

Fixed Loop Versus Adjustable Loop Fixation In ACL Reconstruction: Functional Outcome

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INTRODUCTION:

Anterior cruciate ligament injury occurs as a result of pivoting mechanism when the anterior cruciate ligament is at the highest stretch. Reconstruction techniques have been developed with some authors recommended usage of adjustable loop over fixed loop device during fixation. Interestingly, with many studies studying the biomechanics of each fixation, no study compares the outcome of these fixations.

MATERIALS & METHODS:

From 2014 to 2015, patients who diagnosed to have anterior cruciate ligaments tear and undergone anterior cruciate ligament reconstruction in Pusat Perubatan UKM was followed. 82 patients were available for review in which 32 patients undergone adjustable loop fixation of ACL while 50 patients undergone fixed loop fixation of anterior cruciate ligament.

The functional outcome of these patients was evaluated at 3 months, 6 months and 12 months post surgery using Lysholm score.

RESULTS:

Independent t-test was statistically not significant at 12 months with the fixed loop fixation (M=93.82,SD=0.307) than the adjustable loop group (M =92.47, SD=0.321)

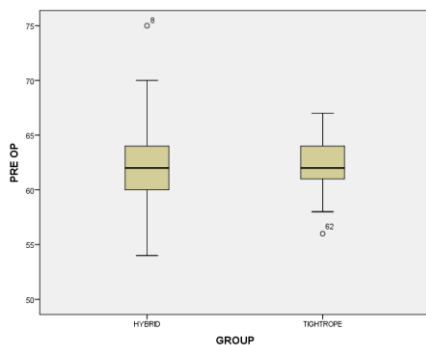


Figure 1 : Pre Operative Score Score

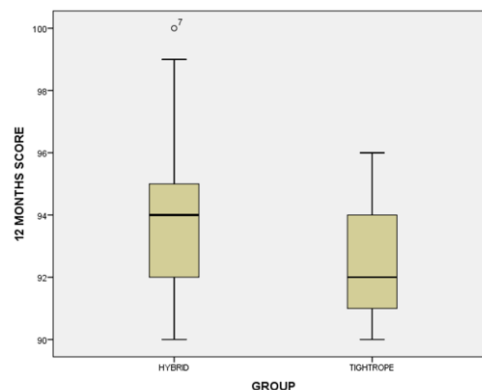


Figure 2 : 12 Months Score

DISCUSSIONS:

Adjustable loop fixation provides advantage to maximize the bone –graft interface with preservation of more bone stalk and higher bone tendon integration. Firat et al found that the amount of tunnel widening is significantly low in adjustable loop device as compared to fixed loop device¹. However, fixed loop device has shown higher loads to failure which provides a better mechanical advantage.

CONCLUSION:

Fixed and adjustable loop device shown no statistically difference in term of functional outcome at 12 months post operation.

REFERENCE:

1. Firat, A., Catma, F., Tunc, B., Hacıhafızoglu, C., Altay, M., Bozkurt, M., . . . S. (2014). The attic of the femoral tunnel in anterior cruciate ligament reconstruction: A comparison of outcomes of two suspensory femoral fixation systems. *Knee Surgery, Sports Traumatology, Arthroscopy*, 22(5), 1097-105.