Subtle Elbow Instability Associated with Lateral Epicondylitis

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Introduction & purpose

- Associated Ligament Injuries in Lateral Epicondylitis should be excluded.
- Subtle Instability: Stable in conventional physical exam, but unstable in EUA (Examination Under Anesthesia)
- Using Fluoroscopy
- Purpose
  1) Number of Subtle Instability in Lateral Epicondylitis
  2) EUA finding matches MRI or Operative Finding?
  3) Clinical Difference between Subtle Instability VS No Instability?

Methods

- Operation on Lateral Epicondylitis: consecutive 122 patients
- Identifying Instability During EUA (Fluoroscopic AP instability, >1.5mm; Posterolateral Instability, Radial Axis subluxated)
- MRI Review (By two Radiologists, MCL, LCL, LUCL)
- Operative Finding (No Visible LCL, or Partial defect)
- Preoperative Clinical Data Review
  Gender, Age, Dominance, Manual Worker, Duration of symptom, Education Level, Multiple Corticosteroid Inj>(>3), Smoking History, BMI, VAS, MEPS, Quick DASH

Result(1)-Number of Subtle Instability

Subtle Instability (17) VS No Instability (105)
17 Varus Instability (Radiocapitellar Joint Widening: 2.5~4.1 mm)
2 Additional Posterolateral Instability
No Valgus Instability

Result (2)- MRI and Operative finding

1) MRI
15 Subtle Instability of 28 abnormal MRI
(Positive predictive value 53.6%)
81 No Instability of 82 normal MRI
(Negative predictive value 98.7%)

2) Operative Finding
Partial Defect or No visible LCL complex was visible in Subtle Instability

Result (3)- Clinical Association

- Multiple Corticosteroid Injection(>3)
- High VAS Score

Conclusions

- Fluoroscopic EUA can evaluate Subtle Instability
- MRI has high Negative Predictive Value (98.7%)
- Multiple Corticosteroid (>3) Inj, High preoperative VAS is associated.

Recommendation

When Abnormal MRI, Corticosteroid Inj >3, High Preoperative Pain,

Consider Fluoroscopic EUA