Physical Examination of the Elbow

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Disclosure

1. Basic Science Support
   a. Arthrex
   b. Smith-Nephew

2. Consultant
   a. Arthrex

3. Royalties –
   1. Arthrex
   2. Book Author, Lead Player

5 Points on
Physical Examination of the Throwing Athlete’s Elbow
Lauren H. Radlet, MD, Jonathan P. Watring, MD, and Christopher S. Ahmad, MD

American Journal of Orthopaedics, 2015
Elbow Physical Exam

Exam Strategy
- Divide elbow into 4 quadrants
  - Anterior
  - Lateral
  - Posterior
  - Medial
- Examine each quadrant sequentially
Anterior Elbow

- Often Vague Pain
- Humeral Stress Reaction
- Biceps tendinitis
- Cervical Radiculopathy
- Thoracic Outlet
- Median Nerve Compression

Venous Effort Thrombosis TOS
**Pronator Syndrome**

Physical Exam
- Forearm percussion test
- NEGATIVE Phalen’s Test/ Cubital Tinel’s
- Weak thenar muscles
- Anterior interossei muscles (FPL, FDP) spared

**Humerus and Median Nerve Palpation**

**Median Nerve**

Palpate Median Nerve
Biceps

- Palpate biceps
- Hook test

- Pain with resisted elbow flexion and supination
Biceps Hook Test

Hook Test

Lateral Elbow
- Lateral epicondylitis
- Capitellar OCD
- Radiocapitellar arthritis
- Synovial plica
- Contusion – hit by pitch
Lateral Epicondylitis
- Tender ECRB
- Pain with resisted wrist and long finger extension

Radiocapitellar
• Triceps tendinitis
• Posterior/posterior medial impingement
• Loose body
• Olecranon stress fracture/reaction
Medial elbow

- UCL tear
- Stress reaction
- Flexor Strain
- Medial epicondylitis
- Ulnar nerve
- Snapping triceps

UCL Injuries Presentation

Physical Examination
- UCL tenderness to palpation
- Pain / apprehension / instability valgus stress
- Moving valgus stress test

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Physical Examination
- UCL tenderness to palpation
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O’Driscoli et al AJSM 2005
Ulnar Nerve Compression
Hypertrophy of the medial head of triceps

16% of pop ulnar nerve instability
Repetitive throwing causes repetitive nerve instability - neuritis

Ulnar Nerve
Snapping Triceps
Under-diagnosed
Unrecognized dislocation of med head of triceps cause of failed ulnar nerve transposition
Spoinner et al J Neurosurg
CASE

CASE: Snapping triceps

Physical Examination
• Palpate
• Assess subluxation
• Tinel’s sign
• Flex, abd, pron

Ulnar Nerve
Physical Examination
Ulnar Nerve
Physical Examination

- Elbow Flexion Test
  - With wrist extended, hyperflex elbow and maintain flexion for 30 seconds
  - Assess for pain, numbness, tingling

- Critical to discern UCL, VEO and flexor/pronator issues

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8 months s/p TJ surgery

Post UCL Reconstruction
Post UCL

Thank you