

Role of *Agnikarma* (Cauterization) in the management of Frozen shoulder.

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ABSTRACT:

Ayurveda is the ancient medical science of India. It has been used since thousands of years to cure the diseases and to maintain the health. It is the ocean of the miraculous remedies for the many difficult entities in medical science. Having no advanced technology, the ancient experts like *Sushruta* explained the conditions using their senses only and identified them well. They found out remedies for all those conditions.

With the help of advanced technology, it has become possible to diagnose the diseases accurately. But researchers are still fighting for the effective remedies available for all. In case of pain management, a good progress has been made to manage the acute pains. But in case of chronic pain it is difficult to avoid the problem of the adverse effects of long term use of medicines. Frozen shoulder is one of the conditions which are prevalent all over the world. The condition is self limiting in 1-2 yrs and may affect one or both shoulders. But during the course it is

very distressing. Modern science offers a combination of NSAIDs, steroids, physiotherapies and operative intervention depending on the severity of the condition. It was thought to search for an effective remedy in *Ayurveda* and *agnikarma* was found to be promising. A clinical trial was performed and the results are presented in this communication.

KEY WORDS: *Sushruta*, *Ayurved*, *Frozen shoulder*, *Agnikarma*.

INTRODUCTION:

Most of the world's population relies on traditional remedies for cure from some distressing conditions. Chinese medicine and *Ayurveda* are among the most ancient traditional medical sciences in *Asia*. *Ayurveda* has described miraculous remedies in the classical texts. *Sushruta* is the father of Anatomy and Surgery. In his treatise, *SushrutaSamhita*, he has described various surgical conditions and their management. There are many non operative procedures described for some

conditions which are treated with operative measures only. The procedures which are less invasive and which can replace surgical interventions are known as parasurgical procedures. These include *Agnikarma*ⁱ (Cauterization), *Raktamokshana*¹ (Blood letting) and *Ksharakarma*¹ (Application of caustics). Out of these the later two are being studied since long but *Agnikarma* has remained somewhat neglected.

This procedure is commonly found in rural areas of *Maharashtra* and in north Indian states. Also known as branding, it is performed at birth to prevent diseases in neonate. It has been described for some painful conditions by *Sushruta*,ⁱⁱ the ancient scholar of *Ayurveda*.

Though modern medicine has progressed a lot but it has failed to give effective remedies for some chronic painful conditions. Frozen shoulder is one of such conditions, also known as 'primary idiopathic adhesive capsulitis', is difficult to define, diagnose and manage. This condition affects 2-3 % of the population. It tends to occur in patients older than 40 yrs of age and most commonly in patients in their 50s and in womenⁱⁱⁱ.

Characterized by pain in shoulder joint and stiffness, it is described in three stages viz. Painful stage, Adhesive stage and Recovery stage³. The treatment options in modern science include NSAIDS, steroids, intra articular injections, physiotherapy and arthroscopic manipulations. But none of these is curative. The study was

performed to see the efficacy of *Agnikarma* in frozen shoulder.

MATERIALS AND METHODS:

• Materials

1. Equipments:

A metal rod made up of *Panchdhatu* (iron, copper, silver, lead and tin in equal proportion)

Heat source, i.e. LPG stove to heat the *shalaka* (rod)

Goniometer to measure angle of movement

2. Drugs

A combination of *Madhu* (Honey) and *Sarpi* (Ghee) in equal proportion for local application after the procedure.

• Methods

• Parameters for selection of the patients

- ✓ Sex: Either sex
- ✓ Age: 20 - 75.
- ✓ Otherwise healthy volunteer.
- ✓ Patient with history of complaints of shoulder pain and stiffness for less than 6 months.
- ✓ Patient with a normal plain radiograph of affected shoulder joint.
- ✓ Patient with unilateral involvement of joint.
- ✓ Patients with normal BSLs.
- ✓ Diabetic patients with controlled BSLs
- ✓ Patient who has not been operated on that particular joint.

- ✓ Patients well diagnosed after through clinical and Radiological investigations.
- **Parameters for rejection of the patients**
- ✓ Patient of age < 20 and >75.
- ✓ Patient with advanced disease, duration being more than 6 months.
- ✓ Diabetic patient with uncontrolled BSLs.
- ✓ Abnormal radiograph of the affected shoulder joint.
- ✓ Bilateral joint involvement.

Procedure of Agnikarma

1. Pre procedural work up

Investigations: Hemoglobin, blood sugar level, plain X-ray of affected joint,
Written informed consent of all patients before procedure,
General and systemic examination of the patient.

Sitting position.

Location of the most painful point and marking the point with the marker.

Local cleaning, painting and drapping.

Metal rod heated on the LPG stove till red hot.

2. Procedure

The red hot metal rod is touched to the marked point on affected shoulder joint.

It is then touched to the points one centimeter from the central point at 6-8 places surrounding the central point.

The symptoms of proper cauterization are looked for.

The pre prepared combination of local application is applied on the cauterized area.

3. Post procedure care

General examination of the patient is done again.

Patient instructed to avoid wetting the cauterized area for two days.

Patient is called for the follow up on the next day.

- **Assessment criteria**

Grade	Criteria
0	Normal movements with no pain
1	Normal movements with mild pain
2	Restriction of movements with mild pain
3	Restriction of movements with moderate pain
4	Restriction of movements with severe pain

The patients with grade 0 or 1 after treatment are considered to have got complete relief. Those with grade 2 are considered to have reduced symptoms. Those who are in grade 3 or 4 were considered as not cured. Pain was assessed using Visual Analogue Scale (VAS) and movements were assessed using Goniometer.

- **Patients profile:**

1. Male dominance was seen in this study.
2. Most of the patients were in the age between 45 to 75.

3. Incidence was more in non dominant arm.

4. Incidence was more in diabetic patients.

- **Tables**

1. Patient profile

	Age (Years)	Sex		Diabetic status		Affected arm	
		Male	Female	Diabetic	Non diabetic	Right	Left
Group E	54.6+/-15.2	26	04	05	25	12	18
Group C	50.5+/-12.7	24	06	08	22	11	19
Total		30	30	30	30	30	30
Chi square value		0.48		0.891		0.07	

(E: Experimental; C: Control)

2. Results

Group	1 st day		3 rd day		7 th day		15 th day		30 th day	
	E	C	E	C	E	C	E	C	E	C
Complete relief	06	00	12	00	22	02	24	04	24	06
Reduced symptoms	22	12	16	18	06	19	04	20	04	20
No relief	02	18	02	12	02	11	02	06	02	04
Total	30	30	30	30	30	30	30	30	30	30
Chi square value	16.55		15.63		19.64		26.96		22.12	

(E: Experimental; C: Control)

RESULTS AND DISCUSSION:

The results observed in this trial are encouraging. The patients were not given any analgesic remedy except this procedure. The patients in the control group were given only *Snehan* (Oleation i.e. massage with oil) and fomentation for seven days. The pre and post procedural goniometric assessment was done. The difference is significant. The movement range increased considerably after the procedure.

80 % patients from Experimental group showed complete relief with no pain and full range of movements. The proportion was only 20 % in control group. The details of results are explained in the table.

- **Probable mode of action of Agnikarma :**

It has been well described on the basis of humours in the *Ayurveda* but on the basis of modern science it is difficult

to explain. The hypothesis behind this procedure is based on nervous physiology. The nociceptors carry the pain impulse with the temporal or spatial summation^{iv}. The cauterization destroys the nociceptors which are responsible for pain. The pain carrying channels are thus blocked and it becomes easier for the patient to do the movements. The analgesic effect of *Agnikarma* leads to increased range of movements.

CONCLUSION:

The traditional heat therapy is very useful in the condition of frozen shoulder. It has been well supported by *Ayurveda* with its scientific explanation on the basis of *Ayurvedic* physiology. It needs to be further explored for its mode of action on the basis of modern science. This therapy is very useful in the conditions with similar pathology. Being easy to perform and cost effective it is the better alternative for the condition of Frozen Shoulder. The *Agni karma* can prove to be promising in the field of pain management.

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