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CORR INSIGHTS

CORR Insights®: What is the Prognosis of Revision Total Hip Arthroplasty in Patients 55 Years and Younger?

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Where Are We Now?

Encouraged by the clinical success of THA in elderly patients, surgeons now implant THAs in younger patients with hip arthritis. Unfortunately, traditional hip implants do not last as long in this population, partly due to the higher activity levels of younger patients. These patients also often have structural deformities around the hip, mostly on the acetabular side, which contribute to their early osteoarthritis. Some research suggests [3] using implants with a long track record of clinical success to prevent even more disappointing outcomes. However, the clinical reality is completely different. Younger patients are in the midst of a total hip paradox. In an effort to overcome the disappointing outcomes of THA in younger patients, orthopaedic companies promoted and orthopaedic surgeons implanted, the most cutting-edge prostheses in this young patient group. However, these implant selections currently remain unsupported by clinical data [2]. I believe this will continue to result in an increasing number of failed hip arthroplasties in relatively young patients.

Where Do We Need To Go?

Revisions are inevitable when surgeons implant THAs in young patients. We should use only implants with a proven clinical track record, along with a reputation for being easily revised. We need revision techniques and implants that can restore the biomechanics of the hip. We currently have only a limited understanding of this issue. The valuable paper by Adelani et al. tries to fill this gap, reporting the outcome of modern revision techniques using noncemented implants in 103 hips. The authors use a case-control study design to evaluate intermediate-term survivorship, complications, and activities of revision procedures relative to primary implantations. As expected, the authors found more complications, and lower clinical outcome scores in the revision groups. However, the authors found a striking difference in the followup outcomes. After a mean followup of nearly 7 years, the survival rate of the revision THA was 69%, compared with 99% of the primary noncemented total hips. Although the few studies available on the topic may not be precisely comparable, the outcome of the newer noncemented implants in revisions for younger patients is not better than the results reported in these older outdated reports, championing cemented techniques. With the increasing number of expected revisions in relatively young patients, there is strong need for revisions techniques with better long-term outcomes.

This CORR Insights® *is a commentary on the article* "What is the Prognosis of Revision Total Hip Arthroplasty in Patients 55 Years and Younger?" *by Adelani and colleagues available at:* DOI: 10.1007/s11999-013-3377-9.

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How Do We Get There?

Surgeons must discuss the unsatisfying long-term outcomes of primary THA with their young patients. We need to develop techniques or implants for primary THA with better long-term outcomes. Most of the implant failures are seen on the acetabular side. Hopefully, the newer acetabular implants using trabecular metal and highly-crosslinked polyethylene will be helpful [4]. Maybe a more biological approach — restoring as much bone as possible during primary total hip of the often distorted acetabulum using bone grafts — can be another valuable treatment option for this young patient population [1]. Orthopaedic surgeons should follow their patients on a regular basis, in order to identify patients who are losing bone and to intervene before it becomes severe. There currently exist no revision techniques that offer acceptable durability for young patients. Newer techniques, like using trabecular metal augments, remain unproven. Perhaps newer polyethylenes can be part of the fresh strategy. Biological reconstruction techniques focusing on bone repair, such as impaction allografting of the acetabulum [1], may also be helpful.

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