Medical Device Surveillance and Assessment (MDSA)

Unit of Clinical Analysis

Newsletter

Patient and Operative Risk Factors for Osteoarthritis After Primary Anterior Cruciate Ligament Reconstruction: A Cohort Study of 41,976 Patients

The reported incidence of posttraumatic knee osteoarthritis (PTOA) after primary anterior cruciate ligament reconstruction (ACLR) varies considerably. In this study, authors sought to determine the incidence of PTOA and identify any patient and perioperative factors associated with the development of PTOA after primary ACLR.

> "Over the years, we have learned a lot about the risks associated with revision and reoperation after ACLR but very little is known about the longer-term consequences of having an ACL injury and ACLR surgery. We understand that the risk of osteoarthritis is increased in patients with an ACL tear and subsequent surgery. This study helps to clarify the patient and operative risk factors that are associated with subsequent PTOA."
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> Gregory B. Maletis, MD, Department of Orthopedic Surgery, SCPMG, Baldwin Park, CA | Study Lead Author

Study Details

PTOA Incidence was 1.7% at 2 years, 5.1% at 5 years, and 13.6% at 10 years in the study population of 41, 976 primary ACLRs. Risk factors included -

- BMI ≥30 versus <30.
- Use of allograft or quadriceps tendon autograft vs a hamstring tendon autograft.
- Knee pain after ACLR may be a risk factor for or evidence of early PTOA.

Practice Considerations

Knee pain after ACLR may be an early sign of PTOA. Surgeons should consider the adverse associations of a higher BMI and an allograft or quadriceps tendon autograft with the development of PTOA, as these were factors identified with a higher risk, regardless of a patient's age at the time of primary ACLR.

Link to Published Manuscript

Prentice HA, Chan PH, Paxton EW, Felson DT, Funahashi TT, Maletis GB (2024). **Patient and Operative Risk Factors for Osteoarthritis After Primary Anterior Cruciate Ligament Reconstruction: A Cohort Study of 41,976 Patients** *Am J Sports Med*, 52 (10): 2482-2492.

Full Authorship

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