

Results of Birmingham hip resurfacing at 12 to 15 years

A SINGLE-SURGEON SERIES

J. Daniel, C. Pradhan, H. Ziaee, P. B. Pynsent, D. J. W. McMinn

From The McMinn Centre, Birmingham, United Kingdom

We report a 12- to 15-year implant survival assessment of a prospective single-surgeon series of Birmingham Hip Resurfacings (BHRs). The earliest 1000 consecutive BHRs including 288 women (335 hips) and 598 men (665 hips) of all ages and diagnoses with no exclusions were prospectively followed-up with postal questionnaires, of whom the first 402 BHRs (350 patients) also had clinical and radiological review.

Mean follow-up was 13.7 years (12.3 to 15.3). In total, 59 patients (68 hips) died 0.7 to 12.6 years following surgery from unrelated causes. There were 38 revisions, 0.1 to 13.9 years (median 8.7) following operation, including 17 femoral failures (1.7%) and seven each of infections, soft-tissue reactions and other causes. With revision for any reason as the endpoint Kaplan–Meier survival analysis showed 97.4% (95% confidence interval (CI) 96.9 to 97.9) and 95.8% (95% CI 95.1 to 96.5) survival at ten and 15 years, respectively. Radiological assessment showed 11 (3.5%) femoral and 13 (4.1%) acetabular radiolucencies which were not deemed failures and one radiological femoral failure (0.3%).

Our study shows that the performance of the BHR continues to be good at 12- to 15-year follow-up. Men have better implant survival (98.0%; 95% CI 97.4 to 98.6) at 15 years than women (91.5%; 95% CI 89.8 to 93.2), and women < 60 years (90.5%; 95% CI 88.3 to 92.7) fare worse than others. Hip dysplasia and osteonecrosis are risk factors for failure. Patients under 50 years with osteoarthritis fare best (99.4%; 95% CI 98.8 to 100 survival at 15 years), with no failures in men in this group.

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Key Figures:

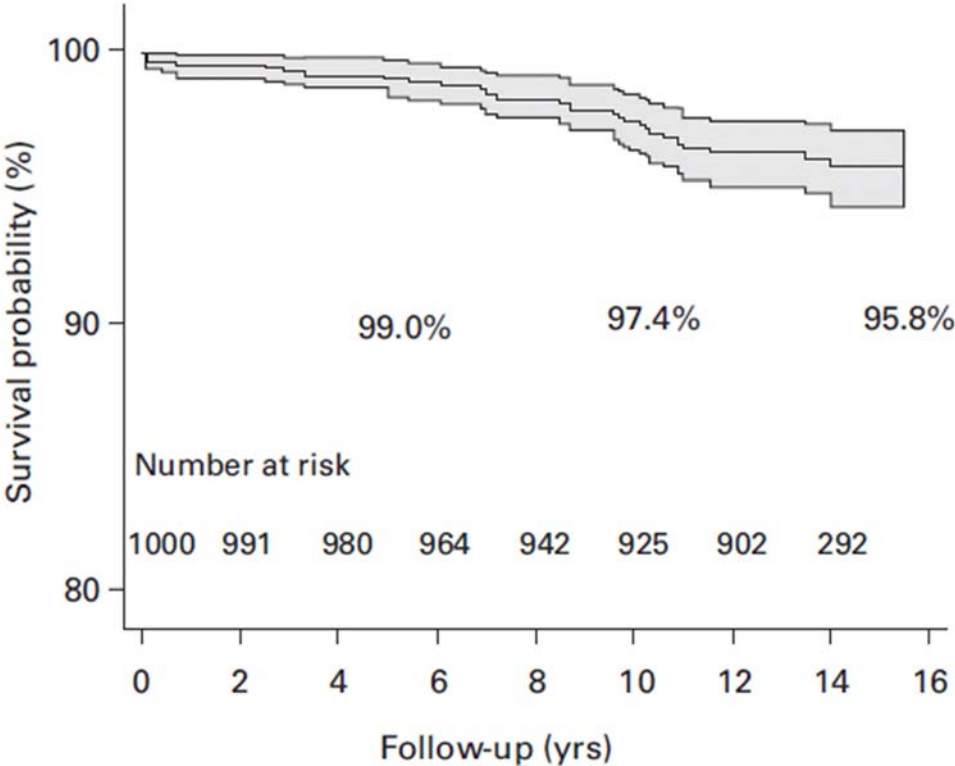


Fig. 2: Kaplan–Meier survival analysis with 95% confidence intervals shown, of the first 1000 consecutive BHRs, including all ages, all diagnoses and both genders.

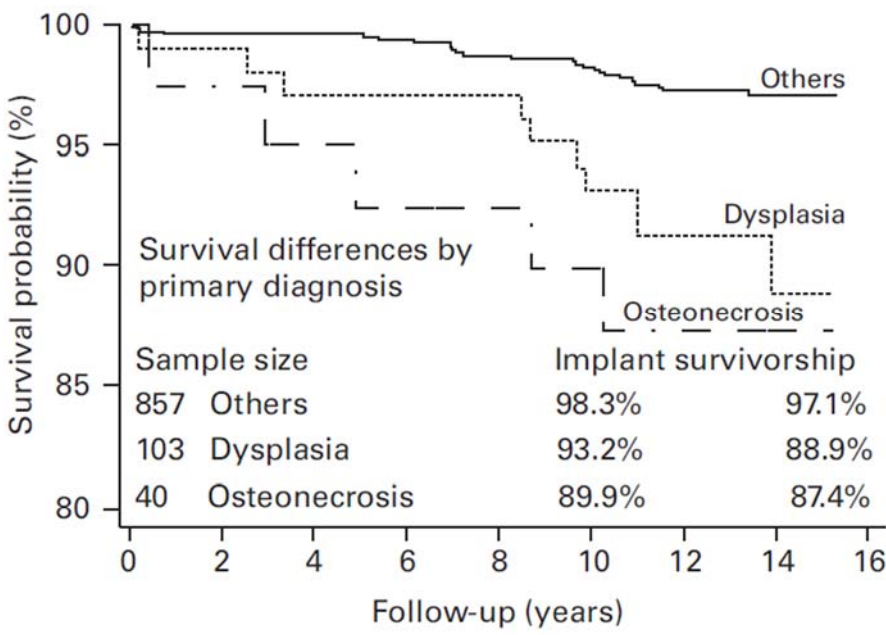
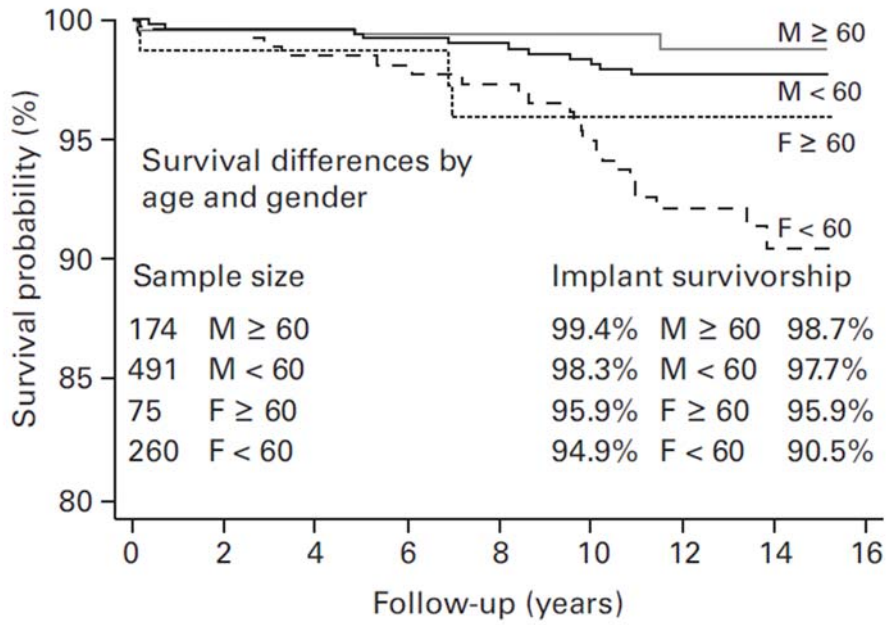


Fig 3: Differences in Kaplan–Meier survivorship based on age, gender and primary diagnosis