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紹介｜Introduction

スポーツ傷害
―ラグビー選手の肩関節エクスターナルインピンジメントの診断―

Sports Injuries:
Diagnosis of External Impingement of the Shoulder in Rugby Players

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紹　介

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Introduction

Sports Injuries

Diagnosis of External Impingement of the Shoulder in Rugby Players

KHAN, Fayyaz Ahmad*

Abstract

External impingement can occur in contact and collision sports such as rugby. This painful shoulder injury occurs when there is either a structural or a functional narrowing of the subacromial space. Investigating the symptoms related to activities will help in determining the underlying pathology or a dysfunction in the subacromial space.

要　約

エクスターナルインピンジメントは、ラグビーのような接触や衝突のあるスポーツで起こりうる。この痛みを伴う肩の損傷は、肩峰下空間の構造的または機能的狭小化がある際に生じる。アクティビティに関連する症状を調べることは肩峰下空間の病理または機能障害を決めるのに役立つ。

キーワード

衝突（Impingement）、ラグビー（Rugby）

腱峰下空間（Subacromial）

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本文注上付数字（1）（2）…（3）については後揚References参照。

1. Introduction

This year Japan hosted the 9th Rugby World Cup (RWC) and was named the first Asian RWC host nation. Rugby is a game that is known for its high injury rates from tackling, as each of the 15-player teams try to bring down the opposing player who has the ball. Injuries to the shoulder are common in rugby due to the high force collisions between the players and the instability of the glenohumeral joint [(1)]. Shoulder impingement can involve the head of humerus and the glenoid or the subacrominal space (SS).

In the SS, the greater tuberosity of the humerus compresses the rotator cuff against the acromion and this is known as the subacromial or external impingement (EI). EI is characterized by irritation and inflammation of the bursa and/or rotator cuff tendons in the SS [(2)]. Pain in the shoulder is one of the most common musculoskeletal complaint in rugby because of the overhead activities [(3)]. Clinical examination and imaging can be useful to confirm the diagnosis of EI.

2. Types of EI

EI type can be classified on the aetiology and is divided into primary and secondary [(2)].

Primary EI (Structural Narrowing)

There is narrowing of the SS because of abnormalities in the structures of the space i.e. acromioclavicular arthropathy, rotator cuff pathology, subacromial bone spurs, swelling of subacromial bursa and type II or III acromion [(2)].

Secondary EI (Functional Narrowing)

There is narrowing of SS because of the functional problems at various positions [(4)] i.e. instability, rotator cuff weakness and scapula dyskinesis [(3)].

3. EI symptoms

Full clinical history should be considered with the common symptoms such as pain, weakness and loss of motion [(5), (6)].

Pain occurs during the following activities:

The arm is at shoulder height and/or the arm is overhead (painful arc)

Putting the hand behind the back or head.

Lying on the sore shoulder.

Attempting to reach or lift [(5), (6)].

4. Tests

Jobe Test (Empty Can Test)

Positive EI when there is pain [7]

Neer Test

Positive EI when there is pain [7]

Hawkins Test

Positive EI when there is pain [7]

Other Tests

Scapular Dyskinesis Tests [4]

Rotator Cuff Tests [5]

5. Imaging

Ultrasound scan (In real-time)

Image of the rotator cuff muscles and tendons will detect any associated injuries like rotator cuff tears, tendinopathies and bursitis [6], [8].

MRI

Shows the degree of rotator cuff pathology and possibly subacromial bursitis [6], [8].

6. Conclusion

Rugby is a commonplace for tackler-type injuries due to physical collisions. It would be necessary to establish the cause of the EI, whether it is structural narrowing or functional narrowing. This could help in the prevention of EI and other types of shoulder impingements i.e. internal impingement, in rugby without changing the nature of the sport.

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