test), health economics, complications
 - 16 studies (1 RCT - Frobell et al, 2010)
- Cochrane review (Monk et al, 2016)
 - Search – 572 records (RCT) 1 RCT (Frobell et al, 2010)
- Limited evidence to support clinical decisions
 - Based on a number of retrospective case control studies and 1 RCT
- Variation in practice

Kanon study (Frobell et al, 2010)



- 121 young active adults
- Acute Population (<4 wks since injury)
- No difference between groups at 2 & 5 yrs:
 - Functional outcomes (KOOS, Tegner Activity Score)
 - Frequency of subsequent
 - meniscal surgery
 - Development of OA
- Provides valuable evidence

‘ These results should encourage clinicians and young active adult patients to consider rehabilitation as a primary treatment option after acute ACL tear ’



Rehab first = 50 % did not need an ACL Reconstruction

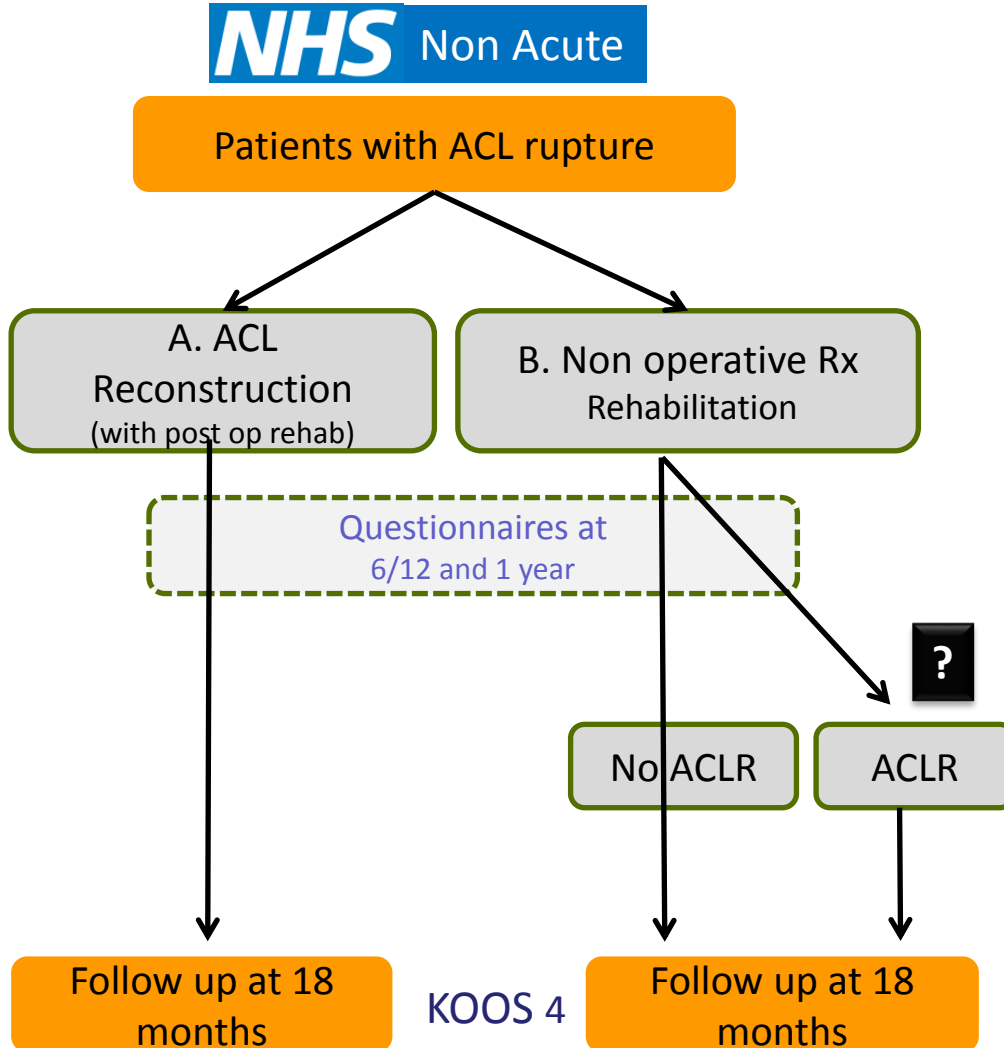
ACL SNNAP Trial



- **NHS** population ?
- Comparison of the clinical and cost effectiveness of two management strategies for non-acute Anterior Cruciate Ligament (ACL) injury: Rehabilitation versus surgical reconstruction
- Multi centre, NIHR HTA funded RCT
- CI: Prof David Beard
- Co-applicants: Prof J Cook, S O'Leary, Prof F Haddad, C Wilson, Prof S Lamb, W Jackson, P Monk, Prof A Carr, Prof K Barker, L Davies, Prof A Price



Design



- Non acute ACL injury (>4 months since injury)
- Outcome KOOS (+activity)
- N=320
- 15-20 sites
- REC & HRA approval
- Start early 2017

Possible challenges



- Complexity of interventions (Ergina et al, 2009, Cook, 2009)
 - Standardisation of the intervention
 - Blinding
 - Crossover
 - Experience of clinicians

- Potential barrier to trial recruitment (King et al, 2005)
 - Patient preferences
 - Preferences and beliefs of participating clinicians

Pre-trial qualitative study



- Aim: Explore clinicians' views at pre-trial stage
- Semi structured Interviews (N=12 clinicians, 6 potential participating sites)
 - Varying levels of uncertainty and preferences expressed
 - “surgery provides the fix”
 - “surgery or downgrading activity is only way to achieve stable knee”
 - Trying you with physiotherapy, there is a 50% chance your knee won't be stable
 - Especially evident in relation to certain patient subgroups: young and highly active patients
- Potential to impact on recruitment & generalisability

Summary



- Current evidence for the management of this injury is limited
- Further research needed to support clinical decisions
- Potential challenges associated with design and conduct
- ACL SNNAP aims to contribute to evidence base and address some of the challenges in design and conduct

Thank you



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