Total hip replacement in patients under 30 years – a review of functional outcomes.

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Background: The benefits of total hip arthroplasty (THA) in older patients have been well documented. However the benefit in very young patients under the age of 30 years is less clearly defined. These patients are more likely to have pathologies other than osteoarthritis which may make THA technically more challenging. In addition the longer life expectancy and high functional expectations of younger patients put higher demands on implants and bearing surfaces.

Aim: We aim to determine whether THA provides improved functional outcome in patients under the age of 30 years.

Method: We performed a systematic review of the literature and meta-analysis using PRISMA methodology to assess whether joint replacement in this very young patient group provides significant functional improvement and whether these procedures are associated with good implant survivorship. A systematic search of Medline, Embase, the Cochrane library and Google scholar identified 566 THA procedures in patients under 30 years of age. Patients were followed up for a minimum of 2 years.

Results: Overall patients showed an improvement in functional score and symptom relief. Uncemented stems showed good integration with no signs of loosening. Cemented implants showed high rates of loosening.

Conclusion: This study shows that THA in the very young patient can provide good functional improvement and relief of symptoms and that the more modern uncemented implant designs used with hard-on-hard bearings can be associated with improved implant survival. Long-term prospective studies are necessary to confirm the superiority and improved survivorship of these newer implants.