



Heel Pain: The Diagnosis and Treatment Options

Heel pain is one of the most common foot complaints, affecting approximately one in ten people at some time in their lives. Fifteen percent of adult foot complaints requiring professional care in the United States are for heel pain. The function of the human foot in everyday stance and gait, especially in running or excessive weight bearing, predisposes the heel to stresses that often produce pathological conditions.

Heel pain has a complex differential diagnosis. The more common etiologies of heel pain are inflammatory and neurologic conditions, and trauma. Other differential diagnoses to rule out are infections, bone or soft tissue tumors, and vascular disorders involving the heel. Inflammatory conditions of the heel are either from a local or systemic source. Common local inflammatory conditions causing heel pain are plantar fasciitis, bursitis, tendonitis, and periostitis. Systemic conditions causing heel pain can come from patients who suffer with rheumatoid arthritis, lupus, gout, and osteoarthritis. Neurologic heel pain can also have local and systemic sources. The most common type of neurologic heel pain is tarsal tunnel syndrome. Some common systemic types of heel pain are patients who have diabetes with peripheral neuropathy or those with a sciatic nerve compression from their lower back. Trauma is a common etiology of heel pain which is seen more in the athletic population. Stress fractures of the heel, plantar fascial ruptures, and heel spur fractures are types of trauma that will hinder an athlete from performing at a high level if not medically treated.

The majority of patients by their history alone can aid the physician in diagnosing the origin of heel pain. The length of time the pain persists, the pain pattern during the day, the type of pain, the specific site of pain, history of trauma, change in shoe gear, weight gain, increase or decrease in activity, and what relieves the pain are all important factors in making a diagnosis in patients who suffer with heel pain.

Approximately seventy-three percent of adult population with heel pain have a bone spur on the bottom of the heel. Individuals who have either a flat foot or very high arched foot are more prone to developing a bone spur. An x-ray of the foot will correlate with the physician's clinical exam to determine the patient's foot type and aid in the diagnosis of heel pain. Patients who present to the office with either a flat foot or high arched foot usually complain of pain at the bottom of their heel. Biomechanically, these certain foot types stress the ligaments and tendons which attach to the heel. If the heel is stressed enough by the pull of these ligaments and tendons, a bone spur may develop.

The treatment of heel pain coincides with the diagnosis. If a patient's heel pain is caused by a local inflammatory condition such as plantar fasciitis, then the goal of the physician is to eradicate the inflammation to get the patient active again. This may entail strapping the foot, anti-inflammatory medications, cortisone injections, orthotics, and physical therapy. Over ninety percent of patients who are diagnosed with plantar fasciitis are cured by conservative treatment. Likewise, other etiologies causing heel pain such as tarsal tunnel syndrome, bursitis, and Achilles insertional tendonitis usually respond to conservative measures.

Some patients over time do not respond to these conservative modalities and may need surgical intervention. Due to improvements in technology and equipment over the years, surgeries such as an open or endoscopic plantar fasciotomy, heel spur resection, fracture management, or tarsal tunnel decompression can alleviate a patient's chronic heel pain.

Heel pain can be frustrating and disabling to the patient, but the physician's goal is for the patient to return to an active, healthy lifestyle. All treatment options, conservative or surgical, will be exhausted until this goal is achieved.