THE USE AND OUTCOME OF HIGH TIBIAL OSTEOTOMY FOR KNEE OSTEOARTHRITIS IN SWEDEN 1998-2007
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Purpose: Unlike for knee arthroplasties, there is no national register on high tibial osteotomies (HTO’s) performed in Sweden. Information on the outcome of HTO as a treatment for knee osteoarthritis (OA) is insufficient. The aim of this study was to evaluate the use and outcome, expressed by rate of revision to knee arthroplasty, of HTO’s performed in Sweden 1998-2007.

Methods: Using the in-patient and out-patient care registers of the Swedish National Board of Health and Welfare during 1998-2007, patients 30 years or older, with the surgical code NGK 59 (angle, rotation or correction osteotomy in the knee or tibia) in combination with the ICD-10 code M17 (knee osteoarthritis), were identified. The number of surgeries per clinic and County, the gender- and age distribution as well as changes over time were evaluated. Conversion of HTO to knee arthroplasty was identified using the Swedish Knee Arthroplasty Register (SKAR). 446/3,246 HTO’s had been converted but for 42 of these side of the the HTO was unknown (knee osteoarthritis), were identified. The number of surgeries per clinic

Results: During 1998-2007 3246 HTO (2885 patients) were identified, or 325 per year on average. 8% were out-patient surgeries. During the period there was a 30% decrease in the number of HTO’s performed per year. Men had surgery more often (69%) and their mean age at surgery was 52 years (SD 8) as compared to 50 years (SD 7) in women. In 1998, 58% of the patients were younger than 55 years, compared to 65% in 2007, with similar trends for men and women. HTO’s were carried out in all Counties of Sweden. Five clinics (out of 75) performed 25% of all the HTO’s. As a percentage of all knee reconstructions, HTO decreased from 6% in 1998 to barely 3% in 2007. The cumulative revision rate (CRR) at 10 years, based on a worst case scenario, was 16% (95% CI 14-24). The risk of revision after adjusting for age was significantly higher in women than men (RR 1.49 (95% CI 1.14-1.93), p<0.002).

Conclusions: In absolute numbers HTO has decreased by 30% during 1998-2007 and constituted less than 3% of the primary knee reconstructions in 2007. HTO was almost exclusively used for patients younger than 65 years. The majority of the HTO’s was performed in clinics performing only few surgeries per year. With HTO becoming uncommon, a need to concentrate these surgeries to fewer and more experienced centers should be considered. The rate of conversion to knee arthroplasty was similar to what has been seen for unicompartmental knee arthroplasty.