

Title: Nuclear Medicine Imaging Predicts Optimal Candidates for Heel Injection Therapy

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Purpose The purpose of this study was to perform a prospective evaluation of the utility of nuclear medicine imaging to identify patients that will benefit from an isolated injection for heel pain in a manner simulating the research of Frater et al (1).

Methods Inclusion criteria: Only patients with a history of plantar heel pain were entered into this study. Exclusion criteria: diabetes, neuropathy, more than one target of pain in the foot or ankle, ulceration, recent heel surgery or history of amputation of a portion of the affected foot. 47 patients were studied. Pain was graded using the visual analog scoring system. Nuclear medicine imaging was performed in all cases. Injections were performed in those with focal infra calcaneal uptake.

Procedures All feet were imaged using 99mTc-Methylene Diphosphonate injection for triphasic bone imaging. Uptake in the 3rd phase images was graded as none, focal or diffuse. Patients with focal infra calcaneal uptake were given an injection. Pain was graded using the visual analog scale before, 1-week after and at long term follow up.

Results The 3rd phase of the scan revealed a focal infra calcaneal region of uptake in 75% and diffuse uptake in 9%. The average pain pre injection and post injection was graded as 7.45 and 1.65 respectively a statistically significant change.

Discussions Based upon the results of this study the use of nuclear medicine imaging for plantar heel pain is prudent and can identify patients that are most likely to benefit from injection therapy. Equally important is the fact that imaging provided diagnostic clues that precluded the use of injection therapy in some cases such as stress fracture and ankle or midfoot arthropathy. Interestingly the majority had no uptake in the plantar fascia ruling out this common entity. Patients who fail to demonstrate focal uptake in the infra calcaneal region may suffer from alternate diagnoses that may be contraindicated for or may not respond to injection therapy.

Format: Scientific

Category: Institutional

Classification: Heel Pain

LevelOfEvidence: Level II

Additional Questions

Grant/Research funding: N

Consultant/Advisor: N

Speakers Bureau, salary or other payments for services:

Equity Interests including stocks: N

Intellectual Property Rights: N

Other financial benefit: N