Midcarpal Instability: Diagnosis and Treatment

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TYPES

A. Dissociative
   SL & LT Lig Rupture

B. Non-Dissociative
   Midcarpal Instability
MCI: Loss of smooth transition of Prox row
Midcarpal Instability

- Heterogenous group of disorders
  - Ulnar Midcarpal Instability (Lichtman '81)
  - Capito-Lunate Instability Pattern (CLIP) (Louis '84)
  - Medial anterior midcarpal Instability (MAMI) (Schernberg '84)
  - Chronic Capito-lunate instability (Johnson '86)

- Instability of Proximal Carpal Row
  - (Wright - JHand Surg Am 1994)
Litchman Classification (1993)

- Palmar
- Dorsal
- Combined P & D
- Extrinsic (Adaptive)
Aetiology

LAXITY VS INSTABILITY

- Laxity: common (Park JBJS 2002)
- Instability: rare

- Minor Trauma

- Loss of proprioceptive control
- Generalised Joint Laxity
Natural History

- Spontaneous improvement
- Joints stiffen with age !!
- Approx 30% improve
- No evidence in Literature
Diagnosis - History

- Dorsal wrist pain - vague
- Giving way
- Clunk- pron & ulnar dev
- Sportsmen - ↓ performance
Diagnosis - Examination

- **Midcarpal Shift Test**
  - Catch-up clunk
  - VISI to DISI in ulnar dev

- **Midcarpal Drawer Test**
  - “That’s it” test !!!

- Exclusion of intrinsic ligament ruptures
Diagnosis- Investigations

- X rays
- MRI
- Dynamic Fluoroscopy
- Arthroscopy

All Normal
Treatments

● Splints

● Physiotherapy:
  ● Biofeedback
  ● General Strengthening
  ● Gyroscope - Spinball

● No proven protocol
Surgical Options

- **Midcarpal fusion:**
  - Triq-Hamate: 50% good (Rao ‘93)
  - 4 corner fusion: ROM 45% (Goldfarb 2004)
● Radio-lunate Fusion
Surgical Options

- Volar Capsular Reefing
- Tenodesis

- 66% failure
  
  (Lichtman ‘93)
Results

- ROM: 90%
- DASH score
  - Pre-op: 38% (range 13-70)
  - Follow up: 17% (range 0-57)
  - P= 0.0004 Paired t-test
- Instability on Pouring Jug:
Conclusion: Ulnar sided Instability

- Not so rare
- Diagnosis: can be difficult
- Treatment: Controversial
- Role of Arthroscopic treatments