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A Clinical Study of *Agnikarma* and *Navak Guggulu* in The Management of *Medaja Granthi* W.S.R. To Lipoma- A Research Article

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ABSTRACT: -

A Lipoma is a benign neoplasm arising from yellow fat. Often it can be hyperplasia or combination of neoplasm and hyperplasia. Deep lipomas are commonly intramuscular. These are common in lower limbs (45 %), trunk (17%), shoulder and upper limb. These are more common in men. Lipomas are found in body of two types of variability, single and multiple. Single lipoma is common. It is usually superficial in subcutaneous area but can be deep also. According to *Ayurveda*, benign tumors are characterized as *Granthi Roga*. According to *Ayurveda* literature, they usually grow in proportion to body fat. These are comparatively large, fatty swellings with *Kapha* at the root of these tumors, they present as being soft. *Vata* contributes to the condition, causing the tumors to also have a movable nature. These *granthis* are of increased itching or tingling nature but less or no pain. *Medaja Granthi* exudates Ghee (clarified butter) like or white fatty fluid discharge. *Ayurveda* also implements broad line of management of *Granthi Roga* like medicinal and para-surgical approach. In *Ayurveda, Acharya sushruta* has described that *Agnikarma* is beneficial in *Medaja Granthi Roga*. There are many oral medications also described by many *Acharyas* for *Medaja Vyadhis.*

Keywords- Lipoma, *Dushya, Doshas, Dhatus, Granthi Roga, Medaja Granthi, Medaja Vyadhi, Agnikarma,* Para-surgical.

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INTRODUCTION

Granthi is a surgical condition that *Acharya Sushruta* described in extensively in the chapter *Granthiapachiarbudagalgandanidanam*.[1]

Although various *Acharyas* have varied definitions, the basic principle remains the same. Based on a combination of concepts found in *Ayurvedic* scriptures, Aggravated *dosha* vitiating *Mamsa*, *Rakta*, and *Meda* that becomes localized in any bodily region causes a local swelling in the *Mamsa dhatu* region, which is circular, knotty, and raised swelling, which are known as *Granthi* (Glandular inflammation).[2] Five types of *Granthi* viz *Vataja*, *Pittaja*, *Kaphaja*, *Medaja*, and *Siraja* have been described by *Acharya Sushrut*.

In view of *Acharya Sushruta*, *Medaja Grnathi* is *Meda* (Fat) predominant and the choice of treatment is total excision. Lipoma is one kind of benign tumor as per modern surgery that resembles with the *Granthi* in general and *Medaja Granthi* in particular as per *Ayurveda.*

Lipomas are the most prominent benign soft-tissue tumors, and they are normally solitary. About 5% to 8% of lipoma patients have several tumors, referred to as multiple lipoma.[3] It's a clump of fat cells that become overactive and bloated with fat, resulting in a noticeable swelling. When a person adds weight, they can stay the same size or grow larger. It can occur anywhere on the body, but the trunk, back shoulder, and extremities are the most prevalent sites.

Lipoma is an uncommon disease that affects one out of every 1000 individuals. The prevalence is around 0.1 percent, [4], [5], [6] although it is possibly underestimated because certain lesions cause little complications. This occurs more commonly between the ages of 30 and 70, with a peak occurrence between the ages of 40 and 60.

In *Ayurveda*, *Acharya Sushruta* has described that *Agnikarma* is beneficial in *Medaja Granthi Roga*.[7] There are many oral medications also described by many acharyas for *Medaja Vyadhis*. *Acharya sushruta* advised to avoid *Shalya Karma* in old aged people, *Bheeru* person (coward), *Garbhini* (pregnant women), *Balyavastha*. Now a day, if a person is fit for surgical procedure, he willingly not wants any surgery procedure done for his illness. *Agnikarma* is the non-pharmacological and result oriented therapy, recommended in *Ayurveda* for such type of diseases.

Hence, **to avoid the dependency on surgeries, and recurrence**, here I had evaluated the efficacy and advantage of *Agnikarma* and *Navak Guggulu* in the management of *Medaja Granthi* or Lipoma.

AIMS AND OBJECTIVES

This study had been designed with following aims and objectives.

1. To study etio-pathogenesis of *Medaja Granthi* (Lipoma).

2. To evaluate the efficacy of *Agnikarma* in *Medaja Granthi* (Lipoma).
3. To evaluate the efficacy of *Agnikarma* and *Navak Guggulu* in *Medaja Granthi* (Lipoma)

MATERIAL & METHODS

Sample Size –

A total of 30 *Medaja Granthi* (Lipoma) patients, ranging in age from 18 to 60 years old, were chosen at random for the study, independent of sex, religion, or other characteristics.

Source Of Data –The patients shall be selected from OPD and IPD of –

1. M.M.M. Govt. Ayurved College Campus Hospital, Ambamata, Udaipur
2. Moti Chohatta Govt. Ayurved Hospital, Hathi Pole, Udaipur.
3. Govt. Ayurved Hospital and Research center, Gulab bagh , Udaipur
4. Special camps are arranged from time to time.

Informed Consent –

The study will be explained clearly to the subjects and their signed written informed consent will be taken before starting the trial.

Selection Criteria –

Inclusion Criteria:

1. Agni karma *Yogya* as per classics.
2. Patients between age group 18-60 years of both sexes.
3. Patient willing to participate in clinical study.
4. Patient not taking any other medicines for *Medaja Granthi* (lipoma).
5. Site- Arms, legs, neck and shoulders.
6. Size- Approximately within 10 cm^2 (length×breadth = cm^2)
7. History of slow growth for at least 6 months.
8. Patients who are not suffering from any systemic disorders.

Exclusion Criteria:

1. Patients below the age of 18 years and above 60 years.
2. Patient having *Medaja Granthi* (Lipoma) with pain, inflammation and hyperpigmentation
3. *Agnikarma ayogya* as per classics.
4. Infected lipoma.
5. Calcified lipoma.
6. Ulcerated lipoma.
7. Malignant changes (liposarcoma).
8. Patient suffering for malabsorption disorders.

Lab Investigation –

1. Hb%
2. TLC
3. DLC
4. ESR
5. Random Blood Sugar
6. S. Total Cholesterol
7. S. Triglyceride
8. F.N.A.C Test (As per requirement)

Study Type – Interventional

Study Design -

- **Allocation –** Randomized
- **Endpoint Classification –** Safety / Efficacy Period
- **Primary Purpose –** Treatment

30 patients were selected randomly and divided into two Groups (Group A, and Group B) of 15 patients each.

- **Mode of Administration –** Local application of Agnikarma Therapy and oral administration of *Navak Guggulu*.

TIME FRAME –

Group	Group A	Group B
Procedure	*Agnikarma (Pratisarana)* 6 sittings at the interval of 5 days	*Agnikarma (Pratisarana)* 6 sittings at the interval of 5 days
Drugs	-	***Navak Guggulu***
Dose	-	1gm B.D with honey mixed lukewarm water
Application	Local application	Local application & Internal use

1. **Time frame –** 45 days
2. **Trial period –** 30 days
3. **Follow up –**15 days after the completion of treatment.

Material Used For The Procedure –

For *Agnikarma* Procedure–

1. *Lohadhatu Shalaka.*
2. *Tila Kalka*
3. *Madhuyashti Churna*
4. *Ghritkumari* (Aloe Vera pulp)
5. *Triphala Churna*
6. Cotton Cloth
7. Kidney Tray
8. Sterile gloves

For dressing –

1. *Madhuyashti Churna*
2. Sterile pad
3. Cotton bandage
4. Micropore

Treatment Procedure –

a) *Purva Karma* -

1. Before starting therapy, the patient had a small diet of *Pichchhila* and *Snigdha ahara*.
2. The draping was performed correctly.
3. The infected region was painted with *Triphala Kashaya (Prakshalana).*

b) *Pradhan Karma* –

1. Freshly made *Tila Kalka* was *applied* over the *Medaja Granthi* site and covered with 2 layers of cotton cloth.
2. *Loha Dhatu Shalaka* was heated upto 300˚-350˚C. Then slowly rubbing of heated iron rod was done on the *Medaja Granthi* till the patient could tolerate the heat.
3. We had used crushed *Kumari Patra* as a cooling agent during and after Procedure.
4. After reaching the tolerance of the patient, the procedure was stopped.

c) *Pashchat Karma* –

1. *Madhuyasti churna* was applied to the area where *Agnikarma* was performed for the purpose of *Ropana* of *Dagdha Vrana*.
2. A sterile pad was applied and stable bandaging was done.

ASSESSMENT CRITERIA –

All criteria were reported on after 5 days till six sittings. For statistical analysis reporting of Before Treatment and After Treatment were used. All assessment criteria were analyzed for statistical significance within the group, and in between the groups for their comparative efficacy.

A. Size - Size in cm^2 (Length*breadth) By Vernier Caliper

Grading	Size of lipoma in cm^2
0	<2 cm2
1	2.1-4 cm^2
2	4.1-6cm^2
3	6.1-8 cm^2
4	>8 cm^2

B. *Kandu*-

Grading	***Kandu***
0	No *Kandu*
1	Mild (on doing work)
2	Moderate (on rest)
3	Severe (continuously)

RESULTS

The study effect was observed in 30 participants who finished the research. All of the results were calculated using **Stat Graph Pad 3 trial** software. Intra-group findings were calculated using the nonparametric **Wilcoxon matched-pairs signed rank test**, while inter-group comparisons were calculated using the **Mann-Whitney test.**

(A) Variable Wise Analysis In Group – A
(Wilcoxon matched-pairs signed rank test)

Effect of treatment on all variables of Group-A (Within the Group)

Variables	Mean		Diff. In Mean	% Relief	S.D.	S.E.	W	p value	Re.
	B.T.	A.T.							
Size (N=15)	3.06	1.6	1.46	47.82	0.5164	0.1333	120	<0.0001	E.S.
***Kandu* (N=4)**	0.26	0.06	0.20	75	0.4140	0.1069	6	>0.05	N.S.

(BT- Before treatment, AT- After treatment, Diff. – Difference, S.D.- Standard deviation, S.E. – Standard Error, W value- Wilcoxon rank sum value, p value-probability value, Re. – Remark, E.S.- Extremely Significant, N.S.- Not significant, N- No. of pairs)

(B) Variable Wise Analysis In Group – B
(Wilcoxon matched-pairs signed rank test)

Effect of treatment on all variables of Group-B (Within the Group)

Variables	Mean		Diff. In Mean	% Relief	S.D.	S.E.	W	p value	Re.
	B.T.	A.T.							
Size (N=15)	2.93	1.40	1.53	52.27	0.5164	0.1333	120	<0.0001	E.S.
***Kandu* (N=3)**	0.20	0.07	0.13	66.66	0.3519	0.090	3	>0.05	N.S.

(C). Intergroup Comparision: (Between The Group)

Intergroup Comparison of variablesin group A and Group B by Mann-Whitney 'U' test

Variables	Mean		Diff. In Mean	% Relief	U	p value	Re.
	Group A	Group B					
Size	1.46	1.53	-0.06	-4.54	105	0.7376	N.S.
Kandu	0.20	0.13	0.07	35	105	0.6531	N.S.

U - Mann-Whitney test value

(D). Percentage Difference After Treatment-

Percentage difference of Size and *Kandu* in Group-A and Group-B

Parameter	Group A%	Group B%
Size	47.82	52.27
Kandu	75.00	66.66
Average % of Relief	50	53.19

Overall Assessment Of Treatment: Overall assessment of effect of the treatment on patients of *Medaja Granthi* (Lipoma) of both the groups

Result	Group A		Group B		Total	
	No. of patients	%	No. of patients	%	No. of patients	%
Cured: 100% improvement	0	**0**	0	**0**	0	**0**
Marked Improvement: >76-99%	0	**0**	0	**0**	0	**0**
Moderate Improvement: >51-75%	6	**40**	7	**46.66**	13	**43.33**
Mild improvement: >26-50%	9	**60**	8	**53.33**	17	**56.66**
Unchanged: < 25%	0	**0**	0	**0**	0	**0**
Total	15	**100**	15	**100**	30	**100**

In Group-A:
In this group 6 (40%) patients achieved moderate improvement and 9(60%) patient got mild improvement.

In Group B:
In this group 7(46.66%) patient achieved moderate improvement, while rest 8 (53.33%) patients got mild improvement.

OBSERVATION AND RESULTS-

The effect of therapy on the disease's Size and *kandu* was analyzed. These were given a scoring pattern before and after the treatment, and the significance was evaluated statistically. The following is the effect of therapy on both groups –

Effect on Size: In *Agnikarma* Group, i.e. Group A, the mean Score of Size before treatment was 3.06,which reduced to 1.6 after the treatment with 47.82% relief, which was statistically extremely significant. In *Agnikarma* with *Navak Guggulu* Group, i.e. Group B, the mean Score of size before treatment was 2.93,which reduced to 1.40 after the treatment with 52.27% relief, which was also statistically extremely significant ($p<0.0001$).

In both the groups, result was extremely significant. But on the percentage basis, Group B has given better result.

Effect on *Kandu*: In *Agnikarma* Group, i.e. Group A, initially the mean Score of*Kandu* before treatment was 0.26, which reduced to 0.06after the treatment with 75% relief, which was statistically not significant. In *Agnikarma* with *Navak Guggulu* Group, i.e. Group B, the

mean Score of*Kandu* before treatment was 0.20 before treatment which reduced to 0.06 after the treatment with 66.66% relief, which was also statistically not significant (p>0.05).

In both group A and B, almost similar results were found as both groups given not significant results but on the percentage basis, Group A has shown better result in the presenting symptom i.e. *Kandu.*

Overall Effect of Treatment

***Agnikarma* Group (Group A):** In this group, out of 15 patients after the treatment completion, each patient had shown improvement as 09 patients i.e. 60% got mild improvement, where as rest 6 patients i.e. 60% achieved moderate improvement.

***Agnikarma* with *Navak Guggulu* Group (Group B):** In this group, out of 15 patients after the treatment completion, 7 patients i.e. 46.66% achieved moderate improvement, while rest 8 patients' i.e.53.33% got mild improvement.

Study showed that group B had given slightly more effect on reduction of size and *Kandu* that may be due to some additive effect of *Navak Guggulu* with *Agnikarma* therapy

DISCUSSION

1. **Discussion on conceptual study-**

Medaja Granthi and lipoma have certain similarities, according to a review of different *Ayurvedic* literature and modern science of medicine, including papers and journals. There are also some differences. There is itching, discomfort, and bursts in the *Medaja Granthi*, according to ayurvedic scriptures, but there is no itching or bursting in the lipoma. The discrepancies between the two might be due to the fact that *Medaja Granthi* is a broad word that does not specifically refer to lipoma. There are additional swellings that can be linked to this, such as a sebaceous cyst, which can cause itching, pain (when inflamed), and occasionally rupture. Lipomas are the most frequent benign fat cell tumours in adults. The prevalence is 1 individual per 1000. They're slowly developing and only need to be removed. These are frequently removed for cosmetic reasons. A lipoma can appear at any age, although it is most commonly observed in people between the ages of 40 and 60. Complete excision is usually the initial treatment option for lipoma. Liposuction, steroid injection, laser lipolysis, ultrasound-assisted lipolysis, and more therapeutic options are available.

2. **Discussion on *Agnikarma* therapy-**

Due to its antagonistic characteristics, *Agnikarma* is *Vatakapha Shamaka*. Agni's *Ushna* (hot), *Tikshna* (sharp), and *Sukshma* (subtle) characteristics clear blockages in channels (*Srotorodha*), while its *Ashukari* (rapid action) property provides immediate relief. As When thermal energy is transmitted from an instrument to a tissue, the internal energy of the tissue increases, and the heat energy is transferred to the cells, according to thermodynamics applied to biological systems. The body's thermostatic centre is instantly engaged to spread this localized temperature increase throughout the body. As a result, blood flow rises and vasodilatation occurs.

3. **Discussion on drug-**

Probable mechanism on *Dosha*:

i. *Navak Guggulu* possesses *Katu-Kashaya Rasa, Laghu-Ruksha-Tikshna Guna, Ushna Virya,* and *Kapha Vata Shamaka* characteristics, all of which have an antidote to *Kapha Dosha* and *Meda Dhatu.*

ii. In *Meda*ja *Granthi*, *Kapha* is the main vitiated *Dosha*, and *Katu Rasa* [8] is dominant in *Navak Guggulu*, which has *Ruksha, Laghu, Ushna, and Vishada* properties, which are opposite to *Snigdha, Guru, Sheeta, and Picchila Guna* of *Kapha Dosha*, while *Kashaya Rasa* [9] is impactful on *Kapha Dosha* through its *Vishada* and *Ruksha Guna* and impactful on *Medaja Granthi* by its *Shoshana Karma.*

iii. In *Kapha Dosha,* the drug is prominent in *Ushna Virya* and *Kapha Vata Doshaghnata,* both of which have opposing effects.

Probable mechanism on *Dushya*:

i. *Meda* is a key *Dushya* in *Meda*ja *Granthi*. *Katu Rasa* owns the *Meda*-Sneha-*Kleda Shoshana Karma. Kashaya Rasa* contains *Vishada* and *Ruksha Guna*. *Navak Guggulu* contains *Laghu, Ruksha,* and *Vishada Guna*.

ii. *Guggulu* [10] is the primary component of *Navak Guggulu,* which has *Lekhana* and *Medonashaka* action and therefore is highly powerful in *Dushya-Meda* Dhatu dominating *Meda*ja *Granthi*. It is an opponent to *Guru, Snigdha,* and *Picchila Guna* of *Medo Dhatu.*

Probable mechanism on *Agni:*

i. All of the components of *Navak Guggulu* include *Deepana Karma* with *Pachana Karma* accounting for 70% and *Yakriduttejaka Karma* accounting for 50%. The majority of them, about 70%, have *Ushna Virya* properties. As a result, *Medodhatvagnimandhya* is improving.

ii. *Sunthi* is the greatest *Amapachaka* in this *Guggulu,* and it also improves the Medodhatvagni by eliminating the *Aam*.

Probable mechanism on *Srotasa*:

Sanga type *Srotodushti* is formed in *Meda*ja *Granthi* by vitiating *Kapha* and *Meda*. *Srotoshodhana Karma* is a property of *Sunthi, Maricha,* and *Haritaki* that helps to remove this *Sanga* type of *Srotodushti* and regulates the function of *Medovahasrotasa.*

CONCLUSION

The most frequent benign soft tissue tumour of the subcutaneous region is lipomas. Lipomas affect around one out of every 1000 people. Lipoma can be correlated to *Medaja Granthi* based on clinical characteristics. *Granthi* encompasses a wide range of surgical disorders such as cysts, lipomas, and benign tumours that are characterised by swelling. All cysts may be classified as *Granthi* based on *lakshana* and *chikitsa*, but all *Granthis* cannot be classified as Cysts. Lipoma's exact cause is unclear. *Agnikarma* therapy is a result-oriented treatment for localized *Vataja* and *Kaphaja* diseases. It is a low-cost hospital outpatient treatment option. Group-B had shown extremely significant results over Group-A. In Group A, resulted in overall 50% relief in size reduction and *kandu* of *Medaja Granthi* (Lipoma) treated with *Agnikarma*. In Group B, resulted in a 53.19% relief in size reduction and *kandu* of *Medaja Granthi* (Lipoma) treated with botj *Agnikarma* and *Navaka Guggulu.* Maximum relief in Group-B can be accredited to the synergistic effect of *Agnikarma* and *Navaka Guggulu.* Patients in both Groups not reported any types of side effects from any intervention.

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