

Comparison of Early Versus Delayed Weightbearing Outcomes After Modified Brostrom Procedure for Chronic Lateral Ankle Instability

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Summary:

Early weightbearing rehabilitation after modified Brostrom procedure for chronic lateral ankle instability showed good clinical results and similar outcomes in clinical and radiological outcomes.

Abstract:

Introduction: The initiation of weightbearing is the focus of postoperative treatment after modified brostrom procedure for chronic ankle lateral instability. There were a few of studies that has good clinical outcomes on early weightbearing after modified brostrom procedure for chronic ankle lateral instability. But no comparative clinical study has been performed on early and delayed weightbearing after modified brostrom procedure for chronic ankle lateral instability. The aim of this prospective study was to compare the clinical and radiologic results of early and delayed weightbearing after modified brostrom procedure for chronic ankle lateral instability.

Methods: One hundred and fifty-five ankles in 155 patients that had been treated by modified Brostrom procedure and The mean follow-up period was 2 years. Ankles were allocated to either an early weightbearing (EWB) group (78 ankles) or a delayed weightbearing (DWB) group (77 ankles) postoperatively, patients in the EWB group was allowed early weightbearing at 2 weeks after wearing AFO(ankle foot orthosis), but the DWB group maintained non-weightbearing for 4 weeks and after then allowed the weightbearing. The American Orthopaedic Foot and Ankle Society (AOFAS), Karlsson scores were used to evaluate clinical outcomes. The ankle stress radiographs(Anterior drawer stress view, Varus stress view) were used to evaluate radiographic outcomes.

Results: Mean Karlsson scores were 56.2 points in the EWB group and 59.1 points in the DWB group preoperatively, and these improved to 91.1 and 95.6 points postoperatively. Mean AOFAS ankle-hindfoot scores were 65.5 points in the EWB group and 70.2 points in the DWB group preoperatively, and these improved to 96.4 and 97.1 points postoperatively. Anterior translation(mm) & Tilting angle of the talus in stress radiographs were 9.2mm, 12.2° in the EWB group and 9.4mm, 12.5° in the DWB group preoperatively, and these improved to 6.7mm, 6.3° and 7.0mm, 6.4° postoperatively. Significant differences were not found between the two groups in clinical & radiographic outcomes.

Conclusion: Two postoperative treatments differing by weightbearing status after modified Brostrom procedure for chronic lateral ankle instability showed good clinical results and similar outcomes in clinical and radiological outcomes. The study shows that early weightbearing postoperative regimens can be recommended for patients treated by modified Brostrom procedure for chronic ankle lateral instability