

TIME TRENDS IN ACL INJURY RATE IN MEN'S PROFESSIONAL FOOTBALL

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Background

Previous studies have shown decreasing trends of ligament injuries in general and ankle sprains (1, 3). However, studies investigating the development of Anterior Cruciate Ligament (ACL) injury over time in football are lacking.

The objective of this study was to investigate the time-trend in ACL injury rate in men's professional football.

Methods

In total, 83 European football clubs from the first divisions of 16 countries were followed prospectively for a varying number of seasons between 2001 and 2013. ACL injuries and individual player exposure during training sessions and matches were recorded. The study design adhered to the consensus statement on injury definitions and data collection procedures in football (2). Seasonal trend for ACL injuries, expressed as average annual percentage of change, was analysed using linear regression with log-transformed injury rates as dependent variable.

A two year moving average approach, by summarising two consecutive seasons, was also used to smooth out large seasonal variation.

Results

A total of 136 ACL injuries were recorded (range 1 to 28 per season). An average annual increase of 28% for the ACL injury rate was indicated in the moving average approach. This seasonal trend was, however, not significant in the regression model ($R^2=0.20$, $b=0.082$, 95% CI -0.034 to 0.198, $P=0.14$).

Conclusion

In contrast to previous studies reporting significant decreasing trends of ligament injuries including ankle sprains, this study could not show a similar trend for ACL injuries.

With respect to the limited sample compared with previous studies, however, the findings of this study suggest that the ACL injury rate might increase slightly over time.

References

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