9:05 am:

**An Independent Audit of the New Zealand Joint Registry (NZJR) at 13 Years – Are we Adequately Capturing Revision Data?**

**Presenting:**
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**Introduction and Aims**

We reviewed all patients in the NZJR who had undergone Total Ankle Arthroplasty (TAA) and attempted to contact each one to establish the true revision and reoperation rate. We also looked at patient and surgical factors predictive of need for early revision.

**Methods**

We identified all patients from the NZJR who had undergone primary TAA from January 2000 to June 2012. As at March 2013, we attempted to contact each individual by phone to verify whether any further surgical procedure had been performed on or around the ankle post primary arthroplasty. Of those who volunteered a history of further surgery, we obtained their records from the treating surgeon to establish the exact nature of the subsequent procedure. If any component of the ankle had been revised we also aimed to establish the reason for revision. We compared the revision group to the rest with respect to gender, age, body mass index, primary diagnosis and implant.

**Results**

As at June 2012, 887 ankles had been entered into the NZJR. 63% were male and 37% female. Mean age at index TAA was 65.0 years. The primary diagnosis was inflammatory arthritis in 10.7% and post fracture in 10.1%. The most common implants were the Johnson and Johnson Mobility (49.2%) and the Tornier Salto mobile bearing (30.2%). Up until March 2013 as documented by the registry, 58 ankles had been revised with a total of 66 procedures (6 had been revised twice and 1 three times).

We contacted 640 patients with 694 ankles. An additional sixty patients were deceased with 63 ankles. We therefore have accurate information on 757 ankle replacements and found 97 ankles had been revised. Seven had been revised twice and two three times, establishing a total of 108 procedures. Of the 42 missed revisions, 64% were conversions to fusion and 12% were isolated bearing exchanges. 79% of revisions were carried out before five years. Sixty revisions were for failure of ingrowth or early and late subsidence; 14 for infection; 19 for unexplained pain and 15 were isolated bearing exchanges in association with other surgery such as grafting cysts or periarticular osteotomy. Odds of revision were higher in females, patients <65 at index TAA and those in whom the primary indication was post-fracture degeneration. 4.5% of the group had undergone debridement without revision. Subjacent fusion post replacement had only been performed in 1.5%.

**Conclusion**

We established that the true revision rate is much higher than that reported in the NZJR. This disappointing result raises concerns about the accuracy of all ankle registries which rely on surgeon and
nursing staff to reliably record revision operations. Conversion to fusion can be overlooked but must be included as a revision procedure in any joint registry.