REVISION OF TRAPEZIOMETACARPAL PROSTHESIS BY REPLACEMENT WITH ANOTHER PROSTHESIS: A REPORT OF 10 CASES

G Meyer zu Reckendorf

JC Rouzaud

IMM

Clinique St Roch

Montpellier
Consultant for Keri Medical
Increase of indications for implants in CMC1 OA
More and more younger and active patients
Possibility of revision surgery must to be taken in count
The trapezium: “weak” bone (loosening cavity, fracture…)
Generally for revision surgery: trapeziectomy = “gold standard”
Our experience of 10 cases of revision of failed total TM prosthesis by a novel prosthetic implant
Our series

- 10 cases (9 female, 1 male)
- Mean age 64 y (58-72)
- Operated between 2012 and 2019
- Loosening of “Electra” cup
- 6.5mm impacted metal-metal
- 2 traumatic cases
- Mean delay between initial surgery and revision: 39.9 months (11-87)
Preoperative exploration

Bone scan: loosening of trapezial implant in all cases; loosening of metacarpal implant in 1 case

- CT-scan: no fracture of the trapezium++
Surgical revision

- Cimented PE cup : 2 cases
- Impacted cup “Moovis” with bone graft : 2 cases
- Screwed cup “Moovis” 10 mm without graft : 6 cases
- 1 simple exchange of metacarpal implant
Complications

1 intraoperative fissuring of the trapezium

- 1 early postoperative mobilization of an impacted cup: no revision necessary
Results

- Mean follow-up: 35.8 months (3-73)
- All patients reviewed
- No surgical revision
- “Forgotten prosthesis”: 5 cases
- VAS: 0.625
- Quick-Dash: 17.79
- Pinch: 3.6 kg
- Key-grip: 4.3 kg
Results

- Loosening of one PE cup, but clinically “forgotten prosthesis”
- 1 impacted cup with bone graft: mobilization of the implant with secondary stabilization and osteointegration (“forgotten prosthesis”)
Results

- 8 other cases: well fixed cup without modification of radiographic images
- excellent clinical result
Clinical example

- Female nurse, bilateral CMC1 arthritis
- Bilat Electra (2009 left side age 50y; 2014 right side age 55y)
- Surgical revision:
  - Right side sept 2015: post-trauma loosening
  - Left side feb 2017: aseptic loosening
Right side
Left side

2017

2019
Revision of total TM prosthesis: very few publications

“Gold standard”: trapeziectomy +/- suspension plasty

Particularity of this series: dimension of the initially implanted cup

- 6.5 mm cup: limited loosening cavity
- 9 mm standard cup: reconstruction of trapezium bone is more difficult; bone graft is mandatory (spongious or "structural" bone)
- No fracture of the trapezium

Influence of the dual mobility cup implanted during revision on the final result??
Loosening of a trapezial cup can be surgically revised by another implant.

Implantation of a bone graft depends on the cavity of the trapezium after curettage.

Preop. CT-scan is useful:
- Measuring the dimension of the trapezial cavity
- Diagnosis of a fracture of the trapezium

Preop. fracture of the trapezium = contra-indication for reconstruction of the trapezium.

Simple implant extraction +/- trapeziectomy remains a valuable solution in case of impossibility of reconstruction.
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