Joint survival analysis and clinical outcome of bilateral total joint arthroplasties with the Isis implant

in the treatment of trapeziometacarpal osteoarthritis

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Introduction

• New generation of ISIS TMC total joint arthroplasty: modular, semi retentive, un cemented ball-and-socket hydroxyapatite-coated implant
• Introduced in 2007
• Primary outcome: report the medium- to long-term joint survival of this prosthesis in patient with scaphotrapeziotrapezoid (STT) osteoarthritis
• Secondary outcomes: clinical and functional results

Material and methods

• Multicenter retrospective study involved 20 patients who underwent 21 Isis TMC prosthesis implantations
• From September 2010 to March 2016
• Minimum of 18 months follow-up
• Indication for the procedure: painful scaphotrapeziotrapezoid joint osteoarthritis affecting activities of daily living and a failure of at least 6 months of nonsurgical treatment
• Clinical and radiological assessment was recorded prospectively:
  – before surgery and in the first year by the surgeon
  – at the latest follow up by an independent operator
• We compared before surgery and at the latest follow-up:
  – the means of the Kapandji index
  – the grip strength
  – the pinch strength
  – Quick Dash
• Clinical and radiological complications were registered

Results

• Prosthesis included in the survival analysis: 21 (21 arthroplasties from 20 patients)
• Mean follow-up: 46.9 months (range, 18-111 months)
• Mean age at surgery: 66.4 years (range, 54-84 years)
• At the latest follow-up:
  – Mean Quick Dash improved from 70.3 ± 3.2 to 13.2 ± 1.5
  – Mobility of the thumb was restored
  – Kapandji score: 9.45/10 (range, 5-10)
  – Mean key pinch improved by 30%
  – Mean grip strength improved by 46%

• At the latest follow-up:
  – No prostheses required revision surgery
  – No dislocation

→ There was no symptom for these different radiological complications

Conclusion

• In our series, the Isis prosthesis in patients with scaphotrapeziotrapezoid osteoarthritis has proven to be a reliable and effective implant
• Mean motion and strength increased whereas pain decreased after surgery and these results remained constant within the follow-up period

Bibliography