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PADA KANTAKA – A CONCISE AYURVEDIC REVIEW

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ABSTRACT:

Pada kantaka is a *vataj* disease described in *Ayurvedic* text. *Pada kantaka* is common orthopedic condition encountered in day today Ayurvedic practice. Clinically, *Pada kantaka* can be correlated with plantar fasciitis. Today many treatment modalities are available for plantar fasciitis. But the problem still persists as a medical challenge due to incomplete cure or recurrence. The present article encompasses the concise *ayurvedic* review of *pada kantaka* and Plantar fasciitis referred in terms of introduction, signs and symptoms, management methods available for *pada kantaka* in *Ayurveda* and plantar fasciitis in modern science.

KEY WORDS : *Ayurveda, pada kantaka*, plantar fasciitis, *vata kantaka,gulf sandhi*, review.

INTRODUCTION

Pada-kantaka is a condition caused by the vitiated. Aggravated *vata* takes *ashraya s*(localizes) in *gulfa sandhi* (ankle joint) and *padatala* (sole)leading to the development of *Pada-kantaka*. There are only a few references available regarding *Padagata Vyadhi* in *Ayurvedic* text. In the context of *Vatavyadhi Sushruta* has explained the disease *Vata kantak*. It has been elaborately mentioned as follows:

न्यस्तेतुविषमेपादेरुजः कुर्यात्समीरणः । वातकण्टकं इत्यषे विज्ञये खुडकाश्रितः ।। (सु नि . 1 /79)

Acharya Yogratnakar has stated *Vata kantak* as *Pada kantak.*

न्यस्तेतुविषमेपादेरुजः कुर्यात्समीरणः । पादकण्टकं इत्यषे विज्ञये स्तलमाश्रितः ।।

(यो. र. पूर्वखंड वातव्याधी निदान)

It is primarily recognized as *Vata Vyadhi*, characterized by pain "just like pricked by thorn (*kantak*)" in the foot (*Pada)* and hence the name "*Pada kantak*".

This means that walking bare-foot on uneven surface causes vitiation of *Vata* which inturn causes pain which is specifically located at heel.

As per the various literary references available in *Ayurveda*, the clinical features of Plantar fasciitis resembles with that of *Pada-kantaka*. Plantar fasciitis is the most common cause of chronic pain beneath the heel in adults. Plantar fasciitis occurs in 1 in 10 people in their lifetime. Though it is frequently associated with calcaneal spur, the main underlying pathology is the degenerative process of plantar fascia. For plantar fasciitis, first line of management is NSAIDs with physiotherapy is the followed by local injection of steroids for immediate relief.

Plantar fasciitis or PF, Plantar fasciopathy, Jogger's heel, tennis heel, policeman heel are some synonyms used for this condition. It is a common and painful enthesopathy of the heel and plantar surface of the foot with characteristic inflammation, fibrosis, or structural deterioration of the plantar fascia of the foot.

The diagnosis of Plantar fasciitis is usually clinical and rarely needs to be investigated further[1,2].The patient complains of pain in heel, especially with initial steps after a period of rest and usually diminishes with increasing activity during the day and it tend to worsen toward the end of the day. Symptoms may become worse after prolonged weight bearing.

Plantar fasciitis is usually unilateral, but up to 30% of cases have a bilateral presentation[3]. Almost 80% of cases shows Tightness of Achilles tendon.

Occasionally the pain may spread to the whole foot including the toes. Medial calcaneal tuberosity may show tenderness which may exaggerate on dorsiflexion of the toes or standing tip toe. Most patients may show resolution of symptoms within a year.

Plantar fasciitis is commonly encountered condition in middle aged, overweight persons, whose work involves prolonged standing. As the pain in the heel is aggravated on weight bearing, it affects adversely daily[4].

The etiology and treatment of the Plantar fasciitis is poorly understood. Chronic cases of plantar fasciitis have more degenerative changes than inflammatory changes. Such cases are termed as plantar fasciosis[5]. Commonly associated finding with plantar fasciitis is Calcaneal spur, but it could not be related to the disease process. Though it is a self-limiting disease, it's sharpness of pain and long duration of course makes most of the patients to seek medical intervention.

According to *Ayurvedic* scriptures *Snehan, Bandhan, Raktamokshana* and *Agni-karma* are the principal treatment modalities for the *Pada-kantaka*[6].

Cold and heat fomentation, splints, stretching and orthosis and NSAIDs are the first line of treatment for Plantar fasciitis. Local injection of steroids is the commonest choice of treatment for refractory cases, but steroids are having a long list of side effects[7]. So, nowadays many alternative treatments are suggested with some advantage and disadvantage. Extra-corporeal shock wave therapy, Autologous platelet rich plasma (PRP), and lastly surgery are the recommended treatments in modern science. Recently Plantar Iontophoresis is gaining popularity due to its simplicity of procedure and effectiveness.

Radiological findings-

Radiological Imaging has limited role in diagnosis of Plantar Fasciitis. In the clinical management of chronic heel pain, diagnostic imaging can provide objective information. Cases that do not respond to first-line interventions or when considering more invasive treatments (e.g. corticosteroid injection), radiological imaging may become necessary.

- Lateral radiograph of the ankle -for assessment of calcaneal spur, thickness of plantar fascia and the fat pad quality. Stress fractures, and giant cell tumors are usually identified with plain X ray.
- Ultrasound examination- normal thickness of the plantar fascia when measured in ultrasound varies in range (mean 2–3 mm). People with chronic heel pain are likely to have a thickened plantar fascia with associated fluid collection, and that thickness values >4.0 mm are diagnostic of plantar fasciitis[8]
- Thickness of Plantar fascia values have also been used to measure the effect of treatments. There is a significant correlation between decreased plantar fascia thickness and improvement in symptoms.

Differential diagnosis of plantar fasciitis is enlisted in table no.I.

Treatment modalities available today-

1. **Medication-**Pain management- ibuprofen and naproxen may ease associated pain and inflammation.
2. **Physiotherapy-**Stretching and strengthening exercises or use of specialized devices may provide symptomatic relief. These include :

i. **Physical therapy.** Series of exercises causing stretching of plantar fascia and Achilles tendon, to strengthen lower leg muscles, which stabilize ankle and heel.

ii. **Night splints.** Wearing a splint that stretches calf and the arch of foot while sleep. This holds the plantar fascia and Achilles tendon in a lengthened position overnight and facilitates stretching.

iii. **Orthotics.** Cushions or custom-fitted arch supports (orthotics) to help distribute pressure to feet more evenly.

3. **Surgery and other -**
4. **Steroid- Injecting steroid medication into the tender area may provide temporary pain relief. Multiple injections are not advised because they can weaken plantar fascia and possibly cause its rupture, as well as shrink the fat pad.**

5. **Extracorporeal shock wave therapy. In this, sound waves are directed at the area of heel pain to stimulate healing. It's usually used for chronic plantar fasciitis that has not responded to more-conservative treatments. This procedure has few side effects like bruises, swelling, pain, numbness or tingling. It has not been consistently effective.**
6. **Surgery. Few people need surgery to detach the plantar fascia from the heel bone. It is generally an option only when the pain is severe and all other treatments fail. Side effects include a weakening of the foot arch.**
7. **Lifestyle style modifications-**

   i. Maintain a healthy weight.

   ii. Apply ice

   iii. Stretching arche

Treatment in *Ayurveda*-

1. *Charaka* has mentioned *Sandhigata vata roga* in the chapter *Vatavyadhi chikitsa*. He explained this disease with *Dhatugata anila vikaras* and not mentioned in *Nanatmaja vata vikara*. A separate *nidana* or the treatment principles are not found in the text.
2. *Sushruta* mentioned general *nidana* in *Nidana Sthana* (*vata vyadhi nidana*) and separate treatment principles are mentioned in *Chikitsa sthana (Vatavyadhi chikitsa).*

स्नेहोपनाह अग्निकर्म बंधनोन्मर्दनानि च स्नायु संध्यस्थिसंप्राप्ते कुर्याद्वायावतंद्रितः ।। (सु. चि. 4 /8)

Local *Snehana, Upanahaa, Agni-karma, Raktamokshana, Bandhana, Unmardana* and oral administration of *Eranda taila* are the classical line of treatment for *vata – kantaka*

Yogratnakar and *Acharya Chakradutta* has indicated following therapeutic measures for *Pada-kantak*:

"रक्तावसेचनं कुर्यात अभिक्ष्णं वातकण्टके।

पीबेदेरंडतैलं दहेत् सूचीभिरेव च ।। योगरत्नाकर पूर्वखंड वातव्याधी चिकित्सा

"*Acharya Shushruta* has also mentioned *Agnikarma* in severe painful conditions of *Twak, Mamsa, Sira, Snayu, Sandhi, Asthi* due to vitiated *Vata*[9].

In *Shalya Tantra* different modalities of treatments are described as *Bheshaja karma*, *Kshara karma, Agnikarma*, *Raktamokshana* and *Shastra karma*. Among them *Agnikarma* is said to be superior most as, according to *Sushruta Samhita, Agnikarma* cures the disease completely with no recurrence[10]

CONCLUSION-

From the above discussion, it is clear that *Pada kantaka* is a common condition encountered in day today practice. It has wide range of available treatment modalities from non-invasive treatments such as physiotherapy or simple exercises to invasive such as *agnikarma*, to release of plantar fascia.

Therefore, it is important to enlist the management modalities available and making patients aware about signs and symptoms and management options available for them. The article also opens a new research window in the field of *Ayurvedic* musculoskeletal or orthopedic disorders to research upon a variety of better non-invasive or minimal invasive tools to observe their clinical effects in *Pada kantaka* and or Plantar Fasciitis.

1.	**Neurological**	abductor digiti quinti nerve entrapment
		Disorder of medial calcaneal branch of the posterior tibial nerve
		tarsal tunnel syndrome

2.	**Soft tissue**	Achillis tendinopathy
		fat pad atrophy
		heel contusion
		plantar fascia rupture
		posterior tibial tendonitis
		retrocalcaneal bursitis
3.	**Skeletal**	Sever's disease
		Calcaneal stress fracture
		infections
		inflammatory arthropathies
		subtalar arthritis
4.	**Other**	metabolic disorders
		Osteomalacia, Rheumatoid arthritis

Table no. I- Differential diagnosis of plantar fasciitis

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