

Title of Article: Primitive Results After Medial-Pivot Knee Arthroplasties: A Minimum 5-Year Follow-Up Study
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Product(s): ADVANCE® Medial-Pivot

Publication Highlights

- Fan et al. investigated the clinical and radiographic results of 59 ADVANCE® Medial-Pivot (MP) TKAs after a 5-year minimum follow-up.
 - “Our study demonstrated excellent midterm results with the medial-pivot TKA prosthesis.”
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Publication Summary

Methods

- Prospective, single-center clinical study of 55 patients who underwent primary knee replacement with MP TKAs (58 knees)
- Mean Age: 65.1 yrs (range, 48-83 yrs); M/F: 13/42
- Primary diagnosis: degenerative osteoarthritis (55), posttraumatic osteoarthritis (3), rheumatoid arthritis (1)
- Mean tourniquet time: 80.1 min (range, 52-115 min)
- Mean Blood Loss: 170 mL (range, 100-460 mL)
- Average Hospital Stay: 7.6 days (range, 6-11 days)
- Mean Follow-up: 64.7 months
- Outcome measures: Knee Society (KS) rating system, radiographic evaluation, and range of motion (ROM)

Results

- Radiographic evaluation demonstrated no severe malalignment, prosthetic loosening, or osteolysis
- Range of motion significantly improved from 103.5±2.0° to 115.4±1.8° postoperative
- Significant improvement in KS objective score: Pre-op: 30.5 (range, 0-73) Post-op: 91.1 (range, 35-100), p<0.0001
- KS pain scale significantly improved 5.6 (range, 0-25) to 43.2 (range, 15-50) postoperatively, p<0.0001
- Significant improvement in KS functional score: Pre-op: 36.7 (range, 15-70); Post-op: 82.3 (range, 20-100), p<0.0001
- Radiolucent lines were observed in 2 patients (1 over femoral zone I and the other over tibial zone II)
- Complications: 2 wound infections developed 2-4 weeks post-op and one knee displayed anterior femoral notching (3mm- no additional treatment was required in this patient)

Overall Conclusions

- “Our study demonstrated excellent midterm results with the medial-pivot TKA prosthesis.”
- The MP TKA exhibited significant improvements in range of motion, objective KS score, pain scale, and functional score.
- Since anterior-posterior translation is restricted in the insert’s medial compartment, long-term studies with large patient cohorts are needed to investigate insert longevity and tibial component loosening.