Hamstring tendon auto graft versus fresh-frozen tibialis posterior allograft in primary arthroscopic anterior cruciate ligament reconstruction: a retrospective cohort study with three to six years follow-up

Mohsen Mardani-Kivi1 & Mahmoud Karimi-Mobarakeh2 & Sohrab Keyhani3 & Khashayar Saheb-Ekhtiar1,4 & Keyvan Hashemi-Motlagh1,2,3,5 & Ali Sarvi3

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Abstract

Introduction: Selection of various grafts for anterior cruciate ligament (ACL) reconstructions has been employed in order to improve on stability and function of the knee. This study aimed to compare stability and function of the knee after ACL arthroscopic reconstruction by single-loop tibialis posterior (TP) allograft and four-strand hamstring tendon (HT) autograft.

Materials and methods: The retrospective cohort study included 104 patients in the TP group matched with 118 patients in the HT group in terms of demographic characteristics, associated meniscus injury, subjective and objective knee characteristics. All patients were followed up for at least three years with regards to mentioned criteria and time of return to former activities.

Results: The mean (range) age of TP (88 males and 16 females) and HT (99 males and 19 females) groups was 34.4 (19–48) and 36.9 (20–51) years, respectively. Median (range) follow-up durations were 55 (37–71) and 56 (36–72) months, respectively. No significant differences were observed post-operatively, regarding subjective and objective evaluations. Additionally, time duration for return to former activity was similar in both groups. Post-operative parenthesis and
numbness of medial aspect of the calf were observed for two months in eight patients of the HT group which persisted to the final visit in one case. No similar symptom was seen in the TP group.

**Conclusion:** In arthroscopic ACL reconstruction, fresh frozen doubled TP allograft compared to HT auto graft was equally effective in restoring function and stability of knee, permitting return to former activities. Level of evidence Retrospective comparative, Level III

**Keywords:** Anterior cruciate ligament. Hamstring tendon. Tibialis posterior tendon. Autograft . Allograft .Functional outcome