Fear of Reinjury Limits Patient Functional Outcomes as Measured by PROMIS Following Augmented Broström Procedure

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INTRODUCTION:
Prior evidence suggests that fear of reinjury may impact return to activity following Broström ligament repair; however, this study did not examine the role of fear individually, rather it was included as one of many factors in a category of “non-ankle reasons” for why patients failed to return to activity. It therefore remains unclear whether fear of reinjury, specifically, limits patients with chronic lateral ankle instability (CLAI) who have undergone Broström repair. This study aims to determine whether patients experience fear of reinjury following Broström repair and whether this impacts functional outcomes and ability to increase activity from preoperative baseline. To our knowledge, this is the largest study to evaluate fear in Broström and the first to do so in Broström with internal brace augmentation.
METHODS: 574 patients who underwent lateral ankle ligament reconstruction at a single institution between January 2013-January 2024 were retrospectively reviewed. Two investigators independently evaluated all records. Revisions, concomitant Evans osteotomies, allografts, nonanatomic reconstructions, flexor digitorum longus transfers, progressive collapsing foot deformities, concomitant hindfoot arthrodesis, associated ankle arthroplasties, concomitant fractures, and non-augmented procedures were excluded. 80 remaining patients who had Broström with internal brace augmentation were contacted to complete surveys containing questionnaires with Patient Reported Outcome Measurement Information System (PROMIS) measures of physical function (PF) and pain interference (PI), Cumberland Ankle Instability Tool (CAIT), and self-reported ability to increase activity. Patients were classified based on CLAI etiology: isolated ligamentous instability (CLAI without anatomic deformity, n=36), osteochondral defect (OCD, n=15), or deformity (varus, equinus contracture, n=29). T-tests were used to assess associations.
RESULTS:
63.8% (51/80) of patients reported postoperative fear of reinjury. CLAI etiology was not associated with fear (p=0.31). Fear of reinjury was significantly associated with worse PF (49.9±7.4 vs. 54.9±8.4, p=0.01) and worse CAIT (19.1±8.0 vs. 23.2±8.1, p=0.04). There was no significant difference in PI (49.8±8.7 vs. 46.5±6.9, p=0.06), though patients with fear still had worse PI. There was no significant difference in the proportion of patients who reported ability to increase activity between patients who did and did not experience fear of reinjury (76.5%, 39/51 vs. 86.2%, 25/29, p=0.45). There were no significant differences in proportion of patients who reported fear by age, sex, or BMI (p>0.05).
DISCUSSION AND CONCLUSION: Most patients (63.8%) experience fear of reinjury following augmented Broström procedure. Fear of reinjury limits patient physical function following repair, as PF of patients with fear was significantly lower than PF of patients without fear. Fear was also associated with worse postoperative CAIT scores. Despite fear of reinjury, however, patients achieve population mean outcomes as measured by PROMIS scores and successfully increase activity postoperatively with Broström augmented with internal brace. Efforts should be directed towards addressing the psychological barriers that may impact recovery in patients with lateral ankle instability.