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COMPARATIVE SINGLE CASE STUDY OF AGNIKARMA AND JALAUKA AVACHARANA IN SNAYUGATA VATA (TENNIS ELBOW)

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ABSTRACT

Background: *Ayurvedic* writings offer two treatment possibilities for Tennis Elbow (*Snayugata Vata*), a clinical ailment caused by repeated actions of the hand, wrist, and forearm: *Agnikarma* (therapeutic heat burns) and *Jalaukavacharana* (leech therapy). It is a degenerative condition that causes soreness around the lateral epicondyle and pain during everyday activities.

Aim:1. To evaluate and compare Agnikarma and Jalaukavacharana's efficacy in managing *Snayugata Vata* (Tennis Elbow).

Materials and methods: Four patients with tennis elbows were registered and allocated into two groups by a simple random sampling method. Two patients were treated with Agnikarma (Group A) by Lohadhatu Shalaka around the lateral epicondyle of the humerus in three sittings at a 10-day interval, and two patients were treated with Jalaukavacharana (Group B) around the lateral epicondyle of the humerus in five sittings at a 7-day interval.

The U test is used When comparing Group A with Group B. We can see from the test above that half of the parameters have p-values less than 0.05, while the other half have p-values more than 0.05. Thus, we may say that Group A and Group B differ significantly. Additionally, we can see that Group A's mean rank is higher than Group B's. Therefore, we may say that Group A's statistical effect is superior to Group B. Agnikarma's average

percentage impact is 80.22%, whereas Jalaukavacharana's is 71.08%. As a result, both treatments work well for tennis elbow. Following Agnikarma, 33.33% of patients saw substantial improvement, and 66.67% (10 patients) exhibited moderate improvement. In Jalaukavacharana, 33.33% (05) of patients showed mild improvement, one patient showed great improvement, and 60% (09) showed moderate improvement.

Conclusion: Both treatments are non-invasive and non-pharmacological, and OPD-level operations require the least amount of equipment. Therefore, both treatments are successful in treating tennis elbow. The statistical effect of Agnikarma is superior to that of Jalaukavacharana.

Keywords: Tennis elbow, *Snayugata vata, Agnikarma, Jalaukavacharana*

INTRODUCTION

Runge was the first to mention elbow pain on the lateral side in 1873. Other terms for tennis elbows include Angio fibroblastic hyperplasia, tendinosis, tendinitis, lateral epicondylitis, epicondylitis, epicondylalgia, and lateral elbow discomfort. Since there is a direct correlation between a backhand stroke, wrist extension, and a tight grip on the racquet, the name "tennis elbow" is the most suitable. However, most patients with this ailment are not tennis players; they are housewives, butchers, plumbers, carpenters, painters, car mechanics, sweepers, and gardeners.

Epidemiology

TE is a disease that primarily affects middle-aged individuals (30–65 years old), with a prevalence of 1-3 percent[2]. The effects are the same for males and females. Tennis elbow is a more common musculoskeletal condition among employees linked to physically demanding jobs. Homemakers and manual labourers are more likely to have it.

Lateral epicondylitis and tennis elbow are not the same thing. Because there are no indications of prostaglandin-mediated inflammation or elevated interleukin and cytokines in tennis elbow CRP, the common extensor tendons, which originate from the lateral epicondyle of the humerus, have tiny rips as a result of recurrent wrist extension and flexion, forearm supination and pronation, and radial and ulnar deviation movements. The idea that tennis elbow is essentially a mechanically caused ailment is supported by Briggs' biomechanical research[3].

Vascular hyperplasia, disorganised collagen, and dense fibroblast populations dominate this histological image. Angio fibroblastic hyperplasia is the word used to describe this disorder. Locomotion-related tendons are considered vulnerable to degenerative damage due to their low blood supply and ability to transfer stresses under elastic eccentric circumstances.

Tennis elbow is a clinical diagnosis. Daily regular tasks, including kneading, sweeping, pouring, hard lifting, squeezing, gardening, and clutching, are typically linked to this discomfort. Tennis elbows are often diagnosed clinically, and the following symptoms support the diagnosis: The chairlift test, Maudsley's test, Mill's test, and Cozen's test.

Cozen's test – When the patient is asked to extend his clenched fist against resistance, considerable pain is experienced at the lateral epicondyle.

Mill's test: When his forearm is pronated, the patient's wrist is passively flexed, causing tremendous pain at the attachment of the common extensor tendons.

Maudsley's test- when the patient's middle finger extends against resistance, the patient feels pain on the lateral epicondyle of the humerus.

Ayurvedic medicine suggests that tennis elbows are associated with Snayugata Vata. Under the Vatavyadhi, Snayugata Vata is referenced by every Acharya. Only lakshana and chikitsa are used to describe Snayugata Vata in Samhitas such as Charaka[5], Sushruta[6], Ashtanga[7], Bhavaprakashakara[8], and Yogratnakara[9].

Acharya Sushruta has mentioned *Lakshana and Chikitsa* of *Snayugata Vata.*

- Luk;qizkIr% LrEHkdEikS "kwyek{ksi.ka rFkk || *(Su. Ni 1/27)*

- LusgksiukgkfXudeZcU/kuksUenZukfu p । Luk;qlU/;fLFklaizkIrs dq;kZ}k;korfUnzr% ॥ (*Su.Chi4/8)*

According to *Acharya Charaka,*

बाह्याभ्यन्तरमायामं खल्लिं कुब्जत्वमेव च ।।
सर्वाङ्गैकाङ्गरोगांश्च कुर्यात् स्नायुगतोऽनिलः ।। ३५ ।।
(Ch.Chi.28/35)

According to *Acharya Vagbhata,*

Luk;q स्थितः कुर्याद् गृध्रस्यायामकुब्जताः ।।
स्नावसन्धिशिराप्राप्ते स्नेहदाहोपनाहनम् ।। २२ ।।
(*A.H. CHI.*)

According to *Bhavaprakasha,*

शूलमाक्षेपकः कम्पः स्तम्भः स्नाय्यनिलाद्भवेत् । स्वेदोपनाहाग्निकर्मबन्धनोन्मदनानि च | कृद्धे स्नायुगते वाते कारयेत्कुशलो भिषक् ।। २५७।। (*Bh.Pr.Ma.* 24/257)

According to *Yoga Ratnakara,*

सर्वाङ्गैकाङ्गरोगांश्च कुर्यात् स्नायुगतोऽनिलः ॥ 1 ॥
स्नायुसन्ध्यस्थिसम्प्राप्ते कुर्याद्वाते विचक्षणः | स्वेदोपनाहसंमर्दस्नेहनादिकमादरात् ॥१॥ (*Y.R. Poorvardh* page no.505)

According to *Chakradatta Samhita,*

स्नेहोपनाहाग्निकर्मबन्धनोन्मर्दनानि च । स्नायुसन्ध्यस्थिसम्प्राप्ते कुर्याद्वाते विचक्षणः ।।१४।।

Acharya Sharangdhara mentioned *Raktmokshana* in *Vata Vyadhi.*

- lihMs nqtZ;s vfuys…….jDrL=ko% iz”kL;rs ॥ (*Sha.U.12/17)*

Acharya Sushruta mentioned *Raktamokshana* in *Vata Vyadhi*. References are –

- RoM~+++-++ekalkl`d~~fljkizkIrs dq;kZPpkl`fXoeks{k.ke~ ॥ (*Su.Chi. 4/7)*
- t;sr~ lokZM~+++-+Xta okra fljkeks{kS”p cqf)eku~ । (*Su.Chi. 4/11)*
- ,dङ्गंxa p efrek¥N`³Sx”pkofLFkra t;sr~ ॥ (*Su.Chi. 4/11)*
- L=kO;k…….ok;q% l#t% “kksQks ;”pSdns”kt% ॥ (*Su.Su.25/20)*
- r= okrfirdQnq’V”kksf.kra ;Fkkla[;a {`³xtykSdkssykcqfHkjolsp;sr~, fLuX/k”khr:{kRokr~ ।

lokZf.k loSZokZ (*Su.Su.13/4)*

Allopathy provides symptomatic alleviation. Treatment options include corticosteroid intratendinous injection, rest by splinting the neighbouring joint, and medications such as NSAIDs, analgesics, and anti-inflammatory drugs. Surgery comes last. However, there are restrictions on surgery; these include

- risk of recurrence
- risk of surgical and postsurgical complications
- The possibility of infection
- postoperative immobilisation of the elbow and a long ambulatory period

CASE STUDY

A female patient of age 32 yrs. Old coming to Uttarakhand Ayurvedic University Gurukul Campus Haridwar & Hospital with complaints of pain in the elbow, Stambha (Stiffness), Akshepa (Muscle spasm), Kampa and don't hold any heavy objects. The patient was diagnosed with *Snayugata Vata* (Tennis Elbow) with the help of physical symptoms & all investigations. The patient did not get relief from modern medicine. She has been given Ayurvedic Para surgical Process *(Jalaukavcharana*) and Agni karma for 35 days.

Physical Examination:

Pulse: 82/ min. **Temp:**98.7^0 F **B. P.** 130/90. **R. R**. 20/ min.

Kshudha: *Prakrut* **Nidra:** *Alpa* **Mala:** *Baddha* **Mutra:** *Samyak*

Muscle power: Not affected significantly- grade V.

Dosha – *Vatapradhana Kapha***. Dushya:** *snayu, Mamsa, Sira*. **Mala***: Purisha*

Srotas: *Rakta, Mamsa, and Manovaha***.**

Diagnosis: *Snayugata Vata* (Tennis Elbow)

INVESTIGATIONS:

Tennis elbow is a clinically diagnosed disease.

1. Routine blood investigations- Complete Haemogram (TLC, DLC, RBCs, MCV, MCH, Hb, Haematocrit, Platelets count, ESR, BT, CT)

2. Blood sugar, RA factor, CRP
3. Viral markers- HBsAg, HCV, HIV
4. X-ray of the elbow joint, if necessary

1. *AGNIKARMA*

Materials required-

Lauha Dhatu Shalaka, gas cylinder, pieces of *Ghrita kumari Patra*, turmeric powder, gauge, cotton bandage.

Site – In the present study, *Agnikarma* was done around the lateral epicondyle of the humerus**.**

Type – *Bindu,* which is one of the following *Dahan Prakara.*

Procedure- *Agnikarma* -By *Lohadhatu Shalaka*

- The patient was informed about the entire *Agnikarma* treatment.
- Painful, tender points of the elbow joint were marked with a marker or pen. The marked points were a minimum of 8 and a maximum of 15.
- The procedure was done by *Dahana* with red hot *Shalaka* for one second at each marked site. *Agnikarma* was done in a *Bindu* manner (one of the *Dahana Prakara)* or the dots form.
- Aloe vera pulp was applied immediately over the Dahana site so that the patient didn't feel a burning sensation.
- The dressing was done with turmeric powder on the first day. After the first day, the dressing continues with *Jatyadi Ghrita.*
- Patients were strictly advised not to allow water contact at the *Dagdha Vrana* site for one day.
- **No. Of sittings** – 3 at 10 days interval

Fig. 1.1 Materials required for *Agnikarma*

Fig.1.2 Red hot *Loha Shalaka*

Fig. 1.3 *Agnikarma* by Red hot *Loha Shalaka*

Fig1.4 1st sitting of *Agnikarma as* on 28-01-2023

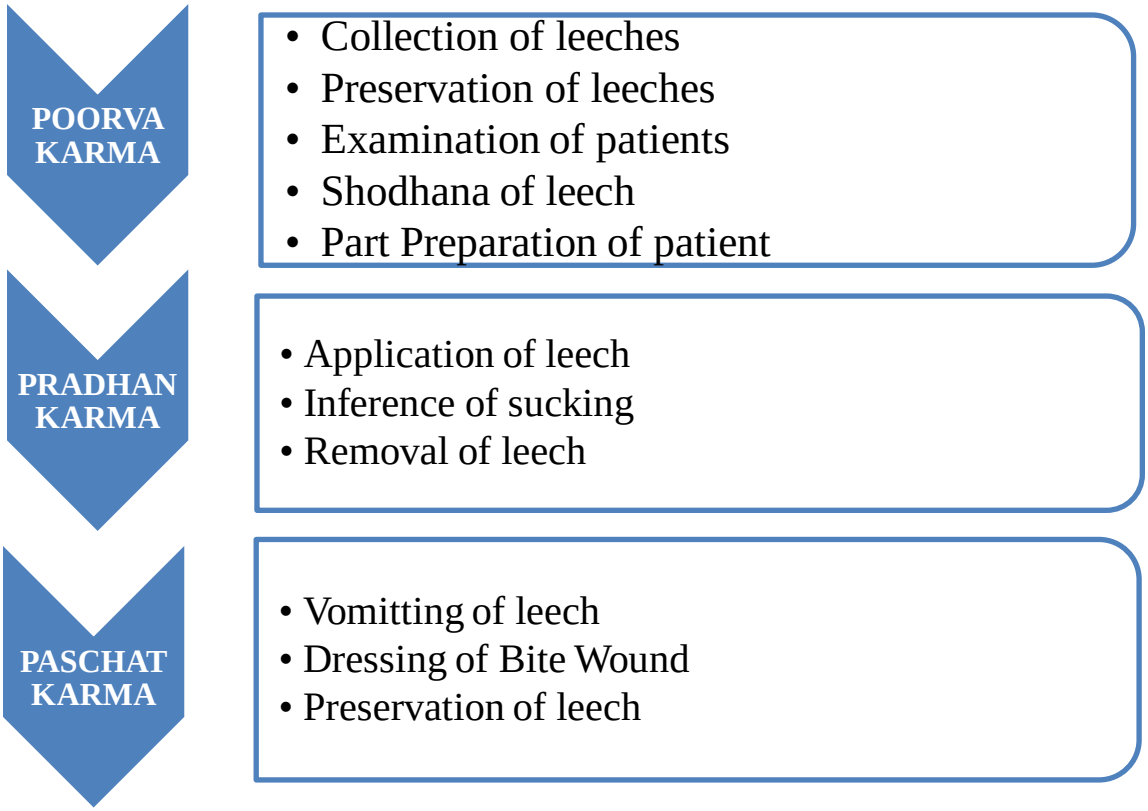
Fig 1.5 wound at 10th day

Fig 1.6 2nd sitting as on 07-02-2023

Fig. 1.7 3rd sitting as on 23-02-2023

Fig 1.8 As on 17th March 2023, Wound completely heal after three sitting of *Agnikarma* and Pt. advise only to apply *Jatyadi ghrita* on wound due to this scar marks of *Agnikarma* wound not found.

1. JALAUKAVCHRAN



- **No. Of sittings –** 5 at 7 days interval.

Fig. 2 *Jalaukavacharana*

DISCUSSION

a. Discussion on *Snayugata Vata* (Tennis elbow)

Tennis elbow and Snayugata Vata can be associated, but they are not the same, according to the thorough conceptual examination. Because two Lakshanas—Shoola and Stambha—are identical in both disorders, Snayu and Nidana are involved in Atichesta, Ativyayama, Bharavahana, and Abhighata. Thirty patients with Tennis elbow (Snayugata Vata) did not have Akshepa, Kampa, Gridhrasi, Ayama-Bahyama and Antaryama, Khali, Kubjata, Sarvangavata, or

Ekangavata Lakshana. However, according to several Acharyas, these are the Lakshana of Snayugata Vata, referenced in Ayurvedic texts. A degenerative condition known as tennis elbow is mechanically produced and results from repetitive strain from activities involving heavy, repeated gripping and wrist extension.

c. Discussion on probable mode of action

1. ***Agnikarma***

Physiological effects of *Agnikarma*

- Vasodilation
- Increased viscosity
- Increased nerve stimulation
- Diminish pain perception: Heat increases blood flow to the afflicted region. Increased blood flow to the injured region supplies vital amino acids, oxygen, and nutrients that can promote rapid healing and muscle relaxation, which can lessen pain perception. The feeling of heat also changes pain perception. Heat causes the cutaneous thermoreceptors to become more active, which can immediately limit the spinal cord's ability to transmit pain.

• Higher metabolic rate: Vant Hoff's principle states that the body's basal metabolism rises by a specific proportion for every degree that body temperature increases.

• Promote healing by increasing tissue extensibility and its effects on collagenous tissue

• Pain relief: The increased blood flow that has been seen may wash out prostaglandins and bradykinin, two compounds that cause pain when tissue is injured.

• A decrease in muscular contractions

Gate control theory of pain

Melzack and Wall introduced the gate control hypothesis of pain in 1965 to explain how the spinal cord modulates pain in an inhibitory manner. It clarifies why rubbing our heads feels better after hitting them. Inhibitory interneurons in the dorsal horn are triggered by tactile, non-noxious stimuli that activate Aβ fibres, which inhibit pain signals sent by C fibres[10.]

2. ***Jalaukavacharana***

Jalauka acts in two ways:

I. By sucking blood

- Pacifies *Pitta* and *Rakta Doshas* by sucking out the *Dushita Rakta*.

II. By injecting bioactive substances present in its saliva that have the following actions:

- Normalization and improvement of capillary circulation
- Corrects venous and capillary hypertension
- Anticoagulation effect
- Endo cellular exchange enhancement
- Local anesthetic effect
- Antibacterial effect
- Anti-inflammatory effect
- Vasodilation
- Early wound healing effect
- Angiogenesis is the process by which new blood vessels grow, enabling the body's tissues to get nutrients and oxygen. It is an essential function that is necessary for both wound healing and growth and development.

CONCLUSION

Therefore, it may be said that Jalaukavacharana and Agnikarma work well for tennis elbow (Snayugata Vata). Agnikarma's average percentage impact is 80.22%, whereas Jalaukavacharana's is 71.08%. In terms of statistics, Agnikarma works better than Jalaukavacharana. However, para-surgical techniques produced notable improvements in every tennis elbow metric. Both treatments are noninvasive and nonpharmacological, and OPD-level treatments may be utilised to treat tennis elbow (Snayugata Vata) with the least amount of equipment.

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