

**PAIN MANAGEMENT OF *ATTAI VIDAL* (LEECH THERAPY) IN  
SIDDHA SYSTEM OF MEDICINE ON LATERAL EPICONDYLITIS  
(TENNIS ELBOW)**

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**ABSTRACT**

Tennis elbow or Lateral epicondylitis mean overuse injury of common extensor tendon of the elbow joint, due to repetitive micro trauma. It is a syndrome characterized by an insidious onset of elbow pain brought on by wrist extension with degeneration characterized by the presence of dense fibroblasts, vascular hyperplasia, and disorganised collagen. Pain is aggravated by gripping actions and also during trivial daily activities. Patient feels painful position with straight elbow and maximal flexion. This present study is revealed the pain management of *Attai vidal* (Hirudo or Leech therapy) on tennis elbow via the Siddha system of medicine. Leeches taxonomy and method of application are

also described by the classical evidence of Siddha literatures. In present era, many more researches established the components of leech saliva. Leeches have highly developed salivary glands by their saliva contains 100 bio active substances. Pain management of leech application on tennis elbow is a case study to reveals the severity of pain decreased. The outcome of this study was assessed by the universal pain scale. It gives immense results too.

**KEYWORDS:** Tennis elbow, Siddha Medicine, *Attai vidal* (Leech therapy), Pain management.

## INTRODUCTION

Lateral epicondylitis or tennis elbow is a common pathology of both athletes and non-athletes affecting 1 to 3% of the population at large. This condition is most often associated with over use or a repulsive stress, as opposite to an acute inflammatory reaction.<sup>[3]</sup> It is caused by repetitive stressed micro trauma and failure of the healing process in the soft tissue attachments of the extensor carpi radialis brevis, origin of occupational or sporting activities. The annular ligament, the radial head and the capitellum may also contribute to the experience of pain in tennis elbow. In lateral epicondylitis implies an inflammatory condition associated with the Extensor Carpi Radialis Bravis [ECRB] is the most common muscle tendon involved with this condition. On physical examination typically point of tenderness medial and distal to the lateral epicondyle. Microanalysis studies of the ECRB in patient affected with tennis elbow failed to show an increased in the inflammatory mediator prostaglandin E2 compound to control subjects. The pathology of tennis elbow is thus most likely to be angiofibroblastic degeneration at the origin of the wrist extensors, and more suitably referred to the lateral epicondylosis.<sup>[1,2,3]</sup>

Tennis elbow affects 1-3% of the population, only 5% of all patients are seen in recreational tennis players. 75% of tennis elbow patients are symptomatic in their dominant arms. Although the syndrome has been identified in patients ranging from 12 to 80 years old, there is prevalence of 19% increase in 30 to 60 years old population, it predominantly occurs in the fourth and fifth decades. Male and female prevalence rates are reportedly equal.<sup>[5,6]</sup>

Siddha Medicine is one of the most ancient medical sciences of the world. According to Siddha literature, *Attai vidal* (leech therapy) placed in twenty seventh place of thirty two types of external therapy under the bloodletting method.<sup>[7,8]</sup> Leech types, taxonomy and method of application are explained in Siddha literatures. *Attai vidal* (leech therapy) is the method keeping medicinal leech over the affected area to absorb the blood.

*Attai vidal* (leech therapy) is essentially used for Traumatic swelling, tumours, sprain, skin diseases, head ache, bleeding haemorrhoids, splenomegaly, amenorrhea induce head ache, arthritis, some kind of eye diseases.<sup>[9]</sup>

This study to evaluate the Pain management of *Attai vidal* (leech therapy) in siddha system of medicine on Lateral epicondylitis.

Leeches have various bioactive molecules in their secretions. More than 20 molecules and their mode of action identified such as, analgesic, anti-inflammatory, platelet inhibitory, anti-coagulant, anti-thrombin regulatory functions.<sup>[10,11,12]</sup>

## DIAGNOSTIC TOOLS

Radiological analysis of lateral epicondylitis may reveal the calcification along the lateral epicondyle. Ultrasound of the common extensor origin can be used to confirm lateral epicondylitis in patient with elbow pain. MRI is an updated tool to the diagnosis of tennis elbow. The diagnosis in tennis elbow is usually made clinically examinations to the patients Maudsley's test, Mill's test, Cozen's test and Chairlift test.<sup>[3]</sup>

## Case History

42 years old female patient came to the Outpatient Department (OPD) of *Aruvai & Thol Maruthuvam* (Surgery), at National Institute of Siddha, Chennai with pain in right lateral aspect of the elbow joint and restricted movements on right hand for last three months. Before this period patient was apparently normal. She had undergone treatment from private Allopathic hospitals but she had not any obvious progresses. Further she has no history of Trauma, Sprain, Diabetes mellitus, Systemic hypertension, any other infectious diseases such as tuberculosis, asthma and etc. The patient presented with the complaints of pain and tenderness in right lateral elbow, difficult to flexion and extension movements. The patient was examined by specific test of tennis elbow by Maudsley's test and Mill's test that had given positive results.

## METHADODOLOGY

A specific case sheet was prepared, and administrated with the patient involved in the study and examined in detail as per case sheet. The necessary pathological and biochemical investigations Complete including CT, BT, Blood sugar, HIV I & II, HBS Ag, Montoux test and Urine examinations were carried out before and after treatment. The patient was included for study after taken the written consent for ethical clearance.

## DURATION AND METHODS

Four sittings of leeches application was carried out by seven days interval, and two leeches were applied for each session. The leeches were applied around the elbow joint near lateral epicondyle. Patient was properly prepared for Hirudo therapy after taken of all aseptic

measures. *Hirudo Medicinalis* leeches which are indicated for the medicinal use are applied locally.

### **PRE LEECHING PROCEDURE**

On the day after the general examinations like Blood pressure, Pulse rate, Respiratory rate, consent of the patient and explained the procedure to the patient.

The patient placed supine position on the bed under sterile condition. The affected part was placed in suitable position for leech application and the site was cleaned with sterile water and dried with dry gauze piece. Two numbers of selected leeches was kept into the turmeric water roughly 45 minutes then kept in fresh water for 10 minutes for purified and activated them.

### **PROCEDURE**

The activated leeches were applied over the site of lesions. When it starts sucking the blood in affected site as the evidence of its mouth like horse's hoof or raised in an arched position and blood sucking motility movements in its body that they are indicates leech sucking the blood vigorously or strength fully. While sucking, the leeches were covered with wet cotton pad and regularly sprinkled with cold water on the leech to kept them moisten and relaxed. The leeches were allowed to detach itself from the site after sucking the vitiated blood (approximately 60 minutes).

### **POST LEECHING PROCEDURE**

After detachment of leech, the bite sites were cleaned and dressed with turmeric dipped aloe pulp. The leeches were allowed to vomit the sucked blood by used turmeric powder. Then put into turmeric water for 05 to 10 minutes for purified them. After this procedure they were kept into normal water for 05 minutes and noticed the activities of the leeches and they stored in separated bottle containing pure water. Patient's details were recorded over the bottle and after 7 days interval the leeches used for the particular patient.

### **RESULTS AND OBSERVATION**

Four sittings of leech therapy were carried out in seven days interval to above mentioned proper procedures. The pain was assessed by universal pain scale. In pain scale 1 to 10 numbers on mild, moderate, severe and worst segments were mentioned. Initially the patient reported with severe pain and every sittings of leech application the pain was noted by the

tool of pain scale. After the fourth sitting of leeches patient felt the mild pain and point of tenderness reduced.

## DISCUSSION AND CONCLUSION

Tennis elbow is a painful condition that radiates from the outside of elbow to forearm and wrist. It is mostly affected between the age group of 30 to 50 years. Most of the tennis elbow patients might suggest for surgery. In these conditions affects the day to day life activities. Most of the cases treated by Non-steroidal anti-inflammatory drugs or steroid injections, painkillers, local anaesthetic are prescribed to the patients it causing side effects. In leech therapy without causing any side effects and safest, less cost effective way of treatment to pain management on lateral epicondylitis. Leech has a highly developed salivary glands by their salivary secretions contains more than 100 biological compounds such as Hirudin, Calin Destabilase, Hyaluronidase, Eglins, Acetylcholine, Anaesthetic substances and Histamine like substances which acts as Inhibits blood coagulation by binding to thrombin inhibits collagen mediated platelets aggregation, Anti-inflammatory, Vasodilator, Increase the inflow of blood at the bite side. In this study to had shown the effectiveness of Attai vidal (Leech application) for the pain management on lateral epicondylitis.

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