



ORIGINAL RESEARCH ARTICLE - CLINICAL STUDY

CLINICAL STUDY ON THE EVALUATION OF ANALGESIC EFFECT OF AGNIKARMA AND RASONADI GUGGULU IN THE MANAGEMENT OF OSTEOARTHRITIS OF KNEE JOINT

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ABSTRACT:

Background: *Sandhigatavata* is a clinical condition in which structural and functional derangement of joints occurs because vitiated *vata* gets lodged in the joints. *Sleshaka kapha* is residing in every *sandhi*. All movements of the body is controlled by *vyana vata*. When *vata* gets vitiated in the joints, *Sleshaka kaphavrutha vyana vata* condition occurs in joints which hampers the normal function. *Osteoarthritis (OA)* is by far the most common form of arthritis. It is also called degenerative joint disease. It is one of the most disabling conditions in developed nations. The aetiology is multifactorial, still not understood; but commonly it is thought to be wear and tear of joints. Agni karma is procedure which is performed with help of agni or any procedure related to agni is called agni karma **Material and Methods:** Two groups of 20 Patients each were done and Group A received *Agnikarma* with *Pancha Loha Shalaka* and Group B received *Rasonadi Guggulu*. Both the group were compared to evaluate the Analgesic effect of *Agnikarma* and *Rasonadi Guggulu*. **Results:** overall results were tabulated and observed that analgesic effect in Group A treated with *Agnikarma* is significant than Group B treated with *Rasonadi Guggulu*. **Conclusion:** Even though both *Agnikarma* and *Rasonadiguggulu* were showing highly significant result in their Analgesic efficacy, overall percentage of relief shows that Group A treated with *Agnikarma* is having better results than Group B treated with *Rasonadiguggulu*.

Keywords: *Agnikarma, Panchalohashalaka, Rasonadi Guggulu, Sandhigatavata*

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INTRODUCTION:

Vatavyadhi is one among *Ashta mahagada*^{1,2}. *GataVatas* were given more importance by almost all the Acharyas. *Sandhigata vata* is listed as one amongst Vata vyadhi. *Sandhigata vata* is a clinical condition in which structural and functional derangement of joints occurs because vitiated *vata* gets lodged in the joints. *Sleshaka kapha* is residing in every *sandhi*. All movements of the body is controlled by *vyana vata*. When *vata* gets vitiated in the joints, *Sleshaka kaphavrutha vyana vata* condition occurs in joints which hampers the normal function.

Sandhigata vata is one among such diseases where pain is inevitable. *Susruta* specifically mentions that in *Sandhigata vata*, *shoola* and *sopha* are the main clinical features. *Sandhigata vata* is one among those which creates temporary or permanent loss of joints mainly because of *Sandhishoola* or joint pains, among which *janusandhishoola* is having more importance as it hinders walking. As *Janumarma* is residing in *Janusandhi*, pain will be severely elicited on injuries or diseases.

Osteoarthritis (OA) is by far the most common form of arthritis. It is also called degenerative joint disease³. It is one of the most disabling conditions in developed nations. The aetiology is multifactorial, still not understood; but commonly it is thought to be wear and tear of joints⁴. It shows strong association with ageing and is major cause of pain and disability in the elderly. Pathologically, it may be defined

as a condition of synovial joints characterized by focal loss of articular hyaline cartilage with proliferation of new bone and remodelling of joint contour. Inflammation is not a prominent feature here.

Osteo Arthritis principally targets the patella-femoral and medial tibio-femoral compartments of the knee⁵.

Clinical Features:

- Pain is the earliest symptom and occurs intermittently in the beginning, but becomes constant over months or years. Initially, it is dull pain and comes on starting an activity after a period of rest; but later it becomes worse and cramp like and comes after activity.
- A coarse crepitus may be complained of by some patients.
- Swelling of the joint is usually a late feature, and is due to the effusion caused by inflammation of the synovial tissues.
- Stiffness is initially due to pain and muscle spasm; but later, capsular contracture and incongruity of the joint surface contribute to it.
- Other symptoms are; a feeling of 'instability' of the joint, and 'locking' resulting from loose bodies and frayed menisci.
- The two cardinal features of osteoarthritis are narrowing and osteophyte formation.

- Subchondral sclerosis ‘cysts’ and osteochondral ‘loose’ bodies within the synovium are additional features.⁶

Thus pain is a salient feature in *Sandhigataavata/ OA Knee*. Treatment focusing on reduction of pain is more important. Reduction of pain in turn reduces Muscle spasm and Joint stiffness. *Susruta Samhita* has pointed out the *VedanaShamaka* effect of *Agnikarma*. *Agnikarma* being *Ushna*, *Teekshna*, and *Sookshma* will reduce *vata* and thus reduces pain.

Agni karma is procedure which is performed with help of *agni* or any procedure related to *agni* is called *agni karma*. Any procedure that involves the *agni* directly or indirectly with help of different materials to

cure the disease⁷. *Susruta* highlighted the importance of *agni karma* in *vata vyadhi chikista* specially in *siras*, *snayus*, *sandhi* and *asthigata vyadhi*.

AIMS & OBJECTIVES:

1. Evaluation of comparative efficacy of *Agnikarma* and *Rasonadiguggulu*.

METHODS AND MATERIALS

Study design: It is randomized, open labeled, non controlled, parallel, comparative clinical study.

Following drugs and materials were used for this study:

- 1) *Panchaloha shalaka*⁸.
- 2) *Rasonadi Guggulu*⁹.
- 3) *Shatadhautha gritha*¹⁰.

Table no. 1: Ingredients of *Panchaloha shalaka*

Metals	Weight	Percentage
<i>Tamra</i>	20gms	40%
<i>Loha</i>	15gms	30%
<i>Rajat</i>	5gms	10%
<i>Yashada</i>	5gms	10%
<i>Vanga</i>	5gms	10%
Total	50gms	100%

Table no. 2: *Rasonadi Guggulu*

Sl No.:	Drugs	Quantity
1	<i>ShodithaGuggulu</i>	10 parts
2	<i>Lasuna</i>	5 parts
3	<i>Maricha</i>	2 parts
4	<i>Pippali</i>	2 parts

5	<i>Rasna</i>	2 parts
6	<i>Eranda</i>	2 parts

Study Population: The patients were selected from the population of Hubli city.

Study Sample: patients of OA were selected randomly from the population of Hubli city.

Sample size: 40

Grouping and Intervention: The selected patients were randomly assigned into 2 groups-

Group A:

- Sample size : 20
- Procedure : *Agnikarma*.
- Duration : One sitting.

Group B:

- Sample size : 20
- Internally : *Rasonadiguggulu*.
- Dose : 500mg ,thrice daily.
- Anupana : *Ushnodaka*
- Duration : 7 days.

Follow-up: The subjects of the above two groups were followed up for 7days.

Assessment criteria:

Assessment was done on subjective and objective parameters before and after the treatment.

Subjective parameters: Pain.

Objective parameters: Tenderness.

Parameters of Assessment

- **Subjective parameters**

Pain: Pain was assessed on McGill's Pain Index Score.

McGill's Pain index Score

- No Pain - 0
- Mild Pain - 1
- Discomforting pain - 2
- Distressing Pain - 3
- Horrible Pain - 4
- Excruciating Pain - 5

Definition

Grade

- No tenderness 0
- Tenderness to palpation without grimace or flinch. 1
- Tenderness with grimace and / or flinch to palpation. 2
- Tenderness with withdrawal (+ "jump sign") 3
- Withdrawal (+ "jump sign") to non-noxious stimuli (i.e. Superficial palpation, pin prick, gentle percussion) 4

Changes observed in the subjective and objective parameters were analysed before and after the treatment, then results were categorized as,

- No relief - less than 25 % improvement.
- Mild relief - 25 to 50 % improvement.
- Moderate relief - 50 to 75% improvement.

- Marked relief- more than 75% improvement.
- Overall assessment was done based on the improvement in subjective and

objective parameters before and after treatment which were subjected to statistical analysis by applying student ‘t’ test.

RESULTS:

Table no. 3: Total effect of therapy

Remarks	Group A		Group B		Total	
	No	%	No	%	No	%
Complete relief – 100%	0	0	0	0	0	0
Marked relief-- more than 75% improvement	0	0	0	0	0	0
Moderate relief -- 50 to 75% improvement	20	100%	0	0	20	50%
Mild relief-- 25 to 50 % improvement	0	0	6	30%	6	15%
No relief-- less than 25 % improvement	0	0	14	70%	14	35%

In this study in Group A treated with *Agnikarma* by *Panchaloha Shalaka*, all subjects (100%) got Moderate Relief. Whereas in Group B treated with *Rasonadi Guggulu*, 06 subjects (30%) got Mild Relief and 14 subjects (70%) got No Relief.

DISCUSSION

- In both the groups, it was found that the improvement of mean score of Pain relief (McGills Pain index) at the end of *Agnikarma* by *Panchaloha shalaka* in Group A shows 100% relief. Whereas at the end of 7days in Group B treated with *Rasonadi Guggulu* shows 19.17% relief.
- In Group A, 46.08% improvement was observed in ‘Morning Pain’, 55.84%

improvement was observed in ‘Pain On Walking’, 63.20% improvement was observed in ‘Pain While Walking After Prolonged Rest’, 54.37% improvement was observed in ‘Unable To Walk On Uneven Area’, whereas in the same duration in Group B , only 27.77% improvement was observed in the ‘Morning Rise OfPain’, 23.17% improvement was observed in ‘Pain On Walking’, 15.83% improvement was observed in ‘Pain While Walking After Prolonged Rest’, 23.17% improvement was observed in ‘Unable To Walk On Uneven Area’.

- In this study in Group A treated with *Agnikarma* by *Panchaloha Shalaka*, all

subjects (100%) got Moderate Relief. Whereas in Group B treated with *Rasonadi Guggulu*, 06 subjects (30%) got Mild Relief and 14 subjects (70%) got No Relief. Eventhough both *Agnikarma and Rasonadi guggulu* were showing highly significant result in their Analgesic efficacy, overall percentage of relief shows that Group A treated with *Agnikarma* is having far better results than *Rasonadi guggulu* taken by Group B.

Mode of Action of Agnikarma: Agni having *ushnaguna* which pacifies *Vata and kapha* it increases *dhatvagni* and pacified the *mandagni* & also performs the *Ama Pachana* & remove the accumulated toxins & enhances nourishment & formation of good newer tissues. By *Agnikarma* procedure symptomatic relief of pain was obtained appreciably. For complete cure of the disease multiple sittings of *agnikarma* along with internal medication is necessary. Proper knee joint exercises are also required in future for increasing the strength of ligaments and knee joint muscles which plays a major role in supporting knee joint. No complications were seen during the course of study.

CONCLUSION:

The subjects of Group A showed better results in all the parameters compared to Group B. So *Agnikarma* by *Panchaloha Shalaka* has a much contributory effect in *Sandhigata vata* even

though *Rasonadi Guggulu* internally also has a significant role in this disease

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