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FROM NIDANA TO CHIKITSA: UNDERSTANDING AMAVATA THROUGH THE LENS OF AYURVEDA AND RHEUMATOLOGY

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ABSTRACT

Amavata is disease of Rasavaha strotas, generally compared with Rheumatoid Arthritis. Amavata is the outcome of Agnidushti, Amotpatti and Sandhivikruti. It is the commonest among chronic inflammatory joint disease in which joints becomes swollen, painful & stiff. Due to its chronicity & complications it has taken the foremost place among the joint disease. Despite of the administration of best available modern drugs, the disease has a tendency of persistent progress and cripples the patients. Amavata is the prime disease which makes the person crippled and unfit for an independent life and about 60% of the patients become unfit to work 10 years after the onset of the disease. Many peoples in society are unaware about disease and its complications which is responsible for lifelong joint deformities. The therapy which normalize Agni, Metabolizes Ama, and Regulates Vata and maintain healthy Sandhi and Sandhistha Shleshma will be the supreme one for this disease. Many herbal as well as Ayurvedic preparations are mentioned in the classics which are very effective remedy in Amavata.

KEYWORDS: Amavata, Ama, Rheumatoid Arthritis, Agni-dushti, Amotpatti, Sandhivikruti, Ayurvedic Preparation.

INTRODUCTION

Amavata is the most common endogenous disease in which vitiation of vata dosha and accumulation of ama take place in joints, which simulate rheumatoid arthritis (RA) in modern¹. AMA is maldigested product, which is not homogenous for the body. Vitiated vayu circulates the ama all over the body through Dhamanis, takes shelter in the shleshma sthana (Amashaya, Sandhi etc.), producing symptoms such as stiffness, swelling and tenderness in small joints and big joints, making a person lame². The features of Amavata are much identical to RA, an autoimmune disorder which causes chronic inflammatory and symmetrical polyarthritis³. Due to its chronicity and complications it has taken the foremost place among the joint disease.

Madhav⁴ was the 1st physician who describes the disease Amavata. It seems to be simple disease but its prognosis is not so good. Before the Acharya Madhava the concept of Amavata was uncertain.

In 1591 Guillaume Baillou, the French physician wrote first book on Arthritis named Rheumatism" to describe a condition characterized by inflammation, soreness, stiffness in the muscles & pain in & around the joints.

In 1859, sir, Alfred Garrod, the London physician, coins the clinical term "Rheumatoid Arthritis" & the 1st reference is made in medical literature.

The onset is more frequently during 4th & 5th decades of life with 80% of patients developing disease between the age of 30-40 years.

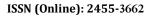
Women are affected approximately 3 times more often than men⁵. Studies suggest that genetics & environmental influences are important in the susceptibility to R.A. There is no doubt modern system of medicine play an important role in overcoming agony of pain, restricted movement & disability caused by the disease. Simultaneously prolonged use of allopathic medicines are not only giving rise to many side effects, toxic symptoms & adverse reactions even including many organic impairments.

OBJECTIVES

- 1) To have an in depth knowledge of *Amavata* in comparison with Rheumatoid Arthritis.
- 2) To understand The Pathophysiology & Symptomatology of *Amavata*.
- 3) To be aware of deformity & complications of Amavata.
- 4) To have knowledge for diagnosis of *Amavata* according to Ayurveda as well as Modern science.
- 5) To understand treatment and its efficacy in *Amavata*.

HISTORICAL REVIEW

In Samhita kala there is no description regarding Amavata as a separate disease entity. Only the passing references in the context of various treatments are available.





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Madhavakara was the first author who has described Amavata as a separate disease entity, devoted a full chapter (25th) of Amavata in his famous treatise Madhava Nidanam containing detailed specification concerning aetiopathogenesis, clinical manifestations, complications and prognosis of Amavata.

ETYMOLOGY OF AMAVATA

In various literatures, following etymological derivations are mentioned about *Amavata*.

आमेनसिहतो वात: आमवात:6॥

- A condition where Ama gets associated with Vata Dosha is known as Amavata.
- Improperly formed *Annarasa* is *Ama* and when it vitiates *Vata Dosha*, named as *Amavata*.

Classification of Amavata⁷:

According to Doshanubandha:-

	0			
Anubandha of one Dosha		Anubandha of two Dosha		Anubandha of all Dosha
I.	Vatanuga Amavata	I.	Vata Pittanuga Amavata	Tridoshaja Amavata
II.	Pittanuga Amavata	II.	Pitta Kaphanuga Amavata	-
III.	Kaphanuga Amavata	III.	Kapha Vatanuga	
			Amavata	

Classification according to severity –

- 1. Samanya Amavata
- 2. Pravriddha Amavata

In *samanya Amavata*, the symptoms are more or less general, less severe and not

associated with *Upadrava* in comparison to *Pravriddha Amavata*.

• Classification according to Chronicity⁸ –

- 1. Navina Amavata (one year of onset)
- 2. Jirna Amavata (more than one year)
 - Classification according to clinical manifestation –
 Acharya Harita⁹ has classified Amavata into
 following four types on the basis of clinical
 manifestation –
 - Vistambhi Amavata
 - Gulmi Amavata
 - Snehi Amavata
 - Pakva Ama and Sarvangi Amavata

NIDANA (ETIOLOGY)¹⁰:

In *Madhava Nidana* specific etiological factors responsible to cause *Amavata* has been mentioned which are –

विरुद्धाहारचेष्टस्य मन्दाग्नेर्निश्चलस्य च | स्निग्धं भक्तवतो ह्यन्नं व्यायामं कुर्वतस्तथा ॥

- Viruddha Ahara (unwholesome diet)
- Viruddha Cheshta (erroneous habits)
- Mandagni (diminished Agni)
- Nishchalta (sedantary habits)
- Exertion immediately after taking Snigdha Ahara.

PURVARUPA (PRODROMAL SYMPTOMS)

The only text which describes the premonitory signs and symptoms is $Vangasena\ Samhita^{II}\ namely -1.)$ Shiro Ruja 2.) Gatra Ruja

आमो अपाकहेतुः वातः। स्वनामख्यातरोसिवशेषः॥ (क.दु. भाग १ पृष्ठसंख्या १७८)

 Ama is produced due to indigestion (Apakva Ahara Rasa) and along with Vata it's a well known disease entity.

DEFINITION

युगपत्कुपितावन्तस्त्रिकसन्धिप्रवेशकौ |

स्तब्धं च कुरुतो गात्रमामवातः स उच्यते ॥ (M.Ni.25/5)

When vitiated *Ama* and *Vata* concurrently enters the *Trika Sandhi* and leading to *Stabdhata* (stiffness) in the body, the condition is known as *Amavata*. It signifies that restricted ranges of movement in the affected joints are due to stiffness, and this stiffness is caused by spreading of *Ama* throughout the body by vitiated *Vata*.

RUPA OF AMAVATA (SYMPTOMS):

Madhavakara, Bhava Mishra, & other have described the rupas of Amavata clearly.

They can be classified under following headings

SAMANYA LAKSHANA OF AMAVATA¹²: अङ्गमर्दोऽरुचिस्तृष्णा आलस्यं गौरवं ज्वरः।

अपाकः शूनताऽङ्गानामामवातस्य लक्षणम् ॥

- 1. Angamarda (Bodyache)
- 2. Aruchi (Anorexia)
- 3. Trishna (Thirst)
- 4. Alasya (Lethargy)
- 5. Gaurava (Heaviness)
- 6. Jwara (Fever)
- 7. Apaka (Indigestion)
- 8. Angashoonata (Swelling)

PRATYATMA LAKSHANA OF AMAVATA:

- 1. Sandhishoola (Pain in joints)
- 2. Sandhishotha (Swelling in joints)
- 3. Stabdhata (Stiffness)

DOSHANUBANDHA LAKSHANA (SYMPTOMS AS PER DOMINANCY OF DOSHAS)¹³:

पित्तात् सदाहरागं च, सशूलं पवनानुगम् । स्तिमितं गुरुकण्डुं च कफदृष्टं तमादिशेत् ॥

- 1. Vatanubandha Ruka
- 2. Pittanubandha Daha, Raga
- 3. Kaphanubandha Staimitya, Guruta, Kandu
- 4. Vatapittanubandha Ruka, Daha, Raga
- 5. Vatakaphanubandha –Ruka, Staimitya, Guruta, Kandu
- 6. Kaphapittanubandha –Staimitya, Guruta, Kandu, Daha, Raga
- 7. *Sannipataja* Symptoms of all *doshas*.



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PRAVRIDDHA LAKSHANA (SIGN AND SYMPTOMS OF **ADVANCED** AMAVATA)14:

स कष्टः सर्वरोगाणां यदा प्रकुपितो भवेत्। हस्तपादशिरोगल्फत्रिकजानरुसन्धिष ॥ करोति सरुजं शोथं यत्र दोषः प्रपद्यते। स देशो रुज्यतेऽत्यर्थं व्याविद्ध इव वश्चिकैः ॥ जनयेत सोऽग्निदौर्बल्यं प्रसेकारुचिगौरवम् । उत्साहहानिं वैरस्यं दाहं च बहुमूत्रताम् ॥ कृक्षौ कठिनतां शुलं तथा निद्राविपर्ययम्। तुटछर्दिभ्रममुर्छाश्च हृद्गहं विडविबद्धताम्। जाड्यान्त्रकूजमानाहं कष्टांश्चान्यानुपद्रवान् ॥

- 1. Agnidaurbalya (Hindered digestive mechanisms)
- 2. Praseka (Excessive salivation)
- 3. Aruchi (Anorexia)
- 4. Gaurava (Heaviness)
- 5. Vairasya (Distaste in mouth)
- 6. Ruja & shotha in Hasta, Pada, Shiro, Gulpha, Trika, Janu, Uru Sandhi (Painful swelling of the joints)
- 7. Vrishchikadanshavatavedana (Nature of pain like scorpion
- 8. Kukshikathinyata (Hardness in abdomen)
- 9. *Kukshishoola* (Pain in abdomen)
- 10. Vibandha (Constipation)
- 11. Antrakujana (Intestinal sounds)
- 12. Anaha (Distension of abdomen)
- 13. Chhardi (Vomiting)
- 14. Hridgraha (Stiffness in precordium)
- 15. Jadya (Stiffness)
- 16. Bhrama (Vertigo)
- 17. Murchha (Fainting)
- 18. *Nidra-viparyaya* (Disturbed sleep)
- 19. *Daha* (Burning sensation)
- 20. Bahumutrata (Excessive urination)

SAMPRAPTI (PATHOGENESIS)¹⁵:

A proper understanding of Samprapti is vital in the planning of the treatment of any disease, since Chikitsa as enunciated in Ayurvedic texts is nothing but

Samprapti Vighatana. Conventionally the Samprapti can be categorized in two types.

- 1) Samanya (General) Samprapti:- this is a common pathogenesis among various types of a single disease.
- 2) Vishishta (specific) Samprapti:- this is a specific pathogenesis for a particular sub type

of disease. The samprapti of Amavata described in Madhava Nidana and by some other

commentators can be summarized as-

Sanchaya (Accumulation of Doshas): When a person exposed to etiological factors Viruddha

Ahara, does vyayama after intake of Snigdha Ahara, Chinta, Shoka, Bhaya etc. they cause

Dushti of Agni, Dosha prakopa and Dushya daurbalya.

Prakopa (Provocation/Aggravation of Doshas): Due to Dushti of Agni, Mandagni occurs.

Mandangni cause Ama formation. Then due to fermentation of Ama gets suktatva (Vidagdhatva) and it converts in Amavisha. With the help of vitiated Vayu it goes to Prasaravastha. Now it is Samavata.

Prasaravastha (Spread of Doshas): Samavata goes to Dhamani (RasavahaSrotasa). Then Dushti of Amavisha occurs due to Tridosha. So it becomes Nanavarna (various colours) and Atipichchhila (viscid unctuous and heavy) Ama. Now it is Atidaruna Ama.

Sthana Sanshraya (Localization/Deposition of Doshas): Yugpat Kupita of Vata and Ama (kapha) with the help of Dushya Daurbalya gets Sthana Sanshraya in Rasavaha Srotasa, Sleshma Sthana and Trika Sandhi.

Vyakta (Manifestation of Qualitative Changes): As it reaches Vyakta stage, most of the symptoms of Amavata are manifested like Daurbalya, Hridgaurava, Gatrastabdhata, Sandhishula, Sandhishotha, Sandhigraha, Sparshasahyata etc.

Bheda (Differentiation or Destruction of Tissue): In chronic stage of it, the disease is left.

SAMPRAPTI GHATAKA OF AMAVATA¹⁶

- Dosha Tridosha mainly Vata and Kapha.
- Dushya Rasa, Rakta, Mamsa, Sira, Snayu, Kandara, Asthi (These constitute Sandhi & Dosha take Ashraya in Sandhi), Majja (Asthi & Sandhi are Mula of Majja Vaha Srotas)
- Agni Jaaharagnimandya, Dhatvagnimandya
- Ama-Jatharagni, Rasagnimandyajanya Ama
- Srotasa Annavaha, Rasavaha, Raktavaha, Asthi -Majjavaha Srotasa
- Srotodushti Sanga, Vimargagamana
- Rogamarga Madhyama
- Udbhavasthana Ama Pakvashaya
- Vyakta Sthana Sarvasharira mainly Sandhisthana
- Vyadhi Svabhahva Chirakari

PATHOGENESIS

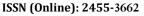
- 1) Synovitis (Synovial cell hyperplasia, Hypertrophy with CD4 lymphocytic infiltration and synovial effusion)
- 2) Pannus formation
- 3) Cartilage loss
- 4) Fibrosis
- 5) Bony erosion, deformity, fibrous and bony ankylosis
- 6) Muscle wasting
- 7) Periarticular osteoporosis.

TRIGGERING FACTORS

- 1) Infection
- 2) Vaccinations
- 3) Physical trauma
- 4) Psychological stress

CLINICAL FEATURES OF AMAVATA IN COMPARISON WITH RHEUMATOID ARTHRITIS

- 1) Hasta sandhi shotha & shoola Inflammation & severe pain in metacarpo-phalangeal joints & proximal inter phalangeal joints are affected most severely in Rheumatoid Arthritis.
- 2) Pada sandhi shotha & shoola The feet are often involved especially the metatarso phalangeal joints & subtalar joints are affected.





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- 3) Jaanu gulfa sandhi shotha R.A. involves first smaller joints of hands & feet and then symmetrically affects the joints of wrist, elbow, ankle & knee.
- 4) Angagourava-Feeling of heaviness in the body.
- 5) *Stabdhata* In R.A. stiffness of joints, particularly observed in morning hours.
- 6) *Jaadhya* Due to deformity limited movements in the joints, weakness in grip or

triggering of fingers occurs in R.A.

- 7) *Angavaikalya* Deformity in joints.
- 8) Sankocha Contractures.
- 9) Vikunchana This can be compared to volar subluxation, ulnar deviation which occurs at metatarsophalangeal joints and bilateral flexion contractures of the elbow are observed in R.A.
- 10) Angamarda Body ache, myalgia occurs in R.A.

JOINTS COMMONLY INVOLVED IN R.A¹⁷

- 1) Finger joints (40%) MCP & PIP joints
- 2) Shoulder joints (20%)
- 3) Foot joints (20%)
- 4) Wrist joints (15%)

OTHER JOINTS ARE INVOLVED IN CHRONIC RHEUMATOID ARTHRITIS JOINT DEFORMITY IN R.A¹⁸

- 1) Swan neck deformity in interphalangeal joint.
- 2) Boutonniere (Deformity in R.A. with flexion at proximal interphalangeal joint &

hyperextension at distal interphalangeal joint).

- 3) Z deformity in the thumb.
- 4) Volar subluxation and ulnar deviation occurs at metacarpophalangeal joint.
- 5) Bilateral flexion contractures of the elbow.
- 6) Synovitis at the wrist may cause carpel tunnel syndrome.

DIAGNOSIS OF R.A

The diagnosis of R.A. is essentially clinical since there is no specific laboratory test to diagnose it. The occurrence of symmetrical peripheral inflammatory polyarthritis along with early morning stiffness should suggest the possibility of R.A.

AMERICAN RHEUMATISM ASSOCIATION (A.R.A.) CRITERIA FOR DIAGNOSIS¹⁹

- 1) Morning stiffness (>one hour)
- 2) Arthritis three or more joints area
- 3) Arthritis of hand joints
- 4) Symmetrical arthritis
- 5) Rheumatoid nodules
- 6) Presence of Rheumatoid factor
- 7) Radiological changes (hand & wrist)

SADHYA - ASADHAYATA OF AMAVATA (PROGNOSIS)²⁰ एकदोषानुगः साध्यो, द्विदोषो याप्य उच्यते | सर्वदेहचरः शोथः स कृच्छुः सान्निपातिकः॥

Madhava Nidana has classified Sadhya-Asadhyata of Amavata on the basis of

Anubandha of Dosha, which are as follow:-

- Involvement of one *Dosha (Eka-Doshaja) Sadhya*
- Involvement of two *Dosha (Dvi-Doshaja) Yapya*

• Involvement of three *Dosha* (Sannipataja), Sarvadehachara Shotha.

KRICCHA UPADRAVA OF *AMAVATA* (COMPLICATIONS)

Upadrava is termed as another clinical condition (Complication) which belongs to the

main disease along with same Dosha and Dushya.

In Anjana Nidana²¹ 8 Upadrava of Amavata are stated that are Jadvata, Antrakunjana,

Anaha, Trishna, Chhardi, Bahumutrata, shola, Nidranasha. According to Vachaspati and Yogaratnakara²² the symptoms of advanced stage of Amavata are Upadrava of Amavata itself.

CHIKITSA SIDDHANTA OF AMAVATA

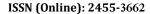
Acharya Chakrapani was the pioneer who laid down the principle and line of treatment of Amavata. He has described following measure in his text Chakradatta –

लंघन स्वेदनं तिक्त दीपनानि कटूनि च। विरेचनं स्नेहपानं बस्त्याश्चाममारुते ॥ सैन्धवाद्येनानुवास्य क्षारवस्तिः प्रशस्यते । आमवाते पञ्चकोलसिद्धं पानान्नमिष्यते ॥ रूक्षः स्वेदो विधातव्यो बालुकापुटकैस्त्या ।

- 1) *Langhana: Langhana* is the 1st line of treatment to digest Ama. Here *langhana* means not complete fasting but, intake of light food. The duration of *langhana* varies from person to person depending upon individual capacity.
- 2) **Swedana:** Swedana is sudation therapy; in this disease swedana is done locally on affected joints. In amavata rooksha sweda is recommended (Sudation without oil/fat). For the procedure of rooksha sweda valuka (sand) is recommended. Snehana is contraindicated in amavata.
- 3) Katu, Tikta & Pachak aahar & aushadhi: The drug which possess Katu (pungent), Tikta (bitter) and which act as deepana, pachana (appetizer) are recommended in amavata. These drugs, by virtue of their qualities does amapachana, hence may help in relieving shotha & shoola.
- 4) Virechana:- For virechana, erenda taila and haritaki are used. In amavata without any preoperative procedure, virechana is recommended directly. Eranda acts as srotoshodhaka, shothahara, shoolahara and amavatahara.
- 5) Basti chikitsa:- Chakradatta recommends ksharabasti and anuvasanabasti in amavata.
- 1) Following tailas are used in anuvasana and nirooha basti –
- 2) Prasarani taila, Bruhat saindhavadi taila, Dashmooladi taila, Eranda taila is used as base in preparation of these tailas.
- 6) Shamanaushadhi²³:-

Single drugs

- Guggulu (Commiphora mukul)
- Eranda (Riccinus communis)
- Amrita (Tinospora cordifolia)
- Sunthi (Gingiber officinale)
- Rasna (Pluchea lanceolata)
- Nirgundi (Vitex negundo)
- Bhallataka (Semicarpus anacardium)
- Lashun (Allium sativum)
- Punarnava (Boerhavia diffusa)





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Compound drugs Rasaushadhi in Amavata

- Suvarna Bhupati Rasa
- Mahavata vidhwamsa Rasa
- Amavatari Rasa
- Vatagajankusa Rasa

Vati Kalpana

- Sanjeevani Vati
- Agnitundi Vati
- Chitrakadi Vati
- Ama Pramathini Vati

Guggulu in Amavata

- Simhanada guggulu
- Yogaraja guggulu
- Vatari guggulu

Kwatha yoga

- Rasna panchak kwatha
- Rasna saptak kwatha
- Maharasnadi kwatha
- Dashmoola kwatha
- Shattyadi kwatha
- Poonarnavadi kashaya

Choorna yoga

- Pathyaadi choorna
- Panchakola choorna
- Panchasama choorna
- Ajamodadi choorna

Lepa in Amavata

- Dasanga lepa
- Himsradi lepa

Taila

- ✓ Abhyantara prayogartha
- Eranda Taila
- ✓ Bahya prayogartha
- Saindhavadi taila
- Vishgarbha taila
- Panchaguna taila
- Prasarini taila

Rasayana Prayoga

- Amruta Bhallatka (Naimittik Rasayana)
- Aswagandha Rasayana

PATHYA-APATHYA

	PATHYA ²⁴	APATHYA ²⁵
	Sunthi,Jeeraka,Adraka,	Dadhi,Matsya,Guda,Du
AHARA	Saindhav,Hingu,Lasuna,Yava,	gdha,
	Takra,Gomutra,Usnodaka,	Masa, Virudha-
	Eranda Taila etc.	Guru,Asatmya
		Bhojana,Guru
		Bhojana,etc.
	Rukshyana,Swedana,Langhan	Vega Dharana,Ratri
VIHARA	(Upavasa),Chakramana,Mrud	Jagarana,Alasya,Chinta
	u Vyayama,Usna Bastra etc.	Shoka,Meghaachhanna
		Akasha,etc.

DISCUSSION

Drugs like Vatsanabha and Ahiphena helps in inducing sleep and relaxing muscles, hence pain is relieved. Drugs like

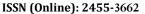
Guduchi, Nagara, Rasna, Musta, Pippali and Chitraka help in improving agni and digestion of ama. Guggulu acts as bhagnasandhankara hence prevents the erosion of bone, osteoporosis and deformity of joints. It also acts shothahara hence reduces the inflammation of synovial membrane, connective tissue and ligaments of affected joints. Drugs like Nirgundi and Shatapushpa act as pain reliever. Some drugs simply by their virtue of prabhava act as amavataghna.

CONCLUSION

Amavata has been named keeping view two predominant pathological factors viz Ama & Vata. Ama means unripe, uncooked, immature & undigested material as a consequence of the impaired functioning of Agni. Description of Amavata seen in different ancient Ayurvedic textbook of Ayurveda but after medieval period it started dominating & nowdays it is very common dreadful disease. In our text we can clearly see that pathogenesis of Amavata start after formation of Ama. As we know autoimmune disease occur due to the harmful response of self immune system when immune system started attacking of body tissue as anticipated response against antigen/toxins or Ama. The inflammatory response occur in auto-immune disorders triggered by Ama or antigen at cellular level. Antigen or Ama modulate signalling at cellular levels leading to incompatible auto-immune response that damage tissues.

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