



Patellar Tendon Autograft is Associated with Difficulty Kneeling but
Does Not Result in a More Painful or Symptomatic Knee Compared to
Hamstring Tendon Autograft after ACL Reconstruction

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Mandatory Faculty Disclosure

I Have No Financial Conflicts to Disclose

Introduction

- The patellar tendon (BTB) autograft is associated with difficulty kneeling after ACL reconstruction, however it is unclear whether it results in a more painful or symptomatic knee when compared to the hamstring tendon autograft
- This study aimed to identify the rate and risk factors for significant knee pain and difficulty kneeling following primary ACL reconstruction and clarify whether graft type influences the risk of these complications

Methods

- Primary ACL reconstructions using a BTB or hamstring graft performed between April 2014-November 2019 were eligible for analysis
- The Pain and Symptoms subscales of the Knee Injury Osteoarthritis Outcome Score (KOOS) were analyzed at 2-year follow-up
- Significant knee pain = KOOS Pain ≤ 72
- Significant kneeling difficulty = “Severe or Extreme” difficulty when kneeling
- Univariate Chi-Square test and multivariate binary logistic regression were performed

Primary Outcomes

Significant **Knee Pain** = KOOS Pain Score ≤ 72

Significant **Kneeling Difficulty** = Severe or Extreme

NZACL

REGISTRY

4,492

Primary ACLR

2014 – 2019

Min 2Y F/U

KOOS Scores

New Zealand ACL Registry

4,492

Primary ACLR

9%

Knee Pain
@2Y F/U

12%

Kneeling Difficulty
@2Y F/U

Demographic	<u>BTB</u>	<u>Hamstring</u>	P-Value
Overall	27%	73%	
Male %	62%	54%	<0.001
Age Mean	26 years	31 years	<0.001
Time to Surgery Median	3.8 months	4.7 months	<0.001

Kneeling Difficulty

2Y Follow Up

	<u>BTB</u>	<u>Hamstring</u>	P-Value
% Patients	21%	9%	<0.001
Multivariate OR	3.1x	Ref	<0.001

Significant Knee Pain

2Y Follow Up

	<u>BTB</u>	<u>Hamstring</u>	P-Value
% Patients KOOS Pain \leq 72	9.9%	9.2%	0.5

Other Risk Factors

Significant Knee Pain

Significant Knee Pain Prior to ACLR

HR 4.1x

$p < 0.001$

Other Risk Factors

Significant Kneeling Difficulty

Significant Kneeling Difficulty Prior to ACLR

HR 2.9x

$p < 0.001$

Conclusion

ACLR 2Y – 9% Knee Pain, 12% Kneeling Difficulty

BTB – Higher Risk of Kneeling Difficulty,

But Not More Painful
