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Epidemiology and incidence of injury in elite netball players - An injury audit of the 2016 Netball Superleague season



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BACKGROUND

Netball is played by more than 20 million people in over 80 nations around the world, from recreational level through to elite, national representation. The UK operates its own elite netball competition (NSL) played annually between January and May which attracts athletes from some of the world's top netballing countries [1].

The game requires quick dynamic movements including jumping, quick acceleration, rapid change of direction, pivoting and cutting manoeuvres, all of which can expose players to a wide range of different injuries across various anatomical locations [2].

With the increasing number of females participating within the sport and England Netball announcing that for the first time in its history it will be offering full time, professional contracts there is a growing need to be able to understand the nature and occurrence of injuries sustained at top level competition.

OBJECTIVE

To undertake a prospective epidemiological study of injuries sustained in elite netball during a single Netball Super-league season in the UK scheduled between January and May 2016.

METHOD

A prospective **cohort design** was used to collect descriptive injury data using only elite netball players competing in the 2016 Netball Superleague season.

103 players gave consent to take part in the study (**85.8% return rate**) with an average recruitment from each team of 12.88 ± 2.53 . 4 players suffered major injuries in the first half of the season and did not participate in all 14 rounds of match play (**96.1% retention rate**)

Injury audit form drafted based on information pertained in a questionnaire by the Rugby Injury Consensus Group to monitor epidemiology of rugby injuries. Adapted to suit netball specific characteristics [2].

The physiotherapist or sports therapist from each of the franchise teams were instructed how to complete injury audit forms at the start of the season. Data was recorded during match play and training.

Information was emailed to the researcher on a weekly basis and collated on an electronic database.



OUTCOME MEASUREMENTS

Date of injury, age of player, playing position, activity at time of injury, mechanism of injury, classification of injury at two levels (body location and injury type), predicted time loss and identification of injury being acute, gradual onset or recurrent was recorded.

RESULTS

59 injuries were recorded with an incidence rate of **9.08 injuries per 1000 hours exposure**. Injuries were more common in competitive match play (71.2%) than in training (28.8%).

The ankle was injured most frequently (35.6%, 95% CI 24.6 to 48.3) and ligament damage was the main type of injury recorded (44.1%, 95% CI 12 to 32.3).

Data revealed a significant association between match quarter and occurrence of injury $\chi^2 (3) = 9.91$, $p = 0.019$, with the greatest proportion of match injuries recorded in the middle 30 minutes of play.

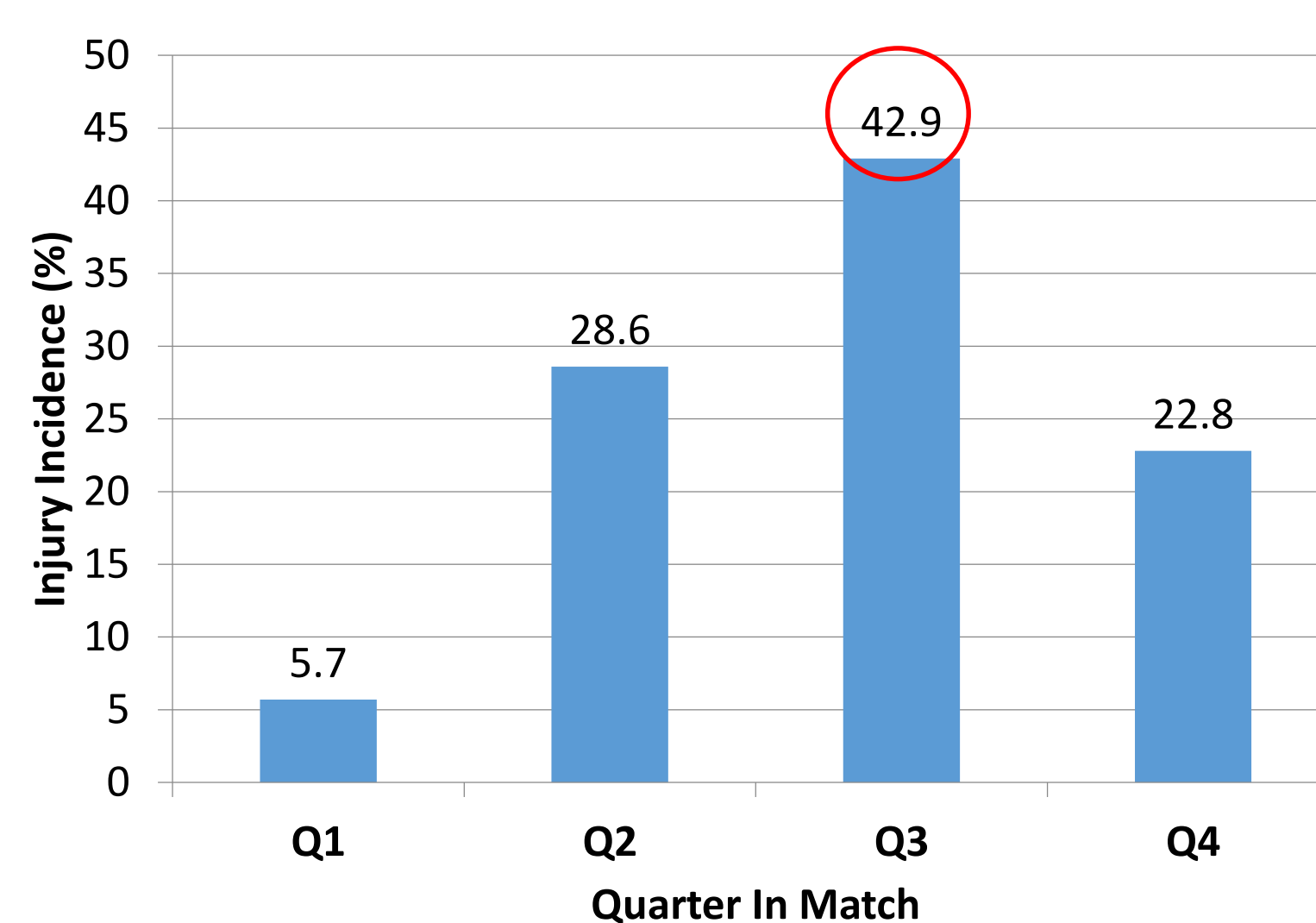


Figure 1 • Frequency of injuries recorded in each quarter of match play

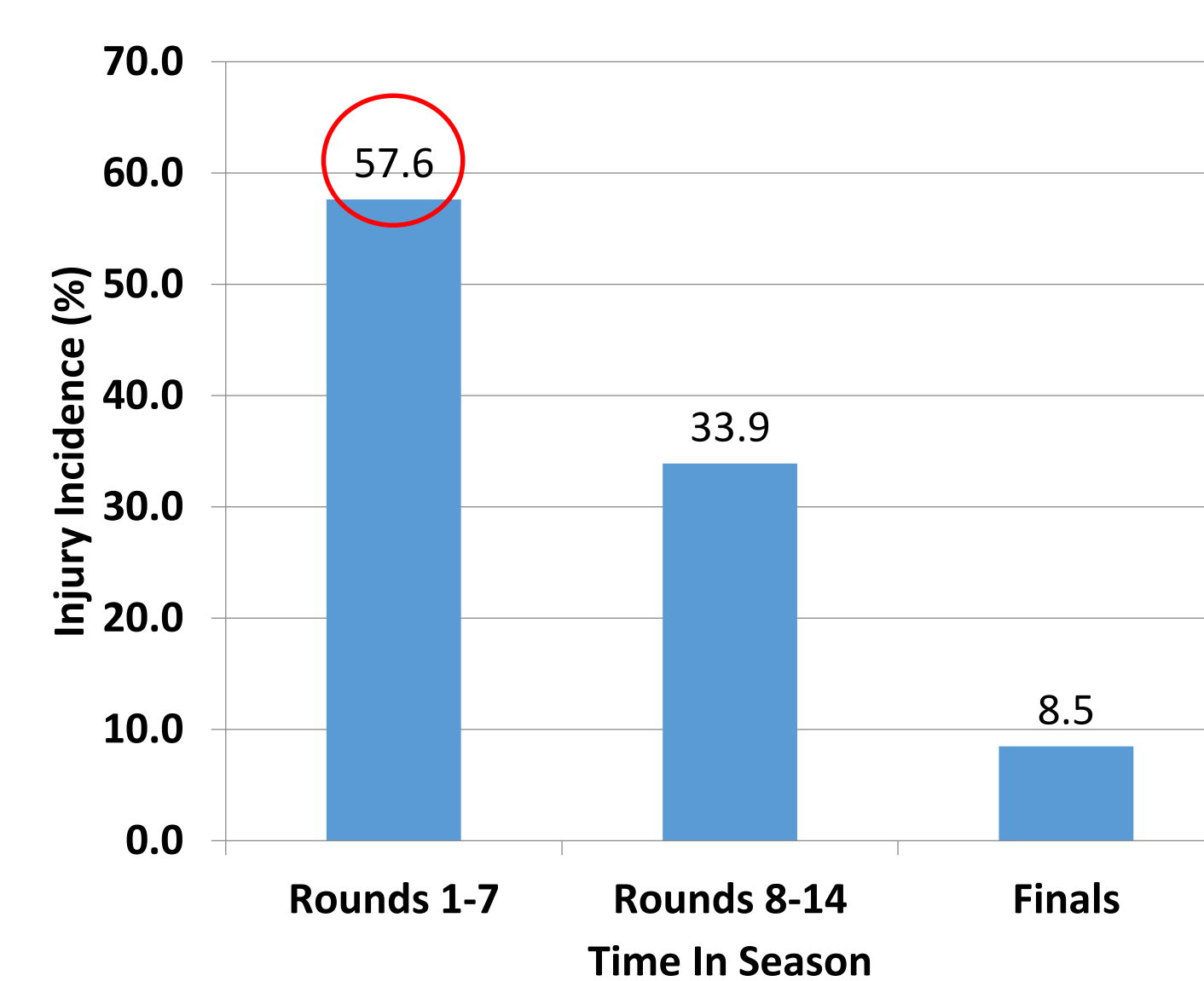


Figure 2 • Frequency of injuries recorded throughout the season

No significant association was observed between playing position and injury incidence $\chi^2 (2) = 0.917$, $p = 0.632$.

Overall injury frequency was highest in the first half of the regular 14 week season with 57.6% of all injuries occurring in this time frame.

CONCLUSION

Pre-season preparation, half time match strategies and overall physiological conditioning should be considered when addressing injury prevention within elite netball. Early occurrence of injury within the season suggests there maybe some form of training effect as the increase in exposure occurs.

References

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