SUN Orthopaedic Group, Inc.

PLANTAR FASCIITIS

SUMMARY

Plantar fasciitis (PF) is the most common cause of heel pain and accounts for approximately 11% to 15% of all foot problems treated by foot and ankle physicians. If you suffer from plantar fasciitis, you are not alone! In the United States more than 2-million individuals are treated for PF on an annual basis.

The term "plantar fasciitis" implies an inflammatory condition. However, the disorder is better classified as a "fasciopathy" as the cause of heel pain is not inflammatory, but instead is associated with degenerative changes to the fascial tissue.

PF can occur with or without a heel spur. Many individuals mistakenly believe that it is the spur that causes the symptoms. To be clear, the cause of the condition is degenerative wear and tear to the fascia tissue located on the under side of the foot. PF is a soft tissue and not a bone disorder.

PF typically starts gradually with mild pain at the heel bone. The pain classically occurs right after getting up in the morning and after a period of prolonged sitting. The pain can be sharp, dull, knife-like or achy. Athletes often experience pain at the onset of a run that not uncommonly subsides during the run, but then reoccurs more intensely after completing the run.

Nonoperative management can be successful in the vast majority of individuals. The main components of an effective nonoperative treatment program are calf and plantar fascia stretching usually performed in a nonweightbearing manner, as well as activity modification. Good supportive shoe wear is critical to success.

When traditional nonoperative measures fail, there are additional treatment options. As a last resort, surgery can produce predictably good results in a majority of patients.

ANATOMY

The plantar fascia is a thick band of tissue that runs along the sole of the foot. The plantar fascia begins at the heel bone and extends to the base of the toes. The plantar fascia is thick and fibrous and has a poor blood supply.

CAUSES

PF is caused by repetitive microtrauma to the plantar fascia tissues. With repetitive trauma, micro-tearing at the origin of the plantar fascia can occur. This is often the result of excessive loading and is often seen in individuals who participate in impact athletics or who work much of their day on hard surfaces.

RISK FACTORS

PF is commonly identified in impact athletes such as runners, walkers and jumping athletes and is also quite common among sedentary individuals. Females are more at risk then males. Excessive body weight, ankle stiffness, poor shoe wear and working on hard surfaces for much of the day are additional risk factors. Individuals with very high arches and with excessively flat feet are also at risk.

TRADITIONAL TREATMENT

Traditional treatment includes relative rest, activity modification, ice massage, weight reduction, avoiding prolonged standing on hard surfaces, as well as nonweightbearing stretching of both the calf and plantar fascia tissues. It is often times helpful to keep weight off the affected foot for approximately 15 minutes every hour or two.

Additional treatment options include nonsteroid anti-inflammatory medication such as Ibuprofen or Naproxen. Soft heel cup inserts, orthotics, night splints and physical therapy modalities such as ultrasound can also be beneficial.

DIAGNOSIS

Diagnosis of PF is usually straight-forward. The typical individual who develops PF is either middle-aged, female gender and someone that has recently undergone an increase in activity level, i.e. a new walking or running program or is an impact athlete such as a runner.

Individuals with this condition often provide a history of pain with the first few steps in the morning. Pain is also associated with the first few steps after periods of inactivity such as sitting or after getting out of a car. The pain is well localized to the heel. The pain tends to improve after moving or stretching, however, it also tends to recur as the day progresses.

X-rays are generally not necessary to diagnose this condition. Heel spurs may or may not be present and do not correlate to symptoms. When in doubt, an MRI scan can demonstrate the micro-tearing to the plantar fascia tissue which is commonly identified.

EXTRACORPORAL SHOCK WAVE THERAPY

ESWT is widely used to treat chronic PF. The procedure is safe, non-invasive and is typically performed in the office without any form of anesthesia. The procedure can be performed promptly with minimal discomfort.

Shock waves are administered to the area of maximal tenderness. The shock waves stimulate the body's natural healing response. The body responds by making additional blood vessels and growth factors in the area of treatment. Numerous studies have confirmed that the procedure is safe and effective.

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STRETCHING

Investigators at the University of Rochester Medical Center have demonstrated that a program of home Achilles tendon and plantar fascia stretching exercises is an another effective treatment for chronic PF. The stretching exercises should be repeated twice a day. Each stretch is held for a period of 10 seconds and is repeated 10 times. It is important to perform the plantar fascia stretches while seated in a nonweightbearing position. It is often helpful to perform these stretches immediately upon rising before getting out of bed.

SURGICAL INTERVENTION

When stretching and ESWT are not effective, surgery is an option. Surgery is indicated for individuals with persistent symptoms but is generally not recommended unless the individual has had a minimum of four-six months of appropriate nonoperative management.

Surgical intervention generally involves a partial plantar fascia release. This involves removal of a small section of the injured plantar fascia and dividing approximately 1/3 of the plantar fascia so at to make it less tight. Although the procedure is minimally invasive, rehabilitation can be somewhat lengthy. In general, patients who have undergone a partial plantar fascia release have to modify their activities for a period of approximately six weeks.

To learn more about plantar fasciopathy, see the following web sites: www.aoss.org; www.aofas.org; www.footeducation.com.