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## **Knee Dislocation With Lateral Side Injury: Results of an En Masse Surgical Repair Technique of the Lateral Side** **K. Donald Shelbourne, MD, Marc S. Haro, MSPT, ATC, Tinker Gray, MA, ELS**

### **Abstract**

**Background:** Knee dislocations with lateral side injury are rare and disabling if not treated.

**Hypothesis:** An en masse surgical technique to repair the lateral side will provide good stability, and the posterior cruciate ligament will heal when left in situ.

**Study Design:** Case series; Level of evidence, 4.

**Methods:** Twenty-three patients underwent an en masse lateral side repair after knee dislocation injury; all but 1 patient had anterior cruciate ligament reconstruction. Physical examination included the International Knee Documentation Committee score, isokinetic strength testing, KT-2000 arthrometer testing, radiography (including varus stress), and magnetic resonance imaging scan. Patients were evaluated subjectively with several surveys.

**Results:** Mean objective evaluation occurred for 17 patients at 4.6 years postoperatively, and 21 subjective evaluations occurred for 21 patients at 5.6 years postoperatively. The objective overall grade was normal for 10 patients and nearly normal for 7 patients. Lateral laxity was graded as normal in 15 patients and 1+ in 2 patients. The posterior drawer was normal in all but 3 patients, who had 1+ posterior laxity. The postoperative varus stress radiography demonstrated a mean increase of  $1.1 \pm 1.7$  mm (range, -1.2-4.7) between knees. Magnetic resonance scans showed that the lateral side was thickened but intact in all patients. The posterior cruciate ligament was viewed as healed or intact in all patients but was sometimes seen as elongated or buckled. The mean subjective total scores were 91.3 points for the IKDC survey, 93.0 for the modified Noyes survey, and 8.0 for an activity score, but scores were higher for patients who underwent surgery within 4 weeks from the injury.

**Conclusions:** The en masse surgical technique to repair the lateral side combined with an anterior cruciate ligament reconstruction after knee dislocation provides excellent long-term stability. The repaired lateral side and untreated posterior cruciate ligament heal with continuity. Patients can return to high levels of activity.

**Key words:** knee dislocation; lateral; surgery; results