

Efficacy of Sri Lankan Traditional Paste on *Vatakantaka* with special reference to Calcaneal spur -A Case Report

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Abstract:

As per the classical texts of *Ayurveda*, *Vatakantaka* is a one of the common clinical condition which is considered as a *Vatavyadhi*, caused mainly due to the vitiation of *Vata Dosha* occurring due to walking on an uneven ground frequently, placing the feet improperly while walking, running etc. Due to this when vitiated *Vata* produces severe pain in *Pada*. Present case study was carried out at Chamal Rajapaksha Ayurveda Research Hospital, Hambantota, Sri Lanka, to evaluate the efficacy of Traditional Paste practiced by Sri Lankan Traditional Practitioners. This is a case of 48-year-old female patient presented with 6 months history of B/L ankle spur was treated with traditional paste. The clinical presentation of patient was pain over ball of the heel, tenderness on plantar aspect of the heel, slight swelling at the attachment of Plantar Fascia-ray of the heel. Radiological findings of lateral view of the heel shows prominent bone spike arising from the Calcaneum. The patient was treated for one month with this traditional paste. Paste was prepared by seed of Black Mustard (*Brassica nigra L.*) which has properties of *Teekshna*, *Ushna*, *Lekhana Guna* and *Ushna Veerya*. Progress of the treatment was recorded and therapeutic effects were evaluated through symptomatic relief. Clinical symptoms were significantly reduced and X-Ray showed that reduce of the size spur. It can be concluded that paste of Black Mustard (*Brassica nigra L.*) is effective in treating *Vatakantaka* (Ankle Spur) by reducing symptoms and reducing the size of the spur of the ankle.

Key Words: Ankle spur, *Brassica nigra L.*, Calcaneum spur, Planter faciculitis, Traditional paste, *Vatakantaka*

Introduction:

A heel spur is a pointed bony outgrowth of the bone of the heel (the calcaneus bone). It is attributed to chronic local inflammation at the insertion of soft-tissue tendons or fascia in the area. ^[1] Heel spurs can be located at the back of the heel or

under the heel, beneath the sole of the foot. Heel spurs at the back of the heel are frequently associated with inflammation of the Achilles tendon (tendinitis) and cause tenderness and pain. About 15% of adult world population complains of foot problem and 1 in 8 orthotic prescriptions

are related to heel spur related symptoms. About 1 out of 10 adults develop this condition each year in U.S. Women have a significantly higher incidence of heel pain than men. ^[2]

This condition can be correlated with *Vatakantaka* based on the *Ayurvedic* point of view which is considered as a *Vatavyadhi*, caused mainly due to the vitiation of *Vata Dosha*. ^[3] It is described that by walking on an uneven ground frequently, placing the feet improperly while walking, running etc., causes exertion there by *vata* that is localized in *Gulpha* gets aggravated and produces severe pain in *Pada* and tenderness beneath the posterior heel. ^[4-5] Pain is worsened by walking bare foot on hard surfaces, and with first few steps taken in the morning or after long periods of resting. ^[6]

Different treatment in Allopathy for this involves both conservative and non-conservative modes of treatment. Black Mustard (*Brassica nigra*) paste of Brassicaceae family, ^[7] affect all the symptoms of Ankle spurs and ability to perform daily tasks with chronicity of Ankle spurs over a 6 months period.

Case Report

The patient in this study was a 48-year-old female police officer who was diagnosed as B/L an ankle spur 6 months before progression condition with pain over ball of the heel, tenderness on plantar aspect of the heel, slight swelling at the attachment of Plantar Fascia-ray of the Heel. Lateral view x-ray of left foot

showed prominent bone spike arising from the calcaneum. The participant took nonsteroidal anti-inflammatory drugs (NSAID) and analgesics to manage the pain. She was free from other chronic disorders like Hypertension, Diabetes mellitus, Thyroid disorders etc. Patient was on under diet control and behavior control.

Intervention:

The intervention used in this study was paste of Black Mustard (*Brassica nigra L.*). The study was conducted over a 1 month period with 20 minute treatment given per day. Paste was prepared with seed of Black Mustard (*Brassica nigra L.*) by mixing adequate quantity of warm water. 5mm thickness was kept for paste and which was applied on the affected heel. By using heated metal, heel was fomented until stretching like pain occurs over the calf muscle region (Fig-1 all steps of procedure). Two tools were used to collect data throughout this case study.

A visual analog scale (VAS) was used to measure the outcome of pain intensity before and after treatment and the AIMS 2 Questionnaire was also completed upon arrival of the participant at the clinic every week before treatment (Table-1,2). Data was recorded every week. Pre and post intervention symptoms intensity measurements were measured weekly.

Table-1: Subjective criteria (VAS)

Parameters	Before Treatment	After Treatment
Pain	03	00

Table-2: Objective criteria (AIMS 2)

Parameters	Before Treatment	After Treatment
Tenderness	03	00
Swelling	03	00
Movability	03	00

Fig:1 Procedure images:**Step 01****Step 02****Step 03****Step 04**


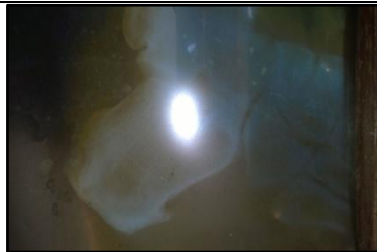


Step 05



Step 06

Fig-2 X-Ray Changes:

Parameter	BT	AT
X-ray Lt Ankle joint lateral view		

Results and Discussion:

The results of the study with the usage of the visual analog scale provided reliable data by measuring the effects of paste therapy on pain before and after treatment. The data indicated an improvement in the perception of pain. The arthritis impact measurement scale (AIMS 2) questionnaire indicated a 100% change between the four weeks of the data collection; however, slight changes occurred between weeks 2-4.

The effects of *Brassica nigra* (Black Mustard) paste was observed before and after the intervention with a visual analog scale (VAS) ^[8] and the arthritis impact measurement scale (AIMS 2) questionnaire.^[9] This data shows the positive outcomes of paste of *Brassica nigra* L. (Black Mustard) since there was a

decline in the VAS measurements before 3 and after 0 the treatments. The AIMS 2 questionnaire was administered adequately to provide feedback on any changes in the patient's physical ability to complete a variety of tasks without pain. Result showed there was a 100% change, which means there was significant improvement. Ankle spur is associated with flare-ups and pain syndromes and this percent change indicates that it is able to maintain and manage those symptoms without aggravating the condition. Furthermore, X-Ray showed that reduction of the size of spur (Fig-2) *Vatakantaka* a common clinical condition is considered as a *Vatavyadhi*, caused mainly due to the vitiation of *Vata Dosha*. It has opposite *Guna* of *Vata Dosha* such as *Teekshna* and *Ushna Veerya*. *Ushna Teekshan Guna*,

and *Ushna Veerya* of paste breaks *Sroto Sanga* in *Gulpa Sandhi* and scraps the accumulation of *Ashthi Dhatu* which is caused by its *Lekhana* property. An enzymatic reaction in the wet mustard powder produces a chemical called allyl isothiocyanate which is absorbed through the skin as trans-dermal drug. ^[10] It provides warmth and functions as counter irritant, meaning that it stimulates nerve endings in the skin and thereby distracts the body from deeper-seated pain.

Conclusion:

It can be concluded that paste of Black Mustard (*Brassica nigra L.*) is effective management of *Vatakantaka* (Ankle spur) and only local application of thin paste can provide remarkable reduction in pain. However, if it is applied simultaneous with internal *Vatahara* drugs the time of recovery can be even faster and need to further study in more number of patients.

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