

RISK FACTORS OF SHOULDER INJURIES IN COLLEGIATE RUGBY PLAYERS

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Introduction

Shoulder injuries cause a long-term absence from training and game in rugby union. Therefore, it is important to identify injury risk factors beforehand, and manage them to prevent injuries. The purpose of this study was to examine the association of potential risk factors obtained from a preseason medical screening with subsequent shoulder injuries in collegiate rugby players.

Methods

69 rugby players without any history of shoulder surgery were involved in the prospective cohort study from one university club. All players joined in the preseason medical assessment related to their shoulder joints, including basic demographics, injury experience, and physical findings at that time. During the two playing seasons, 2008-2009 and 2009-2010, the occurrence of shoulder injuries were recorded by a team doctor and medical trainers. Injury was defined as “time loss injury”, which means that a player was unable to full participate in the next rugby training or match after the injury. Only glenohumeral joint injuries or rotator cuff injuries were included in the study. Logistic regression model was used to analyze the risk factors of respective shoulder joint with the significance level set at $\alpha=0.05$.

Results & Discussion

Injuries during the two seasons occurred in the right shoulder of 9 players and in the left shoulder of 9 players. Factors related to the right shoulder injuries were previous injury history (OR=7.8, 95%CI:1.27-48.4, $p=0.02$), and internal/external rotational strength ratio (OR=6.2, 95%CI:1.10-35.0, $p=0.03$). For the left shoulder injuries were previous injury history (OR=13.4, 95%CI:1.96-91.6, $p=0.00$), anterior joint instability (OR=11.8, 95%CI:1.16-120.6, $p=0.03$), and internal/external rotational strength ratio (OR=26.9, 95%CI:1.08-671.7, $p=0.04$). Previous injury history and internal/external rotational strength ratio were common risk factors relevant to the shoulder injuries.

Conclusion

This study clearly showed that previous injury history and internal/external rotation strength ratio were important risk factors for shoulder injuries in collegiate rugby players. We need to confirm that the improvement of internal/external rotation strength ratio effectively contributes to the decline of injury incidence in shoulder injuries.

References

1. Brooks JH et al. (2005). Br J Sports Med, 39(10):757-766.