

Tennis Elbow - Differentials

- Radial Plica
- OA
- OCD capitellum
- Varus/posterolateral rotational instability
- Cervical radiculopathy
- PIN entrapment

Aims

- Outcomes of Arthroscopic Tennis Elbow Release

Methods

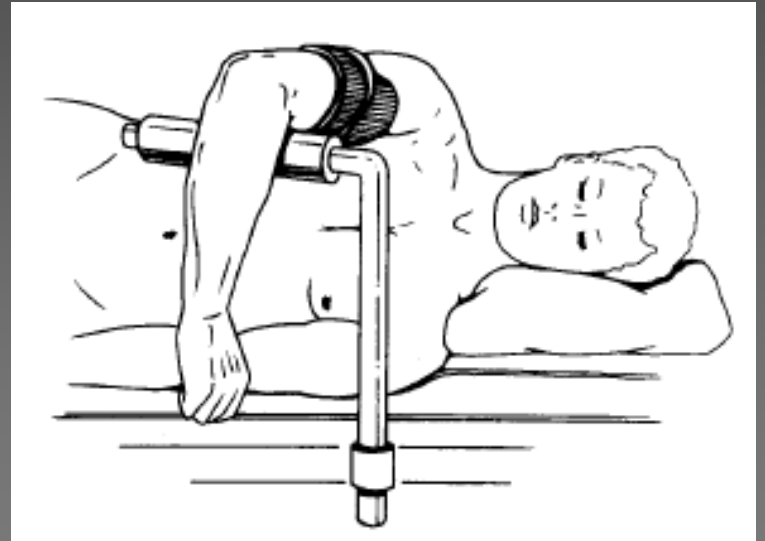
- Prospective study
- October 2006 to June 2008
- Consecutive patients undergoing surgery
- Symptoms > 6 months
 - Failure of conservative measure
- Normal Elbow radiographs

Methods

- DASH Questionnaire
(Disabilities of the Arm, Shoulder and Hand Questionnaire)
- Validated outcome measure
 - 3 sections: Disability/Symptoms, Work, Sports/Arts
 - Scored 0-100.
 - Score of '0' = normal
- DASH scores pre op, 2 weeks and 3 months

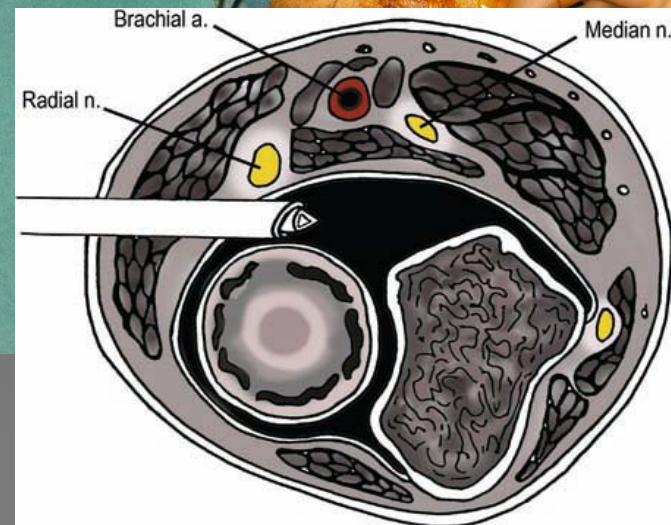
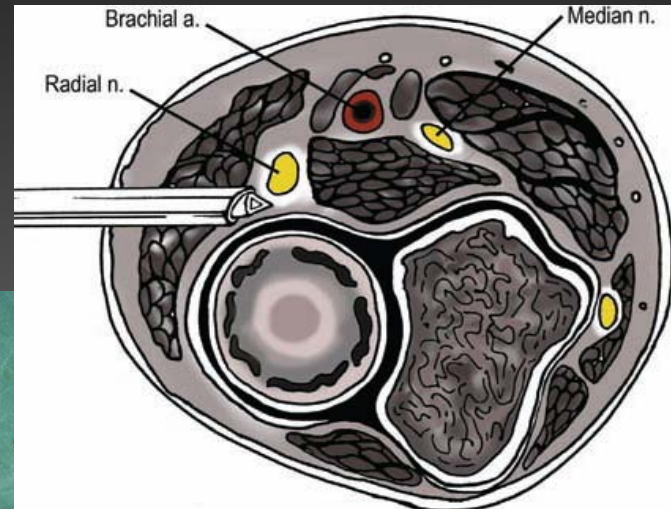
Methods

- All procedures performed by single surgeon (BR)
- Identical setup and technique
 - General Anaesthetic
 - Lateral Decubitus position
 - Arm flexed 90° over bolster



Set up

- Tourniquet 250mmHg
- Joint insufflated
 - 20mls N/Saline
 - Through lateral soft spot
- Elbow remains flexed
- No pressure (swelling)
- Gravity suction

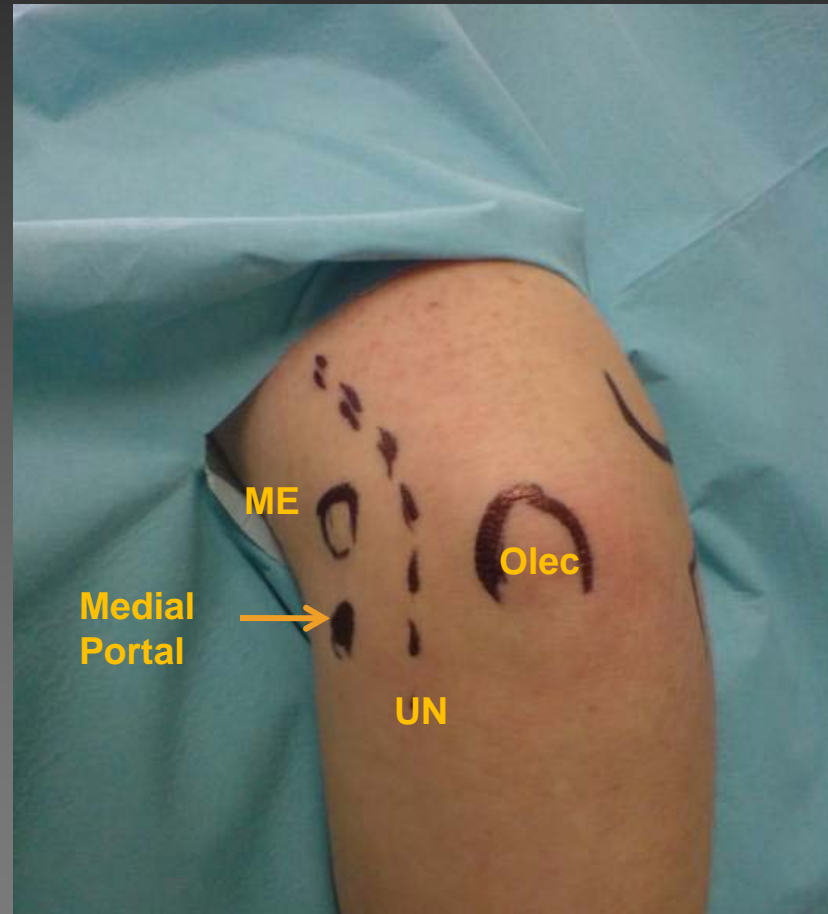
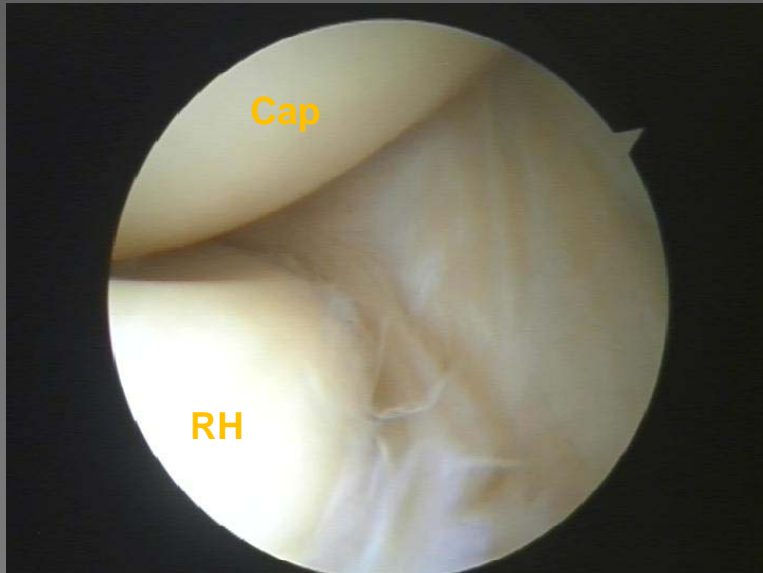


Portals

- Many portals described
- Skin incision → Blunt Dissection with Clip → Blunt Trocar
- Medial portal = viewing
- Lateral portal = working
- Portals sutured

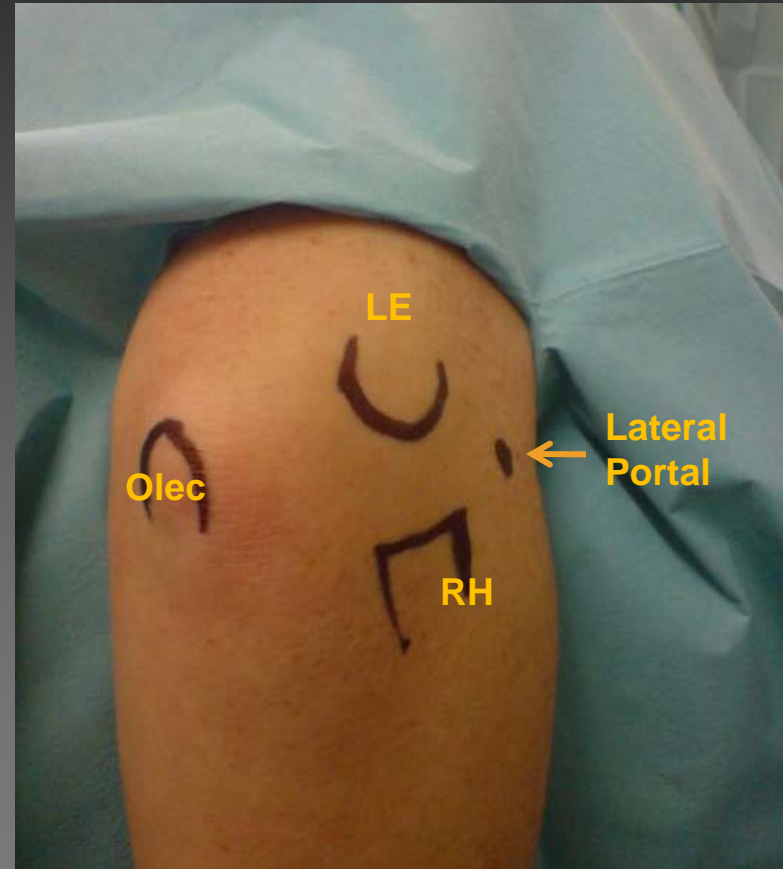
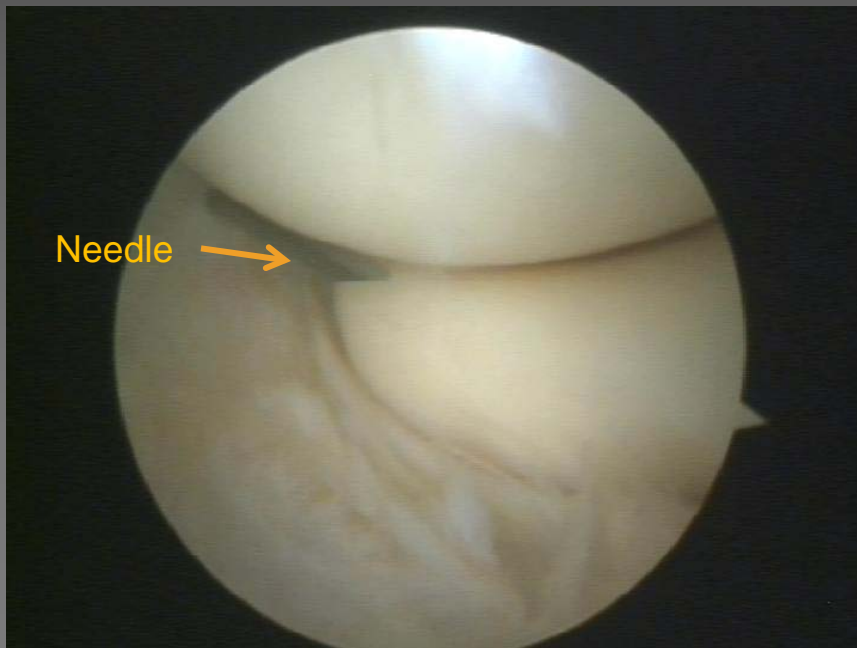
Medial Portal

- Identify ulnar nerve
- Viewing portal
- Right Elbow



Lateral Portal

- Working portal
- Right Elbow



Methods - Operative Technique

- Pathology noted
- Capsulectomy and debridement of ECRB tendon



- Full release or decortication not performed
- Associated intra-articular pathology addressed

Results - Patients

- 28 Patients
- Mean age 46 (32-63)
- M:F 1:1.25
- Mean Follow up = 10 months (range 3 -23 months)
- 1 lost to FU

Results – Operative Findings

- Mean Tourniquet time 48 mins (35-65mins)
- Pathological changes in the lateral capsule (Baker 1998)
 - 21 Type 1 (No tear)
 - 6 Type 2 (Linear/longitudinal capsular tear)
 - 1 Type 3 (Capsular Rent and retraction of capsule)



Results – Operative Findings

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- 68% (N=19) had other intra-articular pathology
 - 17 with Degenerative Articular changes in the elbow
 - 6 Radial Head only
 - 2 Lateral compartment
 - 1 Medial compartment
 - 4 Humerus only
 - 4 Throughout elbow



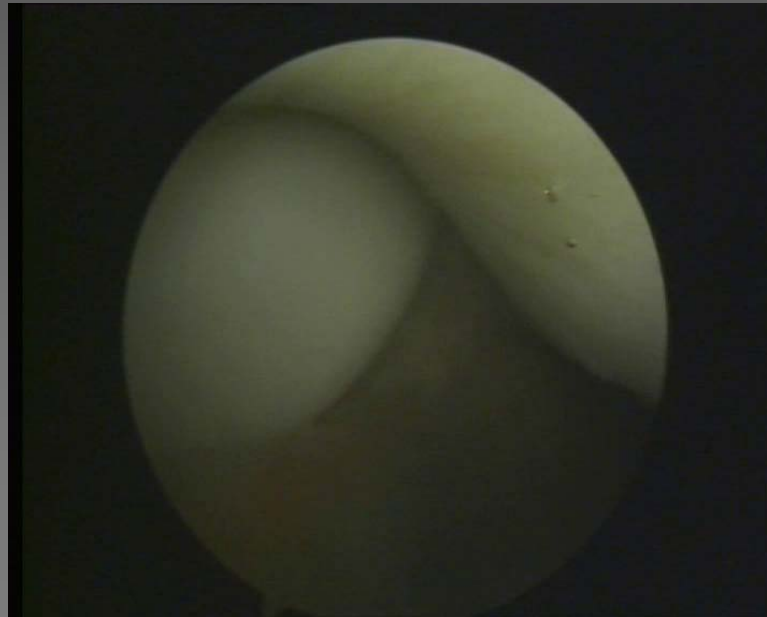
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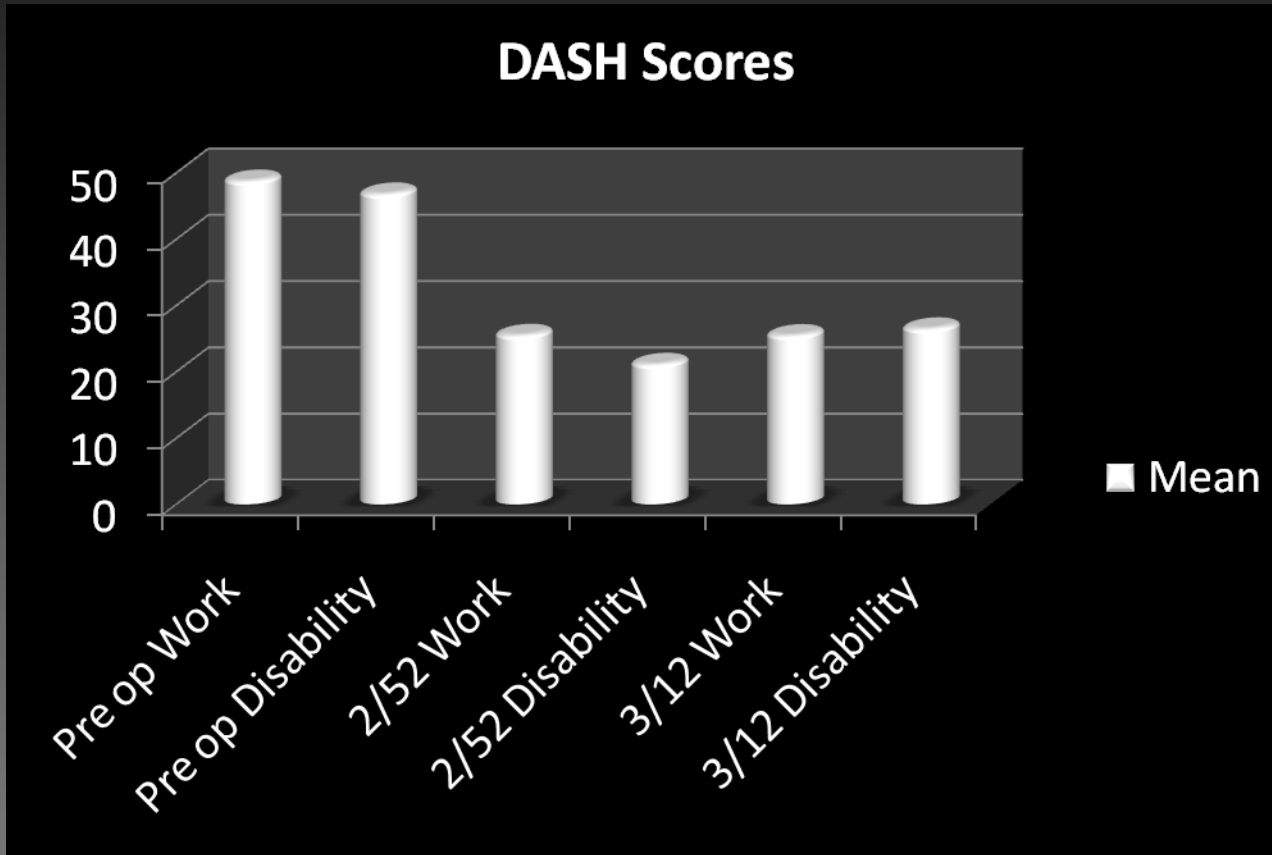


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 - 3 had Eccentric radial heads



Results – Mean DASH Scores



DASH score 0 = normal elbow

Differences statistically significant using worst case scenario
($P < 0.002$)(Paired T-test)

Results

- 75% patients improved (N = 21/28)
 - As early as 2 weeks
 - Improvement sustained at 3 months

- Consistent with other studies

Author	Cases	Improved
Baker 98	38	71%
Baker 00	39	95%
Owens 01	16	100%
Mullet 05	30	93%
Peart 04	33	72%
Nissan...07	70	86%
Jersoch 06	20	85%

Discussion

- Comparable results to open procedures
- Earlier return to work and sports
- Identify and Address Intra-articular pathology

1. Szabo et al. Tendinosis of the ERCB: An Evaluation of Three Methods of Operative Treatment. JSES 2006
2. Peart et al. Lateral Epicondylitis: A Comparative Study of Open and Arthroscopic Lateral Release. Am J Orthop. 2004

Failure to improve

- 6 Failure to improve
 - 2 previous open surgery
 - 1 revised with open and still failed to improve
 - 1 revised arthroscopically and improved
 - 1 refused further surgery
 - 1 listed for open revision
- 3 failure to improve had type 2
- 1 degenerative change throughout elbow and assym
RH

Limitations

- Small numbers
 - Large studies from O'Driscoll, Baker & Pooley
- Relatively short follow up
 - On going study
 - Sustained improvement

Summary & Conclusions

- Arthroscopic tennis elbow release does appear to work (in the short term)
- Intra-articular pathology common.
 - This may be the aetiology of resistant tennis elbow.

Thank You

Any Questions?