

The Known and Unknown Reality of Knee Dislocations: A Scoping Review

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Purpose: Knee dislocations (KDs) are severe injuries, and short- and long-term outcomes are not well understood due to challenges with follow-up and injury-specific outcome measures. This review aims to summarize KD knowledge and uncover knowledge gaps.

Methods: The published literature was queried according to PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. Studies eligible for inclusion were clinical studies of KDs. Studies were excluded that were published before 1990 or focused on patellofemoral dislocations.

Results: Our review of 132 studies encompassed 43,800 individuals (57.7% male, 42.3% female, mean age 36.1 years) with 43,869 knee dislocations. Substance use (15.1%) and alcohol involvement (17.2%) were commonly reported. Predominant KD types were KD III (54.8%) and KD IV (20.5%). Posterior dislocations (49.5%) outnumbered anterior dislocations (30.7%). Associated injuries included fractures (40.6%), popliteal artery (5.4%), and peroneal nerve (13.9%) injuries. With regards to treatment, acute ligament repairs (64.2%) were more common than delayed repairs (35.8%), however the average time to repair was 56.1 days. Hospital stays averaged 7.9 days. Complications ranged from amputations (2.3%) and fatalities (1.9%) to compartment syndrome (2.7%), infections (5.3%), and heterotopic ossification (21.6%). 36 studies reported 19% loss to follow-up. The follow-up period, as reported by 62 studies, averaged 51.7 months. Functionality assessments revealed a weighted mean range of motion of 120.6° (35 of 132 studies) and a weighted mean Lysholm score of 83.2 (53 of 132 studies). Furthermore, 20% of patients developed arthritis, which was only reported in 2 studies. Many individuals faced challenges returning to sports or work or had to change professions but this was only reported in 10 or fewer studies.

Conclusion: This review uncovered high rates of neurovascular injuries and associated complications. Substance and alcohol use was prevalent. Treatment was nonuniform with variability in timing and type of surgical management. Outcome data must be interpreted with challenges associated with loss of follow-up and underreporting of meaningful results such as return to work or sport, chronic disability, and posttraumatic arthritis. Future research is required to better guide appropriate management and patient expectations.