



CLINICAL STUDY TO EVALUATE THE EFFICACY OF "HINGWADI CHURNA IN THE MANAGEMENT OF AMAVATA

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ABSTRACT

Diseases are the health and life destroying agents. *Arogya* is the root for attaining *Purushartha Chatushtya* i.e. *Dharma, Artha, Kama* and *Moksha*. For the alleviation of disease and to raise the standard of health of living beings, various Rishi gathered at the lap of Himalaya and based on the proceeding in that gathering enhanced the medical knowledge in the form of *Ayurveda*; thus helping to alleviate the sufferings and misery of living beings. *Amavata* can be correlated with RA in modern medical science. Rheumatoid arthritis (RA) is a systemic inflammatory chronic disease. The etiology or cause of RA is unknown, many cases are believed to result from an interaction between Genetic factor and Environmental exposures. Whereas according to *Ayurveda* the cause is well explained. The study was conducted over 10 patients of OPD of *Arogyashala* N.I.A. Jaipur. All patients were diagnosed as *Amavata* on the basis of some subjective and objective parameters. *Hingwadi Churna* was taken for the treatment of *Amavata* in a 3gm of dose, twice in a day for 45 days with follow up of 15 days. Patients treated with *Hingwadi Churna*, very significant relief was found in symptoms like *Angamarda* (Body ache), *Gauravam* (Heaviness in body) & *Apaka* (Indigestion) while significant relief was found in symptoms like *Aruchi* (Anorexia) & *Alasya* (Laziness). Non-significant result was found in all objective parameters except ESR and CRP which shows very significant and significant result respectively. After treatment reports showed a marked improvement in the condition of the patients.

KEYWORDS : Amavata, Hingwadi Churna.

INTRODUCTION:

We go by the definition of the health by World health organization which states: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". *Amavata* is one such disease which may affect all the three i.e. physical, mental and also social well-being of an individual.

The altered life style, varieties of groceries and sophisticated living has given their contribution in occurrence of new diseases and those diseases which were not common, now developed as a fiery difficulty. *Amavata* is one of such disease.

Ama and *Vata* are the two leading factors in the occurrence of the disease. *Agni* is the one, which maintains the health. When a *Mandagni* person indulges in flawed food habits and activities result is *Ama* production. *Ama* influenced by the vitiated *Vata*, moves all over the body with more liking towards the *Sleshma Sthana* like *Sandhis*. Convoying with body ache, loss of taste, feeling of heaviness, laziness, fever and swelling of joints etc. the disease manifests. If not treated in right time, ends up with deformities.

Rheumatoid Arthritis, a disease seen with similar symptoms to *Amavata*, is the one of the burning problem of this era. A disease in future makes man to depend on others by afflicting the joints, altering the appearance, affecting the other systems makes the life miserable. The disease is mainly due to the formation of '*AMA*'. The treatment of this disease with modern medicine is mainly symptomatic and adverse effects of the modern medicine are also intolerable. So *Ayurveda* medicine might be effective to deal with this problem.

So I have tried to make suitable, appropriate and chief treatment of *Amavata*. I have selected the "*Hingwadi Churna* for better treatment.

AIMS AND OBJECTIVE

1. To elaborate, evaluate and discussions of *Amavata* in various classical *Ayurvedic* literature.
2. To evaluate and discuss the clinical effect of '*Hingwadi Churna*' in *Amavata*.

MATERIALS & METHODS:

Materials:

1. **Literary Material:** *Ayurvedic* text books, previous research paper & thesis, different medical books & journals, internet, advice from the learned experts.
2. **Clinical Material:**
 - **Sample Size:** 10 patients of *Amavata*.
 - **Source of Data:** The study was conducted over 10 patients of OPD of *Arogyashala* N.I.A. Jaipur.
 - **Drugs Used in The Study:** All the drugs were procured from National Institute of *Ayurveda* Pharmacy as needed for the preparation of '*Hingwadi Churna*'.

Methods: Research Design:

- The present study is:
- Open label
 - Clinical study
 - Interventional type

INCLUSION CRITERIA:-

1. Diagnosed & confirmed cases of *Amavata* as per classical symptoms and other criteria.
2. Patient of either male or female between the age group of 16 to 70 years.
3. Patient who are willing to take medicine.
4. Patient willing to sign the consent form.

Exclusion criteria:-

1. Patient of age below 16 years and above 70 years.
2. Patient of *Amavata* with severe crippling deformities.
3. Patient suffering from any major systemic diseases like Diabetes mellitus, TB etc.
4. Patient with other joint disorders like Osteoarthritis, Gout,

psoriatic arthritis etc.

Laboratory Investigations:

For the purpose of diagnosis of the disease as per the contemporary science, its severity, clinical improvement and to assess the possible side effects, certain routine and specific investigations were performed in every patient viz. All these were not considered in the diagnosis of *Amavata*.

- 1.) CBC- Investigations
- 2.) ESR
- 2.) R.A. Factor:
- 3.) CRP- C Reactive Protein

CRITERIA FOR THE ASSESSMENT OF AMAVATA:

• **Angamarda (Body ache)**

1.) No generalized body ache	0
2.) Mild body aches and manageable	1
3.) Moderate body ache which is difficult to manage with self	2
4.) Severe body ache which makes patient difficult to walk	3

• **Aruchi (Anorexia)**

1.) No <i>Aruchi</i>	0
2.) Mild <i>Aruchi</i> with willing towards some food items	1
3.) Moderate <i>Aruchi</i> with willing towards only very specific food items	2
4.) No willing at all/ severe <i>Aruchi</i>	3

• **Trishna (Thirst)**

1.) Absent	0
2.) Occasional feeling of thirst	1
3.) Very often feel thirst	2
4.) Feel thirst always with a very short interval / gap.	3

• **Alasya (Laziness)**

1.) Absent	0
2.) Doing work satisfactorily, but late initiation	1
3.) Unsatisfactorily doing work very late in time with very late initiation	2
4.) Skips routine work and no initiation at all	3

• **Gaurav (Heaviness in body)**

1.) No heaviness in body	0
2.) Feels heaviness in the body, but it does not hamper routine work	1
3.) Feels heaviness in the body, which partially hampers daily routine work	2
4.) Feels heaviness in the body, which badly hampers routine works	3

• **Apaka (Indigestion)**

1.) Absent	0
2.) Occasional indigestion only with intake of heavy food stuff	1
3.) Ingestion occurs daily irrespective of heavy or light food stuff	2
4.) No hunger at all, absolute indigestion with associated complaints	3

DRUG REVIEW

Hingwadi Churna is a classical *Ayurvedic* formulation which described in *Bhaishajya Ratnavali*.

Table no. 1 The constituent of Hingwadi Churna are as below:-

Sr. No.	Name	Rasa	Guna	Virya	Vipaka	Doshaghna
1.	Hingu	Katu	Laghu, Snigdha, Teekshna	Ushna	Katu	Kaphavata Shamaka, Pittavardhaka

RESULT:

EFFECT OF THERAPY- Showing effect of therapy on subjective parameters:

Table No. 2:- Effect of Hingwadi Churna on subjective parameters- (Wilcoxon matched pairs signed rank test)

SYMPTOMS	N	Mean		Dif.	% of Change	SD	SE	P	R
		BT	AT						
<i>Angamarda</i>	10	1.70	0.60	1.10	64.71	0.57	0.18	0.0039	VS

2.	Chavya	Katu	Laghu, Ruksha	Ushna	Katu	Kaphavata Shamaka, Pittavardhaka
3.	Vid-Lavana	Lavana	Laghu, Sukshma, Teekshna	Ushna	Katu	Kaphavata Shamaka
4.	Shunthi	Katu	Laghu, Snigdha	Ushna	Madhura	Kaphavata Shamaka
5.	Pippali	Katu	Laghu, Snigdha, Teekshna	Anushna	Madhura	Kaphavata Shamaka
6.	Krishna - Ajaaji	Katu	Laghu, Ruksha, Teekshna	Ushna	Katu	Kaphavata Shamaka, Pittavardhaka
7.	Pushkar	Katu, Tikta	Laghu, Teekshna	Ushna	Katu	Kaphavata Shamaka

Dose & Duration: 3grm twice in a day for 45 days with follow up of 15 days.

AMAVATA

- *Rasena Dushito Vataha Rasavataha* | As per *Siddhanta Nidana*, *Amavata* is nothing but *Rasavata*. *RasaVata* is the *Rasa* which is vitiated by *Vata*.
- When *Ama* and *Vata* simultaneously get vitiated and enters the *Trika* and *Sandhi* finally leading to *Stabdhatta* (stiffness) of the body, the condition is known as *Amavata*.

While commenting on the word *Yugpada Madhukosha* and *Atanka Darpana* has expressed separate thoughts. According to *Madhukosha Vata* and *Kapha* vitiate simultaneously during the pathological process of *Amavata*. On the other hand the commentator of *Atankadarpana* says it is *Ama* and *Vata* who vitiate simultaneously. Both the comments seem to be similar as structurally *Ama* is very much similar to *Kapha*. Only the difference is that *Kapha* produces pathology only in the vitiated state, while the *Ama* is always pathological.

- The disease in which *Vikunchana* of *Manya*, *Trika*, *Prista*, *Kati* and *Janu* occur with *Shabda* leading to *Gatra Stabdhatta* (immobility of joints) is called *Amavata*.

Nidana of Amavata: (Etiology)

In *Madhava Nidana* specific etiological factors responsible to cause *Amavata* has been mentioned.

- *Viruddha Ahara* (unwholesome diet)
- *Viruddha Chesta* (erroneous habits)
- *Mandagni* (diminished Agni)
- *Nishchalata* (sedentary habits)
- *Snigdham Bhuktvato Hiannam Vyayamam* (Exertion immediately after taking *Snigdha Ahara*)

Samprapti of Amavata:

- After taking *Nidana*, *Ama* formation occurs in *Koshtha*, and *Vata Vriddhi* also occurs simultaneously then *Ama* taken by *Vata* to any of *Kapha Sthana* (*Sandhi* & *Amashaya*) which Attains *Vidagdhatta* and then goes to *Dhamani* and various *Srotas*. *Ama Ahararasa* further gets vitiated by *Tridosha* & attains *Abjishyanda Bhava Srotoavarodha* then Manifestation of various symptoms occurs and if enters *Trika* – *Gatra Stabdhat*

Aruchi	10	1.30	0.60	0.70	53.85	0.48	0.15	0.0156	S
Trishna	10	0.60	0.50	0.10	16.67	0.32	0.10	0.9999	NS
Alasya	10	1.50	0.90	0.60	40.00	0.52	0.16	0.0313	S
Gauravam	10	2.40	1.30	1.10	45.83	0.32	0.10	0.0020	VS
Apaka	10	2.40	1.10	1.30	54.17	0.48	0.15	0.0020	VS
Jwara	10	0.60	0.50	0.10	16.67	0.32	0.10	0.9999	NS
Shoonata of Anga	10	1.00	0.50	0.50	50.00	0.53	0.17	0.0625	NS

Analysis of effect of Hingwadi Churna as per table no.2:

- Statistically very significant result were found in Angamarda (64.71%), Gauravam (45.83%) and Apaka (54.17%).
- Statistically significant results were found in Aruchi (53.85%) and Alasya (40.00%).
- Statistically not significant result were found in Trishna (16.67%), Jwara (16.67%) and Shoonata of Anga (50%)

Showing effect of therapy on objectives parameters:

Table No. 3:- Effect of Hingwadi Churna on objective parameters – (Paired't Test)

SYMPTOMS	N	Mean		Dif.	% of Change	SD	SE	P	R
		BT	AT						
Hb %	10	11.81	11.72	0.09	0.76	0.90	0.29	0.7603	NS
TLC	10	7760.00	7170.00	590.00	7.60	1287.9	407.28	0.1814	NS
Neutrophil	10	64.20	62.00	2.20	3.43	7.25	2.29	0.3626	NS
Lymphocyte	10	30.90	29.10	1.80	5.83	6.05	1.91	0.3715	NS
Eosinophil	10	3.70	4.50	-0.80	-21.62	3.33	1.05	0.4664	NS
Monocyte	10	4.60	4.80	-0.20	-4.35	1.48	0.47	0.6783	NS
Basophils	10	0.00	0.00	0.00	00	00	00	00	-
ESR	10	34.10	17.00	17.10	50.15	12.93	4.09	0.0024	VS
RA	10	0.40	0.30	0.10	25.00	0.32	0.10	0.3434	NS
CRP	10	0.50	0.10	0.40	80.00	0.52	0.16	0.0368	S

The above table reveals that non-significant result was found in all parameters except ESR and CRP which shows very significant and significant result respectively.

DISCUSSION:

Probable mode of action of Hingwadi Churna on Amavata:

Pharmacodynamics Study of Hingwadi Churna reveals that it has dominance of *Katu Rasa*; *Laghu & Teekshna Guna*; *Ushna Virya*; *Katu Vipaka & Kapha-Vata Shamaka* properties are present in Maximum *Dravya*.

Ama is immunologically active complexes generated in the intestine due to improper digestion of food. Which is the cause of pathogenesis of *Amavata*. Drug acting on *Ama* in two ways, one those increases digestion capacity (*Deepana Dravya*) and prevent formation of *Ama* second those which digest *Ama* (*Pachaka*). As stated by *Chakrapani*, line of treatment of *Amavata*, in which *Tikta*, *Deepana* and *Katu Dravya* are playing important role in *Samprapti Vighatana* of *Amavata*.

All the contents of *Hingwadi Churna* are *Katu Rasa* predominantly followed by *Tikta Rasa*. According to *Acharya Sushruta*, *Katu Rasa* has *Alasya* and *Kapha Nasaka* effect. *Katu*, *Tikta Rasa* has *Deepana*, *Pachana*, *Ruchikara*, *Shodhana*, *Srotansi Vivrunoti* (*Prasaryati Srotansi-Arundatta*) *Kaphaghna* etc, properties. Due to their *Deepana Karma* it helped in *Jatharagni Deepana* and also *Dhatvagni Deepana*. With *Pachana Karma* it helped in *Ama Pachana* which is main cause in the *Samprapti* hence with *Deepana* and *Pachana Karma* it helped in *Samprapti Vighatana*. It reduces excessive *Ama* formation in the body. All involved *Rasa* have *Kaphaghna* properties. *Kapha* is one of the main *Dosha* in the *Samprapti* of *Amavata*, and so with *Kaphaghna* property it again helped in *Samprapti Vighatana* of *Amavata*.

Maximum contents of *Hingwadi Churna* contain *Laghu Guna* which reduces *Guruta*. *Laghu Guna* having *Kshiprapaki* property. *Laghu Guna* is *Kapha Shamaka & Dhatuhrs akaraka*, *Krishtakaraka* and *Srotoshodhaka* by its *Langhana Karma*. Due to their *Kshiprapaki*, *Lekhana* and *Langhana* properties they results in reduction of excessive *Ama* from body which again helped in *Samprapti Vighatana* of *Amavata*.

Maximum contents of *Hingwadi Churna* have *Katu Vipaka*

which is responsible for *Ama Pachana* and *Srotoshodhana* by enhancing *Jatharagni*, *Bhutagni* and *Dhatwagni*. *Ushna Virya* of ingredients digests *Ama* by enhancing *Dhatwagni*. Digestion of *Ama* clears the obstruction of *Rasavaha Srotas* results in *Vata Anulomana* too. It helps in *Samprapti Vighatana* of *Amavata*.

The known pharmacological action of majority of the drug contents is *Kapha Vata Shamaka Karma*. Drugs are having *Deepana*, *Pachana*, *Amapachan*, *Lekhana*, *Srotoshodhan* etc. properties. The effect of the study drugs can be attributed to the above mentioned properties of its ingredients.

C-reactive protein (CRP) is an annular (ring-shaped), pentameric protein found in the blood plasma, the levels of which rise in response to inflammation. CRP is thus a screen for inflammation. Any Inflammation is once again indicative of *Raktadushhti* very clearly. The negative CRP will not rule out the *Rakta* involvement. Most of the content of *Hingwadi Churna* having *Sothahara* and *Raktashodhaka* property, which may effect on CRP.

The **erythrocyte sedimentation rate (ESR)** is increased by any cause or focus of inflammation. Thus, raised ESR may also indicate the *Raktadusti*. The presence of inflammation increases the fibrogen concentration in the blood, resulting in increased rouleaux formation, which is represented as raised ESR. That increased fibrogen may be an indicative of *Kleda* in the circulation. This is because *Kapha* gives the *Styaana* to the *Rakta*. When this *Styaanata* increases, which is nothing but the excessive *Kledata*, rouleaux formation speeds up, resulting in raised ESR. So due to having *Kapha Shamaka* property of *Hingwadi Churna*, it shows very significant result in ESR.

CONCLUSION:

Amavata is a *Santarpanajanya* and *Rasadhatwashrita Vyadhi*, in which *Kleda Vriddhi* in the *Rasavaha Srotas*. Which when saturated enough obstruct the flow of *Vata* leading to the manifestation of disease. Maximum contents of *Hingwadi Churna* have *Katu Vipaka* which is responsible for *Ama Pachana* and *Srotoshodhana* by enhancing *Jatharagni*, *Bhutagni* and *Dhatwagni*. *Ushna Virya* of ingredients digests *Ama* by enhancing *Dhatwagni*. Digestion of *Ama* clears the obstruction of *Rasavaha Srotas* results in *Vata Anulomana* too.

It helps in *Samprapti Vighatana* of *Amavata*. Patients treated with *Hingwadi Churna*, very significant relief was found in symptoms like *Angamarda*, *Gauravam* & *Apaka* while significant relief was found in symptoms like *Aruchi* & *Alasya*. Non-significant result was found in all objective parameters except ESR and CRP which shows very significant and significant result respectively. The drug had encouraging effects without any side effects. No recurrence was found during the follow up period.

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