Management of Failed ACL Surgery: Stage or No Stage
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Background
- ACL reconstruction is the 6th most common procedure in Orthopaedics with ~200,000 cases performed each year in the United States
- 10-15% failure in the literature (“experts”)
- 85% of ACL surgery is done by surgeons doing < 10 per year (their failure rate?)
- ACL graft failure is a big problem!!
  - You must optimize the chances of success in revision surgery to avoid a 3rd, 4th, et cetera, failure!
- Etiology of Failure:
  - Surgical technique (placement, fixation)
  - Biological (graft healing)
  - Traumatic
  - Early aggressive rehab
  - Early vs. late failure
    - Less than 6 months, probably technical
- Most common causes of failure I see are due to:
  - Graft placement (technical!). Often associated with tunnel expansion
  - Traumatic graft failure
  - Failure of surgeon to address secondary restraints (including loss of menisci)
- Pre-operative planning:
  - History and physical exam are the most important
  - Prior surgical notes
  - MRI – overrated!!!
  - CT scan – occasionally

Dr. Harner’s ACL Revision Experience
- Years in practice: 27
- Number of primary ACL’s/year: ~120
- Number of revisions: 25-30
  - Single stage: 50%
  - Two stage (two surgeries): 50%
- Graft selection:
  - Autograft: 66% (BTB, hamstrings, occasional quad tendon)
  - Allograft: 33% (90% BTB, occasionally A.T.)
- Additional procedures: ~70% of cases
  - Meniscal surgery: ~60%
- Meniscal transplant: 8-10/year (~20%)
- Collateral surgery: ~20% (med > lat)
- Osteotomy: 2-3/year

Case Examples
- Revision ACL
  - 24 y/o traumatic failure of hamstring allograft
  - Single stage (1 surgery) with BTB autograft
- Revision ACL (2 surgeries)
  - Failed double bundle allograft
    - First surgery: bone graft tunnels
    - Second surgery (6 months later): revision with BTB auto and Lemaire extra articular
- Re Revision ACL with hamstring autograft
  - 17 y/o female high school soccer athlete x2 failure of ACL allograft revision with hamstring autograft over the top
  - Anatomic tibial
- Other case examples of 2 stages
  - Revision ACL with lateral meniscus transplant
  - Revision ACL with MCL surgery
  - Revision ACL with HTO

References


