Changes in the cross-sectional area after the anatomic rectangular tunnel ACL reconstruction with <u>hamstring tendon or Bone-patellar tendon autografts.</u>

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Conflict of Interest

The anthers declare that they have no conflict of interest.

Introduction

Graft Hypertrophy: 2nd-Look & MRI



Introduction Hypertrophy of Auto-graft after ACLR³⁻⁴, 49-- Hamstring tendon (HT) & Bone tendon bone (BTB) -



% increase of CSA : <u>HT < BTB</u> & <u>Similar pattern</u> (Retrosp. study)

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To pursue the post-ACLR CSAs with MRI in both hamstring and BTB autografts, and to compare them with the contralateral ACL.

Patients: HT vs BTB

	HT-ACLR	BTB-ACLR
• N:	16	36
• Age:	37.3y	22.7y
• M: F:	2:14	21:15
• Height:	156.6 cm	168.6 cm
• Weight:	51.1 kg	66.9 kg
• KT	0.4 ± 0.9	0.1 ± 1.3

Material & Method

CSA w/MRI: Changes in Each Graft & vs ACL





CSA @ ACLR : ACL vs Graft





% Increase : HT vs BTB



*** P** < 0.05



% Increase : Graft / ACL (HT, BTB)



*** P** < 0.05

Discussion

Factors Affecting Graft Hypertrophy

2y

lv



6m

70

20

0m

<u>% increase of CSA: BTB > ST</u>

Difference of graft material?

Mayr et al. KSSTA. 2012 Hadjicostas et al. Arthroscopy. 2007

1.5-1.6 times larger than normal ACL

Remaining space around each graft

Shimizu et al. KSSTA. 2007 Kinugasa et al. *KSSTA*. 2017, 2021

Conclusions

• % increase of CSA in BTB graft was significantly larger than those in hamstring tendon graft.

• CSA of both grafts were 1.6 times larger than those of normal ACL.

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