Peggers’ Super Summary of CMCJ OA and Trapeziectomy Surgery
(Mr A Graham)

Patient Selection:
- **Anatomy CMCJ**
  - Biconcave saddle joint
  - Anterior oblique (Beak) ligament primary stabiliser
  - CMCJ JRF is 13x pinch force
- **Documentation**
  - Pain on pinching and grasping
  - Carpal tunnel coincides in up to 50%
  - Z shaped deformity and painful grind test
  - Differentiate from dart throwing movements STT
  - Radiographs looking at thumb in hyperpronation
- **Classification**
  - Eaton and Littler
    - 1 – joint space widening
    - 2 – joint space narrowing with sclerosis
    - 3 – marked narrowing osteophytes >2mm
    - 4 – STT joint also involved
- **Indications**
  - Pain despite non-surgical treatment for 12-18/12
- **Complications**
  - Scar tenderness
  - Persistent pain and 6/12 recovery
  - CRPS
  - Weak pinch
  - Nerve damage and numbness
- **Options**
  - Stage 1 & unstable - Ligament reconstruction using FCR
  - Stage 2-3 – consider denervation or osteotomy as evidence going away from fusion
  - Stage 2 -4 – Trapeziectomy +/- LRTI
  - Silicone replacements
- **Evidence**
  - Dias et al, 2013 JHS (Am)
    - 183 thumbs trapeziectomy vs PL interposition vs FCR LRTI
    - 82% good pain relief 2/3rds regained strength for ADL but no difference in outcomes between groups.
  - Ferrero, 2014 JHS (Euro)
    - 69 CMCJ replacements using biomet had 94% 10 year survival
  - Langerhan et al, 2014 JHS (euro)
    - Trapeziectomy with LRTI offer better PROMs than replacement

Patient Set-up:
- **Equipment**
  - Tendon passing instruments
- **Position**
  - Supine / Tourniquet / Arm board / antibiotics
- **Surgical approach**
  - VOLAR - Wagner approach between Abductor pollicis longus (APL) and thenar intrinsics
    - Distal volar wrist crease deviating radially between dorsal and volar differentiation
    - Blunt dissection to identify any sensory branches
    - Cut through thenar muscle transversely at the proximal aspect of the wound
- **Describe chondral loss:**
  - Degree of chondral loss to trapezium
  - State of STT joint

**Surgical technique**
- McDonald to identify STT and CMCJ
- Volar branch of the radial artery is a useful landmark to identify the STT joint.
- Expose base of thumb metacarpal sufficiently to pass 3.5mm drill bit
- Osteotome trapezium into ¼
- Nibbler piece meal excision with meticulous removal of all trapezium
- FCR attaching onto base of 2-3rd metacarpal will be found at ulnarly at base trapezium
- LRTI Tendon technique
  - Place tension band wire through radial half of FCR
  - Make a horizontal cut 6-8cm proximally along line of FCR tendon
  - Pass tension band wire under fascia out through the proximal hole exposing palmar half of FCR
  - Cut FCR and pull tendon into wound distally
  - Pass tendon through 3.5mm drill hole at base of thumb metacarpal from radial to ulnar
  - Perform tendon tenodesis using 3-0 vicryl
  - Remaining tendon is concertinaed and stitched then placed in the defect left by the trapeziectomy

**Closure:**
- Wash
- Haemostasis
- 4-0 and 5-0 vicryl
- Opsite
- Thumb abduction and extension cast

Palpate trapezium and longitudinal capsulotomy

DORSAL

4cm linear incision made and centered on the radial aspect of the trapezium
- Subcutaneous dissection to identify the sensory branches of the radial nerve
- Dissect down to sheath containing APL and EPB and with sharp dissection open interval between the two.
- Proximal extension pasted STT risk branch of radial artery
- Sharp dissection to reflect trapezium capsule

4cm linear incision made and centered on the radial aspect of the trapezium
- Subcutaneous dissection to identify the sensory branches of the radial nerve
- Dissect down to sheath containing APL and EPB and with sharp dissection open interval between the two.
- Proximal extension pasted STT risk branch of radial artery
- Sharp dissection to reflect trapezium capsule

Describe chondral loss:
- Degree of chondral loss to trapezium
- State of STT joint

Closure:
- Wash
- Haemostasis
- 4-0 and 5-0 vicryl
- Opsite
- Thumb abduction and extension cast
At 2/52 place in TP resting splint if thumb is tending towards adduction for further 4/52 + hand therapy