Cementless total hip arthroplasty using the Spongiosa-I fully coated cancellous metal surface: a minimum twenty-year follow-up.

Abstract:

We present the results of cementless total hip arthroplasty performed with use of an anatomically adapted femoral stem and hemispherical cup with a fully coated Spongiosa-I metal surface, which was designed to achieve a surface similar to human cancellous bone. The purpose of the present retrospective case series was to determine the long-term outcomes of this hip arthroplasty system after a minimum of twenty years of follow-up. Between 1983 and 1985, 209 consecutive total hip arthroplasty procedures (199 patients) were performed with use of the first-generation Spongiosa metal-surface chromium-cobalt total hip implant with an articulating surface consisting of a ceramic head and an ultra-high-molecular-weight polyethylene liner. We report the clinical and radiographic outcomes, the rates of and reasons for revision, and the influence of sex and age on outcome and complications. At the time of the latest follow-up, twenty-seven patients had died and thirteen patients had been lost to follow-up; none of these forty patients had had revision surgery. The outcomes for 159 patients (169 prostheses) were reviewed. The mean duration of follow-up was 262 months (range, 242 to 275 months). There were nineteen revisions, including fourteen revisions of the femoral stem, two revisions of the acetabular cup, and three revisions of both components. The mean Harris hip
score for patients who did not undergo revision surgery was 82 points. The probability of survival of both components at twenty years, with revision for any reason as the end point, was 97%. The probability of survival of the acetabular component was 98%, and the probability of survival of the femoral component only was 86%. The probability of component survival was significantly increased among older patients. The results of cementless hip arthroplasty with use of the first-generation Spongiosa implant were excellent at a minimum of twenty years of follow-up. The probability of survival of the acetabular component exceeded that of the femoral stem.