

Athletic Shoulder II

- Volleyball injuries -

문영래

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Incidence

1. Ankle
2. Finger
3. Knee
4. Shoulder

Shoulder injuries

- Compared with those of the pitching motion
 - Most vulnerable to injury in the competitive volleyball athlete.
 - 1. Acromioclavicular joint injuries
 - 2. Glenohumeral joint injuries
 - Acute and chronic
 - 3. Rotator cuff injuries
 - 4. Glenohumeral instability
 - 5. Impingement syndrome
 - 6. Tendonitis
 - 7. Nerve pathology
 - Suprascapular nerve entrapment
 - 8. Bursitis
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1. Acromioclavicular joint injuries
- Result of acute trauma or repetitive overuse
 - Impact of fall on a hard surface while diving for the ball

- AC contusion : common
- AC sprains
- Degeneration articulating surfaces disc
 - Older competitive athletes
- 2. Glenohumeral joint injuries
 - Sudden impacts and repetitive loads to the GH joint that occur in volleyball predispose these stabilizing
 - Traumatic dislocations
 - 1. Usually anterior (extreme external rotation position)에서 발생
 - 1. Posterior dislocation : defensive specialists가 넘어지면서 발생
 - Labral fraying or tears
 - 1. Overhead activities에서 증상 발현
 - 3. Rotator cuff injuries
 - Blocking, serving, diving 시 발생
 - Older athletes에서는 full-thickness tear 발생
 - 1. Spike할 때 follow-through phase에 supraspinatus와 infraspinatus에 eccentric load가 발생되면서 손상
 - Subscapularis
 - 1. 강한 spike나 block시에 발생
 - 4. Glenohumeral instability
 - Spike나 serve시 repetitive stress
 - Instability가 있는 환자에서 capsuloligamentous complex가 stretch되면서 증상이 발현
 - Dead arm syndrome
 - 5. Impingement syndrome
 - One of the most common injuries in volleyball athletes
 - 1. 특히 older athletes에서
 - Spike, serve, blocking 을 자주하면 잘 발생
 - 6. Tendonitis
 - Impingement syndrome과 동시에 잘 발생
 - Scapula의 improper positioning과 주변 근육 기능에 의해서 발생
 - Rotator cuff의 strength imbalance에 의해 발생
 - 1. Supraspinatus, infraspinatus, biceps brachii
 - Improper mechanics, fatigue에 의해 humeral head는 superior migration

1. Decrease in the subacromial space
2. Inflammation, pain
7. Nerve pathology
 - Suprascapular nerve entrapment
8. Bursitis
 - Diving activities

Treatment and Prevention

- 치료와 손상의 예방을 동시에 시행
 - Rehabilitation
- Flexibility, strength, proprioceptive, and endurance training 시행
 1. Strengthening - strength ratio of 2:3 for external to internal rotation
 - 0도 외전 상태에서 외회전 근력 강화운동을 시작
 - 점차적으로 45-90도 외전 상태에서 rotator cuff exercise 시행
 2. Proprioception의 회복
 - Joint position sense
 3. Endurance(지구력) 강화 운동