Similar and good fixation of cementless and cemented Oxford® Partial Knee Tibial Trays at 5 years follow-up. A Randomized RSA Study

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Background: Cementless fixation of Oxford® Partial Knee Tibial Trays is gaining in pass on the market and has promising results.
Purpose / Aim of Study: To compare fixation of cementless and cemented (gold standard) Oxford® Partial Knee TT up to 5 years follow-up.
Materials and Methods: 79 patients (48 men) were randomly allocated to surgery with cementless (CL) hydroxyapatite-coated (n=25) or cemented (C) (n=54) Oxford® Partial Knee tibial trays (Biomet) in a multicenter study. Femoral components were either single-pegged or double-pegged in the cemented group and double-pegged in the cementless group. Refobacin bone cement (Biomet Inc.) was used. Evaluation of implant migration, and clinical outcomes (OKS) was performed at 6 weeks, 3 and 6 months, and 1, 2, and 5 years.
Findings / Results: CL migrated more than C at all follow-ups ($p<0.01$), however migration stabilized at 6 months follow-up. At 5 years CL (n=23) migrated 0.49mm (sd 0.34) and C (n=48) migrated 0.38mm (sd 0.63) mean total translation ($p=0.01$). 5 year subsidence was higher for CL compared to C ($p=0.01$). Between 2 and 5 years CL migrated 0.09mm (sd 0.10) and C migrated 0.13mm (sd 0.33) total translation ($p=0.48$). 16% of CL and 22% of C migrated more than 0.2mm total translation between 2 and 5 years follow-up ($p=0.55$). At 5 years mean OKS was 39 (range 12-48) and similar between groups ($p=0.47$) with comparable improvement from baseline ($p=0.18$). 91.6% with C and 94.1% with CL were satisfied with the result ($p=0.91$).
Conclusions: Cementless Oxford® Partial Knee tibial trays migrated initially but stabilized at 6 months probably due to osseointegration. Between 2 and 5 years follow-up cementless fixation was as good as cemented fixation (gold standard). Functional results were good and satisfaction high and equivalent in both groups.

No conflicts of interest reported