Non-Operative Management of Retrocalcaneal Pain With AFO and Stretching Regimen

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Background
Retrocalcaneal heel pain is caused by a spectrum of etiologies—insertional Achilles tendonitis, pretendon bursitis, retrocalcaneal bursitis and Haglund’s Deformity—all resulting in the same symptom of pain at the tendon-achilles insertion on the calcaneus. Several studies have reported the outcomes of operative treatment, but none have reported the outcomes or success rates of non-operative treatment. We describe a detailed treatment algorithm for retrocalcaneal heel pain and report the clinical outcomes with a validated scoring system.

Materials & Methods
Between January 2000 and March 2008, a consecutive series of 103 patients with retrocalcaneal heel pain underwent a detailed treatment algorithm consisting of an AFO and stretching program. Foot function was measured with the Foot Function Index pre and post-treatment. The effect of clinical and radiographic factors was examined and the exostoses were classified.

Results
Of the study population, 76% had a BMI > 25, 80% were older than 50 years, and 75% had an exostosis on radiographs. The mean pre-treatment FFI was 48.4 and the mean post-treatment FFI was 18.6 indicating a statistically significant improvement in function of 29.8. Further analysis showed that neither BMI nor age had a significant effect on the magnitude of improvement; though, smokers had a significantly inferior improvement compared to nonsmokers. Radiographic analysis showed FFI improvements in patients with an exostosis were less than those without an exostosis. Additionally, patients with an exostosis <1cm had a lesser improvement than those with an exostosis ≥1cm. Patients with type I and III exostoses (calcaneal spur and intra-tendinous) had a significantly worse improvement in FFI compared to those with multiple exostoses or exostoses at the tendinous insertion (type II and IV). 12 of the 103 (11.6%) were not pleased with the results of non-operative treatment and elected to have a procedure performed.

Conclusion
Our study is the first to report the outcomes of non-operatively treated retrocalcaneal heel pain and to classify retrocalcaneal exostoses. Our study population indicates that most patients with retrocalcaneal heel pain are overweight, older, and have an exostosis on radiographs. Using our treatment algorithm, we had an 83% success rate in alleviating symptoms and avoiding surgery. Our data suggests that the use of an AFO and stretching regimen may benefit patients suffering from retrocalcaneal heel pain.