OUTCOME OF SINGLE STAGE ACL RECONSTRUCTIONS REVISION SURGERIES, HOSPITAL SERVICE REVIEW

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I have no financial conflicts to disclose
**Introduction:**

ACL reconstruction is a common orthopaedic procedure, hence there is an increased potential for ACL reconstruction revision surgeries.

**Aim:**

Pragmatic review of single stage revision ACL reconstruction outcomes and reasons of failure in primary surgery.
Methods

• Retrospective analysis of prospectively collected data:
  ❖ 59 patients with revision ACL reconstructions.
  ❖ Performed by senior author from 2007 to 2017.

• Data collection:
  ❖ Demographic details.
  ❖ Type of graft in primary and revision surgery.
  ❖ Any identified cause of failure.
Methods

• Assessment of pre and post revision xray:
  • tunnel position/widening.

• Pre/post revision surgery functional scores:
  • Oxford knee scores.
  • Tegner Scores.
  • Leysholm scores.
Results – Primary reconstruction (I)

• 59 patients were included (done by the senior author).

• 48 males.

• Mean age was 32.56 +/- 8.75 years.
Results - Primary reconstruction (II)

• Type of graft harvest:
  - Hamstrings grafts (67.8%).
  - Patellar tendon grafts (22%).
  - Carbon fibre (5.1%).
  - LARS ligament (3.4%)
  - Quadriceps tendon (1.7%).

• Causes of failure:
  - Mechanical (44%).
  - Improper tunnel position (30.5%).
  - Biological (25.4%).
Results – Revision cases (I)

• Technique:
  ❖ Autografts with independent femoral tunnel technique.

• Type of graft harvest:
  ❖ Patellar tendon grafts (55.9%).
  ❖ Ipsilateral hamstrings (20.3%).
  ❖ Contralateral hamstrings (15.3%).
  ❖ Quadriceps tendons (8.5%).
Results – Revision cases (II)

• Associated reconstructions with revision surgeries:
  - 9 Antero-lateral ligament.
  - 7 Postero-lateral corner.
  - 1 Medial collateral ligament.
  - 13 meniscal surgeries.

Note: One patient could have none/more than one associated procedure.
Results – Revision surgeries (III)

• Outcomes observed:
  - 30 point improvement in Leysholm score.
  - 18 point improvement in OKS.
  - 1.6 point improvement in Tegner score.
Results – Revision surgeries (IV)

• Complications:
  ✷ 1 septic arthritis.
  ✷ 4 superficial infection.
  ✷ 2 Post-traumatic patellar fracture (BTB grafts).
  ✷ 6 residual instability.
  ✷ 4 lack of full extension.
Discussion:

• Technical difficulties - Tunnel positioning

• Anatomical Vs completely non-anatomical tunnels → could be revised using same tunnel or new tunnel respectively.

• Widened tunnel / near anatomical tunnels → bone block with screw

Conclusion:

Good outcomes of single stage revision ACL reconstruction surgery are achievable as being successful in our centre.
References


