Outcomes of trapeziometacarpal joint with Moovis® implant at five years of follow-up

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No conflict of interest
INTRODUCTION

- Moovis® implant has been introduced in 2012
- First dual-mobility implant
- The goal of our study was to evaluate the implant retrospectively at an average follow-up of 5 years
MATERIEL AND METHODS

- The series
  - 46 patients, 7M 39W
  - Average age 68 (56-82)
  - Dominant hand in 35
  - A single surgeon
  - Revision by a single independant examinator
  - Average follow-up : 60 months (24-72)
The prosthesis
- Semi-constrained, non-retentive, dual-mobility
- Cup: frustoconical, HAP coated, diameter 9mm
- Stem: straight, non-anatomic, HAP coated, 4 sizes
MATERIEL AND METHODS

- Clinical evaluation
  - Pain: VAS
  - Grip and pinch strength
  - Active range of motion
  - Thumb retropulsion score
  - Kapandji opposition score

- Functional evaluation
  - QuickDash
  - Michigan Hand Questionnaire
MATERIEL AND METHODS

- Radiographic evaluation
  - Anteroposterior and lateral view (Kapanfji)
  - Preoperative: Dell classification
  - At review
    - Subsidence
    - Loosening
    - Radiolucent line
    - Premature wear of bearing surfaces
    - Ossifications
    - Osteolysis
RESULTS

- Clinical results
  - Pain: VAS 0.7 (0-3)
  - Strength:
    - Pinch: 6.5kg
    - Grasp: 22.3kg
  - Motion:
    - Retropulsion: 2.6/4
    - Kapandji: 9.1/10
  - Function
    - Significant increase of DASH
  - Overall satisfaction
    - 88%: excellent
RESULTS

- Radiological results
  - No loosening / subsidence / fracture / premature wear
  - 1 patient: stem radiolucent line (asymptomatic)
  - 2 patients: small periprosthetic ossification (asymptomatic)
RESULTS

- Complications
  - No infection
  - No surgical revision
  - No dislocation
  - 1 patient: CRPS
  - 3 patients: tenosynovitis (De Quervain, FCR)
  - 2 patients: dysesthesia in a superficial branch of the radial nerve
A few studies (12) about new generation of implants
  - Comparable mean number / follow-up / age

A single study with a dual mobility implant: Moovis® (Dreant and al., 2017)
  - Similar results (mean follow-up: 27.5 months)

Good clinical results similar to our study
  - Pain: 1.7 (0.7)
  - Strength:
    - Grip: 22.3kg (22.7)
    - Pinch: 6.5kg (5.5)
DISCUSSION

- Radiological outcome
  - Only 1 radiolucent line and 2 cases of heterotopic ossification, no anomalies with the cup
  - Much more anomalies in literature
  - In particular: cup loosening or subsidence (in 11 out of 12)

- Complications and surgical revision
  - Revision
    - No case in our study
    - Mean revision rate in literature: 10%
  - Dislocation
    - None in our study
    - At least one for 7 studies out of 12
CONCLUSION

- Our work confirms the good clinical and radiographic mid-term results of the Moovis® implant
- No dislocation (dual mobility)
- No cup loosening (frustoconical shape?)
- No surgical revision
- These results will have to be confirmed by a long-term assessment
- The Moovis® prosthesis seems to be a satisfactory solution for trapeziometacarpal arthritis
Merci pour votre attention