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Clinico-Anatomical Examination of *Marma* Massage Therapy for *Kurpara Marma* in Treating Common Sports Injuries

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Abstract : ***The widespread occurrence of sports injuries creates a demand for new treatment methods that not only ease discomfort but also address the deeper structural and functional imbalances within the body. This research investigates the healing potential of Marma Massage Therapy, focusing on Kurpara Marma, a key point at the elbow joint. By integrating anatomical dissections, literature reviews, and clinical trials, we seek to assess its effectiveness in diminishing pain, improving the range of motion, and enhancing overall function for individuals experiencing common sports injuries. Clinical results provided significant proof that the Marma technique encourages not just symptom relief but also the recovery of functional ability among athletes.***

Keywords: Marma Massage Therapy, Kurpara Marma, Sports Injuries, Ayurveda, Holistic Healing, Clinico-Anatomical Study, Pain Management, Rehabilitation

I. INTRODUCTION

A. Background

Sports injuries present a serious issue for athletes of all skill levels, leading to discomfort, functional limitations, and prolonged breaks from their activities. The American Orthopaedic Society for Sports Medicine reports that around 3. 5 million people receive treatment for sports-related injuries annually. Current approaches mainly aim at relieving symptoms, often ignoring the root causes of these issues.

B. Ayurveda and Marma Therapy

The field of medicine provides a well-rounded approach that encourages holistic wellness. A fundamental idea in this practice is that of *Marma*s crucial points in the body believed to impact health. These points are categorized according to their anatomical relevance and energetic properties. *Kurpara Marma*, situated at the elbow joint, plays a vital role in limb function, comprising a complex network of muscles, tendons, nerves, and blood vessels.

C. Rationale for Study

Though traditional treatment options can be effective, they frequently disregard the energetic and holistic aspects of healing. By stimulating *Kurpara Marma* through *Marma* Massage Therapy, we suggest that it is possible to instigate not only localized physiological alterations but also overall improvements in health and resilience against future injuries.

II. MATERIALS AND METHODS

A. Study Design

This study adopted a three-phase design that included:

- Literature Review: A systematic gathering of existing information on *Marma* therapy and *Kurpara Marma*.
- Anatomical Dissection: Cadaveric investigations to analyze the anatomical connections related to *Kurpara Marma*.
- Intervention Trial: A clinical trial evaluating patient outcomes following the intervention.

B. Literature Review

We reviewed essential texts from both *Ayurvedic* and contemporary scientific literature. Notable works included *Susruta Samhita* and *Ashtanga Hridaya*, which provided foundational understanding of *Marma*s. Modern research sourced from PubMed and Google Scholar improved our comprehension of the anatomical and physiological impacts of these practices.

C. Anatomical Study

Carried out in the PG Department of *Rachana Sharir*, the cadaveric dissections concentrated on mapping the Kurpara area. It pinpointed crucial structures that included:

Sr. No	*Ayurvedic* View	Modern Correlation
	Mansa	Biceps brachi, Triceps brachi, Supinator, Pronator teres and extensor carpi radialis
	Sira	Brachial artery, tributaries of cephalic and median cubital vein, Median nerve and its branches
	Snayu	Capsular ligament, radial and ulnar collateral ligaments of elbow joint
	Asthi	Lower end of Humerus, Upper end of radius and ulna
	Sandhi	Humero ulnar, Humero radial, superior radio ulnar joint constitutes Elbow Joint

D. Clinical Study Protocol

Population: The investigation enlisted 30 participants (aged 18-35) who were diagnosed with varied sports injuries affecting the elbow joint.

Inclusion Criteria:

- Patient belonging to the age group of 20-60 years irrespective to gender.
- Diagnosed patient of sports injuries with injuries on *Kurpara Marma*
- Patient willing to participate in trial

Exclusion Criteria:

- Patient of age below 20 years and above 60 years of either gender.
- Patients having osteomyelitis, rheumatoid arthritis, joint replacement and fractures.
- Non- co-operative patients.

E. Treatment Protocol

Participants received *Marma* Massage Therapy focused on *Kurpara Marma*, which included:

- Technique: Applying gentle to moderate pressure at specific points surrounding the elbow to promote the release of energy blockages and improve blood circulation.
- Frequency: Treatments were carried out three times a day .
- Follow up:Follow up of the patients will be done regularly at every 7 days.
- Duration of trial: 45 days

F. Assessment Tools

- Criteria for assessment of Marma Massage Therapy:After the application of trial, patients will be carefully observed to know the general response of Marma massage therapy.
- Criteria for assessment of overall effect of therapy :The evaluation of results will be on clinical parameters obtained before and after the completion of the treatment.
- SymptomaticParameters :Various symptoms will be assessed before, during and after the procedure for any recovery. The symptoms include Sandhishool (pain in joints). Sandhishotha (swelling of Joints) , Sthabdtha (stiffness of joints). And sparshaasahyta, different symptoms are graded into different grades as per their severity.

G. Observation

- Age: Among 30 patients of Common Sports Injuries On Kurpara Marma.maximum number of patients 10 (33.33%) were observed in 4th & 5th decade (41-60 yrs.) followed by 6 patients (20.00 %) were in 3rd decade (31-40 yrs.), 4 Patients (13.33

%) were observed in 2nd decade (21-30 yrs). This shows that incidence of Common Sports Injuries On Kurpara Marma is more in 4thand 5thdecade of life.

- Sex: In present study, maximum number of patients 19 (63.33%) were Male & 11 patients (36.67%) were Female. This incidence shows that Male patients are more than Female. Therefore Common Sports Injuries On Kurpara Marma is more common in Males than Females.
- Religion: Among 30 patients of Common Sports Injuries On Kurpara Marma, maximum no. of patients i.e. 27 (90.0%) were Hindus followed by Muslims 3 patients (10.0 %). The religion doesn't have any significant relationship with the disease . This is because of the place from where patients were registered was Hindu predominant area.
- Marital Status: Among 30 patients of Common Sports Injuries On Kurpara Marma, maximum number of patients 26 (86.67%) were married & 4 patients (13.33 %) were unmarried.
- Habitat: Among 30 patients of Common Sports Injuries On Kurpara Marma, maximum number of patients 19 (63.33%) were from rural areas and 11 patients (36.67 %) were from urban areas.
- Educational Status: This data shows that most of patients 25 patients (83.33 %) were educated , 5 patients (16.67%) were were uneducated.
- Occupational Status: This data shows that maximum no. of patients 10 (33.33%) were in the group of Service , 8 (26.67 %) patients were Retired, 5 (16.67 %) patient were in the group of House wife, 4 patients (13.33%) were Student , 2 (6.67%)were in the group of Business and 1 (3.33%) is Labourer.
- Family history: Present clinical study shows that all of the 30 patients revealed negative family history of Common Sports Injuries On Kurpara Marma.
- Dietery Habits: This data reveals that in present clinical trial most of patients 20 (66.67 %) were vegetarian while 10 patients (33.33 %) were of mixed dietaryhabits.
- Addictions: This data shows that maximum no. of patients 12 (40.00 %) were having tea addiction while 11 patients (36.67 %) were having addiction of tobacco, 4 patients (13.33%) were alcohol addicted and 3 patients(10.00) were addicted to none
- Agni: This data shows that 9 (30.00 %) patients were having Manda Agni , 11 patients (36.67%)were having Vishma Agni, 10 patients (33.33 %)were having Sama Agni
- Koshtha: This data shows that maximum patients 12 (40.00 %) were of Madhyama Koshtha while 11 patients (36.67 %) were of Kroora Koshtha and 7 patients (23.33%) were of Mridu Koshtha.
- Shareerika Prakriti: This data shows that maximum patients 12 (40.00 %) were of Vata-Kaphaja Prakriti , 11 patients (36.67 %) were of Vata-PittajaPrakriti, 7 patients (23.33%) were of Kapha-PittajaPrakriti
- Maanasika Prakriti : This data shows that majority of patients 16 (53.33 %) were Rajasika, 8 patients (26.67%) were Tamasika, 6 patients (20.00%) were Saatvika
- Saara: This data shows that 11 (36.67%) patients were of MamsaSaara, while 11 (36.67%) were of Twak Saara, 8 patients (26.67%) were of Meda Saara.
- Samhanana: This data shows that maximum no. of patients 12 (40.00%) were having Madhyama Samhanana, 10 patients (33.33%) were from Avara type ofSamhanana, 8 patients (26.67%) were from Pravara type ofSamhanana
- Saatmya: This data shows that 15 patients (50.00 %) were Vyaamishra Rasa Saatmya, 13 patients (43.33%) were observed Sarva Rasa Saatmya and 2 patients (6.67%) were Eka Rasa Saatmya.
- Satva: This data shows that 18 patients (60.00 %) were of Madhyama Satva, 8 patients (26.67%) were of AvaraSatva, , while 4 patients (13.33%) were of Pravara Satva
- Aahara Abhyaharana Shakti: This data shows that 8 patients (26.67%) were of Avara Aahara Abhyaharana Shakti, while 16 patients (53.33 %) were of Madhyama Shakti and 6 patients (20.00%) were of Pravara Shakti.
- Aahara Jarana Shakti: This data shows that 10 patients (33.33%) were of Avara Aahara Jarana Shakti, while 14 patients (46.67 %) were of Madhyama Shakti and 6 patients (20.00%) were of Pravara Shakti.
- Vyayam Shakti: This data shows that 14 patients (46.67%) were of Avara Shakti, while 16 patients (53.33 %) were of Madhyama Shakti .
- Symptoms: This data shows that; Elbow pain was found in 30 patients (100%) ,Restricted movement was found in 30 patients (100%), Swelling was found in 13 patients (43.33%), Tenderness was positive in 28 patients (93.33%), Stiffness was found in 30 patients (100%)

H. Discussion on Result

Discussion on effect of therapies with the help of Parameters

Effect of therapy on Elbow pain:

- In Elbow pain the (Mean±SD) before treatment was 5.00±1.72 which reduced to 1.93±1.70 after treatment, with Mean difference 3.067 giving a relief of 61.34%, which is statistically Extremely significant (P<0. 0001).

Effect of therapy on Restricted movement*:*

- In Restricted movement the (Mean±SD) before treatment was 2.96±0.85 which reduced to 1.13±0.81 after treatment, with Mean difference 1.833 giving a relief of 61.93%, which is statistically Extremely significant (P<0. 0001).

Effect of therapy on Stiffness:

- In Stiffness the (Mean±SD) before treatment was 2.46±0.89 which reduced to 1.1±0.84 after treatment, with Mean difference 1.367 giving a relief of 55.57%, which is statistically Extremely significant (P<0. 0001).

Effect of therapy on Swelling:

- In Swelling the (Mean±SD) before treatment was 0.53±0.62 which reduced to 0.36±0.49 after treatment, with Mean difference 0.166 giving a relief of 31.32 %, which is statistically insignificant (P=0.062).

Effect of therapy on Tenderness

- In Tenderness- the (Mean±SD) before treatment was 2.83±1.28 which reduced to 1.16±0.74 after treatment, with Mean difference 1.667 giving a relief of 58.90%, which is statistically **Extremely significant (P<0. 0001)**.

(% : Percentage ; S.D : Standard Deviation ; P: P Value)

1) Table : Overall effect of therapy

Variables	Before treatment (Mean±SD)	After treatment (Mean±SD)	Mean difference	% of change	P value
Pain	5.00±1.72	1.93±1.70	3.067	61.34	<0.0001
Restricted movement	2.96±0.85	1.13±0.81	1.833	61.93	<0.0001
Tenderness	2.83±1.28	1.16±0.74	1.667	58.90	<0.0001
Swelling	0.53±0.62	0.36±0.49	0.166	31.32	0.062
Stiffness	2.46±0.89	1.1±0.84	1.367	55.57	<0.0001

2) Overall result of Therapy

	Overall results			P value
	Mean+SD	Mean difference	% of changes	
Before treatment	13.8+2.83	8.1	58.69	<0.0001
After treatment	5.7+2.74			

Showing the % relief of clinical trial on Subjective Parameters reveals that symptomatically 58.69% relief was observed. So it can be said that significant/ satisfactory relief was found.

III. DISCUSSION

A. Clinical Implications

These study results highlight the practical application of *Marma* Massage Therapy within standard rehabilitation practices for sports injuries. The notable drops in pain and gains in functional ability demonstrate how focused energy work can enhance conventional physical therapy methods.

B. Mechanisms of Action:

Pain Modulation: *Marma* massage may activate the nervous system, potentially triggering endorphin release and boosting local blood flow, which can aid healing and diminish inflammation.

Muscle Relaxation: Engaging sensory receptors during the massage may foster neuromuscular relaxation, relieving tension and discomfort at trigger sites.

Sustainability of Results: Participants noted lasting positive effects, indicating that *Marma* Massage Therapy could function not only as a treatment but also as a preventive strategy against recurring injuries.

Synergistic Approaches: The prospective combination of *Marma* therapy with contemporary methods such as ultrasound therapy, physical rehabilitation exercises, and nutritional guidance could improve overall treatment results.

IV. CONCLUSION

Marma Massage Therapy that targets *Kurpara Marma* reveals considerable therapeutic advantages in addressing sports injuries. The favorable results demonstrate enhancements in pain management, mobility, and overall function, indicating a promising complementary therapy that could revolutionize rehabilitation approaches. Future research with larger populations, diverse demographics, and various injury types is needed to confirm these outcomes and investigate the broader applications of *Ayurvedic* principles in modern sports medicine.

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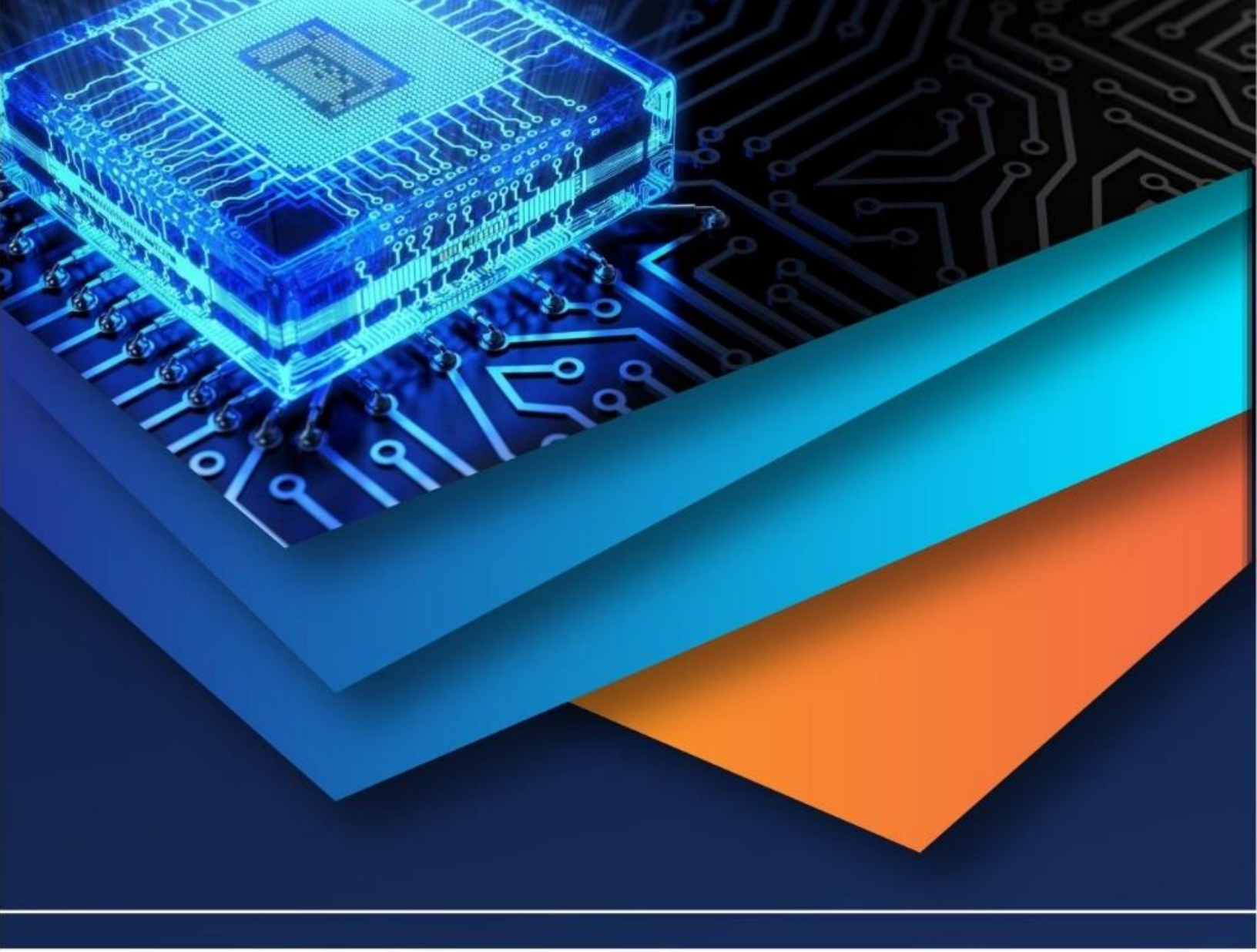

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