BASAL JOINT ARTHRITIS
-Arthroscopic interposition-

Didier FONTÈS
(Sports Clinic of Paris – France)
**Instrumentation**

- **Traction Tower (Whipple) or shoulder holder**
  - Stabilization of the forearm (assistant)
  - Single thumb finger trap (2-4 Kg traction)

- **Mini-fluoroscopy for Xray control**

- **Short-barrel optical**:
  - Smooth trochart
  - Diameter : 1,9 mm or +

- **Specific miniaturized instruments**:
  - Probes, dissectors, graspers, baskets...
  - Power Shavers and burs
  - Radiofrequency ablation probe (mini VAPR)
Technique

- Loco-regional anaesthesia
- Tourniquet
- Outpatient surgery
- Thumb traction (2-4 kg)
Surgical Anatomy (CMC joint)

- Portals: 1R, 1U +/- thenar portal
- Pay attention to superficials nerves, radial artery, tendons
Surgical Anatomy (CMC joint)

- Extrinsic ligaments:
  
  *Controversial physiology*
  
  *(up to 17 have been described)*

- Cartilages & bones:

  *Double saddle joint*
Diagnostic Arthroscopic CMC Examination
Basal Joint Arthritis

- Diagnosis Ao (Badia’s Ao classification):
- Evaluation of chondromalacia
- Ligaments laxity association

<table>
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<th>Stage</th>
<th>Arthroscopic Changes</th>
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| 1     | Intact articular cartilage  
                   | Disruption of the dorsoradial ligament and diffuse synovial hypertrophy  
                   | Inconsistent attenuation of the AOL |
| 2     | Frank eburnation of the articular cartilage  
                   | on the ulnar third of the base of 1st metacarpal and central third of the distal surface of the trapezium  
                   | Disruption of the dorsoradial ligament plus more intense synovial hypertrophy  
                   | Constant attenuation of the AOL |
| 3     | Widespread, full-thickness cartilage loss with or without a peripheral rim on both articular surfaces  
                   | Less severe synovitis  
                   | Frayed volar ligaments with laxity |
Badia’s treatment Algorithm
The surgical procedure

- Exploration, Evaluation, Washing
- Debridement (removal foreign bodies)
- Shrinkage
- (+/- Partial trapezeectomy)
- Interposition arthroplasty

(PLA device or palmaris longus)
The surgical procedure

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- Debridement (removal foreign bodies)
- **Shrinkage**
  - (+/- Partial trapezection)
- Interposition arthroplasty
  (PLA device or palmaris longus)

Shrinkage is not cooking!
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PLA AREX®
No more marketed
The surgical procedure

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Polylactic Acid Implant

- Bio absorbable polymer derivative of natural components (sugar + corn)
- PLA is used in aesthetic medicine and surgery (anchors, sutures, stents...)
- In Vitro and in Vivo studies concluded to:
  - Good tolerance
  - Few reverse effects (loose bodies reactions)
  - Progressive fibro-collagenous colonization

Fig. 7. At 3 years the P(l/d)LA 96/4 joint scaffold had almost totally degraded and been replaced by dense connective tissue (D) with abundant collagen fibres. In some areas, there were patches of cell-rich loose connective tissue with tiny P(l/d)LA 96/4 debris particles (star) being phagocytosed by macrophages and foreign-body giant cells (arrow). Masson-Goldner trichrome; scale bar 100 μm.
Experience in Basal Joint or Foot Arthritis Open surgery (RegJoint®)

- Over 5 years of clinical experience
- More than 300 patients operated
- Very good outcomes
- No loose bodies adverse reactions
The introduction of the device
POST-OP Care

- No K wires, no suture, comfort splint, self rehabilitation
Results of Arthroscopic Interposition Arthroplasty

Simple technique with numerous advantages

- No bone perforation
- No trapeziectomy
- No K-wires
- Realignment of M1/ligaments tensioning
- Not expensive
- Fast recovering
Conclusion

• Mini invasive reliable non irreversible procedure
• Place to find beside total trapezeectomy and prosthesis
• Obvious interest of arthroscopic exploration, grading and debridement
• Larger follow-up will be necessary to confirm these encouraging results