

# Outcome of Arthroscopic All-Inside Posterior Cruciate Ligament Reconstruction Using the Posterior Trans-Septal Portal

Shahir Shahibullah, Farhan Yahaya, Veenesh Selvaratnam, Nur Dini Mohd Yusof, Ahmad Fauzey Kassim, Suresh Chopra, Suhairi Juhari

Trauma & Orthopaedic Department, Hospital Sultanah Bahiyah, Alor Setar, Kedah.

## INTRODUCTION:

Posterior Cruciate Ligament (PCL) reconstruction is a complex surgical procedure. The posterior trans-septal portal technique is thought to make tibial tunnel preparation easier and better visualization of the tibial attachment site. Our study aim to evaluate the functional and clinical outcomes of patients who underwent arthroscopic all-inside PCL reconstruction using the posterior trans-septal portal at our institution.

## METHODS:

This was a retrospective study with prospectively collected data between 2016 - 2020. Data collected were age, gender, types of graft used, range of movement(ROM) , posterior drawer test grade, KOOS(Knee Injury and Osteoarthritis Outcome) score, Lysholm knee scoring scale, and post-operative complications. All patients underwent pre and post-operative PCL rehabilitation.

## RESULTS:

A total of 36 patients (26 males and 10 females) were identified. The mean age was 35.2 years. Mean time from injury to surgery was 17 months. Mean follow-up was 41.2 months (range, 13-72 months). Nineteen cases involved multiligament injuries and another 17 patients had isolated PCL injury. Eighteen PCLs were reconstructed using autograft and 18 were allograft. Post operative posterior drawer and lysholm knee score show significant improvement ( $p < 0.001$ ). Knee ROM and KOOS score as show in the table. One patient required a manipulation under anaesthesia for knee stiffness.

## Mean Changes of Outcomes

Outcomes	Pre	Post	Paired Differences	
	Mean (SD)	Mean (SD)	Mean (SD)	p-value
Posterior Drawer	2.7 (0.48)	0.7 (0.60)	2.0 (0.82)	<0.001
ROM	116.3 (11.48)	115.6 (8.34)	0.6 (10.47)	0.814
Lysholm Score	50.9 (12.83)	91.0 (10.11)	-40.1 (12.85)	<0.001
KOOS	65.1 (21.89)	77.2 (21.84)	-12.1 (38.22)	0.196

## DISCUSSIONS:

Greater visualisation of the PCL tibial attachment minimizes the 'killer turn' giving advantages to this technique<sup>1</sup>. To our knowledge there are no published articles showing clinical outcomes of arthroscopic posterior transeptal all inside PCL reconstruction.

## CONCLUSION:

Arthroscopic all inside PCL reconstruction using the posterior trans-septal portal technique is a safe, reliable and reproducible procedure. From our study it shows that clinical and functional outcomes improved significantly post operatively.

## REFERENCE:

Chernchujit, Remnant-preserving posterior cruciate ligament reconstruction: Arthroscopic transeptal, rod and pulley technique. Arthrosc Tech. 2017