Throwing Injuries In Young Athletes

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objectives

- recognize
- confirm
- treat
Little Leaguer’s Shoulder
(Proximal Humeral Epiphysitis)

Injured growth plate
(proximal humeral epiphysis)

Growth plate
(proximal humeral epiphysis)

Normal

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GIRD

Glenohumeral internal rotation deficit
little leaguers elbow
osteochondritis desicicans
stress fractures
little leaguers shoulder

- 30% of pitchers age 9-14 will experience pain
- multifactorial
- associated with 800 or more pitches in a season
- 50% more likely if throwing a curveball
how is it confirmed?

- Pain at proximal humerus
- Loss of motion compared to the contralateral side
- GIRD... greater than 25 degrees
- X-rays show widening of growth plate
- MRI or bone scan with increased metabolic activity
treatment

- remove stress
- core strengthening
- proper pitching instructions
GIRD

- glenohumeral internal rotation deficit
- internal impingement
- loss of internal rotation
- loss greater than 20 degrees at risk for injury
- related to posterior capsular contracture
Treatment

- therapy
- focus on restoring symmetrical internal rotation
- “sleeper stretches”
little leaguers elbow

- 25% of pitchers 9-14 elbow pain post game
- Pain associated with 600-800 pitches
- 80% more likely if throwing a slider
how is it confirmed?

- pain at medial epicondyle
- loss of extension
- positive valgus extension overload maneuver
- x-rays
- mri
- bone scan
Fragmentation of Medial Epicondyle of Right Elbow
treatment

- remove stress
- core strengthening
- proper mechanics
osteochondritis dessicans

- Panners disease typically less than 10 years old
- OCD most commonly capitellum
- pain
- swelling may or may not be present
- swelling more common if loose bodies present
how is it confirmed?

- x-rays
- mri
- bone scan
treatment

- Panners rest
- prognosis better if less than 13yo
- the more skeletally immature the better prognosis
- surgery for loose body removal
stress fractures

- usually older
- high school pitchers
- most commonly olecranon
- pain over affected area
Mri

Warning: Not for diagnostic use
how is it confirmed?

- x-rays
- MRI
- bone scan
treatment

- Rest
- Bone stimulator
- surgery
- subchondroplasty?
thank you

Orthopaedic Knowledge Update 4; Sports Medicine pp.389-390.
