MAÏA® (Lépine) CMC 1 Prosthesis

Didier FONTÈS (Sports Clinic of Paris - France)
The design of the Prosthesis
The MAÏA® Prosthesis
(Groupe Lépine)

The implants

The technical material
The Surgical Procedure for MAÏA Prosthesis implantation

Preparation, impaction and reduction of the press-fit cup
Important tips and tricks during implantation of the Maïa® prosthesis

- Perfect centering of the cup (+/- Rx control)
- Preserve trapezium walls during milling
- Polyethylene cup must overtake Tz surface after impaction
- Right tension with 2 mm axial piston during try
- APL tendon dorsalization during capsular closing
Our personal indications and contra-indications

- Eaton I-II-III class or Badia class II-III, resistant to codified medical treatment
- No STT symptomatic arthritis
- Trapezium height > 5 mm
- No dominant hand of heavy laborers
- No work compensation nor previous prosthesis
- Z deformity is not a CI

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<table>
<thead>
<tr>
<th>Stage</th>
<th>Articular Changes</th>
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<tbody>
<tr>
<td>1</td>
<td>Intact articular cartilage</td>
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<tr>
<td></td>
<td>Disruption of the dorsal ulnar ligament and articular supero-lateral hypoplasia</td>
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<td></td>
<td>Incomplete extensor of the AOL</td>
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<td>2</td>
<td>Partial elevation of cartilage on the superior third of the base of the mesocapitale and central part of the dorsal surface of the trapezium</td>
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<tr>
<td></td>
<td>Disruption of the dorsal ulnar ligament and articular supero-lateral hypoplasia</td>
</tr>
<tr>
<td></td>
<td>Complete extensor of the AOL</td>
</tr>
<tr>
<td>3</td>
<td>Widened, ulnar thicker cartilage box with or without a peripheral rim on both articular surfaces</td>
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<td>Loss of arciforma</td>
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<td>Frayed extensor ligaments with laxity</td>
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Eaton Classification

Table 1. Badia Arthroscopic Classification of First Joint Arthritis

2. La prothèse trapézométacarpienne Maïa dans la rhizarthrose – Revue de 100 prothèses à plus de 3 ans – J. Teissier (Chir de la Main 2011)

Post-operative Assessment

Clinical assessment
Post-operative Assessment

Radiological assessment

[Images of radiological assessments of bones, with labels such as 'Face', 'Profil', 'Protrusion of the cup', and 'Longueur de l'os']
Clinical Results at short follow-up (6 months versus Tzectomy)
Radiological Results at short follow-up (6 months versus Tzectomy)

- M1 lengthening +3.4mm
- Sublux reduction 1 cm
- Good centering in 80% cases
- Osseous integration in 64%
  (no cup protrusion, good angular stability, no peri prosthetic bright space)
- 2% mobilization (1 necessity of a Tzectomy)
Results at follow up > 4 years (J. Tessier – 100 prosthesis)

Subjective Satisfaction

- Very satisfied: 71.3%
- Satisfied: 22.2%
- Medium satisfied: 4.8%
- Bad result: 1.6%

93.6% global satisfaction

95.6% of survival probability at 4 years follow up
Results at follow up > 4 years (J. Tessier – 100 prosthesis)

Clinical evaluation

Males: 9.4 Kg / 9.3 Kg
Females: 5.3 Kg / 5.5 Kg
Results at follow up > 4 years (J. Tessier – 100 prosthesis)

Radiological evaluation

- Cup osteolysis seam 17.4%
- Around M1 stem 8.2%
  (no clinical consequence)
- Peri prosthetic ossifications
  (frequent but not symptomatic / arc of motion)
- Cup protrusion 3.2%
- Cup mobilization 4.7%
Results at follow up > 4 years
(J. Tessier – 100 prosthesis)

Complications

- 3 removal of the prosthesis
- 1 dislocation (close reduction)
- 4 Sudeck dystrophy syndromes
- 2 de Quervain tenosynovitis
- 1 cup unsealing
- 1 traumatic Tz fracture
Advantages of MAÏA® PROSTHESIS

Our Preferred treatment of Eaton class II-III CMC 1 Arthritis

- Large indications (small Trapezium)
- Large panel of configurations
- Quick pain free function recovery
- Rare dislocations (retentive cups)
- Z deformity and 1st column length can be corrected
- In case of failure, Trapezectomy = simple alternative