

EFFICACY OF AGNIKARMA COMPARED WITH PIPPALI AND LOHA SHALAKA IN THE MANAGEMENT OF KADARA (CORN)-A CONTROLLED CLINICAL TRAIL

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ABSTRACT

Kadara is a one of the kshudra roga. It poses no threat to life, but it can bring a lot of discomfort to a person. At the beginning, Kadara doesn't hurt, but as it gets worse, it might. The illness Kadara is comparable to Corn in contemporary medicine based on its clinical manifestation. Due to horny induration with a hard center, corn is a localized hyperkeratosis of the skin that has an externally placed base and an internally pointed apex. It is palpable as a nodule. Histologically, it consists of intact basal layers surrounded by keratin masses. Although a number of treatments, including ointments, corn caps, surgical excision, and others, are available to treat Kadara, none of them are comprehensive and guaranteed to stop reoccurring. Acharya Sushruta mentioned in sutra sthana 12 chapter for twak dagdha Pippali, shalaka, ajashakrut, godanta, shara is one among the substance. In the present

tudy agnikarma is compared with Pippali and Loha shallaka.

KEYWORDS: Kadara, Pippali, Loha Shalaka, Agnikarma.

INTRODUCTION

Kadara means—that which destroys the part of the foot by the influence of Vata. Kadara is a hard painful growth with raised and deep seated hard muscular growth on palms and soles caused by vitiated Kapha and vata which resembles to that of seed of Kadara. The etiological factors described in Sushruta Samhita in respect of Kadara are injury to the pada because of thorn prick, stone, and any type of cut injury or repeated pressure over the foot during barefoot walking. By this it leads vitiation of Vata and Kapha along with Rakta gives rise to

changes which are more confined to parts of the skin subjected to friction and pressure effects.^[1]

Corn is the hard thickening and hyperkeratosis of horny layers of the skin. It causes due to constant pressure and repeated minor trauma. Corn is small, tender, raised painless epidermal thickened patch, which are commonly seen in hands and feet. Injury, repeated irritation and undue pressure are the chief causes of Corn. Corns are usually 4mm to 10mm in diameter and have a hard center. These factors lead to cell irritation and the area will grow at faster rate leading to overgrowth, thickening of skin, and finally a callus is formed.^[2]

Shastrakarma is of eight types and Anushastrakarma includes Ksharakarma, Agnikarma and Raktamokshana. Amongst Anushastra karma, Agnikarma is unique because of its simple technique and optimum result. By this technique various diseases are treated successfully without recurrence. Kadara is a TwakRoga where Agnikarma is indicated.^[3]

To prevent recurrences due to remnants of the Corn tissue, Agnikarma is adopted. In this work an attempt is made to find out the clinical comparative study to evaluate the efficacy of Agnikarma with pippali and loha shalaka in the management of Kadara(Corn). Agnikarma by pippali⁴ and loha shalaka.^[5] is selected for the present study as logically that it helps in better prevention from recurrence by destroying the tissue due to its direct heat. There will be less pain as the nerve fibers destroyed by Agni karma.^[6] Chances of infection are also less as Agni karma itself being a sterile procedure in the present study, the patients suffering from Kadara lesion over the sole are selected.

AIMS AND OBJECTIVES

1. To compare the efficacy of Agnikarma with Pippali and Loha shalaka (made of iron).
2. To introduce the safe & effective modality of treatment in the management of Kadara.

MATERIALS AND MATHODS

Total 40 Patients were selected from OPD and IPD of S.V.Ayurvedic hospital, Tirupati, Andhra Pradesh.

REQUIRED METERIALS

Pippali, Loha Shalaka (made of iron), A stove, Gauze pieces Cotton pads, Kumari swarasa.

INCLUSIVE CRITERIA

- Patients of irrespective Gender.
- Patients with age ranging from 20 to 60 years.
- Patient with clinical features of kadara (corn).

EXCLUSIVE CRITERIA

- Patients having serious systematic diseases.
- Pregnant women, children, patients age below 20 years and above 60 years.
- Patients with infective conditions like HbsAG.

Data collection

40 patients of Kadara will be randomly categorized into 2 groups, each comprising of 20 patients.

- Group A: Agnikarma will be done on 20 patients of kadara with Pippali.
- Group B: Agnikarma will be done on 20 patients of kadara with Loha shalaka.

Intervention^[7]

Procedure of Agnikarma: It includes Purva karma, Pradhana karma, Paschat karma.

Purva Karma: Initially all the material required for the procedures were collected, if the patient has more than one corn, then the corn which is more painful will be selected first. The patient was made to assume a comfortable position over the minor OT table, as per the site of lesion. Then the site of lesion will be cleaned with aseptic solution.

Pradhana Karma: Then the area to be mopped, dried, draped with a sterile swab. Then the pippali will be held with artery forceps and heated to red hot and directly placed over the midpoint of the lesion of corn for a duration of 20 secs. Again, the pippali will be reheated and reapplied over the lesion till the Kadara is completely burnt. If necessary, a new pippali will be used.

Paschat Karma: Then the kumara swarasa will be anointed properly on the burnt area. The area is dressed with the help of dry sterile pad and gauze piece. The patient is advised to take rest in the supine position for half an hour and advised to go home and instructed to keep the area clean and dry.

The Procedure is done for group B, by replacing the Pippli with Loha shallaka and applied at

the mid lesion of corn for 15 seconds.

Progress and Follow Up

The progress of all the patients were noted for a period of 30 days at the interval of 2 to 3 days. The patients of both groups were followed up for every 2 or 3 days for 1 Months.

Assessmentcriteria

Subjectiveparameters

a) Pain

Objectiveparameters

a) Size

Gradation of Parameters

PAIN^[8]

Pain was recorded before and after treatment based on McGill Pain Index Score.

0 - No pain

1 - Mild pain

2 - Discomforting pain

3 - Distressing pain

4 - Horrible pain

5 - Excruciating pain

SIZE

0 - No Corn.

1 - Radius measures from the center up to the periphery of hard mass were less than 0.5 cm.

2 - Radius measures from the center up to the periphery of hard mass were in between .5-1cm.

3 - Radius measures from the center up to the periphery of hard mass were in b/w 1cm - 1.5cm.

4 - Radius measures from the center up to the periphery of hard mass were 1.5 cm or more.

ASSESSMENTCRITERIA

Criteria of assessment were based on improvement in subjective and objective parameters.

The results were categorized as

- Complete relief -- 100%
- Marked relief -- Above 70% improvement
- Moderate relief -- 50 to 70% improvement
- Mild relief -- 20 to 40% improvement
- No relief -- Below 20% improvement. -Overall assessment was done on the comparison of subjective and objective symptom score index between the groups, which were subjected for statistical analysis.

Table 1: Showing the subjective and objective parameters of group A.

Parameters	N	BT Mean	AT Mean	M.D	Relief %	S.D.		S.E def	't'	P value
						BT	AT			
Pain	20	2.30	1.00	1.30	64.1%	0.57	0.86	0.128	10.1775	<0.0001
Size	20	2.40	1.05	1.35	50.81%	0.68	0.76	0.150	9.0000	<0.0001
OVERALL RESULT	20	4.70	2.05	2.65	57.48%	1.03	1.23	0.182	14.5820	<0.0001

Pain; The statistical analysis revealed that the mean score before treatment was 2.30 and after treatment was 1.00. This difference is considered to be statistically significant with $p < 0.0001$.

Size of Corn: The statistical analysis revealed that the mean score before treatment was 2.40 and after treatment was 1.05. This difference is considered to be statistically significant with $p < 0.0001$. Overall result; The statistical analysis revealed that the mean score before treatment 4.70 and after treatment was 2.05. This difference is considered to be statistically significant with $p < 0.0001$.

Table 2: Showing the subjective and objective parameters of group B.

Parameters	N	BT Mean	AT Mean	M.D	Relief %	S.D		S.E def	't'	P value
						BT	AT			
Pain	20	1.90	0.30	1.60	83.33%	0.64	0.47	0.134	11.9607	<0.0001
Size of the corn	20	1.60	0.10	1.50	93.3%	0.68	0.31	0.115	13.0767	<0.0001
Overall results	20	3.50	0.40	3.10	88.31%	0.76	0.50	0.143	21.6375	<0.0001

Pain: The statistical analysis revealed that the mean before treatment was 1.90 and after treatment was 0.30. This difference is considered to be statistically significant with $p < 0.0001$.

Size of Corn: The statistical analysis revealed that the mean score before treatment was 1.60 and after treatment was 0.10. This difference is considered to be statistically significant with $p < 0.0001$. Overall result; The statistical analysis revealed that the mean score before treatment was 3.50 and after treatment was 0.40. This difference is considered to be statistically significant with $p < 0.0001$.

Table 3: Showing statistical analysis of comparison between parameters of groups.

Parameters	N	G.A Mean	G.B Mean	M.D	S.D		SE def	't'	P value
					G.A	G.B			
Pain	40	1.25	1.60	-0.35	0.55	0.60	0.182	1.9259	=0.0616
Size	40	1.40	1.50	-0.10	0.68	0.50	0.191	0.5247	=0.6028
Overall results	40	2.65	3.10	-0.45	0.81	0.64	0.231	1.9446	=0.0593

Pain: The statistical analysis revealed that the mean score of Group A was 1.25 and Group B was 1.60. This difference is considered to be not statistically significant with $p=0.0616$.

Size of Corn; The statistical analysis revealed that the mean score of Group A was 1.40 and Group B was 1.50. This difference is considered to be not statistically significant with $p=0.6028$.

Overall result; The statistical analysis revealed that the mean score of Group A was 2.65 and Group B was 3.10. This difference is considered to be not statistically significant with $p=0.0593$.

Table 4: Comparison of percentage relief of all 2 Groups.

Parameters	Group A % relief	Group B % relief
Pain	64.1%	83.3%
Size of corn	50.81%	93.3%

DISCUSSION

In ayurveda Agnikarma is superior among Chaturvidha Chikitsa. It can be better explained in Two theories.

Theory 1: Agnikarma → Ushnaguna → Pacifies vata and kapha → Reduces Sula and Stambha.

Theory 2: Agnikarma → Ushnaguna → Increases the Dhatwagni at the site → Mandhadatwagni get improved → Amapachana → Enhances nourishment and formation of new tissues → Vyadhisamana.

GROUP A**GROUP B**

CONCLUSION

To conclude, Foot Corn mainly affects the middle-aged men. It is not cured by internal medicines and patient's satisfaction is less. For desperate patients, Agnikarma with loha shalaka is a therapy to give better results. It is very effective in relieving the pain quickly. Foot Corn can be managed effectively by this modality. It is very simple, safe, cost effective and there are no complications. The signs and symptoms of Foot Corn is very much similar to Kadara in Ayurveda. Since superficial skin layers burnt easily and deep skin layers were challenging to treat, Pippali has a medium efficacy for pain alleviation and superficial skin layer cases of foot corn but a low efficacy can be seen for size reduction. Agnikarma with loha shalaka is found to be effective in Foot Corn. It helps in relieving pain much faster. As it gives quick effect it can be accepted as a good treatment modality. Bandaging the eyes and receiving counselling can help manage patients' fear. Chance of infection in therapeutic burn is very rare.

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