Traumatic instability of the trapeziometacarpal joint: emergency strategy

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Traumatic TM instability

- Anatomy – Origin – Mechanics
- Imaging – Incidence
- Reduction: Open or Closed
- Techniques
- Outcome - literature
Trapeziometacarpal Anatomy

• Saddle
• Volar structures
• IMC structures
• Dorsal structures

Ladd A, Lee J, Hagert E: Macroscopic and microscopic Analysis of the thumb caprometacarpal ligaments: A cadaveric Study of ligament Anatomy and Histology JBJS Am; 2011 in publication

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Trapeziometacarpal Anatomy
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• Functions as a derrick crane:
  - MC 1: crane arm
  - Cables: dorsal ligament
Mechanism of TM dislocations

- A dorsal dislocating force
- The primary restraint to dorsal dislocation was found to be...
Mechanism of TM dislocations:

- Bennett Fracture (1882): more common

Same mechanism

Bony avulsion due to strength of ligamentous GECO - Les Arcs - janvier 2012
Imaging
Imaging
Clinical Features

- Swelling
Radiological Features
Treatment

• Open reduction
• Gedda Mobert incision
• Reduction
• Ligament reconstruction?
• Iselin pinning
Congruency of the joint is key to success
Toupin JM, Milliez PY, Thomine JM. Service de Chirurgie Orthopédique et Traumatologique, Hôpital Charles Nicolle, Rouen
Pequignot et al.

- Ligament reconstruction
- Opponens slip of APL which is dorsalised
- Distally based hemi ECRL around base of 1st Metacarpal
Pequignot et al.

• Allows a good stability without perturbing the normal laxity of this joint
• Authors already stress the importance of the value of the dorsal ligamentous CMC 1 apparatus (anatomical study)
• At follow up: superior technique as compared to other ligamentous reconstructions

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Literature overview: Fontes

Fontes D. Service de Chirurgie Orthopédique et de Traumatologie, Hôpital Ambroise Paré, Boulogne, France
Fontes et al.

- Abduction injury in Ball sports
- Hyperabduction injury (ulnar structures)
- Eaton Littler ligamentoplasty
Fontes et al.
La luxation trapezométacarpienne récente traitée par embochage : à propos de sept cas avec un recul moyen de 8 ans (2 – 13 y)

Results:

– 2 moderate pain, 2 joint movement restriction, 1 discrete subluxation
– No degenerative changes

Closed reduction followed by percutaneous pinning remains a reliable and safe procedure with good long-term results.
• Trapeziometacarpal Dislocation is rare
• Ball sports, Road accident, contact sports
• Open or closed reduction and pinning combined with immobilisation (3-6W)
• Ligamentoplasty is not essential but
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