

Epidemiology of anterior cruciate ligament ruptures during the 2010/11 to 2021/2022 RPL seasons

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Purpose

To investigate the epidemiology of Anterior Cruciate Ligament Ruptures (ACLR), the patterns associated with their occurrence, and the return to play (RTP) in professional soccer players during the 2010/11 to 2021/2022 competitive seasons in Russian Premier League (RPL).

Methods and Study Design

All ACLR sustained by players competing in the RPL across 12 competitive seasons from 2010/11 to 2021/22 were analyzed. All data were obtained by three independent experts via a media analysis and confirmed by cross-checking with team physicians. In case of disagreement, all information was clarified by the player. Outcomes of ACLR as well as RTP duration were collected.

Results

Eighty-five players (age 26.2 ± 3.5 years) sustained 100 injuries (76 primaries) during the examined period - 8.3 ACLR per season. There were 47 ACLR in the first half, and 53 in the second half of the studied period. There was an increase in the number of injuries in August and September as well as the January-March. Players from the most competitive teams were affected most often. Central and wide midfielders suffered sustained the most injuries (25% and 22%, respectively) while goalkeepers were the least injured (6%). Most injuries ($n=58$) occurred during the official game. A total of 76 ACL reconstruction surgeries were performed with a 14.5% ($n=11$) re-injury rate in the ipsilateral knee, and 5.2% ($n=4$) injuries in the contralateral knee. The mean time to RTP after primary surgery was 289 ± 136 days.



Conclusion

The epidemiology of ACLR does not significantly differ from other championships. ACLR number has not increased significantly over the last 12 years. The majority of injuries occurred during the official game in the first 2 months after the season commencement and also in the first months of the calendar year. Re-injuries are relatively common after ACL repair, and RTP time is lengthy. Players from the most competitive teams suffered more often.

Significance of Findings

ACLR require surgical treatment, long RTP time, and pose significant risks for re-injury and contralateral knee injury. Understanding of ACLR patterns will aid the development of injury prevention programs with a focus on players most at risk.

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