

Rotational Laxity and Collateral Ligament Laxity after Total Knee Arthroplasty with Rotating Platform

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Summary:

TKA with rotating platform preop valgus knees show a significantly increased rotational laxity but no increased collateral ligament laxity compared to preoperative varus knees

Abstract:

Question: Is there an increased laxity of clinical significance at knees with preoperative(preop) valgusalignment compared to knees with preoperative varusalignment after total knee arthroplasty (TKA) with rotating platform?

Methods: Retrospective study including 81 patients (43f, 38m), 6 years follow up, either preoperative valgus- or varusalignment of the leg. All patients had been supplied with the same TKR (CR) with a rotating platform. The subjective and objective findings were assessed by KSS, OKS, WOMAC, KOOS and IKDC 2000. Rotational laxity of the joints was evaluated with a validated instrument (Laxitester) under a 2 Nm torque in internal and external rotation of the knee 30 ° flexion of and compared to the contralateral side.

Results: follow-up: 6.4 ± 0.9 years. 31 patients had a preoperative valgusalignment 11 ° -18 and 50 patients a varus leg axis 8 ° -19 °. In the preop valgus knees rotational analysis showed an average of increased laxity in external rotation of 7.9 ° and 2.8 ° in internal rotation compared to the varus knees (p = 0.001). There was no significant difference in medial (valgus: 2.6mm/varus: 2.5mm) and lateral (valgus: 2.8mm/varus: 2.7mm) laxity in 30 ° flexion. In all classical joint replacement scores there was no significant difference in follow-up. In IKDC objective 50% of the preop varus knees and 25.8% of the preop valgus knees were nearly normal (Group B). The difference in the IKDC objective was highly significant (p <0.001).

Conclusion: 6 years after TKA with rotating platform preop valgus knees show a significantly increased rotational laxity but no increased collateral ligament laxity compared to preoperative varus knees. There is a significant difference in IKDC objective.