Abstract Number: 10941

JOURNAL OF THE JFA Foot & Ankle

Excellent Functional Outcomes and Low Complication Rates After Arthroscopic Broström Repair With Internal Brace Augmentation for Chronic Lateral Ankle Instability

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Introduction: Chronic lateral ankle instability (CLAI) may persist after recurrent sprains, causing pain, giving-way, and functional limitation. Arthroscopic Broström repair with minimally invasive internal brace augmentation (IBA) may improve stability and support earlier rehabilitation. This study evaluated functional outcomes, complications, and recovery after minimally invasive IBA for CLAI.

Methods: Retrospective multicenter cohort of consecutive adults (> = 18 years) with CLAI treated with minimally invasive Arthroscopic Broström plus IBA (2018-2022) at three tertiary centers in Brazil. Primary outcome: change in AOFAS Hindfoot score. Secondary outcomes: pain, complications, residual stiffness/range of motion loss, and return to activity/sport. Mean follow-up: 2.4 ± 1.3 years.

Results: Seventy-six patients were included (35.1 ± 10.2 years; 51.3% male). Mean AOFAS improved from 54.6 ± 15.9 to 95.9 ± 5.5 ($p < 0.001$), with a median gain of 41 points (95% CI 37.0-44.5; Cohen d = 3.18). Return to preinjury activity level occurred in 93.4%. Longer instability duration correlated with lower AOFAS gain ($r = -0.23$; $p = 0.043$). Complications occurred in 7.8% of cases, mostly minor/transient, with no recurrent mechanical instability or reoperation.

Conclusions: Minimally invasive IBA is a safe and effective option for CLAI with excellent mid-term functional recovery. Prospective comparative studies are needed to confirm long-term durability and cost-effectiveness.

Keywords: Joint instability; Arthroscopy; Ankle injuries.

DOI: https://doi.org/10.30795/jfootankle.2026.v20.2024

This abstract was presented at the XXII Brazilian F&A Meeting 2026, held in São Paulo, Brazil, from April 18 to 21, 2026.