

## AGNI KARMA WITH GUDA IN TENNIS ELBOW

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### ABSTRACT

*Agnikarma, Kshara karma and Raktamokshana are Anushastra karmas, which gives instantaneous and long lasting results. Agnikarma is mainly indicated in painful conditions and diseases of Vata as well as Kapha. Pancha dhatu shalaka has been used on a regular basis for the purpose of Agnikarma irrespective of the structure involved or level of the pathology. Most of the painful conditions are related to musculoskeletal system which comprises Sandhi, Asthi, Sira and Snayus. The dahanopakaranas mentioned for the diseases of these locations are Snigdha dravyas such as Kshaudra, Guda, Taila, Vasa, Madhuchista etc, as they have the deep heat penetration capacity for longer periods. Tennis elbow or lateral epicondylitis is a common painful condition of the outer part of the elbow due to unaccustomed use of the common extensor origin. In this condition patient feels difficult for pouring the liquid, turning of the stiff door handle etc. Agnikarma with Guda (Jaggery) gives significant results in relieving the signs and symptoms of tennis elbow.*

**Keywords:** Tennis elbow, *Agnikarma, Rooksha Agnikarma, Snigdha Agnikarma Pancha dhatu Shalaka, Guda.*

### INTRODUCTION

'Agnikarma' is an asset of Ayurvedic surgeons which has been used widely in the clinical practice since time immemorial. "Agnina Krutva Yat Karma, Agne Sambandhi Va Yat Karma, Tadagnikarma"

This procedure aims at the management of various conditions by inflicting burns on the tissue surface directly. The insightful authority of *Agnikarma* becomes clear from the wide descriptions in various Ayurvedic texts belonging to the *Vedic, Samhita* and *Samgraha* period. Because of its great therapeutic value it is considered superior than *Kshara*. Even in the modern surgery the principles of *Agnikarma* have been adopted with advanced technology like, Radiation therapy, Laser therapy, Cauterization for haemostasis, excision

etc. *Agnikarma* is mainly indicated in *Ruja pradhana, Vata* and *Kaphaja vyadhis*<sup>1</sup>. It is of 2 types viz *Ruksha Agnikarma* (performed with dry substances) and *Snigdha Agnikarma* (performed with oily/sticky substances). *Pancha dhatu shalaka* has been used on a regular basis for the purpose of *Agnikarma* irrespective of the structure involved or level of the pathology. But according to the classic, specificity of *Dahanopakarana* depends on the disease level concerned as described in Table No 1<sup>1,2</sup>. Most of the painful conditions are related to musculoskeletal system which comprises bones, joints, tendons, ligaments etc. The *Dahnopakaranas* mentioned for the diseases of these locations are *Snigdha dravyas* such as *Kshaudra, Guda, Taila, Vasa, Madhuchista* etc., as they have the deep heat penetration capac-

ity with a greater latent heat period. *Sushruta* has described four types of *Agnikarma* on the basis of shapes which depends on different location of the body. These include *Valaya*, *Bindu*, *Vilekha* and *Pratisarana*<sup>1</sup>. *Vagbhata* adds three more types viz, *Ardhachandra*, *Svastika* and *Ashtapada*<sup>3</sup>. Tennis elbow or lateral epicondylitis is a common condition of young and middle aged people, where the patient complains of pain in the elbow particularly in certain movement like pouring of tea, turning of stiff door handle etc. It is common in tennis players and that is why it is called 'tennis elbow'. There will be tenderness over lateral epicondyle with restricted movement of elbow and forearm. Due to unaccustomed use there will be damage to the common extensor origin which is attached to the lateral epicondyle of the humerus. Damage is followed by subsequent adhesions with untorn fibers and joint capsule. It further causes chronic degenerative changes in the tendon that attaches the forearm muscle extensor carpi radialis brevis<sup>4</sup>. The treatment modalities in modern science include rest, exercise, joint manipulation, local anesthetic injections, low level laser therapy and in non responding conditions ultimate choice is surgery. Even in Ayurveda, *Vatahara* treatments like *Abhyanga*, *Upanaha* etc are adopted. As *Agnikarma* is a choice of treatment in painful conditions, *Guda* (Jaggery) has been taken for therapy and its efficacy was compared with *Pancha dhatu shalaka*.

## MATERIALS AND METHODS

### Sample source

40 patients diagnosed with tennis elbow were taken for the study from Alva's Ayurveda Hospital, Moodbidri. Patients were randomly selected into two Groups A

(control group) & B (trial group) irrespective of their sex, religion, socio-economic status etc. Each patient was selected for the trial after voluntary consent.

### Study design

Randomized comparative clinical study

### Diagnostic criteria

- Pain on the lateral epicondyle of humerus bone
- Tenderness over the lateral epicondyle
- Cozen's test- Pain during passive palmar flexion of wrist with extended elbow
- Pain during certain activities like pouring a container of liquid, lifting with the palm down, sweeping etc.
- Morning stiffness

### Inclusion criteria

- Clinically diagnosed patients of tennis elbow
- Any individual above 20 yrs and below 60yrs of age were selected irrespective of sex, Occupation, religion, socioeconomic status etc

### Exclusion criteria

- Patients with the history of systemic diseases such as Diabetes, Tuberculosis, Rheumatoid arthritis etc.
- Malignant tumors, Senile osteoporosis etc in and around the elbow region.
- Patients associated with Golfer's elbow, Olecranon bursitis, Radial tunnel syndrome etc.
- Patients with history of compound fracture, Pathological fracture, non united fracture and mal-united fracture of complaining limb.
- Women who are pregnant.

### Laboratory investigations:

X-ray- to exclude the other pathology

### Intervention:

The Total study period is of 15 days

**Group A-** Patients were subjected to Agnikarma with *Pancha dhatu shalaka* on 1<sup>st</sup> and 8<sup>th</sup> day.

**Group B** - Patients were subjected to Agnikarma with Guda on 1<sup>st</sup> and 8<sup>th</sup> day.

**Follow up-** Done on 15<sup>th</sup> day.

**Procedure:**

The patient should sit comfortably and ask the patient to 90° bending of the elbow with pronated forearm. So that there will be prominence of the lateral epicondyle. Then Agnikarma should be performed over the most painful and tender point in and around the lateral epicondyle.

**Group A: Agnikarma with Pancha dhatu shalaka:**

The *shalaka* is heated to red hot over a stove. It is then tapped on a cleaned and predetermined site.

**Group B: Agnikarma with Taptha Guda paka:**

A small amount of *Guda* is taken in a sterile dish and little quantity of water is added. Then heated over the stove till it attains sticky consistency. Then it should be sucked using a Borosil glass pipette, poured on the predetermined site drop wise and wiped off after cooling. About 5 mm gaping should be maintained between each burning spot.

In both group a mixture of *Madhu* and *Ghrita* should be applied immediately after Agnikarma<sup>5</sup>. If any blebs or ulcers are developed at the site of Agnikarma the application is continued till healing. The procedure is to be repeated after 1 week.

**Assessment:**

Clinical assessment was done on 8<sup>th</sup> days and follow up was done on the 15th day and the data obtained was analyzed using paired student's t-test. Grading was given

for every clinical feature and it is presented in Table No.2.

**RESULTS**

Observation of the results with respect to the group A (Control group) and Group B (Trial group) are denoted in the table No. 3 and 4 respectively. It shows that the treatment of the condition in both the groups has resulted in marked improvement which is statistically significant. Clinically too there are remarkable improvements with respect to the entire set of variables in both the groups.

The therapy showed high significance on the 15<sup>th</sup> day. There was a brisk decline in the mean value of pain and tenderness in group B and showed more efficacious than group A. There was a great improvement with respect to morning stiffness and pain during movement in trial group compared to control group.

Overall comparison of the effect of the therapy is presented in Table No 5 and 6. Accordingly, it is observed that the efficacy of the trial group is much better than the effect of the control group. The comparison is also evaluated statistically and is found to be significant.

**DISCUSSION**

Based on the demographic profile (Table No.7) it is observed that tennis elbow is prevalent in life period of 20 to 40 yrs. Gender wise males and occupation wise physical workers shows the major incidence. These observations correspond to the etiology being these groups are usually exposed to pathogenic factors.

Agnikarma with *Guda* showed a high efficacy than *Pancha dhatu shalaka* in reduction of pain, tenderness and restricted movement, which was highly significant. It may be the reason that, the rate of any metabolic activity is increased by a rise in

temperature (Vant Hoff's law). At temperatures above 45°C so much tissue destruction occurs. It has been shown that collagen melts at temperatures above 50°C. Afferent nerves stimulated by heat may have an analgesic effect by acting on the gate control mechanism. With skin heating vasodilatation occurs not only to distribute the additional heat around the body, but also to protect the heated skin. The resistance to flow in a blood vessel depends directly on the viscosity of the fluid and raising the temperature in liquids lowers its viscosity. But when heat is applied to the skin surface, little heating of the deeper tissues occurs because they are shielded by the thermal insulation provided by the subcutaneous fat and the fact that heat is removed in the increased skin blood flow<sup>6</sup>. Since the effects are largely confined to the skin, for deeper conduction it is responsible to propose materials which are having more heat conduction capacity for longer periods. Though *Pancha dhatu shalaka* has a considerably higher temperature than that of the *Snigdha dravyas*, when employed for *Agnikarma*, *Snigdha dravyas* owing to its higher latent heat (heat retention capacity of sticky liquid is high) can effect a greater variation in the temperature of the tissue surface and also that of the subsequent layers. Eventually the heat penetration will always be higher when such liquids are used for *Agnikarma*. Hence it helped in relieving the pain and muscle spasm, acceleration of healing, resolution of chronic inflammation etc. It gives better result than that of *Ruksha Agnikarma*, when used for the diseases of *Snayu*, *Sira*, *Sandhi* and *Asthi* such as tennis elbow.

On the other hand *Agnikarma* pacifies *Vata* and *Kapha Dosha*, by virtue of the

properties that *Agni* possesses viz. *Ushna*, *Tikshna*, *Sukshma*, *Ashukari Guna*. Here the heat which is transferred to *Tvak Dhatu* may help to remove the *Srotavarodha* and increases the blood circulation to the affected site. More blood circulation flushes away the inflammation and pain producing substances and patient gets relief from symptoms. The therapeutic heat also increases the *Dhatvagni*, which cause local *Ama pachana*. *Sneha* is said to percolate into *Sukshma marga* and hence pass to deeper parts.

It was observed that there was a great improvement in acute cases and moderate response in chronic cases. It may be due to adhesion formation in chronic cases. Compared to *Pancha dhatu Shalaka* the incidence of blebs and ulcer formation at the site of *Agnikarma* is more in case of *Guda*. It is due to the sticky nature of *Guda* and it was healed within a few days of the application of a mixture with *Madhu* and *Ghrita*.

## CONCLUSION

Tennis elbow is a common problem of young and middle aged people. *Agnikarma* is a simple, economical and effective procedure which has been widely used in so many conditions. In tennis elbow *Agnikarma* with *Guda* gives significant relief than *Pancha dhatu shalaka*. Continuation of treatment for a further few weeks can expect more significant results in chronic conditions.

## REFERENCES

1. charyaSushruta-Sushruthasamhita with Nibandhasangraha Commentary by Dalhanacharya and NyayachandrikaPanchika of Gayadasa edited by Vaidya Yadavji Trikamji, 9<sup>th</sup> edition, reprint on 2012, Chaukamba Orienta-

A

lia, Varanasi. P.51

2. charya Vagbhata-Ashtangahrdayam with Commentaries by, Sarvangasundari of Arunadatta and Ayurveda Rasayana of Hemadri, edited by Prof: Bhisagacharya Harishastri Paradkara Vaidya, Chaukhamba Krishna-das Academy, Varanasi. P.358

3. rddha Vagbhata-Ashtanga Sangraha with Sanskrit Commentary of Indu, elaborated by Shashilekha, edited by Dr. Shivaprasad sharma, reprinted on 2012 Chaukhamba Sanskrit Se-

ries, Varanasi. P. 263-264.

A S. Das-A Cosise Textbook Of Surgery, 3<sup>rd</sup> edition, published by Dr. S. Das 13, Old Mayor's Court Calcutta: P.458

4. charya Sushruta-Sushruthasamhita with Nibandhasangraha Commentary by Dalhanacharya and Nyayachandrika Panchika of Gayadasa edited by Vaidya Yadavji Trikamji, 9<sup>th</sup> edition, reprint on 2012, Chaukhamba Orientalia, Varanasi. P.52

A Val Robertson Alex 'Electro Therapy' 3<sup>rd</sup> edition, Ward John low ann reed Elsevier Ltd. P 213-253

**TABLES**

Table 1: The specificity of *Dahanopakara a* depends on the disease level concerned

For the diseases of skin	For the diseases of muscle	For the diseases of bones, joints, tendons, ligaments and vessels
<i>Pippali</i> <i>Aja Sakrut</i> <i>Godanta</i> <i>ara</i> <i>al ka</i> <i>Varti</i> <i>S ryakata</i>	<i>Jambavaoshtha</i> <i>Loha</i> <i>Swarna</i> <i>Taamra</i> <i>Kansya</i>	<i>Kshaudra</i> <i>Guda</i> <i>Sneha- Vasa, Ghrita, Taila, Sarjarasa, Madhuchista.</i>

Table 2: Grading for different clinical features

Pain	Cozen's test	Tenderness	Morning stiffness
<b>0</b> -no pain in elbow region <b>1</b> -pain in elbow region only on movements <b>2</b> -pain in elbow region with slight movements <b>3</b> -continuous pain in elbow region	<b>0</b> - no pain <b>1</b> -mild pain <b>2</b> -moderate pain can tolerate <b>3</b> -intolerable pain	<b>0</b> -no tenderness <b>1</b> -tenderness on palpation without grimace <b>2</b> - tenderness on palpation with grimace <b>3</b> -tenderness with withdrawal <b>4</b> - tenderness with withdrawal for gentle touch	<b>0</b> -no stiffness <b>1</b> -mild difficulty in movement <b>2</b> -can move with difficulty <b>3</b> -cannot move

Table 3: Showing treatment efficacy of control group 'A' after 15 days

Variable	Mean		SD	SE	“t”	“p”	Remark
	BT	AT					
Pain	1.65	1.15	0.53	0.12	7.47	<0.001	<b>HS</b>
Tenderness	1.95	1.45	0.72	0.16	7.08	<0.001	<b>HS</b>
Morning stiffness	1.35	1.00	0.45	0.10	6.83	<0.001	<b>HS</b>
Cozen's test	1.45	1.00	0.58	0.13	7.96	<0.001	<b>HS</b>

**HS: Highly significant**

Table 4: Showing treatment efficacy of trial group 'B' after 15 days

Variable	Mean		SD	SE	“t”	“p”	Remark
	BT	AT					
Pain	1.95	0.45	0.59	0.13	11.33	<0.001	<b>HS</b>
Tenderness	2.45	0.75	0.64	0.14	11.8	<0.001	<b>HS</b>
Morning stiffness	1.55	0.35	0.49	0.11	8.53	<0.001	<b>HS</b>
Cozen’s test	1.95	0.6	0.67	0.15	7.91	<0.001	<b>HS</b>

**HS: Highly significant**

Table 5: Showing comparative efficacy of group A and B

Variable	Mean		“t”	“p”	Remark
	A	B			
Pain	0.5	1.5	7.57	<0.001	<b>HS</b>
Tenderness	0.5	1.7	4.45	<0.001	<b>HS</b>
Morning stiffness	0.35	1.2	4.44	<0.001	<b>HS</b>
Cozen’s test	0.45	1.35	5.77	<0.001	<b>HS</b>

**HS: Highly significant**

Table 6: Showing Overall result of treatment of Group A and B

Overall effect of the treatment	Group A		Group B	
	No. of patients	Percentage	No. of patients	Percentage
Markedly Improved, 75-100 % Relief	8	40%	13	65%
Moderately Improved, 50-74.99 % Relief	7	30%	6	30%
Mild Improvement, 25-49.99 % Relief	2	15%	0	00%
No Change, <24.99 % Relief	3	15%	1	05%

Table 7: Showing demographic profile of group A and B patients

Age in years			Gender			Occupation			Chronicity (In months)			
	A	B		A	B		A	B		A	B	
20-29			Male			Student			0-3			
30-39	70%	75%	Female	55%	60%	Sedentary	10%	15%	4-6	50%	45%	
40-49	20%	20%		65%	35%	Physical	10%	15%	7-9	30%	50%	
50-60	05%	05%		House wife				70%	65%	10- >	10%	05%
	05%	00%						10%	5%		10%	00%

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