

# Operative treatment of multidirectional instability

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# MDI- what is the problem?

- Definition
- Diagnosis
- Patients
- Treatment
- Results



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# Definition

- Neer:
  - Abnormal amount of excursion of the humeral head on the glenoid in all directions”- Neer 1980
- No accepted definition:
  - Instability in more than one direction
  - Symptomatic instability in more than one direction
  - Laxity and symptomatic..

# Definition

- Our definition:
  - Global shoulder joint laxity
  - Symptomatic instability
    - dislocation
    - pain
  - With or without a history of traumatic events

# Diagnosis

- No specific examinations
- No pathognomonic tests
- Some indications:
  - Adolescents or young patients
  - Females > males
  - Hyperlaxity
  - Slender > fat



Figure 1. Beighton's modification of the Carter and Wilkinson scoring system. Give yourself 1 point for each of the manoeuvres you can do, up to a maximum of 9 points.

# Typical patient

- History of minor traumatic event (real?)
- Loose shoulders, only symptomatic one side
- Sulcus sign also in extremes of rotation on symptomatic side



# Typical patient

- Positive hyperabduction test both sides
- Frequent transient neurological symptoms of radiating pain and paresthaesia
- Severe functional impairment



# Treatment

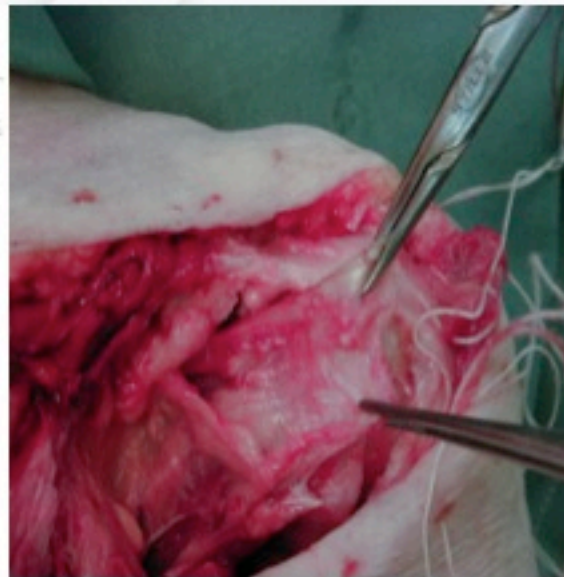
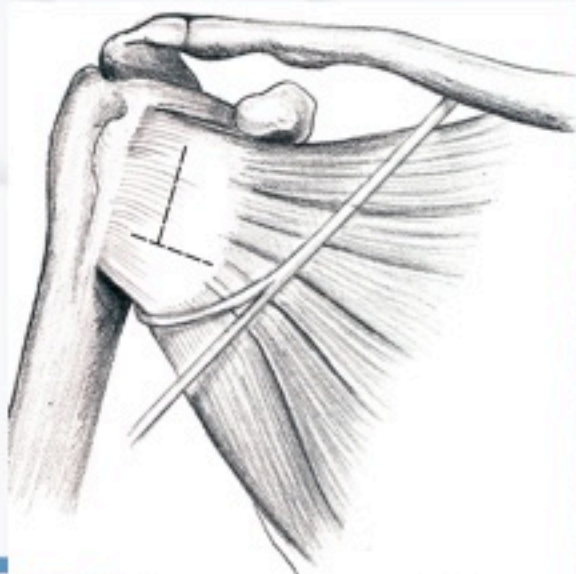
- Minimum of 6 months of conservative treatment
- Physio/shoulder group
- Muscular stability
  - Deltoid
  - Rotator cuff
- Focus on the scapula

# Treatment

- Open:
  - capsular shift
- Arthroscopic
  - Thermal capsulorrhaphy
  - Plication of the capsule

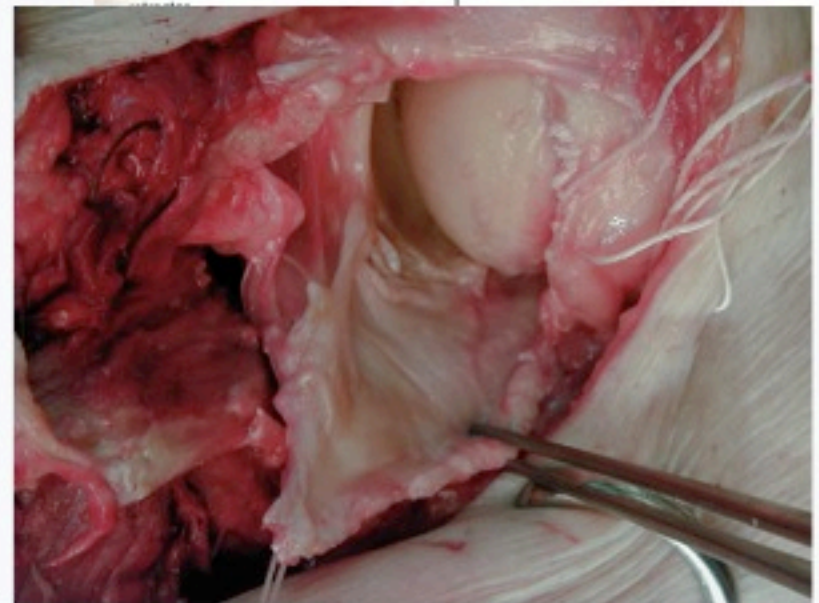
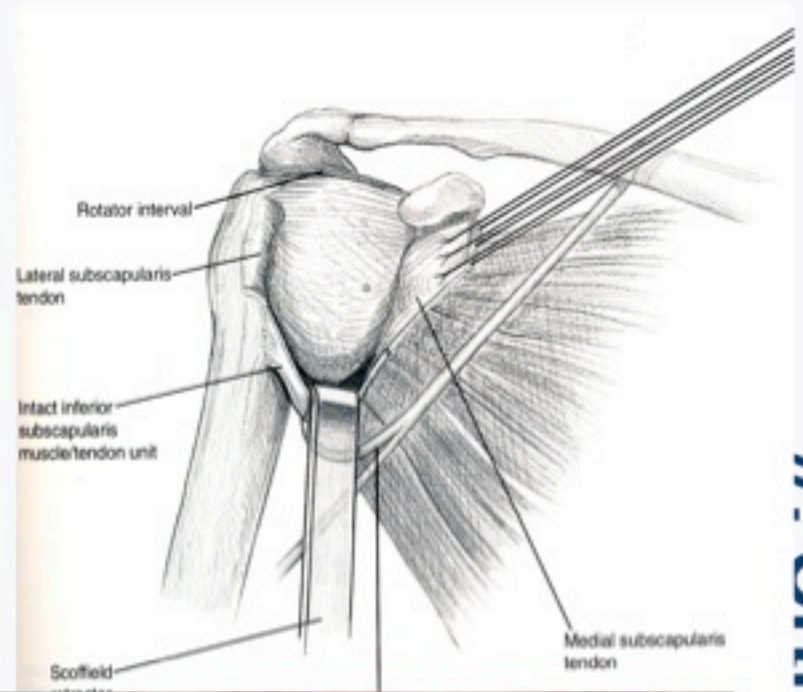
# Capsular shift

- Deltopectoral approach
- Subscapularis split



# Capsular shift

- Subscapularis is cautiously detached from the capsule
- South-North shift



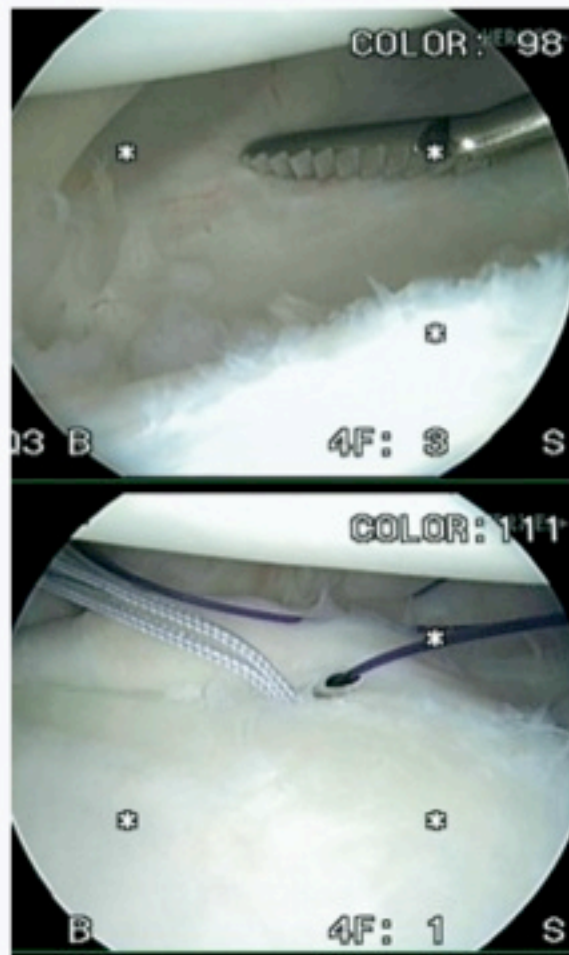
# Plication techniques

- Lateral decubitus
  - traction
- 3 or 4 portals
  - Visualizing from both anterior and posterior portals



# Plication techniques

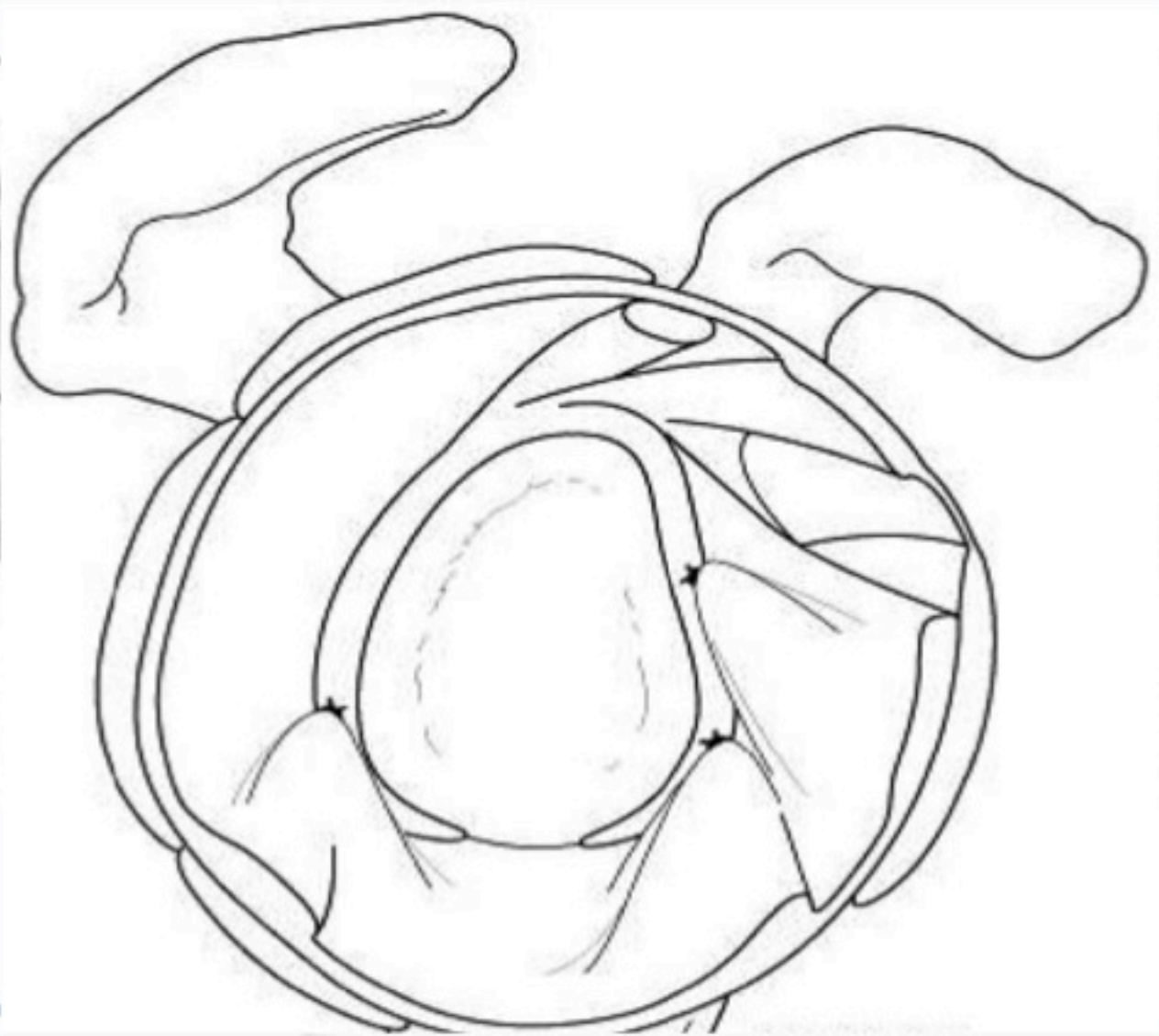
- Treat Bankart lesions if present
  - Suture anchor etc
- Plication of the capsule (Posterior-inferior-anterior)
  - Suture anchors
  - Sutures
- RI closure

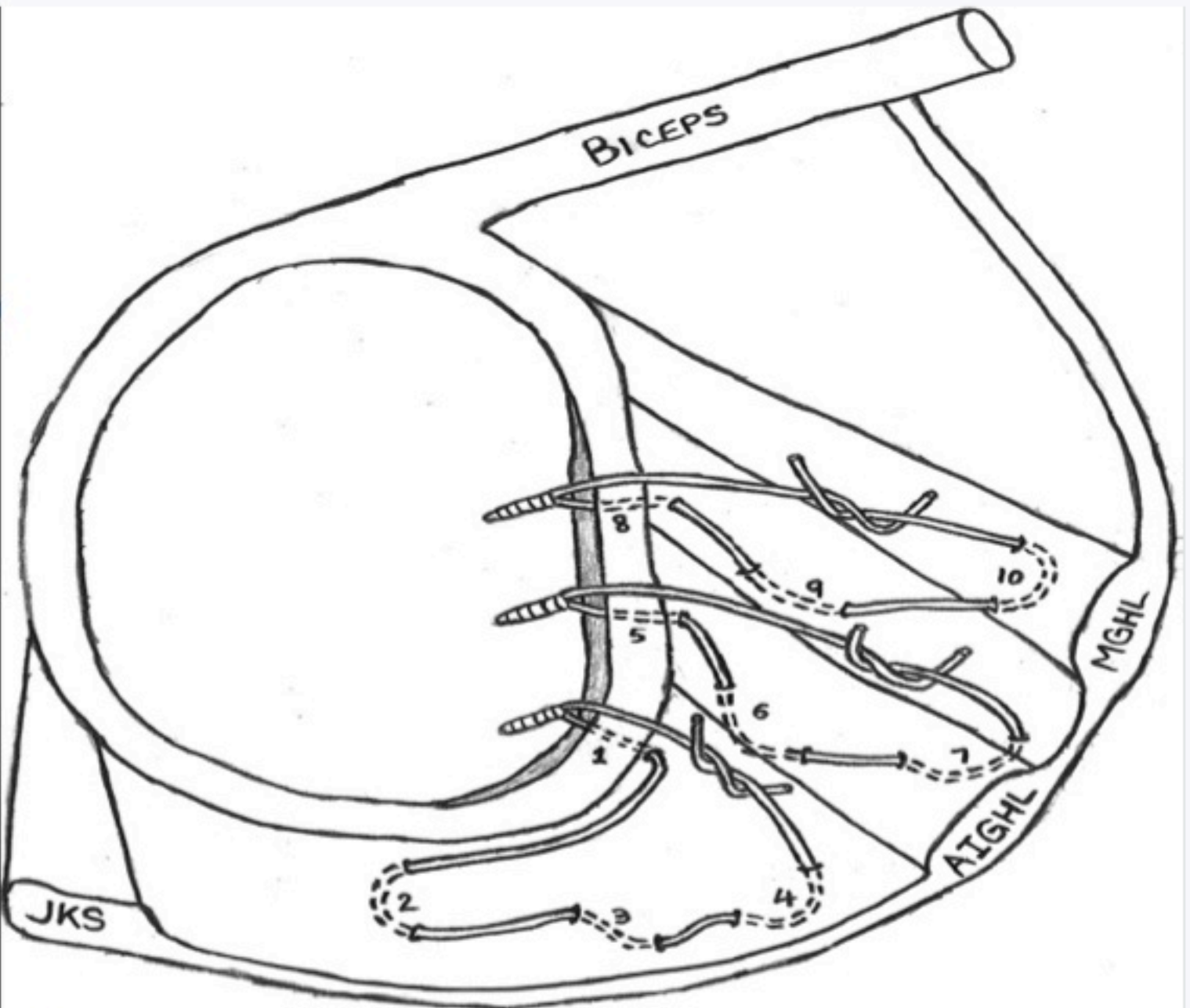


# Which one is the better?

- No good studies
  - Definition?
  - Not a homogenous group of patients
  - Small population
- Techniques/skills
  - Doctor
  - Equipment
  - Quantity of volume reduction?

# Studies





# Studies

- Caprise A et al:  
Open and arthroscopic treatment of MDI of the shoulder. Arthroscopy; Vol 22, 2006
  - Multifactorial nature
  - Thermal capsulorrhaphy not recommended
  - Comparable results
  - No clear advantages

# Operative results Ullevål 2002-2005

- 21 patients, 23 shoulders
  - 17 patients, 19 shoulders responded
- 9 females
- Mean age 32 (19-43)
- Mean following up 45 months

# Operative results Ullevål 2002-2005

- All patients underwent conservative treatment
- 2 patients previously unsuccessfully operated
- 2 open Andrews
- 17 arthroscopic
  - 3 Thermal capsulorrhaphy
  - 14 Plication

# Operative results Ullevål 2002-2005

- Retrospectively contacted by mail
- Self-scoring, VAS scale
- No prospective scoring

# Operative results Ullevål 2002-2005

- Results:
  - 4 patients dislocations and subluxations
    - 1 open
    - 3 TC
  - 2 patients subluxation
    - 2 patients from the plication group

# Operative results Ullevål 2002-2005

- Results:
  - 6 patients incapable of paid employment
    - 3 due to shoulder problems
  - 8 patients improved or unchanged level of activity, 1 not responded
  - 15/19 scored equal to or better than 5 on a VAS-scale when asked if they were satisfied with the outcome

# Conclusion operative treatment MDI

- Inhomogeneous patient population
- Surgery is indicated in carefully selected patients
- No clear advantage for open or arthroscopic treatment
- The results are fairly good but patients must have realistic expectations

# Thank you



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