

The UK INFINITY Study - Early Experience and Complications of a Multicenter series of 504 Total Ankle Arthroplasties.

David N. Townshend, MBBS, FRCS (Tr&Orth); Rajesh Kakwani; Murty N. Aradhyula; John C. Mckinley; Hisham Shalaby; Robert Smith; James H. Davenport, FRCS (Tr&Orth); Michael Karski; Timothy Clough; Chris Blundell, MD, FRCS; Howard Davies, MD; Martin Raglan, MD; Sunil Dhar, MBBS, MS, MCh; Steve Hepple, MB ChB; Heath Taylor; James Davis, MD; Ian T. Sharpe, MD; Andrew J. Bing; Andrew J. Goldberg, MD, MBBS, FRCS (Tr&Orth)

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Introduction/Purpose: This is the first report from the UK INFINITY study. This is a multicentre, non-inventor, prospective observational study of 504 INFINITY fixed bearing total ankle arthroplasties. We report our early experience, complications, radiographic and functional outcomes of this prosthesis.

Methods: Patients were recruited from 11 specialist centres between June 2016 and November 2019. Demographic, radiographic, and functional outcome data (Ankle Osteoarthritis Scale, Manchester Oxford Questionnaire and Euroqol 5D-5L) were collected preoperatively, at 6 months (454 patients), 1 year (328 patients) and 2 years (104 patients). The average age was 67.8 (range 23.9 to 88.5) and average BMI 29.9 (18.9 to 48.0). The COFAS grading system was used to stratify deformity. There were 259 (51.4%) COFAS Type 1, 122 (24.2%) COFAS Type 2, 32 (6.3%) COFAS 3 and 87 (17.3%) COFAS type 4. 38 patients (7.54%) presented with inflammatory arthritis. 101 (20.0%) of implantations utilised patient specific instrumentation (Prophecy). 169 (33.5%) of patients underwent an additional procedure at the time of surgery. Early and late complications and reoperations were recorded as adverse events. Radiographs were assessed for lucencies, cysts and/or subsidence.

Results: There was a significant ($p < 0.01$) improvement across all functional outcome scores at 6 months, which was sustained at one and two years. There was no significant difference with the use of patient specific instrumentation. 167 (33.1%) underwent additional procedures at index surgery. At the latest follow up 3 implants (0.6%) have been revised. One patient at 6 weeks for deep infection, one patient at 6 months for subsidence and one patient at 18 months for loosening. There were an additional 13 reoperations (2.6%) at the latest follow up.

Conclusion: The UK INFINITY study is the largest reported multicentre study of a Total Ankle Arthroplasty to date. This study has shown a low early revision rate and high functional outcomes of the INFINITY prosthesis.

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