

COMPUTER-ASSISTED TOTAL KNEE REPLACEMENT VERSUS CONVENTIONAL TOTAL KNEE REPLACEMENT: POST OPERATIVE ANKLE RADIOGRAPHIC FINDING AND ANKLE CLINICAL ASSESSMENT.

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Few previous studies showed conventional total knee replacement(TKR) have effected to same side talar tilt(TT), we expected computer-assisted(CAS) TKR may prevent this problem.The purpose of this study was to compare post-operative talar tilt and ankle clinical assessment between CAS TKR and Conventional TKR in 28 patients (56 knees) who underwent bilateral TKR

28 patients, 56 knees who underwent both CAS total knee replacement(TKR) and Conventional total knee replacement (TKR) in both knees by one surgeon with combine Gap and Measurement technique at Rajavithi Hospital, Bangkok. Post-operative follow up to 12 months for ankle radiographic finding by tibiotalar angle(TTA), tibial articular surface angle(TAS) and talar tilt(TT)=(TAS-TTA), for clinical assessment by foot functional index (FFI) between pre-operation versus(vs.) post-operation in each group, CAS TKR vs. Conventional TKR for pre-operation and post-operation. P value ≤ 0.05 showed significantly different.

56 knees, 28 patients, mean age = 67.79 years who underwent bilateral TKR by Conventional group and CAS group had pre operative TT (TT= TAS -TTA) conventional group = 1.5(-5,8), CAS group = 0.5(-5,8), p value = 0.65. Post operative TT conventional group = .0(-5,3), CAS group = 1.0(-3,8), p value = 0.4 Compare pre-operative TT with post-operative TT in Conventional group, p value = 0.01, but pre-operative TT with post-operative TT in CAS group, p value = 0.65, which was significantly different for TT in conventional group ,but was not significantly different in CAS group. Clinical assessment by foot functional index (FFI) which include 1. Pain 2. Life difficulty for living 3. Daily life activity limitation , pre-operative FFI in conventional group = 1.85(0.81,6.88) and pre-operative FFI in CAS group= 1.91(0.24,66.5) p value = 0.57, post-operative FFI in conventional group = 1.68(0.24,7.0) and post-operative FFI in CAS group = 1.65(0.24,6.76) p value =0.04 which showed significantly different between post-operative FFI both groups. For conventional group; post-operative FFI was not significantly different from pre-operative FFI, p value = 0.2, but for CAS group; post-operative FFI was significantly different from pre-operative FFI, p value = 0.04

This study showed conventional TKR effected to post-operative talar tilt, but CAS TKR did not effect and was safer to ankle joint than conventional group. Finally we still need more numbers of patients and longer term follow up to improve this study being stronger and more reliable.

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