



Importance Of Homoeopathy In Plantar Fasciitis

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Abstract

The most common cause of plantar heel pain is Plantar Fasciitis. It is mainly diagnosed clinically by the patient symptoms which typically appears with pain that worsens with the first few morning steps. It is a condition, which arises from the degenerative irritation of the plantar fascia origin at the medial calcaneal tuberosity of the heel and its surrounding perifascial structures.. While multifactorial in its origins, overuse stress is often the leading cause, following with having plantar calcaneal spur. The treatment for plantar heel pain varies due to the multiple etiologies and unknown pathogenesis of the disease. Therefore therapeutic efficacy of treatments varies, and beside the fact that the ailment is self-limiting, due to the intensity of the pain and disturbances in daily life, and high relapse rate medical assistance is sought.^[1] If risk factors are managed properly and several therapy methods are started earlier, symptoms will subside more quickly. Many previous studies have showed that Homoeopathic medicines provides long term solutions and treats the root cause of the disease , and this article is an attempt to embark the importance of different homoeopathic medicines for homoeopathic management of plantar Fasciitis .

Keywords : Plantar fasciitis, plantar heel pain, Homeopathy

INTRODUCTION

The most common cause of heel pain worldwide is plantar fasciitis. Nearly about 15% of foot problems and 8 % of injuries to athletes advocated to the health-care professionals are connected to plantar fasciitis.^[2] Some professionals also termed it as “fasciosis” as it occur mainly due to weight bearing and overload on the foot repeatedly for a very long time in daily life and sports which cause degeneration rather than inflammation.^[3] It can also termed as plantar heel pain, heel spur syndrome, runner’s heel and painful heel syndrome. It is an enthesopathy i.e., a deformity or lesion where a ligament is attached to a tendon or bone. Plantar fasciitis is an injury to the plantar fascia attached to the medial tubercle of the calcaneus.^[4] Plantar fascia is a thick connective tissue which is present under the skin in the bottom of foot and linked the heel to the front of foot and plays a major role in in biomechanics of foot by giving support to the arch of foot and thus act as shock absorber as well as sustain normal shape of foot.^[5]

Due to prolonged use of unsupported footwear, running, standing on hard surfaces, weight gain produces strain on plantar fascia leading to irritation and inflammation. The diagnosis of plantar fasciitis is purely based on clinical criteria. The most commonly observed sign and pathognomonic is pain localised at the medial tubercle of the calcaneus. Other investigation like ultrasonography are rarely used and it mainly shows diffuse or localised hypoechoic areas within a thickened calcaneal attachment. But, this does not explain the exact pathogenesis of plantar fasciitis as more than inflammation it is mechanical in origin. Mainly it is of two types:- diffuse and insertional. This article exhibit a review pathogenesis, clinical feature and diagnosis of plantar fasciitis ^[6]

Epidemiology ^[7,8]

It is found that around about 10% of people once in their life suffer from it. Most commonly seen in women of age 40-60 years old with body mass index of more than 25 kg/m². The athletes who are runners about 22% of them could experience plantar fasciitis with high prevalence. In one third of people it can found bilaterally. Every year more than 2 million Americans are treated for plantar fasciitis.

Etiology /Risk Factors

The exact genesis behind the plantar fasciitis is unclear; however it is multifactorial. Repeated micro-trauma due to prolonged strain on the plantar fascia can develop plantar fasciitis. Systemic conditions like rheumatoid arthritis, seronegative spondyloarthropathies, diabetic nephropathy, hypothyroidism, osteoarthritis are also associated in some cases. Heel spurs are also found in approximately 50% of cases.^[9] The risk factors behind the development of plantar fasciitis can be divided into two types:

- a. **Intrinsic risk factors-** People between the age of 40-60 years are most commonly affected. Those who suffer from flat feet(pes planus), high arch feet(pes cavus), shortened Achilles tendon, weak intrinsic muscles and plantar flexor muscles of foot, obesity, abnormal pattern of walking, continuous standing due to work can lead to improper weight distribution and lead to stress on the foot resulting in plantar fasciitis. Another risk factor is unnecessary foot pronation and tight calf muscles which restrain use of windlass mechanism resulting in decrease shock absorption by the fascia and increase tension.
- b. **Extrinsic risk factors-** Long runners athletes have a continuous pressure on the foot which can irritate the plantar fascia. There are certain profession like teachers, sales executive , factory workers, traffic police require long standing and walking on rough surfaces which can lead to heel pain. Other exercise likes aerobics and ballet dancing increase pressure on the foot on long time and thus result in plantar fasciitis. Improper foot wear with thin soles, high heels, improper arch support can contract and shortened the Achilles tendon which produce stress on heels. Weight gain during pregnancy can also cause heel pain.^[10,11]

Pathophysiology ^[12, 13]

Biomechanical dysfunction is the most prevalent etiology of plantar fasciitis. Besides this infection, neoplasm, arthritis, neurological, traumatic and other conditions can also develop plantar fasciitis. The pathology behind it is secondary after micro trauma or tears of the calcaneal fascia because of prolonged stress on the arch with weight-bearing.

Micro-trauma of the plantar fascia occur due to excessive stretching either at its course or where the fascia inserts on the medial calcaneal tuberosity. This repeated micro-trauma or tears lead to chronic degeneration of the fascia. Continuous process of degeneration and healing cause heel pain in the fascia after every first step in the morning or long period of inactivity.

The word “fasciitis” used in the plantar fasciitis is a misnomer because more than inflammation it is a degenerative process along with fibroblastic proliferation. Studies and researches used the concept of fasciosis rather than fasciitis as the inciting pathology. As fasciosis is a chronic degenerative condition which has histologic features of fibroblast hypertrophy, absence of inflammatory cells, disorganized collagen, vascular hypertrophy with zones of avascularity. Ultrasound shows calcifications, intra-substance tears, and thickening and heterogeneity of the plantar fascia. So on ultrasound the changes appear as non inflammatory and dysfunctional vasculature. The reduced blood flow decreases the nutrition to reach the fascia which causes difficulty in synthesizing the extra cellular matrix require for repairing and remodelling of cells.

Clinical feature ^[14]

- Pains are sharp, stabbing and burning in nature and mostly disturb during the first few moves during morning after sleep or long period of inactivity or post static dyskinesia. Prolonged standing and sitting in severe cases can also aggravate the pain.
- History of cumulative tenderness at the inferior and medial aspect of heel, which can also radiate proximally in severe condition
- Pain gets ameliorated after walking for few time or any exercise and activity, but as the day spent the pain increases with increasing activities.
- Palpation the medial calcaneal tubercle where the plantar fascia inserts on the heel bone can also generate pain.
- Pain can also produce by the passive dorsiflexion of foot and toes.
- Positive windlass or Jack test when there is passive dorsiflexion of first meta tarsophalangeal and it elicit pain.
- Other features like tight Achilles tendon, pes planus and pes cavus can also be seen.
- Clinical examination is done to check for any restriction of moment at ankle –foot complex, scar tissues, loss of thickness of heel pad, any motor or sensory deficits and positive Tinel’s sign to exclude any other pathology.

Differential diagnosis ^[15,16,17]

The differential diagnosis plantar fasciitis are as follows:-

- ✓ Rupture of plantar fascia
- ✓ Fat pad syndrome
- ✓ Bruise on heel
- ✓ Bursitis
- ✓ Achilles tendinitis
- ✓ Calcaneal stress fracture
- ✓ Paget’s disease
- ✓ Abnormal growth or tumour
- ✓ Calcaneal apophysitis also called as Sever’s disease
- ✓ Tarsal tunnel syndrome
- ✓ Posterior tibial nerve entrapment
- ✓ Abductor digiti quinti nerve entrapment
- ✓ Lumbar spine disorders
- ✓ Atrophy of fat pad
- ✓ S1 radiopathy
- ✓ Calcaneus spur
- ✓ Osteoarthritis
- ✓ Stenosis of spinal cord
- ✓ Ankylosing spondylitis
- ✓ Reactive arthritis
- ✓ Rheumatoid arthritis
- ✓ Infection
- ✓ Bony pain in sickle cell
- ✓ Osteoporosis
- ✓ Diabetic neuropathy
- ✓ Unicameral bone cyst

Investigation^[18]

The diagnosis of plantar fasciitis is totally based on clinical signs and symptoms, however any tests or procedures are done to rule out any underlying pathological causes. The investigation advised or needed are mentioned below-

- i. X-ray of unilateral /bilateral foot with anteroposterior view or lateral view.
- ii. Ultrasound
- iii. Magnetic resonance imaging to rule out any tears, fracture and osteochondral defects. Plantar fasciitis on MRI appear as thickened plantar fascia and increased signal on delayed and short tau inversion recovery images.
- iv. Technetium scintigraphy
- v. Electromyography (EMG) to assess ant neurological problems.

Treatment & Management^[19,20]

Plantar fasciitis is a self-limiting condition, it can upto 6 to 18 months but sometimes underlying pathology and risk factors delay the healing which made both patient and physician frustrated. The target of treatment is to reduce pain, fastens healing, reinstate normal motion and flexibility of foot, support fascia, correcting any anatomical or physiological abnormalities and to give proper instruction of exercise and training methods to professional runners. The treatment of plantar fasciitis include the following measures-

- ❖ Application of ice-packs after activities.
- ❖ Use of oral or topical NSAID's to relief pain.
- ❖ Deep friction massage of foot.
- ❖ Use of shoe inserts, orthotics and night splints to maintain the correct posture and supporting arch of foot.
- ❖ Stretching exercises along with the use of prefabricated silicone heel inserts also prove beneficial in correcting the arch as well as heal pain.
- ❖ Failure of conservative treatment, taking long time for recovery or the condition is getting worse make the physician to choose more invasive measures like extracorporeal shock-wave therapy, botulinum toxin A, injections of autologous platelet-rich plasma, dex prolotherapy, and steroids.
- ❖ Physiotherapy like osteopathic manipulation and strain-counterstrain technique also prove beneficial where initial measures are unsuccessful.
- ❖ Use of alternative therapies like magnetic insoles, acupuncture, nutritional agents like vitamin C, zinc, omega 3 fatty acid, glucosamine, bromelain and fish oil.
- ❖ When the conservative measures, invasive techniques and alternative methods fail to relief the pain and condition get worse with time then surgery is the last option. Surgery like open, percutaneous, or endoscopically partial plantar fasciotomy and gastrocnemius lengthening are done for the condition.

HOMOEOPATHIC MEDICINES FOR PLANTAR FASCIITIS^[21,22, 23]

1. **Alumina-** Numbness with stiffness in legs and heels feel asleep especially sitting with crossed legs. Stumble while walking with tearing and burning sensation in soles. Tenderness in soles while stepping, feels soft with swelling. Suited to old people or prematurely old people with weakness and deficit vital heat. The characteristic symptoms are sluggishness, heaviness, numbness, staggering and constipation. Aggravation in morning, on awaking and amelioration from open air, damp weather and evening.
2. **Ammonium muriaticum-** Tearing and shooting sensation on tips of toes. Ulcerative pains in heels and boiling sensation with contractions of hamstring tendons. During menses pain in feet. Coldness of feet mainly during evening and in bed. Throbbing, tingling, shooting and jerks in toes. Better from rubbing and open air and worse in evening and in bed.
3. **Apocynum androsaemifolium-** Rheumatic medicine having the most promising and curative results. Wandering pains with rigidity drawing sensation. Everything smell and taste like honey. Trembling, weakness and swelling. Toes and soles are painful with swollen feet. Tingling pain in lower extremities. Cramps with sensation of violent heat in soles.
4. **Aranea diadema-** Periodicity and coldness with sensitivity to dampness is the marked feature of medicine. Feeling of coldness in every bones of body. Suited to people of hydrogenoid constitution.

Os calcis is very painful, numb and swollen. Symptoms are < in damp weather, afternoon and night. Boring and digging type of pain in soles and feet. Pain is relieved by continued motion. Ulceration of the heels.

5. ***Aristolochia milhomens***- Pains are stitching and lancinating in nature. Irritation, burning and pain in heels. Legs become stiff. Achilles tendon painful with itching, cramps and swelling. There are big, irregular patches formed by extravasated blood in whole legs.
6. ***Baryta carbonica***- Suited to old people who have degenerative changes with cold sensitivity, weakness and weariness. Feet are cold and calmy with numbness and tearing. Soreness in toes and soles with pain while walking. Lower extremities joints painful with burning pains and drawing sensation. Muscles get shortened and tensed. Foot joint painful as if sprained. Foot ulcers with painful swelling of great toe. Callous part of sole has pain as if there is a corn. Worse from lying on painful side and thinking of complaints and amelioration from walking in open air.
7. ***Benzoic acid***- It is an anti-sycotic remedy with uric acid diathesis. Sudden change in pain locality. Achilles tendon painful with tearing, swelling and stitches. Joints crack on movement. Ulcerative pain in whole leg. Gastrocnemius muscle painful. Walking causes pain in ankle when the weight of body is put on them. Radiation of severe pain from tendo- Achilles to os calcis when they have to bear the body weight. Metatarsal joint painful with tearing and stitching. Aggravation from open air and uncovering.
8. ***Berberis vulgaris***- Suited to fleshy people having good livers, gouty constitution and bilious diathesis. Symptoms rapidly changes in regards to place and character. Pains are radiating, tearing, burning, bubbling and wandering in nature. Paralytic and rheumatic pain in legs and feet. Ulcerated pain in heels on standing. Stitches between metatarsal bones like as of a nail while standing. Balls of feet painful while stepping. Lameness and weariness of legs even walked for a short distance. Sensation of needles in soles when rising in morning and burning pain in evening. Swelling of tendo-Achilles with pain and heaviness while lifting foot. Heel and foot swollen with burning and cramps after movement. Sensation as if toe joints gets dislocated with drawing, redness and burning.
9. ***Borax veneta***- Stitching and shooting in soles with excoriating pain in heels. Burning and erysipelatos inflammation of toes. Suppuration at a spot in heel due to wound caused by shoe rubbing.
10. ***Bryonia Alb***- Stitching and tearing pains which are aggravated by motion and better by rest is the characteristic. Robust constitution which have firm, fleshy fiber, dark complexion, dark hair tendency to lean and irritability. Swelling with hot sensation in feet. Red, hot and swelling in all joints. Ankle and foot feels as if dislocated with pain while walking. Feet are swollen, red, hot and painful as if bruised and ulcerated while moving and touching. Shooting in soles and toes especially when resting on foot. Aggravation from warm, motion, morning, exertion and touch. Amelioration while lying on painful side, pressure, rest and cold things.
11. ***Calcarea flourica***- Bony overgrowth with pain and swelling. Schüssler called it as a “bone salt” due to its specific action on bones. It is use for any excess growth, ulceration and fistula in bones. Synovitis and bursitis with swelling and crackling in joints. Joints easily get dislocated. Curvature of bones with deformities. Rice bodies formation inbones and cartilages. Aggravation during rest and change of weather. Better from heat and warm applications.
12. ***Causticum***- It cover all the three miasms. Hydrogenoid constitution. The remedy is used in chronic rheumatic, arthritic complaints accompanied by drawing pains in muscular and fibrous tissues. Joint deformities with continuous loss of muscle strength and contracture in tendons. Tearing pain in joints and bones in night with loss of strength and swelling. The marked features of this medicine is burning, restlessness with rawness and soreness. Ankles are weak which make patients unable to walk. Burning in joints with falling and unsteady walking. Stiffness in the joints of feet. Neuralgia of the soles of feet. Tingling and coldness in the soles of feet. Vesicles and ulceration of feet.
13. ***Cyclamen europaeum***- Suited to the people who are chlorotic, phlegmatic temperament, blonde leucophlegmatic subjects who are easily fatigued. Pain in the joints of foot as if dislocated and sprained. Heels get sore during walking. Burning in heels. Pain in parts where bones lie near surface.
14. ***Graphites***- Suited to persons who are stout, fair complexion, fat, chilly, costive, sensitive to cold , delayed menstrual history, constipation and tendency of skin diseases. It is a great anti-psoric medicine. Swelling in lower limbs with stiffness, hardness, burning and shooting pain. Heaviness and numbness in open air. Tearing arthritic pains in feet. Contraction of tendo- Achilles and hamstring muscles. Continuous standing causes congestion in the feet. Shooting pain in heels, soles

and feet like that of an ulcer while standing after sitting. Aggravation from warmth, during night and amelioration from wrapping up.

15. **Hedeoma pulegioides**- Pain in tendo-Achilles as if sprained with swelling and difficult to walk. Feel as if limbs are paralysed with pain sensitivity and cannot stand or move. Coldness of feet with pain.
16. **Kalium bichromicum**- People who are fleshy, fat, light complexion, syphilitic or scrofulous history and prone to catarrh. Wandering pains along the bones with soreness as if bruised. Pain, rigidity, crackling and swelling of all joints. Tendo-Achilles and heels feels sore, swollen and painful while walking. Sensation as if left ankle is dislocated. Inflammation and ulceration of feet. Aggravation in morning and hot weather and better heat.
17. **Ledum palustre**- Rheumatism begins from feet and ascend upwards. Gouty pains in foot and its joints with swelling, hot and paleness. Crackling in joints < warmth of bed. Ankles and soles are swollen, painful and easily sprained and cannot step on them. Sensation of cramps in heels with stiffness. Soles are painful as if galled and filled with blood. Inflammation with edema of legs and feet.
18. **Lycopodium clavatum**- Suited to people with weak muscles, thin, withered, full of gas, lack of vital heat, poor circulation and cold extremities. Carbo-nitrogenoid constitution with lymphatic temperament. Drawing pain along the course of sciatic nerve to foot mostly in evening and in bed. Pain extend from right hip to feet with limp during walking. Discomfort, numbness, shocks and trembling in feet mostly in night. Pain and cramps in soles, ankles and feet. Shooting pain with swelling and coldness of feet, soles and malleoli. Alternate foot heat and other one is cold. Cold, copious sweat on feet with excoriation of skin. Rhagades in heel. Callosities with pain on soles and toes.
19. **Medorrhinum**- Legs feel heavy with pain and restlessness during night. Ankles easily get twisted while walking. Burning in feet want them to uncover and fanned. Tenderness in heels and balls of feet. Soles feel sore. Trembling from legs to feet. Cramps in soles during night. Sudden pain in left ankle and joint that cannot move body or limb with screaming during night while going to bed. Coldness and edema of feet.
20. **Mercurius solubilis**- Swelling in heels with sharp and shooting pains. Wrenching pains, coldness and sweat in feet. Painful swelling of metatarsal bones and toes. Weakness and bone pains during night. Lacerating pain and dropsical swelling of feet and legs.
21. **Natrum carbonicum**- Ankles easily get dislocated and sprained. Weakness in limbs during morning. Pain in heel and tendo-Achilles. Heaviness and rigidity in feet during sitting and walking. Incisive pains and cramping in feet. Burning and swelling in the joints of foot, soles with shooting pains when putting them on ground and in evening. Ankles and foot are so weak that they give away and bends during stepping. Feet feels cold. Chronic ulcers after vesicles in heels. Ulcerated, black pustule on heels. Throbbing and crawling sensation in heels.
22. **Pulsatilla nigricans**- Pain in soles of feet as from subcutaneous ulcer. Swelling and hotness in soles of feet with shooting pain during movement and when touched. Stinging pain, numbness and redness in soles and balls of feet ascending upto calves. Oedematous swelling on top of foot during evening. Piercing, shooting and incisive pains in heel during evening. Shooting in soles of feet when one allows the feet to hang down. Pain in limbs with restlessness, sleeplessness, chilliness and shifting rapidly. Heaviness and weariness in legs.
23. **Petroleum**- Chronic sprains with cracking in joints. Cramps in feet and soles at night. Herpes on ankles with burning sensation in soles. Profuse and fetid perspiration on feet with tenderness. Coldness with hot swelling of feet and soles. Swelling, redness, burning pains and shooting in heels < walking. Blisters on heels with sensation of splinter.
24. **Rhus toxicodendron**- Lancinating, shooting and wrenching pains in feet and toes while resting. Erysipelatous swelling around ankles after prolonged sitting especially during travelling and in evening. Paleness and numbness of feet. Tearing pains and fascid in ligaments and tendon. Tingling in feet.
25. **Ruta graveolans**- Acts on periosteum and cartilages. Flexor tendons gets sprained and lameness. Limbs feel as if bruised. Weakness of legs after rising from chair. Aching pain in tendo-Achilles, bones of feet and ankles with restlessness. After dislocation or sprain there is lameness and pain in ankles as if ulcerated. Pain, tenderness and aching in soles and ankles. Acute shooting in left ankle and rarely in right with pinkish discoloration. Unable to stand and walk due to burning and gnawing pain in bones of the feet.

26. **Sabina**- Intermittent aching in left heel where it joins the soles. Sharp stitching pains from within outwards in right and left heel. Pressive tearing in bones of feet. Shooting and arthritic pains in heels and metatarsal bones.
27. **Sulphur**- Burning and stiffness in soles and ankles at night. Restlessness in feet. Erysipelas in foot. Cramps in soles at night and at every step. Excessive sensitiveness to pain in soles while walking. Foot get dislocated easily during walking. Stiffness of ankle joint and malleoli. Weak and sprained ankle when standing and walking. Burning ulcers on feet. Tetter on ankles. Shooting and coldness in feet during evening and in bed. Burning sensation with itching in soles, want them to place in cool places or out of bed after prolonged sitting and walking. Sweat in soles and right foot. Swelling of foot and ankles. Vesicles in soles.
28. **Thuja occidentalis**- Cracking in feet during stretching. Suppressed gonorrhoea causes pain in feet and ankles with difficulty in walking. Pain and numbness in heels. Stitching above heels in tendo Achilles. Cluster of veins as if marbled on soles.
29. **Valeriana officinalis**- Rheumatic pains with heaviness and constant jerking. Pain in heels when sitting. Drawing and weakness in tendo –Achilles and heel with no strength during sitting but disappear as soon as stand. Constant pain in heels especially in right during sitting. Pain in malleolus of foot as if bruised > walking and < when standing. Wrenching, tearing and transient pain in the joints of the foot and ankles.
30. **Zincum metallicum** – Continuous trembling and twitching of feet cannot keep them still. Soles of feet are very sensitive. Rheumatic drawings and tearing in ankles and joints of the feet. Erysipelatous inflammation and swelling of tendo Achillis. Intolerable boring pain in heel after drinking wine. Stiffness of joint of the foot after being seated for some time. Wrenching pain in joints of feet and toes. Burning sensation in feet. Inflammatory swelling of feet. Weakness and trembling of feet. Coldness of the feet at night. Nervous, fidgety movement of the feet; after retiring and during sleep. Tearing in margin of r. foot. Painful chilblains on feet. Ulcerative, boring pains in heels; < when walking than when sitting. Profuse sweat on the feet.

Discussion & Conclusion

Plantar fasciitis or fasciosis is a clinical condition alike to tendinopathy marked by collagen degeneration rather than inflammation. On the other hand on examination it is found that certain biomechanical factors produces excess tensile stress and strain on the plantar fascia resulting in plantar fasciitis. There are not much studies so trial and researches are needed to show the importance of tensile stress, non-uniformity of fascia like bending ,shear and compression to prove their role in development of plantar fasciitis. Studies are also needed to support the role of age, inheritance and other risk factors responsible for plantar fasciitis. The available treatment options like conservative measure as well as invasive procedures have result in resolving the problem but do not prove to be a specific and successful treatment always. The role of Homoeopathy in treatment and management of plantar fasciitis has been useful because it works on the progressive degenerative changes as well as on inflammation. Homoeopathic medicines has direct action on the muscles, tendons and bones which helps to correct the injury or any abnormal changes in them. The minimum doses and holistic approach in homoeopathy not only cure the disease but also restore the normal anatomy and physiology. By proper integrated homoeopathic approach, lifestyle modifications, counselling and awareness of patients, plantar fasciitis can treated efficaciously .

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