Paper #35

Contemporary Total Hip Arthroplasty in Patients less than 30 Years: 10 Year Outcomes Are Encouraging

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Introduction: Contemporary total hip arthroplasty (THA) in very young patients is controversial, yet increasingly performed. There remains a major need for mid to long-term data on this population to inform surgeon and patient decision-making. The purpose of this study was to analyze primary THA with a HXLPE bearing surface in patients ≤30 years. We investigated implant survivorship, PROs, and polyethylene wear rates.

Methods: This investigation was a retrospective review of prospective data. 127 hips that underwent primary THA with a HXLPE liner were reviewed at mean 10.2 years follow-up. Mean patient age was 22 years (range 11-30). PROs included the modified Harris Hip (mHHS), WOMAC, UCLA, SF-12 physical and SF-12 mental scores. Linear and volumetric wear rates were measured (Martell Hip Analysis Suite).

Results: At an average 10.2 years 95.3% of the THAs survived and 4.7% had been revised. Reasons for revision included instability (2), infection (2), aseptic loosening (1), and liner disassociation (1). The mHHS increased from 47 to 85 ($p<0.001$). WOMAC pain (45 to 79), stiffness (42 to 70) and physical function (47 to 78) all had clinically important improvements ($p<0.001$). The average UCLA score increased from 3.8 to 5.9 ($p<0.01$). SF-12 physical score improved (31 to 41, $p<0.01$) while SF-12 mental score did not change (49 to 44, $p=0.25$). Mean linear wear rate was 0.03 mm/yr (SD 0.129) and mean volumetric wear rate was 29.00 mm3/yr (SD 42.58).

Conclusions: THA with a HXLPE bearing surface performed in very young patients (≤30 years) demonstrates survivorship of 95% at 10 years follow-up. Marked improvements in pain, function, and activity, combined with low failure and polyethylene wear rates strongly support this procedure in very young patients with disabling end stage hip disease.

Notes