



Shelbourne Knee Center
at Methodist Hospital
Specialized Care for Knee Injuries

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Use of a Modified Elmslie-Trillat Procedure to Improve Abnormal Patellar Congruence Angle. Shelbourne KD, Porter DA, Rozzi W: *Am J Sports Med* 22:318-323, 1994.

Forty patients underwent 45 modified Elmslie-Trillat realignment procedures (mean follow-up, 2 years) for refractory patellar instability (34 knees) or painful patellofemoral syndrome with malalignment (11 knees). The postoperative congruence angle (mean $+3.4^\circ$) was significantly improved compared with the preoperative value (mean, $+21.5^\circ$). We considered the "normal" congruence angle average as -8° (range, -20° to $+4^\circ$). Over time postoperatively, we detected no statistical difference in the congruence angle (5 months, 3.4° ; 24 months, 6.3°). There were no patellar dislocations postoperatively. Nine knees (20%) had some postoperative subluxation. Ninety-four percent of the patients without subluxation had congruence angles *less* than 15° , whereas 54% of patients with postoperative subluxation had postoperative congruence angles *greater* than 15° . The evidence in this study population indicates that the modified Elmslie-Trillat procedure can predictably improve the patellar congruence angle. Adequate correction may eliminate patellar dislocation. Correction of the congruence angle to less than $+15^\circ$ will result in a decreased incidence of postoperative patellar instability. Early full activity postoperatively did not affect the modified Elmslie-Trillat correction of the congruence angle being maintained over time.