Proximal interphalangeal joint arthroplasty with TACTYS®: clinical and radiographic results at 12-30 months of follow-up

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INTRODUCTION

PIPJ arthroplasty (silicone or pyrocarbon) ➔ Excellent results on pain reduction

But Low PIPJ mobility and high rate of complications

New generation of PIP arthroplasty in titanium/cobalt-chrome and polyéthylène
Tactys® prothesis (Stryker-Memometal, Bruz, France)
Anatomical, gliding, non-constrained implant

- Objectives: Evaluate the results of Tactys® prothesis
  Determine the impact of preoperative range of motion (ROM) on the final clinical outcome

METHODS

Monocentric, multi-operator series (Jan 2014 - May 2016)
27 patients / 33 Tactys® prothesis
Mean age 67 years (43-85)
Inclusion criteria: Painful severe PIPJ osteoarthitis in long fingers, resistant to medical treatment
Postoperative protocol: Early self mobilization under dorsal thermoplastic splint for 4 weeks (MP extension stop 30°, PIP extension stop 10° and flexion stop 50°)

Clinical (pain, PIPJ ROM, grip and pinch strength), functional (QuickDASH and PRWE scores) and radiographic (axial deviation and complications) evaluation

RESULTS

Mean follow up: 21 months (range 12-30)
Statistical improvement of pain with VAS ≤ 3 in 91% of cases

Postoperative ROM were significantly correlated with preoperative values (r = 0.689, p<0.001)

Radiographics: Significant decrease of axial deviation (5,1° vs 10,9°)
Periprosthetic ossifications in 39% do not affect PIPJ mobility (p=0,287)
No periprosthetic osteolysis, prosthetic subsidence, dislocation, fracture or premature joint bearing surface

Complications: Swan-neck deformity in 4 cases (12%): 1 case needed 3 tenoarthrolysis was needed for extension stiffness

DISCUSSION

Comparison of the 3 types of implants by Daecke et al.
No significant differences in PIPJ ROM
Lower rate of surgical revision for silicone implants (11%) versus Pyrocarbon (39%) or titanium/cobalt-chrome (27%)

Tactys® prothesis 58,5°of PIP ROM ➔ 60° functional motion described by Hume et al.
Valid and reliable alternative to other conventional implants for PIPJ
Final PIPJ mobility is influenced by preoperative ROM