

No. 45

## Differences in the Laxity and Functional outcome after Tibial Spine Fractures Treated by Arthroscopic Pullout Suture Fixation and Cast Immobilization

*Department of Orthopedic Surgery, Mokdong Hospital, Ewha Womans University, Seoul, Korea*

Jae-Doo Yoo, M.D. · Kwon-Jae Roh, M.D.  
San-Gin Shin, M.D. · Sung-II Kim, M.D.

### Introduction:

After treatment of avulsed posterior cruciate ligament, some patients had persistent laxity after union. The purpose of this study was to evaluate laxity and functional outcome of displaced tibial spine fractures treated by arthroscopic reduction and internal fixation, and minimal displaced tibial spine fractures treated by closed reduction and cast immobilization.

### Materials and Methods:

Retrospective review was performed for 41 patients, who underwent subjective, objective, and instrumented knee laxity assessment (KT-1000) at minimum 6 months (mean, 1.6 years) of follow-up time. Twenty-nine patients (group 1) were treated by arthroscopic reduction and pull out suture fixation of tibial spine fractures (Meyers and Makeover type II or III). Twelve patients (group 2) were treated by cast immobilization in full extension (Meyers and McKeever type I or II) (group 2).

### RESULTS:

Lachman examination of the knees showed no persistent laxity in all patients and all patients showed negative pivot-shift examination. All patients showed less than 3-mm manual-maximum side-to-side difference in instrumented knee laxity. Subjective assessment revealed excellent

function, with a mean Lysholm score of 95.2(range, 92~100) in group I and 94.2(range, 96~100) in group2. Extension limitation was present in one patient who was treated with cast immobilization and two patients treated with pullout-suture fixation. Average value in KT-1000 testing was 1.7 mm(range, 0~2) in group 1 and 1.0 mm(range, 0~2) in group 2. No significant differences were seen with regard to the outcomes of laxity and function after treatment ( $p < 0.05$ )

### CONCLUSIONS:

Treatment of tibial spine fractures resulted in no persistent laxity and excellent functional outcome. The amount of preoperative displacement was not correlated with the laxity after treatment.