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# Clinical Outcomes of Reconstruction of Posterolateral Corner and Posterior Cruciate Ligament in Minimal Grade II or Less Posterior Translation

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**Summary**:
Simultaneous reconstruction of PCL and PLC is a reliable treatment method in addressing PCL injury with minimal grade II or less posterior translation combined with posterolateral rotatory instability.

**Abstract**:
There is no previous study about clinical outcome according to treatment option of posterior cruciate ligament injury with less than grade II posterior translation combined with posterolateral rotatory instability.

The purpose of this study is to compare the clinical outcomes of reconstruction of posterolateral corner with or without simultaneous reconstruction of posterior cruciate ligament with minimal grade II or less posterior translation.

Forty-six patients with posterior cruciate ligament injury with minimal grade II or less posterior translation(<7mm) combined with posterolateral rotatory instability were retrospectively reviewed. Twenty-two patients had undergone an isolated reconstruction of posterolateral corner without reconstruction of posterior cruciate ligament (Group A). Twenty-four patients were treated with simultaneous reconstruction of posterior cruciate ligament and posterolateral corner(Group B). Each patient was assessed for knee instability with the Dial test at 30° and 90°, varus and posterior stress radiography, and evaluated with Lysholm knee score, International Knee Documentation Committee (IKDC) subjective score and objective grade.

In all cases, the minimum follow-up period was 24 months. At the final follow-up evaluation, no significant difference was found on side-to-side difference of varus stress radiography (Group A: 1.55±0.78mm vs. Group B: 1.35±1.00mm; p=0.458), and Dial test (Group A: 4.00±1.83° vs. Group B: 4.04±1.30° at 30°; p=0.929 and Group A: 3.64±1.18° vs. Group B: 3.67±1.37° at 90°; p=0.937). However, Group B showed significant improvement(postoperative result minus preoperative result) than Group A on posterior stress radiography (Group A: 0.16±0.44mm vs. Group B: -1.44 ±0.74mm; p<0.001), the Lysholm knee score (Group A: 18.36±8.73 vs. Group B: 23.42±7.44; p=0.040), IKDC subjective score (Group A: 25.51±7.11 vs. Group B: 33.08±5.89; p<0.001), and IKDC objective grade (preoperative Group A: grade C: 19, D: 3 cases; preoperative Group B: grade C: 20, D: 4 cases, and postoperative Group A: grade B: 11, C: 11 cases; postoperative Group B: grade A: 12, B: 9, C: 3 cases)(p<0.001).

Simultaneous reconstruction of posterior cruciate ligament and posterolateral corner is recommended when addressing posterior cruciate ligament injury with minimal grade II or less posterior translation combined with

posterolateral rotatory instability.