Comparison of Five-Year Outcomes Following Three ACL Reconstruction Techniques

A Randomized Clinical Trial Comparing Patellar Tendon, Hamstring Tendon, and Double-Bundle ACL Reconstructions. Patient-Reported and Clinical Outcomes at 5-Year Follow-up

Primary outcome: Anterior Cruciate Ligament-Quality of Life (ACL-QOL) score

Study evaluated the 5-year outcomes of 315 patients treated for complete ACL ruptures using...

- Patellar tendon (PT)
- Single-bundle hamstring tendon (HT)
- Double-bundle hamstring tendon (DB)

All three groups showed improved 5-year ACL-QOL scores, but no differences between groups at 5 years

PT group reported more moderate to severe kneeling pain, while more traumatic ACL reinjuries occurred in the HT and DB groups

Primary outcome: Anterior Cruciate Ligament-Quality of Life (ACL-QOL) score

- PT: 85.00
- HT: 75.00
- DB: 65.00

Secondary outcomes:

- % of patients with a normal or nearly normal IKDC grade:
  - PT: 87%
  - HT: 82%
  - DB: 75%
- Pivot shift (of ≥2):
  - PT: 12%
  - HT: 16%
  - DB: 22%
- Kneeling pain:
  - PT: 10%
  - HT: 4%
  - DB: 2%
- Traumatic reinjury:
  - PT: 4%
  - HT: 15%
  - DB: 16%

Disease-specific quality of life at 5 years is not different, but PT reconstruction is recommended for younger patients with a high risk of reinjury

Anterior cruciate ligament (ACL)