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The Avon Patellofemoral Joint Arthroplasty: 2- to 18-Year Results of a Large Single-Centre Cohort

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Summary:

this large cohort study demonstrates that satisfactory results can be obtained with the Avon patellofemoral joint arthroplasty into the long-term; both surgeon and patient factors are important in achieving good postoperative outcomes.

Abstract:

Aims

This study reports on the medium- to long-term implant survivorship and patient-reported outcomes for the Avon patellofemoral joint (PFJ) arthroplasty.

Patients and Methods

A total of 558 Avon PFJ arthroplasties in 431 patients, with minimum two-year follow-up, were identified from a prospective database. Patient-reported outcomes and implant survivorship were analyzed, with follow-up of up to 18 years.

Results

Outcomes were recorded for 483 implants (368 patients), representing an 86% follow-up rate. The median postoperative Oxford Knee Score (0 to 48 scale) was 35 (interquartile range (IQR) 25.5 to 43) and the median Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC, 0 to 100 scale) was 35 (IQR 25 to 53) at two years. There were 105 revisions, 61 (58%) for progression of osteoarthritis. All documented revisions were to primary knee systems without augmentation. The implant survival rate was 77.3% (95% confidence interval (CI) 72.4 to 81.7, number at risk 204) at ten years and 67.4% (95% CI 72.4 to 81.7 number at risk 45) at 15 years. Regression analysis of explanatory data variable showed that cases performed in the last nine years had improved survival compared with the first nine years of the cohort, but the individual operating surgeon had the strongest effect on survivorship.

Conclusion

Satisfactory long-term results can be obtained with the Avon PFJ arthroplasty, with maintenance of patient-reported outcome measures (PROMs), satisfactory survival, and low rates of loosening and wear.