Chronic Ankle Instability: Long Term Follow-Up of Lateral Reconstruction Using The Extensor Retinaculum Flap: A Report of 150 Cases

Foot & Ankle Category: Ankle

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Introduction
Chronic instability is a common complication of lateral ankle sprains. Furthermore, patients often have unrecognised associated lesions affecting the ankle and subtalar joints. Many stabilising surgical techniques have been described, each with variable results reported at short or mid-term follow-up. The goals of this study were to report the long-term results of ligamentous retensioning combined with reinforcement using an extensor retinaculum flap, regarding stabilization and degenerative changes at the ankle joint.

Methods
This is a retrospective, multi-center study. One hundred and fifty cases were reviewed at a mean follow-up of 11 years. Functional results were assessed using the Karlsson and Good-Jones-Livingstone scores. Pre- and postoperative radiological assessment employed stress x-rays to measure varus tilt and anterior drawer, and the Van Dijk classification to grade osteoarthrosis. The Stata 10 program was used for statistical analysis.

Results
A thorough pre-operative work-up identified ligamentous lesions of the subtalar joint in 30% of cases. At review, 93% of patients were satisfied. Residual instability was only 4.8%. Radiographic analysis of both ankles revealed a differential in varus tilt of only 0.12 degrees and in anterior drawer of 0.17mm. There was no deterioration of the articular surfaces after 11 years follow-up.

Conclusion
To our knowledge, this is the largest series reported with such a follow-up. Our technique addresses both lateral ankle and subtalar instability without sacrificing the peroneal tendons. It protects against progression of posttraumatic arthrosis and provides superior results to other reported techniques in terms of patient satisfaction and residual instability. We believe that many poor individual results in other series are due to a failure to recognise and correct associated subtalar instability or other associated pathologies. In our series, a detailed set of pre-operative investigations helps us to avoid this common error.