North Carolina Department Of Correction
Division Of Prisons

SECTION: Clinical Practice Guidelines

POLICY # CP-23

SUBJECT: PLANTAR FASCIITIS

EFFECTIVE DATE: April 2007
SUPERCEDES DATE: None

PURPOSE

To assure that DOP inmates with plantar fasciitis are receiving appropriate Primary Care for their condition.

POLICY

All DOP Primary Care Providers are expected to follow this guideline and/or will document in the medical record any deviations from this guideline and the reasoning behind the need for deviation.

PROCEDURE

MANAGEMENT OF PLANTAR FASCIITIS

1) Diagnosis
   a) History
      i) Gradual onset of pain at the origin of the plantar aponeurosis
      ii) Shooting, aching, or burning pain in the heel
      iii) Classic sign is heel pain that occurs first thing in the morning or after long periods of rest and is improved with activity but then returns during the course of the day.
      iv) Pain improves with activity but is aggravated by prolonged periods of standing, walking, and particularly running
      v) Job assignment that requires long periods of standing on a hard surface and obesity are risk factors
   b) Examination
      i) Localized tenderness over the medial portion of the calcaneal tuberosity (anterior medial aspect of the plantar surface of the calcaneus)
      ii) Pain may be aggravated by passive stretch of the plantar aponeurosis
      iii) *Pes planus* or *cavovarus* foot patterns are often present
      iv) Tight achilles tendon with limited dorsiflexion frequently present
   c) Diagnostic Imaging
      i) Rarely needed to make diagnosis
      ii) Only indicated to rule out other possibilities when diagnosis unclear
      iii) The presence or absence of a heel spur neither confirms nor refutes the diagnosis
2) Treatment
   a) Lifestyle modifications
      i) Weight reduction
         (a) Weight often plays a significant role
         (b) As little as a 10% weight reduction can result in significant improvement
      ii) Activity restriction
         (a) Limit standing and walking to two to four hours per day

(b) Stop all running, basketball, and other athletic activities. However non weight bearing exercises can continue

iii) Shoe modifications
(a) Arch supports
(b) Soft inserts
(c) Heel cups/pads rarely helpful
(d) Avoid going barefoot
(e) Athletic shoes from the canteen
(f) In recalcitrant cases only: special shoes

b) Stretching
i) Plantar fascia stretching
Technique:
1. Sit with the affected leg crossed over the contralateral leg.
2. Using the hand on the affected side, place the fingers across the base of the toes on the bottom of the foot and pull the toes back toward the shin until a stretch is felt.
3. Confirm tension in the plantar fascia by palpation using the contralateral hand
4. Do before taking the first step each morning and two additional times during the day
5. Do 10 repetitions for a count of 10 each

ii) Achilles tendon stretching
(a) Though recent studies have shown this to be less effective than plantar fascia stretching, it also may benefit and is worth trying in addition to the above
(b) Technique:
1. Stand facing a wall and place the affected leg behind the contralateral leg.
2. Point the toes of the affected foot toward the heel of the front foot and lean toward the wall.
3. Bend the front knee while keeping the back knee straight and the heel firmly on the ground.

iii) Strasburg Sock
(a) Proprietary studies indicate that this is as effective as stretching
(b) Replaces night splints

c) Anti-inflammatory therapy
i) NSAIDs
(a) Primarily provide pain relief, anti-inflammatory effects probably play very little role

ii) Oral steroids
(a) Medium to high dose given for 6 to 14 days often will give temporary relief

iii) Locally injected steroids
(a) Beneficial for short-term relief.
(b) 20 to 40 mg of triamcinolone or equivalent steroid with/without local anesthetic.
(c) Inject deep into the plantar fascia to avoid fat atrophy.
(d) Approximately 10% risk of plantar fascia rupture.

d) Surgical intervention
   i) Only should be considered after six to 12 months of unsuccessful conservative therapy in patients with significant symptoms affecting daily activities or official duties.
   ii) Has a fairly high failure rate.
   iii) Over 80% resolve after one year with or without treatment.

REFERENCES

Barrett, S. L., O'Malley, R. Plantar Fasciitis and other causes of Heel Pain. Am Fam Physician 1999;59;8:2200

Benedict F DiGiovanni, MD, et.al., Enhances Outcomes in Patients with Chronic Heel Pain

Buchbinder R. Plantar Fasciitis. N Engl J Med 2004;350:2159-2166.

Cooper P. Current Concepts on the Management of Heel Pain. MedGenMed 1(1), 1999 [formerly published in Medscape Orthopaedics & Sports Medicine eJournal 1(5), 1997].

Der Bauwhede MD, Plantar Fasciitis. "Wheless Texbook of Orthopedics"

DiGiovanni BF, et al. Tissue-specific plantar fascia-stretching exercise enhances outcomes in patients with chronic heel pain. J Bone Joint Surg July 2003;85-A:1270-7.

Jan D. Rompe, M.D. Plantar Fasciitis, Letter and Response from Buchbinder. N Engl J Med 2004. 351:834

The Strassburg Sock™, Medical Information Packett. www.thesock.com, J T Enterprises,LLC PO Box 1213 Lockport,NY 14095-1213

Young, C.C., Rutherford, D.S., Neidtfelt, M.W., The Treatment of Plantar Fasciitis. Am Fam Physician 2001;63:46.

Paula Y. Smith, M.D.

4/1/2007

Paula Y. Smith, MD, Director of Health Services Date

SOR: Deputy Medical Director