

Marma Chikitsa in Snayugata Vata Affecting Koorpara Sandhi -A Critical Review

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Abstract

Background: *Snayugata Vata* is described in Ayurvedic texts under *Vatavyadhi*, characterized primarily by *Shoola* (pain). When *Vata* localizes in the *Karpooora Sandhi* (elbow joint), clinical manifestations include *Shoola* (pain), *Stambha* (stiffness), *Sankocha* (contraction), *Kampa* (tremors), and *Aakshepa* (convulsions). In contemporary medical science, a similar clinical entity is Tennis Elbow (Lateral Epicondylitis), a painful condition affecting the elbow joint, most prevalent in the 40–50-year age group, with a 1–3% incidence rate.

Objectives: This review aims to explore the classical *Ayurvedic* understanding of *Snayugata Vata*, its etiopathogenesis, and correlate it with the modern condition Tennis Elbow, while highlighting effective *Ayurvedic* treatment modalities.

Methods: A literary review was conducted using classical *Ayurvedic* texts to extract references regarding *Snayugata Vata* and its clinical presentation. The data was then compared with contemporary medical literature on Tennis Elbow, focusing on similarities in pathogenesis and symptomatology. *Ayurvedic* treatment approaches were evaluated in terms of their therapeutic relevance and alignment with modern pathophysiology.

Results: *Ayurveda* offers a comprehensive and holistic approach to managing musculoskeletal disorders like *Snayugata Vata*. Treatment modalities such as *Snehana* (oleation), *Upanaha* (poultice), *Agnikarma* (therapeutic cauterization), *Bandhana* (bandaging), *Unmardana* (therapeutic massage), and *Marma Chikitsa* (vital point therapy) have shown promising outcomes in relieving symptoms. In contrast, contemporary treatments—though effective symptomatically—often have limitations such as recurrence, side effects, or the need for surgical intervention.

Conclusion: Understanding *Snayugata Vata* through both classical and modern lenses allows for an integrative treatment approach to Tennis Elbow. *Ayurvedic* therapies, when tailored to individual *Dosha* imbalance and stage of disease, can offer safer and sustained recovery. Further clinical research is warranted to validate *Ayurvedic* protocols in managing lateral epicondylitis.

Key Words: Ayurveda, Koorpara Sandhi, Snayu, Snayugata Vata, Shoola, Tennis Elbow.

1. Introduction

Tennis elbow (lateral epicondylitis) is one of the most common conditions to affect the arm (elbow joint) with an incidence of 1-3%. [1] It rarely occurs before the age of 30, and is most common in the 4th and 5th decades of

life. [2] Onset of symptoms may be sudden but is more commonly gradual. The dominant limb is more frequently affected.[3]

Manual laborers, smokers, and those who repetitively bend/ straighten their elbow for more than 1 hour / day along with have poor social support have been associated with higher rates of lateral epicondylitis. Patients afflicted with this condition typically experience pain at the origin of the extensor muscle, pain with resisted wrist extension, and tenderness with palpation of the tendinous origin of the muscles (usually involved Extensor Carpi Radialis Brevis ECRB) at the lateral humeral epicondyle. More likely mechanism is a degenerative process, occasionally associated with a macroscopic or microscopic tendon tear, produced by mechanical overload occurring during sports participation or at work. For it's management regular use of anti-inflammatory medications is advised, orally as well as topically, in state of conjunction with a tennis elbow brace. Its care is suggested to include local infiltration with corticosteroids and autologous blood, different types of manipulations performed under anaesthesia, physiotherapies, para-surgical procedures, and surgical treatments. Ayurvedic literature identifies *SnayugataVata* under *Vatavyadhi*. It occurs when vitiated *Vata* lodged in *Snayu* resulting in manifestation of symptoms like *stambha*(Stiffness), *kampa*(Vibration), *Shoola*(Pain), *Akshepa*(Tremors).[4] As per the symptoms manifested, Tennis elbow can be correlated with *SnayugataVata* particularly affecting *Koorparasandhi* (lateral epicondylar region of elbow). *Ayurveda* has vast potential in managing musculoskeletal disorders. Classical treatment modalities are in its management *Snehana*(oleation), *Upanaha*(poultice), *Agnikarma* (cauterization), *Bandhana* (bandaging) and *Unmardan*(massage)and *MarmaChikitsa* (Pressing the specific points). [5]

2. Aim

Aim of the study is to explore the literature concerning *Snayu* and *Snayugata Vata* and its management in *Ayurveda*.

3. Materials and Methods

This review was conducted following the PRISMA 2020 guidelines. A systematic search and analysis of both Ayurvedic and modern scientific literature was performed to explore the condition of *Snayugata Vata* in correlation with *Tennis Elbow*.

3.1 Information Sources:

Classical Ayurvedic texts including *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, along with their traditional commentaries, were reviewed to extract descriptions relevant to *Snayugata Vata*, its symptoms, and treatment principles.

3.2 Electronic Database Search:

A comprehensive literature search was conducted across the following electronic databases: PubMed, Google Scholar, MEDLINE, and EMBASE, covering the period from 2000 to 2023. Keywords used included: "Tennis Elbow", "Lateral Epicondylitis", "Snayugata Vata", "Musculoskeletal Disorders", "Ayurveda", and "Vatavyadhi".

3.3 Eligibility Criteria:

- **Inclusion Criteria:** Articles written in English, full-text availability, relevance to Tennis Elbow or *Snayugata Vata*, and studies discussing Ayurvedic or integrative management approaches.
- **Exclusion Criteria:** Duplicate articles, abstracts without full text, articles unrelated to the core topic, non-peer-reviewed articles, and studies outside the defined time frame.

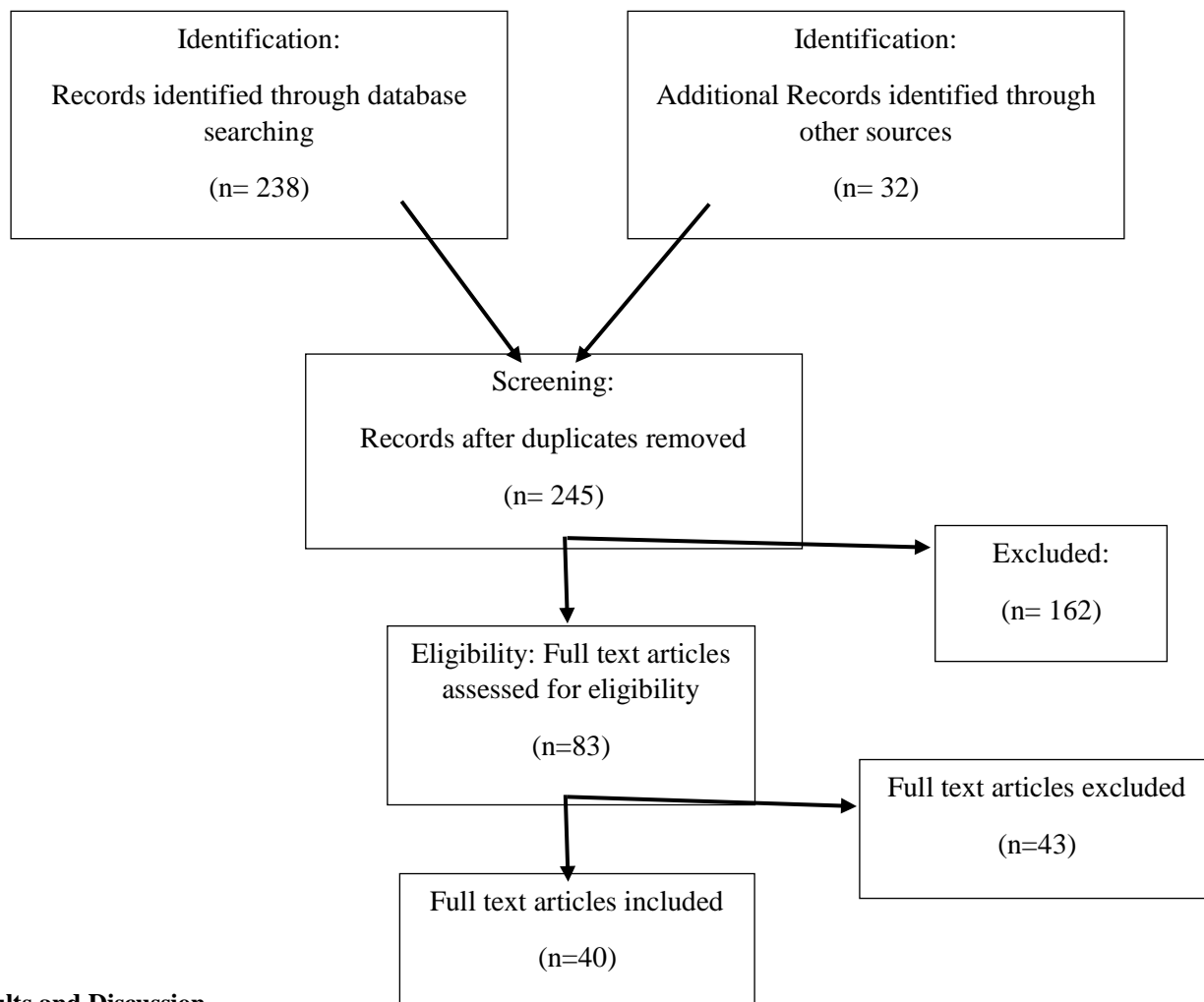
3.4 Study Selection Process:

All identified records were screened by title and abstract. Full-text articles were retrieved and assessed for eligibility. Duplicates and irrelevant articles were excluded.

3.5 Additional Sources:

Information from Ayurvedic university websites, government health portals, clinical reports, and Ayurvedic compendiums were also included where relevant.

Flow Chart 1: Methodology



4. Results and Discussion

4.1 Ayurvedic Review:

The disease condition *Snayugatavata* affecting *koorpara sandhi* (Tennis Elbow) is the common prevalence in our society without any satisfactory treatment. There is considerable pain in elbow, by which patient have to suffer a lot. There is considerable loss of working hours which puts financial as well as psychological burden upon him and family members along with physical stress. According to the texts of *Ayurveda*, *Vata* dosha governs all bodily movement. When this *dosha* is vitiated by overusing a certain joint, it results in discomfort in the afflicted muscle, joint, and ligaments. Ayurvedic fundamental principles state that the human body's constitution and optimal functioning are determined by seven *Dhatus*, or body tissues.

There are four ligaments are described in *Ayurveda*. [6]

1. *Pratanavati Snayu*: These have several branches and are found in all of the body's joints and limbs.
2. *Vritha Snayu*: Known also as *Kandra*, these have a circular shape.
3. *Sushira Snayu*: Porous in origin, located in the end part of the stomach, intestines, and bladder
4. *Prathu Snayu*: A flattened form found in the sides, back, chest, and head.

According to *Acharya Sushruta*, *snayu* are 900 in number. Out of them 600 are from *Shakhas* (extremities), 230 from *Koshta* (Trunk) region and 70 from *Urdhavajatrugata* (cervical region and above).[7]

In the upper limb they are divided as :

<i>Pratyekaanguli</i>	-	6 <i>snayu</i>
<i>Hast</i> (Hand)	-	30 <i>snayu</i>
<i>Tala, Kurcha, Manibandh</i>	-	30 <i>snayu</i>
<i>Agrabahu</i> (Forearm)	-	30 <i>snayu</i>
<i>KoorparaSandhi</i> (Elbow joint)	-	10 <i>snayu</i>
<i>Bahu</i> (Arm)	-	40 <i>snayu</i>
<i>Ansapradesha</i> (Shoulder region)	-	10 <i>snayu</i>
Total	-	150 <i>snayu</i>

Acharya Sushruta mentioned that's a boat made of planks and timber fastened together by means of a large number of bindings, is enabled to float, on the water and to carry cargo, so the human frame being bound and fastened at the *Sandhi* or joints by a large number of *snayu* is enabled to bear pressure for sustaining the biomechanics of the body[8]

Importance of *snayu*:

Damage and illness to the bones, veins, joints, or muscles do not have the same deleterious effects on the system as when *snayu* is compromised in any manner. Only a physician skilled in the internal and external *snayu* of the body is able to remove a hidden or embedded *shalya* from any area of the body.[9] Hence, the whole description gives the conclusion that *snayu* is broad term which includes all tendons, ligaments, aponeurosis and also sphincters. Some authors have also included nerves under this heading. But *kandara* is specific terminology used for tendons.

4.2 Disease review:

Snayugata Vata is a type of *Vata Vyadhi*, which develops when *Vata dosha* aggravates and get lodged in *snayu* of *Karpoora Sandhi*. The *nidanas* responsible for vitiation of *Vata* are:

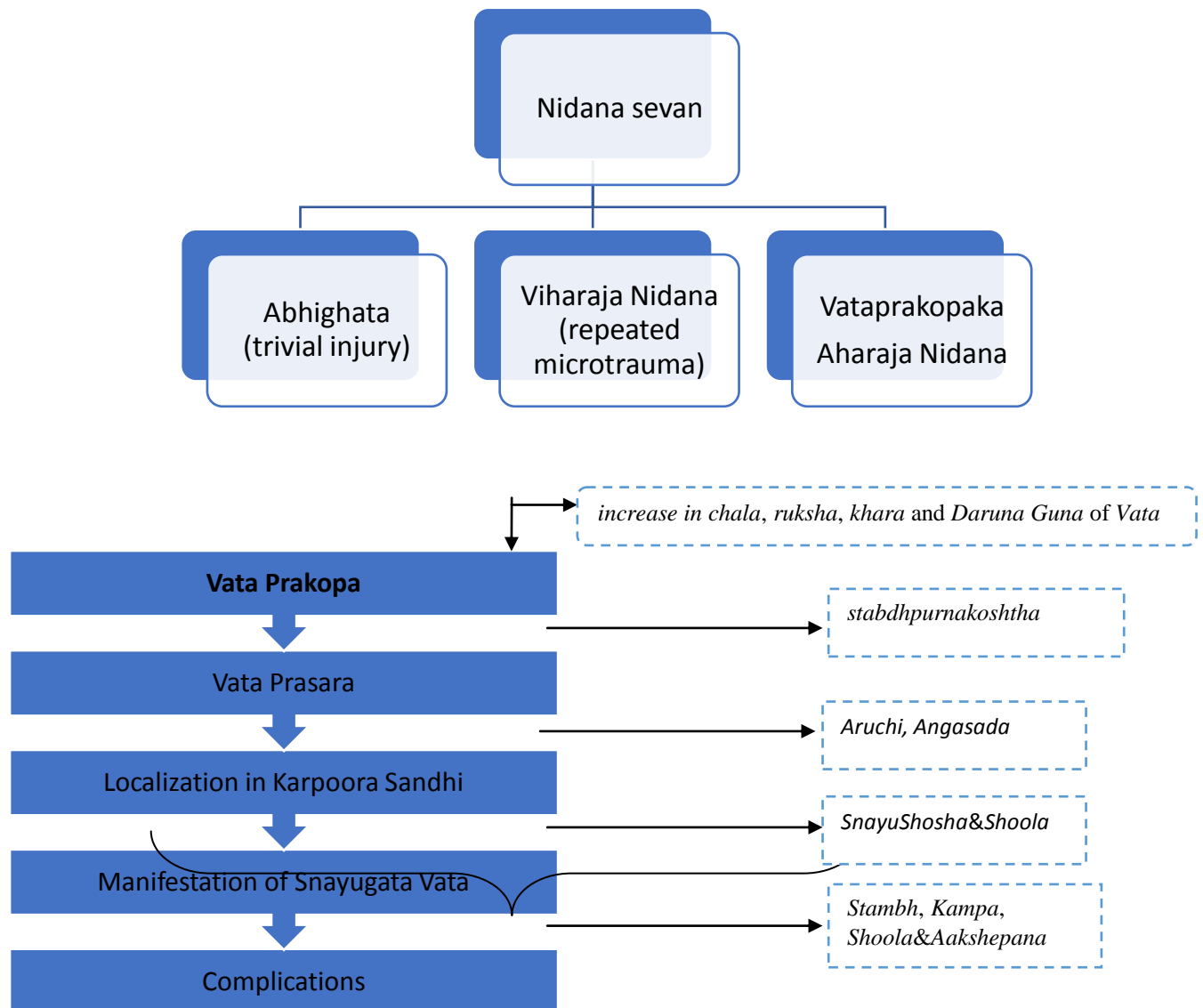
Laghu anna sevana, Sushkabhojana, pramitabhojana, hinabhojana, alpabhojana, abhojana, trasitasana, kshudhitasana, vishtambhibhojana, vishamashana, adhyashana, suskamamsa, atitiktarashevana, atikaturassevana, atikashaya rasa sevana, rukshasevana, sheetannasevana, vihartta, ativyavaya, atyadhva, atiplavana, atilanghana, atiprajagara, ativyayama, dukhsayya, dukhaasana, divasvapa, vegodharana, atiadhayana, pratarana, balvatavigraha, prapidana, gaja- turanga-rath-padaticharya, Chinta, shoka, krodha, bhaya, anya, vishamaupchara, atidoshasravana, atiasruksravana, panchakarma atiyoga, rogatikarsana, dhatu kshaya, ama dosha, abhighata, marmaghata, gajaustra- asvasighrayanataapsantanatetc.[10]

4.3 Pathophysiology:

Exact pathogenesis of the disease is not mentioned in classical text. Classics identifies six stage pathological model of disease progression in the context of *vranaprashanadhayaya*. [11] As per the concept, on the basis of symptomatology the probable pathogenesis may be framed. Due to *agantujanidana (pradhanikanidana)* i.e. Injury or trauma or *Aharaja* or *Viharanidana* as mentioned above, there is accumulation of *vata dosha*. If consumption of *nidana* is still there then aggravation of *Vata* occurs due to increase in *chala, ruksha, khara* and *daruna Guna* of *Vata*. The aggravated *vata* which is capable of movement moves inside the body and get localized in the joints where there is already *Kha-Vaigunya* (decrease quality of muscular tissues due to any

trauma or other reason), here *shosha* (dryness) in *shayu* (ligament) occurs and afterword there is manifestation of all the symptoms of *Snayugata Vata*.

Flow Chart2: The proposed step in pathogenesis are as mentioned in Flowchart 2.



4.4 Chikitsa (Management through *ayurveda*)

Treatment modalities for this in ancient texts comprises of *Snehana* (oleation therapy), *Upnaha* (use of poultice), *Agni Karma* (thermal cauterization), *Bandhana* (bandaging) and *Unmardana* (deep tissue massage) i.e. *Marma* stimulation. [12] All these are meant for making *anulomagati* of *vata dosha* or removing the blockage of *vata* and subsequently alleviating the disease.

Snehana in *Vata Vyadhi*- Local *Snehana* can be used as *Abhyanga* (Massage) and *pariseka* (Pouring). *Snehaguna* of *dravya* alleviates the *rukshaguna* of *vata dosha*, hence alleviates the pain. *Sneha* due to its *sukshmaguna* moves into channels, hence nourishes the *dhatu*, which counteract the *dhatu kshayajanyasamprapti*. [13]

Upnaha in *Vatavyadhi*- The practice of applying warm herbal paste is known as *upnaha*. It is a type of *swedana* that increases local blood, lymphatic, and tissue metabolism by causing hyperthermia. That alleviates *Sang* pathological symptoms. Additionally, *UshnaGuna* neutralises *Vayu'sSheetaGuna*. [14]

AgniKarma- It is also meant of delivery Heat to local part to pacify *amadosha* and *srotovaigunya*, hence relieves symptoms of *shoth* and *shola*. [15]

Bandaging- *bandhanakarma* is meant for rest to the affected *snayu*. It inhibit excessive movement and gives them necessary time to heal. [16]

Unmardana- *Unmardana* means Massaging in upward direction, massage meant for *anulomagati* of *vata*, hence relieving *sang* pathology and alleviates pain. It can be correlated with *Marma* Stimulation, which is now a days used for management of pain. [17]

Marma are vital points of the body where trauma will cause Death and serious damage to the body. These *Marma* are well described by *acharyaSushruta* in *PrateyakamarmaNirdeshSharir* chapter. *Marma* are the meeting point of *mansa, sira, sanyuasthi* and *sandhi*, where *prana* resides position of *marma* and their *vidhhalakshana* are also describes. *MarmaChikitsa* is *upcharatmakadrishtyasharirasayanirdishitastanayatha kalam yatha kalam yathavidhim cha prernammarmachikitsaitiabhidiyate*.

Total 107 *marma* were mentioned by *acharyashushruta*. out of these 107, 44 are in our extremities (11 in each). These are *Kshipra*(4), *Talahridya*(4), *kurcha*(4), *kurchasira*(4), *gulf*(4) or *manibandh*(4), *indrabasti*(4), *janu*(4), *koorpara*(4), *aani*(4), *urvi*(4), *lohitaksh*(4), *kakshdhar*(4) [18]. Out of these, *koorpara* and *aanimarma* are located near *koorparasandhi*. Result of *indrabasti* trauma is severe blood loss and death. Trauma to *koorparamarma* leads to *Kuni* i.e. deformity and due to *aanimarmavidha* there will be *stambhata* and *sotha*. [19]

As these *marma* are the seat of *Prana*, by stimulating these *marma* points, we can balance *prana*.

Marma therapy can be done by two means- pharmacological and non-pharmacological.

Pharmacological methods are with medicine i.e. *abhyanga*(massage), *udvartana*(dry powder), *lepa*(medicinal paste), *parisheka*(pouring) etc. Non pharmacological methods are *mardana*(pressure application) and *marmavedhana*(needling) etc. [20]

In *snayugataavata chikitsa*, there is description of *mardana* i.e. pressure application, in which a controlled pressure is applied over *marma* to channelize the flow of energy for purpose of healing. Pressure over limb given by the thumb each *marma* is stimulated for average 15 times which can be decided as per need. Every time the pressure is applied for 0.8 seconds according to cardiac cycle. [21]

Marma required for *Snayugataavata* affecting Tennis Elbow are-

1. *Koorpara*
2. *Aani*
1. ***KoorparaMarma***[22]:- It is Located on both sides of elbow joint on both medial and lateral aspects(i.e. inner and outer sides) slightly below the elbow crease.

Technique - Hold the forearm in slightly flexed position and apply pressure with the thumb over the lateral side. On the medial side pressure can be applied by using index finger or middle finger also. Otherwise press with the thumb of another hand. Both points should be pressed repeatedly one after another. Repeat it 18-25 times for 0.8-1 sec each time.

Self healing Method- Press on both sides of elbow almost a finger below elbow crease. To locate the lateral point, keep your thumb on bony prominence posteriorly (olecranon process) and extend the hand, the point where index finger reaches is the point to press. Press over the medial side parallel to it, with thumb. Repeat for 5 times on both sides.

Benefits-It is good for treating painful conditions like tennis elbow, golfer's elbow and frozen shoulder, cervical spondylosis, neck spasm and diseases pertaining to radial and ulnar nerves. It is very helpful for diseases of GIT. Right side *koorparamarma* is beneficial for liver diseases and left one for splenic disorders. In *Ayurvedic* texts, *siravedhan* has also been advised in liver and spleen disorders from this site. *Agnikarma* is also performed near to this *marma* in tennis and golfer's elbow. Its regular stimulation decreases blood sugar levels by influencing pancreas.

2. AaniMarma[23] :-It is situated three fingers above the elbow joint just medial to the midline. This *marma* is good for frozen shoulder, post-traumatic stiffness of elbow joint, restricted movement of forearm etc. It is a good *marma* for problems related to circulation, CVS and respiration. It controls '*Udakavahastrotas*'.

Technique - Locate the *marma* point slightly medially to the imaginary line drawn upwards from the center of elbow. Press gently with the thumb. The pressure should be lesser than that applied over the elbow, because it is a sensitive *marma* and repeat the process 15-18 times.

Self healing Method-Press the *Aanimarma* with thumb of opposite hand by holding the arm.

4.5 Probable mechanism of Action of MarmaChikitsa[24]-*Marma* points are like windows or channels that link the inner conscious and mind to the physical body. Thus, positive changes can be generated by proper stimulation of *marma*. *Marma* work as stress buster, which is a major cause for many diseases and is many a times originates an underlying pathology. *Marmachikitsa* nurtures the *prana*- The vital energy/vital power of body, and thus helps to achieve the goal of wholesome health at physical, mental, emotional and spiritual levels. It enhances the body's *aura*, or energy field, and keeps the individual radiant, full of energy and healthy. Compassionate and sincere execution of the *Marmachikitsa* ensures the proper spinning of all the major '*Chakras*' and thus enhances the vigorous, vitality, immunity and keeps the person contented and happy.

Marma stimulation removes the blockage of nourishing channels (*strotans*), thus reverses the pathological changes (*Strotas- Avrodha/Sanga*). They maintain the homeostasis and efficiency of '*Strotans*'. *MarmaChikitsa* is highly effective in reducing pain and raising the body's pain threshold because it manages the neurological system and the "*vata dosha*," which are in charge of maintaining the balance between the body's other two *doshas*, *Pitta* and *Kapha*. Therefore is immensely potent in alleviating pain and increasing body threshold for pain. It brings about positivity in body threshold for pain. As *vata* gradually increases in body with age, it leads to degeneration; this degeneration can be delayed by *marma* therapy. It governs the autonomic nervous system and *VyanaVayu* in particular. Flexibility in the body, mind, and emotions is created.

4.6 Pain management through MarmaChikitsa [25]

The mandatory factor for pain is vitiation of *vata* dosha as specified by *Sushruta*- "*Vaatadritenaastiruja*" thus, it is compulsory to regulate *vata* dosha to manage pain. *Ayurveda* has many *vata* pacifying treatment like *Snehana* (oleation), *Swedana* (sudation), *Parisheka* (fomentation), *Dhara* (pouring of medicated oils/decoctions), *Vastikarma* (medicated enemas), *Abhyangam* (massage therapy), *Nasya*, *Alepana* (paste application) and localized therapies like *Januvasti*, *hrid- vasti*, *kati-vasti* etc. These treatments can be used to regulate *kapha* and *pitta* also but choice of drugs differ accordingly. *Marmachikitsa* gives a drug-less, harm-less option to treat pain. It is most potent of all the methods available to manage pain.

Marmachikitsa pacifies *vata dosha*. It brings down the stress level by working on HPA axis (Hypothalamus pituitary-adrenal axis). It calms down the nervous system and helps in maintaining homeostasis. Basically, it helps the body to 'heal itself'. Our body is the most beautiful creation of God and it has innate capacity to heal/cure itself. Human body is basically a universal chemical laboratory. When encouraged properly, it releases various chemicals and neuro-transmitters which promote self- healing and increases immunity. The proper stimulation of *marma* points by therapeutic gentle touch of empathetic clinician prompts the body to release opioids, morphine, endorphins, aspirin etc. and regulation of cortisol, serotonin, etc. The release of opioids, peptides results in CNS analgesia and reduces cardiac output and anxiety. Serotonin release also gives a sense of

relaxation and reciprocally inhibits anxiety. This creates de-sensitisation to stimulation-thus decreases pain sensation.

Marmachikitsa provides natural analgesia and prevents the patient from hazardous effects of modern analgesics (NSAIDs etc.). There are various opioid receptors in the body. Out of them 'mu' receptors are most important. The pain threshold of each individual is different which is also appreciated in *Ayurveda*. This pain threshold depends upon number of 'mu' receptors in body and amount of opioids available to them. *Marmachikitsa* encourages body to release opioids and other such chemicals, Neurotransmitters which provide analgesia by blocking Prostaglandins release

5. Conclusion

Snayugata Vata, as delineated in classical *Ayurvedic* literature, aligns closely with the clinical presentation of Tennis Elbow (Lateral Epicondylitis) observed in contemporary medicine. While modern interventions such as NSAIDs, corticosteroid injections, and surgery offer symptomatic relief, they often fall short in addressing the root cause, leading to recurrence or functional impairment. *Ayurveda*, on the other hand, provides a multi-modal and holistic treatment framework grounded in doshic pathology and tissue-level understanding.

Through the application of *Snehana*, *Upanaha*, *Agnikarma*, *Bandhana*, and *Unmardana*, supported by *Marma Chikitsa*, *Ayurveda* offers a targeted approach to restore dosha equilibrium, nourish *Snayu* (ligaments and tendons), and alleviate pain while promoting natural healing. The anatomical and functional descriptions of *Snayu* and *Sandhi* in *Ayurvedic* texts reflect a sophisticated grasp of musculoskeletal biomechanics, comparable to modern understandings.

Marma Chikitsa, particularly the stimulation of *Koorpara* and *Aani Marmas*, has demonstrated promise in regulating *Vata Dosha*, enhancing *Pranic* flow, and triggering endogenous mechanisms of pain modulation and tissue repair. These therapies offer a non-pharmacological, low-risk, cost-effective alternative with minimal side effects, making them highly suitable for chronic conditions like Tennis Elbow.

This review underlines the importance of integrating traditional knowledge with evidence-based practice. By revisiting the classical etiopathogenesis of *Snayugata Vata* and aligning it with modern pathophysiology, this article establishes a foundation for formulating comprehensive treatment strategies. However, to substantiate these findings, well-designed clinical studies and interdisciplinary research are essential. The synergy of *Ayurvedic* principles and modern diagnostics holds significant potential for improving the management of musculoskeletal disorders in the current healthcare landscape.

References

- [1] Allander E. Prevalence, incidence, and remission rates of some common rheumatic diseases or syndromes. *Scand J Rheumatol*. 1974;3:145–53. [PubMed] [Google Scholar]
- [2] Buchanan BK, Varacallo M. Lateral Epicondylitis (Tennis Elbow) [Updated 2023 Aug 4]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan.
- [3] Cutts S, Gangoo S, Modi N, Pasapula C. Tennis elbow: A clinical review article. *J Orthop*. 2019 Aug 10;17:203-207. doi: 10.1016/j.jor.2019.08.005. PMID: 31889742; MCID: PMC6926298.
- [4] Sushruta Samhita with 'Ayurveda Tattva Sandipika Commentary by Kaviraj Dr. Ambikadutta Shastri Part 1 Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. Nidana sthanachapter 1, shloka-27 page no- 298
- [5] Sushruta Samhita with 'Ayurveda Tattva Sandipika Commentary by Kaviraj Dr. Ambikadutta Shastri Part 1 Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. chikitsasthanachapter 4, shloka-8 page no- 34
- [6] Sushruta Samhita with 'Ayurveda Tattva Sandipika Commentary by Kaviraj Dr. Ambikadutta Shastri Part 1 Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. sharirasthanachapter 5, shloka-38-40 page no- 62
- [7] Sushruta Samhita with 'Ayurveda Tattva Sandipika Commentary by Kaviraj Dr. Ambikadutta Shastri Part 1 Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi. sharirasthanachapter 5, shloka-34 page no- 62

-
- [8] Sushruta Samhita with 'Ayurveda Tattva Sandipika Commentary by Kaviraj Dr.Ambikadutta Shastri Part 1 Reprint 2011. Chaukhambha Sanskrit Sansthan, Varanasi.sharirasthanachapter 5, shloka-41-42 page no- 62
- [9] Sushruta Samhita with 'Ayurveda Tattva Sandipika Commentary by Kaviraj Dr.Ambikadutta Shastri Part 1 Reprint 2009. Chaukhambha Sanskrit Sansthan, Varanasi.sharirasthanachapter 5, shloka-43-44 page no- 63
- [10] Charaka Samhita with 'savimarshavidhyotni' by pandit kashinath shastri and dr.gorakhnath Chaturvedi Kaviraj Part 2.Reprint 2009. Chaukhambha Sanskrit Sansthan, Varanasi.Chikitsasthana chapter 28, shloka-15-18 page no- 779-780
- [11] Sushruta Samhita with 'Ayurveda Tattva Sandipika Commentary by Kaviraj Dr.Ambikadutta Shastri Reprint 2009. Chaukhambha Sanskrit Sansthan, Varanasi.sutrasthanachapter 21, shloka-36page no- 121
- [12] Sushruta Samhita with 'Ayurveda Tattva Sandipika Commentary by Kaviraj Dr.Ambikadutta Shastri Reprint 2009. Chaukhambha Sanskrit Sansthan, Varanasi.chikitsasthanachapter 4, shloka-8page no- 34
- [13] Neelam, Gupta & Singh, Jasmeet & Kumar, Bharati. (2015). Int J Ayu Pharm Chem Role of Snehana and Svedana in Vatavyadhi.
- [14] Bhagyashree, & Katti, Anand. (2022). A Comprehensive Critical Analysis of Upanaha Sweda Along with its Mode of Action.. International Research Journal of Ayurveda & Yoga. 04. 81-87. 10.47223/IRJAY.2021.41213.
- [15] Mahanta, Vyasadeva & Dudhamal, Tukaram & Gupta, Sanjay. (2013). Management of tennis elbow by Agnikarma. Journal of Ayurveda and integrative medicine. 4. 45-7. 10.4103/0975-9476.109552.
- [16] Sushruta Samhita with 'Ayurveda Tattva Sandipika Commentary by Kaviraj Dr.Ambikadutta Shastri Reprint 2009. Chaukhambha Sanskrit Sansthan, Varanasi.sutra sthanachapter 18, shloka-31-32page no- 101
- [17] Sucheta, Desai & Ananta, Desai & Shaila, Borannavar. (2021). TO EVALUATE THE EFFECT OF UPANAHA SWEDA IN JANUSANDHIGATA VATA WITH VACHADI AND KOLADI YOGAS A COMPARATIVE CLINICAL STUDY. International Ayurvedic Medical Journal. 9. 1675-1682. 10.46607/iamj1209082021.
- [18] Sushruta Samhita with 'Ayurveda Tattva Sandipika Commentary by Kaviraj Dr.Ambikadutta Shastri Reprint 2009. Chaukhambha Sanskrit Sansthan, Varanasi.sharirasthana chapter 6, shloka-6page no- 68
- [19] Sushruta Samhita with 'Ayurveda Tattva Sandipika Commentary by Kaviraj Dr. Ambikadutta Shastri Reprint 2009. Chaukhambha Sanskrit Sansthan, Varanasi.sharirasthana chapter 6, shloka-25page no- 72
- [20] Mishra, Alka & Shrivastava, Vandana. (2023). Exploring the Science of Marma – An Ancient Healing Technique: Marma Therapy. Dev Sanskriti Interdisciplinary International Journal. 22. 23-37. 10.36018/dsij.v20i.157.
- [21] Marma Therapy | National Health Portal of India, www.nhp.gov.in/marmatherapy_mtl
- [22] Clinical Approach to Marma Chikitsa, Dr.Gaurav Phull first edition, 2018 chapter 7 page no-66-67
- [23] Clinical Approach to Marma Chikitsa, Dr.Gaurav Phull first edition, 2018 chapter page no-67
- [24] Clinical Approach to Marma Chikitsa, Dr.Gaurav Phull first edition, 2018 chapter 10 page no-143
- [25] Clinical Approach to Marma Chikitsa, Dr.Gaurav Phull first edition, 2018 chapter 14 page no-182-183