

STUDY THE EFFECT OF NAVAK GUGGULU IN THE MANAGEMENT OF
AAMAVATA

¹Medha Joshi, ²Ashish Avinash Kale, ³Manjusha Pramod Zanzad, ⁴Sumit Bhagwan Chitte.

¹Associate Professor Carc, Nigdi, Pune – 44

³PG Scholar (Kayachikitsa) Carc, Nigdi, Pune – 44

⁴PG Scholar (Swasthavrutta) Carc, Nigdi, Pune – 44

ABSTRACT :

As the name itself indicates *Aama* and *Vata* are the main pathogenic factors in the disease *Aamavata*. The aetiopathogenesis of *Aamavata* is based on the disturbances of *Agni* and *Vata* dominant *Tridosha*. *Sandhi shoola*, *Sandhi shotha*, *Sandhi Stabdhatta*, *Ushna sparsha* are the cardinal features of *Aamavata*. Single blind randomized clinical trial was conducted. 30 clinically diagnosed patients of *Aamavata* with an object of clinical evaluation of the efficacy of *Navak Guggulu* in the management of *Aamavata* were studied. The trial drug was given in the dose of 500 mg twice a day after lunch and dinner with the *anupana* of Lukewarm water for two months with regular follow up after every fifteen days. The trial drug was very effective as *agnivardhaka* & *aamapachak*. It was very effective in reducing pain, stiffness & swelling. No untoward effect was seen in the patients during the treatment.

Key words: *Aamavata*, *Navak Guggulu*, E.S.R., R.A. Factor, Hmg, Urine Routine

INTRODUCTION: With march of time, most of the dietary habits, social structures, life style and environment have been changed. Occurrence of *Aamavata* on large scale is one of the outcomes of this modification¹. As a distinct clinical entity *Aamavata* was only described in the *Madhav Nidan*. It is a disease of *Madhyama Rogamargas* as it affects *Sandhis* & *Hridaya Marma*. The term is derived from the words *Aama* & *Vata*. The *Aama* when combines with *Vata dosha* & occupies in *shleshma sthana* results in painful disease *Aamavata*. It is characterized by various features like *sandhi shoola* in the nature of Toda, swelling, inability of joint movements.² Though, *Aama* & *Vata* are the predominant pathogenic factors but the disease represents *Tridoshic* vitiation.³ Some authorities compare *Aamavata* with Rheumatoid Arthritis. However some authorities compare it with *Vatarakta* or *Sandhigata Vata*, but going through its

signs, symptoms, nature of involvement of joint, we think it more acceptable to compare R.A. with *Aamavata*. R.A. is a chronic, multisystem disease of unknown etiology. Although there are a variety of systemic manifestations, the characteristic feature of R.A. is persistent inflammatory synovitis, usually involving peripheral joints in symmetric distribution. The potential of the synovial inflammation to cause cartilage destruction is the hallmark of the disease (Harrisons – Principles of Internal Medicine).⁴

In this study, a compound drug is used for clinical trial that is described in *Nakaradi guggulu prakarnam* of Bharat Bhaishajya Ratnakar.⁵ *Navak Guggulu* is mentioned as nectar in the management of *Aamavata*, which was prepared by *Vati Kalpana vidhi*.⁶

AIM: To study the clinical efficacy of *Navak Guggulu* in the management of *Aamavata*.

OBJECTIVES:

- To observe the effect of *Navak Guggulu* on Lakshanas of *Aamavata*.
- To study & compile the literature on *Aamavata* & *Navak Guggulu*.
- To illustrate the mode of action of drug.
- To observe the adverse effect of *Navak Guggulu* if any.

MATERIALS & METHODS: *Navak Guggulu* consists of 10 dravyas along with *guggulu*. They are *Shunthi, Maricha, Pippali, Chitraka, Haritaki, Bibhitaki, Amalaki, Nagar motha, Vidanga, Guggulu*. In this maximum ingredients have Rasa – *Katu, Virya – Laghu, Ruksha, Ushna, Vipaka – Katu, Vata – Kapha shamaka, Dipana & Pachana* properties that is effective to break the samprapti of *Aamavata*.

LITERATURE REVIEW:

The references of *Aamavata* from *Brihatrayi, Laghutrayi & Vedas* are studied & compiled.

DRUG & ROUTE OF ADMINISTRATION:

Drug	<i>Navak Guggulu</i>
Route of administration	Oral
Dose	500 mg BD
Bheshaj kala	Vyana udana (after lunch & after dinner)
Follow up	After every 15 days
Anupan	Luke warm water

SUBJECTIVE CRITERIA:

- Swelling accompanied by pain over joints of upper & lower limbs
- Scorpion bite like pain
- Shifting pain

CLINICAL STUDY: This was single blind, Randomized clinical study. 30 patients of *Aamavata* having textual symptomatology from the text of *Madhava Nidana* were randomly selected irrespective of age, gender, religion, occupation, *prakriti*. The study was conducted for 2 months with follow up after every 15 days from O.P.D of College of Ayurveda & Research Centre, Pradhikaran, Nigdi, Pune. Pathyapthya was advised to them.

STUDY DESIGN:

Single blind, Randomized clinical study was done using *Navak Guggulu* as trial drug.

PLACE OF STUDY:

All the patients having signs & symptoms of *Aamavata* were selected & enrolled in the study from the Kayachikitsa O.P.D. & I.P.D of College of Ayurveda & Research Centre, Pradhikaran, Nigdi, Pune. Hospital.

OBJECTIVE CRITERIA:

Haemogram	E.S.R.	R.A. Factor	Urine Routine
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INCLUSION CRITERIA: Patients Having textual signs & symptoms of *Aamavata*.

- Patients with symptoms of diseases like *Vatarakta, Sandhigatavata*.
- Patients with *Aamavata upadravas* like *hrudgraha, bhrama, chardi*.

EXCLUSION CRITERIA:

ASSESSMENT CRITERIA:

Joint score (tenderness or painful passive movements)

3	If more than 5 joints are involved
2	If 3 – 5 joints are involved
1	If at least 2 joints are involved
0	If less than 2 joints are involved

Duration of morning stiffness

3	Above 60 minutes
2	For 30 – 59 minutes
1	For 0 – 29 minutes
0	No stiffness

Severity of pain (by Visual Analogue Scale)

3	If severe (No. 10 - More difficulty in moving the joints, pain is severe disturbing the sleep & requires strong analgesics)
2	If moderate (No. 5 – 9 Difficulty in movement of joint, appears frequently & requires some <i>upashaya</i> measures for relief)
1	If mild (No. 1 – 4 Mild pain of bearable nature, comes occasionally)
0	If no pain

Tenderness (Composite Tenderness Score)

3	If severe (Pain, wincing & withdrawal)
2	If moderate (Wincing on face)
1	If mild (subjective experience of pain)
0	If no pain

Swelling (joint circumference measurement)

3	Severely present
2	Markedly present
1	Slightly present
0	Absent

Local temperature of affected joints (by comparing with the normal part of the body)

3	If severe
2	If moderate
1	If mild
0	If normal

Grip strength (measured by recording the pressure that patient can exert by squeezing a partially inflated bag – at starting of 20 mm of Hg of a standard sphygmo manometer)

3	If poor (below 38 mm of Hg)
2	If moderate (between 40 – 140 mm of Hg)
1	If mild (between 142 – 280 mm of Hg)
0	If normal (above 282 mm of Hg)

Functional score (routine personal activities/work of the patient)

3	Unable to do
2	With the help of other person or device
1	Able to do with difficulty
0	Able to do without any difficulty

OBSERVATION: In this clinical study 30 patients were studied. Observations noted are summarized as follows:

Age: Majority of patients i.e., 46.7 % are reported in age group 40 – years; while in < 40 years age group 33.3 % patients & 20 % of patients are above 50 years. This shows that in the present study prevalence of the disease is high in the middle age group.

Gender: Majority of patients i.e., 73.3 % were female & 26.7 % were male. This data is also supportive to the prevalence ratio of the disease i.e., 2:1.

Occupation: Majority of patients were housewives 20 i.e., 66.7 %; while servicemen & workers were 4 each i.e., 13.3 % & businessmen were 6.7 %. *Viruddhahara*, heavy work, afternoon nap may be the reason for the prevalence of *aamavata* in housewives & irregular food pattern due to work can be cause in the shift duty workers & servicemen.

Economical Status: 40 % of patients were of lower economical status, 13.3 % of patients were of upper economical status while majorities 14 i.e., 46.7 % were of poor status. But in Ayurvedic literature regarding *Aamavata*, there is no direct reference that patients from poor economic class are found more.

Diet: 46.7 % patients in the study were vegetarians while 53.3 % patients were accustomed to mixed diet. A considerable number of patients about 66.7 % were found to be consuming *Viruddhahara*. Hence, it can be inferred that

viruddhahara plays a major role in the aetiopathogenesis of *Aamavata*.

Prakriti: In this study majority of the patients were of *Kapha Pradhan Vata Anushang Prakriti* i.e., 46.7 % followed by *Vata Pradhan Pitta Anushang Prakriti* patients 33.3 %; then *Vata Pradhan Kapha Anushang prakriti*. Patients were 13.3 % & *Pitta Pradhan Vata Anushang Prakriti* patients were 6.7 %. But to conclude the correlation between *prakriti* & incidence of *Aamavata* needs extensive study on this particular line. But as stated earlier *Navak Guggulu* is very well indicated in *Kapha* predominant pathologies so it worked in *Aamavata* pathogenesis.

Agni: Majority of patients i.e., 60 % were *Mandagni*; while 20 % were of *Vishmagni*; 13.3 % were of *Tikshnagni* & 6.7 % were of *Samagni*. This denotes that *mandagni* is prime cause of *Aamavata*.

Koshtha: Most of the patients i.e., 53.33 % were of *Krura Koshtha* followed by 33.3 % of *Madhyama Koshtha* & 13.3 % were of *Mrudu Koshtha*. Thus, majority patients of *Krura koshtha* were found.

Hetu: The most prevalent *hetu* was *Viruddha aahara* i.e., 66.7% followed by *Mandagni* 26.7% & *Virudha Cheshta* 6.7 %.

Religion: 80 % patients i.e., 24 were Hindus & 13.3 % were Muslims. & 6.7 % were from other religion. Although no specific inference can be derived as these findings only reflect the predominance of religion in this particular region.

Vyadhiutpatti Kala: 53.3 % *vyadhi* were produced in *Visarga kala* as compared to

Aadana i.e., 46.7 %. Considerable number of patient's disease was produced in *Visarga kala*. Hence, it can be inferred that *Vyadhiutpatti Kala* plays a vital role in the aetiopathogenesis of *Aamavata*.

Change in Joint Score: *Navak Guggulu* has shown statistically highly significant improvement in Joint Score. After 60 days, 19 % i.e., marked improvement was seen.

Change In Morning Stiffness: After 60 days, 49 % highly significant improvement was seen. Thus, the efficacy of *Navak Guggulu* in morning stiffness is evident.

Vitiated *Vata* propels *Aama* to *sandhis* replacing *shleshaka kapha*. Hence, normal function of *shleshaka kapha* is hampered, leading to morning stiffness. As *stambha* is *sheeta gunatmaka*, *ushna virya* & *katu – tikta* rasa of *Navak Guggulu* may have done *vata shaman* & *Aamapachana*. And thus, *Navak Guggulu* may have relieved morning stiffness.

Change in Severity Of Pain : Pain over the joint is one of the most characteristics symptoms of *Aamavata*. Acharya Madhava expressed the severity of pain by describing it as 'Vrishchika Danshavata' (Scorpion Bite). 'Ama', the chief culprit in *Aamavata* is carried to all sites of *shleshma* in the body by vitiated *Vata*. This *Aama* also causes *avarodha* in the *srotasas*, thereby hampering the *gati* of *Vata*. As the pathogenesis progresses this combination of *Aama* & *Vata* get lodged in the joints & cause severe pain & swelling. *Navak Guggulu* showed on an average 54 % relief in pain which is statistically highly significant ($P < 0.001$). This proves the significant effect of *Navak Guggulu* in Pain.

Probably by means of *Ushna guna*, *Katu – Tikta* rasa properties, *Navak Guggulu*

Relief of Symptoms:

reaches up to the subtle levels & brings about both *amapachana* as well as removal of obstruction resulting in to *vatanulomana*. Thus, pain in *Aamavata* might have been relieved.

Change in Tenderness: After 60 days, 46.5 % highly significant improvement was seen. Tenderness is mainly due to inflammation of joint capsule. *Navak Guggulu* might have subsided inflammation due to *laghu guna*, *katu rasa*, *ushna veerya* & thus tenderness might have reduced.

Change in Swelling: After 60 days, 47.13 % highly significant improvement was seen. This proves the significant effect of *Navak Guggulu* on swelling.

When *Aama* obstructs the *sukshma srotasas* of body, it causes accumulation of *malabhavas* i.e., *kleda* which leads to symptom *sandhi shotha*. Due to *Tikta – Katu* rasa, *Ushna veerya* of *Navak Guggulu*, it may result in *Aamapachana* & *kleda shoshana*, & due to *anulomana* & *vibandhahara* properties, removal of obstruction by *Aama* & accumulated *malabhavas* may be affected.

Change in Local Temperature: After 60 days, 39 % highly significant improvement was seen.

Change in Grip Strength: After 60 days, 26.08 % significant improvement was seen.

Change in Functional Score: After 60 days, 52 % highly significant improvement was seen. This improvement in functional capacity might have been due to enhancement of nourishment of all *dhatu*s by *rasa dhatu*. Thus, *Navak Guggulu* removes the obstruction in the *srotasas*.

Relief of symptoms	No. of patients
Good result (no complaints)	0
Moderate result (2 – step down)	10
Mild result (1 – step down)	14
No result (no change in complaints)	6

As far as relief of symptoms were concerned, no patients got good result (i.e., no complaints), 10 patients got moderate result (i.e., 2 – step down). 14 patients got mild result (i.e., 1 – step down). And 6 patients got no result i.e., no change in complaints.

When the patients were assessed for the other associated symptoms, it was observed that patients showed relief from *Agnidaurbalya, Aruchi, Alasya, Angamarda, Anaha, Trishna, Jvara, Apaka, Vidvibaddhata, angagaurava, anganamshoonata.*

Agnimandya, Aama production, *dhatu kshaya*, vitiation of *vata* due to *Aama*, are the major events taking place in the pathogenesis of *Aamavat*. Thus, eliciting the above symptoms.

Navak Guggulu might have relieved the obstruction in *rasavaha & svedavaha srotasas* by its *Tikshna guna, Katu rasa, Ushna veerya & Katu vipaka* there by relieving *angamarda & jvara*.

Navak Guggulu, being *agnivardhaka* might have improved digestion thus overcoming *agnidaurbalya & apaka*. The

vata dosha obstructed by *Aama* in *koshtha* gets vitiated causing *anaha, aruchi*. *Navak Guggulu* by *Aamapachana* might have relieved the obstruction of *vata* by *Aama*, regularizing the normal motion of *apana vayu*. Thus, *anaha & aruchi* might have got relieved. *Vidvibaddhata* in *Aamavata* is due to obstruction of normal motion of *apana vayu & improper sara-kitta vibhajana*. *Navak Guggulu* might have improvised *sara – kitta vibhajan & normalized the motion of apana vayu* thereby relieving *vidvibaddhata*.

Dhatvagnimandya in *Aamavata* leads to excess production of *kleda* & hence leads to symptoms *bahumutrata*. *Navak Guggulu* might have improved *dhatvagnis* & minimized *kleda* formation. Thus, *bahumutrata* might have relieved. *Navak Guggulu* might have lead to production of *samyak rasa dhatu* by *agnivardhana & pachana*. Hence, might have relieved *alasya & utsahahani*. *Navak Guggulu* is very good at pain relieving. By relieving pain it may have normalized the sleep pattern.

Change in Total Score

TOTAL SCORE	N	Mean	Standard deviation	Wilcoxon signed ranks test (Z)	P	In %
Day – 0	30	18.47	3.839	4.787	<0.001 HS	41.14 %
Day - 60	30	10.87	3.104			

Total score	Mean	In %
Day – 0	18.47	
Day – 15	15.00	

Day – 30	12.47	41.14
Day – 45	11.40	
Day – 60	10.87	

This table shows that *Navak Guggulu* has shown statistically highly significant improvement in Total Score. After 60 days, 41.14 % highly significant improvement was seen.

Change in Overall Score:

Overall score	Day – 0	Day – 60
Mild (1 – 8)	0	2
Moderate (9 – 16)	10	24
Severe (17 – 24)	20	4

Before starting the treatment 0 patients were from mild score, they came under grade I, 10 patients from moderate score i.e., grade II & 20 patients were from severe score i.e., they were in grade III. After 60 days of treatment 2 patients were from mild score, they came under grade I, 24 patients from moderate score i.e., grade II & 4 patients were from severe score i.e., they were in grade III.

Change in Laboratory Investigations:

Out of 30 patients ESR count has reduced to 33% (i.e., 10 out of 30 patients) whereas 26 % patients have shown markedly reduction (i.e., 8 out of 30 patients) & 40 % patients have shown minimum reduction (i.e., 12 out of 30 patients). ESR is an acute phase reactant. Thereby rose in acute conditions. *Navak Guggulu* might have subsided the inflammation of joints thereby resulting in ESR reduction. Whereas RA factor is being positive throughout the study i.e., before treatment & after treatment. No specific changes have been seen in Haemogram & urine routine before & after the treatment.

DISCUSSION: It is a disease of *Madhyama Rogamargas* as it affects *Sandhis & Hridaya Marma*. The term is derived from the words *Aama & Vata*. The *Aama* when combines with *Vata dosha* & occupies in *shleshma sthana* results painful disease *Aamavata*. It is

characterized by various features like *sandhi shoola* in the nature of Toda, swelling, inability of joint movements etc. Though, *Aama & Vata* are the predominant pathogenic factors but the disease represents *Tridoshic* vitiation. In this study, a compound drug was used for clinical trial that is described in *Nakaradi guggulu prakarnam* of *Bharat Bhaishajya Ratnakar*. *Navak Guggulu* is mentioned as nectar in the management of *Aamavata*, which was prepared by *Vati Kalpana vidhi*. In this maximum ingredients have *Rasa – Katu, Virya – Laghu, Ruksha, Ushna, Vipaka – Katu, Vata – Kapha shamaka, Dipana & Pachana* properties that is effective to break the *samprapti*.

Statistical Analysis: Wilcoxon signed rank test was used. Paired 't' test was carried out at $p < 0.05$, $p < 0.01$, $p < 0.001$.

CONCLUSION:

As mentioned earlier this therapy provided highly relief in Pain (54 %), Functional activity (52 %), Stiffness (49 %), Swelling of joints (47.13 %), Tenderness (46.5 %), Local temperature (39%), Joint score (19 %) & improvement in grip strength (26.08 %) i.e., overall total improvement is 41.14 %. Patients also showed relief in general associated symptoms like *angamarda, trishna, jvara, apaka, annanabhilasha, bahumutrata, kukshishoola, nidraviparyaya, vidvibaddhata & anaha*.

Hence, we can conclude on the present study that,

- The trial drug in this study was very effective in *Agnivardhana* & *Aamapachana*. It was a very good combination of *Shoolahara*, *Shothaghna* & *Aamapachaka dravyas*.
- *Navak Guggulu* is very effective in reducing pain & stiffness. It is also effective in reducing swelling.
- No untoward effect was seen in the patients during the treatment.

On the basis of observations of the studies, administration of *Navak Guggulu* may be recommended for the management of *Aamavata*.

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Corresponding Author: Dr. Sumit Bhagwan Chitte, PG Scholar (Swasthavrutta) Carc, Nigdi, Pune – 44
Email: dr.sumu09@gmail.com

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