

# CALCANEAL STRESS FRACTURES INITIALLY PRESENTING AS PLANTAR FASCIITIS



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## Introduction

Plantar fasciitis is among the most frequent complaints seen in a podiatric practice. Plantar fasciitis most commonly presents as plantar medial heel pain and typically is a clinical diagnosis. Plantar medial heel pain with concomitant X-rays negative for any obvious acute osseous injury can frequently lead a clinician to a differential diagnosis of plantar fasciitis. Treatment of plantar fasciitis typically entails a series of corticosteroid injections, in addition to a variety of other conservative options. There should be some index of suspicion for when encountering patients with persistent pain, despite receiving injections along with other conservative modalities.

## Statement of purpose

While there are some similarities in treatment of these two pathologies, corticosteroid injections are not within the standard of care for stress fractures. In fact, research has suggested that there may be detrimental effects of local corticosteroids on bone healing, however this is most commonly associated with systemic steroids

## Methods and procedure:

A sample size 150 patient charts were obtained from a single institution within a nine month period. Charts were chosen at random for patients evaluated for diagnosed plantar fasciitis, in addition to patients with diagnosed calcaneal stress fractures. Calcaneal stress fractures were confirmed with MRI within the same period. Inclusion criteria required an initial diagnosis of plantar fasciitis.

These patients were treated with RICE protocol as well as stretching and corticosteroid injections. Patients were seen back in two weeks and those with worsening symptoms, or no improvement, were subsequently sent for MRI evaluation. If a stress fracture was found on MRI, treatment was changed and corticosteroid injections were discontinued. Appropriate management of these stress fractures included immobilization or, at times, non-weight-bearing to the affected limb.



Image 1 – Sagittal view of calcaneal stress fracture



Image 2 – Lateral view of calcaneal stress fracture

## Results

Retrospective analysis of patients presenting with symptoms consistent with plantar fasciitis revealed 11 patients with recalcitrant plantar medial heel pain, despite conservative treatment modalities. These 11 patients were then sent for MRI evaluation of the affected limb. MRI results revealed calcaneal stress fractures in each of these patients.

## Discussion

Long term retrospective analysis and chart reviews is warranted to further identify the incidence of calcaneal stress reaction among patients presenting with plantar medial heel pain. With patients not responding to conventional treatment, an MRI should be considered to evaluate for the possibility of a calcaneal stress fracture. Conservative treatment of plantar fasciitis is managed differently than a stress type injury of the calcaneus and treatment should be adjusted accordingly and promptly to decrease morbidity.

## References

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