Revising an HTO or UKA to TKA: 
Is It More Like a Primary TKA or a Revision TKA?

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Introduction: The ease and success of revising a unicompartmental knee arthroplasty (UKA) or a high tibial osteotomy (HTO) to a total knee arthroplasty (TKA) is controversial. Our purpose was to compare a cohort of patients who underwent revision of a UKA to a TKA or a HTO to a TKA to matched cohorts of patients who underwent (1) a primary TKA and (2) an aseptic both component revision TKA.

Methods: 49 consecutive patients revised from a UKA and 43 revised from an HTO to a TKA were matched by age and BMI to 43 aseptic both component revision TKAs and 97 primary TKAs. The outcomes studied included Knee Society Scores (KSS), range of motion (ROM), Knee Function Scores (KFS), operative time, postoperative complications, revision rates and reasons for revision surgery, need for stems/augments/constrained implants, and length of stay. ANOVA was used to compare the differences in means (p<0.05).

Results: The mean improvement in KSS and KFS in the UKA to TKA, HTO to TKA and primary TKA cohorts were similar with the numbers available for study (p>0.05). Primary TKA and HTO to TKA had significantly better outcomes than the revision cohort in KFS score improvement (p<0.05). Length of stay was significantly shorter in the primary TKA cohort than the other 3 cohorts (p<0.05, all). Primary TKA had the highest postoperative motion, but was only significantly better than aseptic revision TKA (p<0.05). Revision implants were required in 29% of UKA to TKA procedures compared to 2% of primary TKAs.

Conclusions: In our cohort of patients, revising an HTO to TKA and a UKA to a TKA both had outcomes that were more similar to a primary than a both component revision TKA although revision implants were required more commonly and length of stay was longer than a primary TKA.