Chronic Lateral Ankle Instability: The Effect of Intra-Articular Lesions on Clinical Outcome

Reference:

Scientific Literature Review

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Podiatric Relevance:
This study provides data stating the importance of the evaluation and arthroscopic treatment of intra-articular talar lesions for successful outcomes when treating lateral ankle instability.

Methods:
65 ankles of 64 patients diagnosed with chronic ankle instability were analyzed in this prospective study. All patients were treated with a modified Brostrom lateral ankle ligament reconstruction between January 2001 and September 2006 (average follow-up of 29.7 months; average time from initial injury to surgery of 19 months). Clinical evaluation was performed rating each patient’s edema, tenderness, range of motion and strength. The Karlsson-Peterson Ankle Score was used for evaluation of post-operative outcomes; more than 90 points was considered satisfactory outcome, with less than 90 points being unsatisfactory. Preoperative and final follow-up AP and lateral ankle radiographs were also evaluated in conjunction with TELOS device assisted measurement of lateral mechanical instability and anterior displacement. Patients with diastasis of the ankle mortise were excluded from the study. In addition, MRI was used pre-operatively for evaluation of coexisting injuries including ligament damage, soft tissue impingement and syndesmotic injury. At time of surgery, all patients underwent arthroscopic evaluation of syndesmotic diastasis, osteochondral lesions, lateral malleolar ossicles, soft-tissue impingement and osteophytic proliferation prior to the modified Brostrom reconstruction.

Results:
63 of the 65 ankles showed at least 1 intra-articular lesion when evaluated arthroscopically. 81.5% had soft tissue impingement, 38.5% had ossicles of the lateral malleous, 29.2% had syndesmotic widening, 23.1% had an osteochondral lesion of the talus, and 10.8% had osteophyte formation. The average Karlsson-Peterson Ankle pre-operative score was 53 +/- 14.63 and improved to 85.21 +/- 11.97 post-operatively (P < .001). Pain score (total 20 points) improved from 6.76 +/- 5.11 to 14.69 +/- 6.17 (P < .001). Instability (total 25 points) improved 6.51 +/- 4.60 to 21.15 +/- 5.64 (P < .001). Syndesmosis widening, followed by osteochondral lesions and lateral malleolar ossicles, were determined the strongest predictors of unsatisfactory outcome post-operatively. No association was found between dissatisfaction and soft tissue impingement or osteophyte formation. The best post-surgical outcomes were found with the 2 ankles where no lesions were found. Similarly, patients with 2 or more lesions scored lower. The number of lesions found within the ankle had positive correlation to duration of symptoms. Talar tilt angle using TELOS was 13.42 +/- 7.57 degrees pre-operatively, and 5.45 +/- 4.64 degrees during final follow-up (P < .001). Anterior displacement of the talus decreased from 7.87 +/- 2.89mm to 4.63 +/- 2.66mm pre- and post-operatively (P < .001). No correlation between talar displacement and number of intra-articular lesions was found. No complications were reported.

Conclusions:
Based on these findings, intra-articular lesions are a common finding and arthroscopic techniques should be considered when surgically correcting chronic lateral ankle instability.