

Survival Of Uncemented, Non-HA Coated Femoral Stems: Comparison Of Two Common Morphologies

David Woodnutt, Amanda King, Mark Mullins, Matthew Dodd
Morrison Hospital, Swansea, UK

A retrospective comparative consecutive analysis of 316 hips (in 249 patients) using a non-hydroxyapatite (HA) coated, dual-coated titanium plasma sprayed stems vs 592 hips (in 515 patients) using HA coated stems was undertaken for mid-term results (8 year maximum) of fixation. Average age of 47 vs 64 (age range of 28 to 90) was included for all causes of arthritis including 2% for rheumatoid arthritis and 6% for Avascular necrosis. Gender ratio was 50:49% male:female in both groups. The average weight of patients in each group was 83kg (BMI 29.4kg/m²). A matched spread of femoral bone type Dorr A (24%,23%),B (63%,63%),C (12%,14%) was present. No cases of aseptic loosening of the stem were found in either group. 2 fractures occurred peri-operatively in both groups: these were all treated non-operatively with reduced weight bearing for 6 weeks without further complication. No difference in clinical outcome scores between either group also was noted (Average HHS 48, OHS 24 pre-operatively, improving to 91 HHS and 46 OHS post-operatively). 2 cases (0.77%) were revised in the non-coated group: 1 for acetabular movement; one for dislocation. 6 cases (0.10%) were revised in the coated group: 1 for sepsis, 2 for instability, 1 periprosthetic fracture within 6 weeks and 1 cup failure. 9 cases died in both groups after more than 6 weeks following index surgery. Kaplan Meier survival curves gave 99.3% & 98.0% probability of failure at 8 years respectively. PTIR values of 4.0 and 3.4 events per 1000 years of implantation were calculated. There was no statistical significance ($p>0.05$) between either group for any of the outcome measures. We believe that a non-HA coated stem performs as well as a coated stem, for fixation and clinical outcome, in all patient groups.