



## A COMPARATIVE EFFECT OF AGNIKARMA WITH SHALAKA AND TILA TAILA IN TRIGGER FINGER

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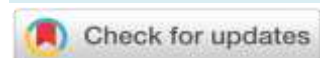
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## ABSTRACT

Trigger finger is a clinical condition in which the interphalangeal joint is flexed, it locks and then snaps into extension. In Ayurveda, the Trigger finger may be considered as *Snayugathavikaara*. *Acharya Susruta* explained that *Agnikarma* (cauterisation) can be a treatment of choice. This article is to compare the effect of *Agnikarma* using *Shalaka* and *Tila Taila* (sesame oil) on trigger finger. The participants were recruited into groups A and B, as *Agnikarma* with *Tila taila* and *Agnikarma* with *Shalaka* respectively. Both interventions were given in four sitting with an interval of a week between them. The assessment was done on the 1<sup>st</sup> and last day of the procedure based on the parameters of quinell grading, tenderness, locking of joint, and swelling. Statistically analysed using Mann Whitney U test and conclusions were drawn. It was found that the effect of *Agnikarma* using *Tila taila* is more effective compared to that of *Agnikarma* using *Shalaka* in the management of the Trigger finger.

**Keywords:** *Agnikarma, Panchadhatu Shalaka, Tila taila, Snayugathavikaara*

## INTRODUCTION

Trigger finger also known as Stenosing tenosynovitis is a clinical condition characterized by painful locking of the digit on flexion and extension.

Commonly seen in the diabetic population and women, in the fifth to sixth decade of life<sup>1</sup>. It arises from constriction of the fibrous digital sheath so that

free gliding of the contained flexor tendon does not occur<sup>2</sup>. In this condition, the patient experiences difficulty with voluntary movements. But when the obstructed portion is crossed, the finger suddenly straightens with a snap, and hence it is called a trigger finger<sup>3</sup>. The middle finger or ring finger is most commonly affected. The tendons in every single finger are covered by a protective sheath, which is lined with synovium producing a fluid that helps the tendons to slide easily while bending and straightening the finger. It is due to the narrowing of space within the sheath that surrounds the tendon in the affected finger as a result of inflammation<sup>4</sup>. Repetitive movements lead to inflammation of superficial & deep flexor tendons with tenosynovitis at the metacarpal head leading to nodal formation. When the fingers are flexed, the node moves proximal to the pulley and when the patient attempts to extend digits this node fails to pass back under the pulley consequently digit becomes locked in a flexed position. If the trigger finger is severe, the affected finger may become locked in a bent position.

Signs and symptoms of the trigger finger resemble that of *Snayugata Vata*. Trigger fingers can be related to *Snayugata vata* of *Hasta anguli*. *Snayugata vata* is characterised by *Stambha* (stiffness), *Kamba* (tumor), *Soola* (pain), and *Akshepaka* (convulsions)<sup>5</sup>. *Snehana*, *Upanaha*, and *Agnikarma* are the specific line of management in *Snayugata vikaras*. For *Agnikarma* *Kshaudra*, *Guda* and *Sneha* are used as *Dahanupakarana* in *Sira-snayu-asthi-sandhi gata rogas*<sup>6</sup>.

The modern line of management of the trigger finger includes the administration of steroid injections or in repetitive cases surgical management by splitting the tight tendon sheath<sup>7</sup>. The medical management of the trigger finger gives only symptomatic relief with the recurrent use of analgesics, with steroid injections and surgical intervention the complications and chance of recurrence are high and also are not cost-effective. *Agnikarma* is a non-pharmacological treatment explained in Ayurveda. It is decreasing the recurrence of the disease and provides long-term relief to the participants. Hence *Agnikarma* which is

classically mentioned and clinically found effective can be an effective treatment modality that is economic and give immediate relief to the participants. So the common people who can't afford the surgical cost will be the more beneficiaries through the cost-effective ayurvedic parasurgical treatment.

In the Present study, *Tila Taila* was selected as a medium for performing *Snigdha Agnikarma*. The comparative effect of *Agnikarma* with *Tila taila* and *Shalaka* in the trigger finger was assessed in this study.

### **Aims and Objectives**

To assess the effect of *Agnikarma* with *Shalaka* and compare it with that of *Tila Taila* in Trigger finger.

### **Materials and methods**

Participants satisfying the diagnostic criteria of Trigger finger (*Hasta anguli snayugata vata*) age group between 30 to 70 years irrespective of sex, religion, caste, and economic status attending the outpatient department of Shalyatantra, Sree Narayana Institute of Ayurvedic Studies & Research Hospital, Pangode, Puthur, Kollam.

The patients were divided into the following groups.

Group A: - *Agnikarma* with *Tila Taila* – *Bindu dagdha*. Group B: - *Agnikarma* with *Shalaka* – *Bindu dagdha*. The study duration for both groups was 1 month.

### **Inclusion criteria**

1. Participants satisfying diagnostic criteria of Trigger finger (*Hasta anguli Snayugata vata*) irrespective of gender, age between 30 to 70 years, irrespective of religion, caste, economic status, willingness to participate, and able to give consent.
2. Participants with controlled Diabetes Mellitus, controlled Hypertension

### **Exclusion criteria**

1. Participants contraindicated for *Agnikarma* as per classics.

**Components of Panchadhatu Shalaka:** *Tamra* (copper)-40%, *Loha* (Iron)-30%, *Yashada*(zinc)-10%, *Rajata*(silver)-10%

### **Procedure of Agnikarma**

**Preoperative procedure:** The procedure was explained in detail and consent was taken. The participant was kept in a comfortable position (lying/sitting) and the finger area was made antiseptic. An eye bandage was given.

**Procedure:** The tender points were marked over the base of the affected finger. *Agnikarma* was applied over the most tender points. In the case of *Tila taila*, a certain amount of *Tila Taila* was taken in a sterile vessel and heated till started boiling. The heated *Tila Taila* was applied over the tender points with help of

a pippete as *Bindu Visesha*. While by using *Shalaka*, *Shalaka* was heated in a gas stove till it becomes red hot. Red hot *Shalaka* was applied over the tender point as *Bindu Visesha*. As it cools, immediately applies Aloe vera pulp to relieve the burning.

**Post-operative care:** After wiping off Aloe vera pulp, a mixture of *Madhu & Ghrita* of equal quantity was applied immediately after *Agnikarma*. The participant should be observed for 30 minutes after the procedure. Clean the burnt spots with an antiseptic solution and apply *Madhu-Ghrita* daily.

**Follow up - 2 weeks after the treatment period.**



**Figure:1** *Agnikarma with tila taila over the base of the affected finger*



**Figure:2** *Agnikarma with Shalaka over the base of the affected finger*

**Criteria for assessment**

Subjective parameters

1. Quinell grading
2. Tenderness
3. Locking of joint

Objective parameters

1. Swelling

**Results and observations**

It was observed the mean age of the participants in Group A was 46.00 and Group B had a mean age of 43.62. The majority of participants (40.5%) who participated in the study are male and the remaining

59.5% are female. From (31%) of the participants in the study are housewives, whereas 14.3% are drivers. Barbers, Entrepreneurs, butchers, Conductors, Coolies, Doctors, Engineers, Industrial employees, IT professionals, and Pharmacists account for 2.4 percent of participants and so on. it is observed that the majority of the participants in the study (52.4%) have no diabetes, whereas 47.6% have diabetes. the majority (23.8%) of the patient's affected fingers are right thumbs. Both the left ring and right index fingers were affected in 16.7% of the participants.

**Effect of treatment on study parameters**

**Table 1: Comparison of Groups based on Quinell grading**

Quinell grading	BT		AT		AF	
	Group A	Group B	Group A	Group B	Group A	Group B
0	0(0.0%)	0(0.0%)	18(85.7%)	4(19%)	18(85.7%)	4(19.0%)
1	3(14.3%)	2(9.5%)	3(14.3%)	7(33.3%)	3(14.3%)	7(33.3%)
2	13(61.9%)	6(28.6%)	0(0.0%)	10(47.6%)	0(0.0%)	10(47.6%)
3	5(23.8%)	13(61.9%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
P value	0.487NS		0.000**		0.000**	

\*\* : Significant at 1% (P<0.01); NS: Not Significant (P>0.05)

**Table 2: Comparison of Groups based on Locking of joint**

Locking of joint	BT		AT		AF	
	Group A	Group B	Group A	Group B	Group A	Group B
0	0(0.0%)	2(9.5%)	21(100%)	11(52.4%)	21(100%)	11(52.4%)
1	21(100%)	19(90.5%)	0(0.0%)	10(47.6%)	0(0.0%)	10(47.6%)
2	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
3	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
P value	0.152NS		0.000**		0.000**	

\*\* : Significant at 1% (P<0.01); NS: Not Significant (P>0.05)

**Table 3: Comparison of Groups based on Swelling**

Swelling	BT		AT		AF	
	Group A	Group B	Group A	Group B	Group A	Group B
0	2(9.5%)	2(9.5%)	21(100%)	7(33.3%)	21(100%)	5(23.8%)
1	13(61.9%)	6(28.6%)	0(0.0%)	11(52.4%)	0(0.0%)	13(61.9%)
2	6(28.6%)	11(52.4%)	0(0.0%)	3(14.3%)	0(0.0%)	3(14.3%)
3	0(0.0%)	2(9.5%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
P value	0.052NS		0.000**		0.000**	

\*\* : Significant at 1% (P<0.01); NS: Not Significant (P>0.05)

**Table 4: Comparison of Groups based on Tenderness**

Tenderness	BT		AT		AF	
	Group A	Group B	Group A	Group B	Group A	Group B
0	0(0.0%)	0(0.0%)	19(90.5%)	8(38.1%)	19(90.5%)	4(19%)
1	9(42.9%)	8(38.1%)	0(0.0%)	10(47.6%)	0(0.0%)	14(66.7%)
2	10(47.6%)	11(52.4%)	2(9.5%)	3(14.3%)	2(9.5%)	3(14.3%)
3	2(9.5%)	2(9.5%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)
P value	0.790NS		0.002**		0.000**	

**\*\*:** Significant at 1% ( $P < 0.01$ ); **NS:** Not Significant ( $P > 0.05$ )

## DISCUSSION

Probable Mode of Action of Agnikarma in Trigger finger

*Taila* is the *Sneha* derived from *Tila* (*Sesamum indicum* L) used as a medium for *Snigdha Agnikarma*. *Agnikarma* with *Taila* is considered to retain heat for a longer duration resulting in deeper heat penetration through *Sukshma Siras*. Immediate heat dissipation after removing from the fire is 18°C-20°C. Subsequent heat dissipation per minute is 4°C-6°C<sup>8</sup>. *Panchadhatu salaka* was innovated by Prof. P.D. Gupta. This *Salaka* has been widely practiced and is apt to provide *Samyak dagdha*. It provides *Ruksha Agnikarma*. It has a major role in treating musculoskeletal conditions. Immediate heat dissipation after removing from the fire is 0°C. Subsequent heat dissipation per minute is 2°C.

### Discussion on observation

**Age:** The result shows increased incidence among the older population when compared to the younger population. **Sex:** More incidence was noted in females compared to males. Might be due to household work which requires repetitive gripping actions. **Occupation:** shows the majority of the patients were Homemakers which suggests that the disease might be having a significant relation with the activities of the subjects. **Diabetes:** Diabetes is one of the predisposing factors of the trigger finger. But in the present study majority of participants have no diabetes. **Finger affected:** In this study right thumb finger is mostly affected than other fingers. This may be because the thumb finger is mostly exposed during daily activities, which needs repeated or forceful movements.

### Discussion on treatment and results

Quinnell grading is a specific parameter for the trigger finger. The subsequent heat dissipation of *Shalaka* is 18°C- 20°C per minute while in the case of *Taila* it is 0°C. When employed for *Agnikarma*, *Snigdha* possesses higher latent heat (heat retention capacity and good heat penetration can achieve. This may be the reason Group A show better results. The main issue facing the condition is the locking of the joint. When the temperature is imparted to the site, collagen melts and due to the extensibility of collagen fibers, stiffness reduces. Thus, locking of the joint releases. Assessing swelling, in group A got complete. The application of heat increases blood circulation to the affected area. This increase in circulation flushes away the inflammatory substance over the site. This will in turn reduce the swelling.

## CONCLUSION

Management of Trigger finger with *Tila taila* and *Shalaka* shows a significant difference and shows the better result with *Tila taila*. The disease is more prevalent in-home makers. The clinical symptoms of the trigger finger are similar to the clinical features of *Snayugatavata*. Both *Tila Taila* and *Shalaka* are effective in improving the criteria like Quinnell grading, tenderness, the release of locking joint, and reduction in swelling.

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