

The Effects of Additional Mechanical External Compression on Hemarthrosis After Arthroscopic External Capsular Release

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Objectives: Arthroscopic external capsular release has been frequently used especially in the treatment of symptomatic lateral patellar hyperpression syndrome. Hemarthrosis was reported among one of the most important complications of this procedure. The aim of this study was to demonstrate the effects of the postoperative application of mechanical external compression -in patients who undergone arthroscopic lateral capsular release- on the rates of postoperative bleeding and on pain scores.

Methods: In this study, different clinical evaluations of 39 patients, who were diagnosed both clinically and radiologically as lateral patellar hyperpression syndrome and who were treated with arthroscopic external capsular release by radiofrequency probe, were compared retrospectively. The patients were evaluated in two groups: Group I (external capsular release, N:19) and Group II (external capsular release + mechanical external compression, N:20). The mean age of the patients was 38.5 +/- 7.3 and 42.3 +/-7.8, in group I and group II, respectively. The female / male ratio and right / left ratio was 17/2 and 16/4, and 9/10 and 9/11 in group I and group II, respectively. Postoperative drainage, cold compression, postoperative 24 hours of bed rest was applied to all patients. In addition, knee range of motion together with quadriceps strengthening exercises was started after postoperative 24 hours in both groups. In group II, mechanical external lateral compression with a steril roll bandage was applied just lateral to the patella and it was ended after one week. The clinical evaluations of the patients were performed first with VAS scoring preoperatively, at 1st and 6th month postoperatively and second with measurements of intraarticular bleeding amounts within the postoperative drains. For the statistical evaluations of the data, variance analysis and independent t-test were used.

Results: The amounts of bleeding through the drains were 94.2 ml +/- 29.9 and 43.0 ml +/- 16.3 in group I and II, respectively ($p<0.05$). The VAS scores were found to decrease significantly at both early postoperative and late postoperative periods compared with preoperative period, in both groups ($p<0.05$). Although the decrease in VAS scores of early postoperative period was found to be more in group II than in group I, this decrease was not significant.

Conclusion: One of the most frequent complications after arthroscopic external capsular release has been reported to be hemarthrosis, which is related with worse clinical outcomes after this surgical procedure. The most important result of this study revealed that the addition of immediate postoperative mechanical external compression application lateral to patella decreased postoperative amount of bleeding and subsequent hemarthrosis, without adding a significant clinical effect on VAS scores. In addition to the results of this study, prospective randomized studies are required further.

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