HISTORICAL REVIEW

ANUPANA

Itihasa:

“The further back you look, further forward you see”.

_Winston Churchill_

Vedic Period: (2000 B.C - 1000 B.C)

Vedas are the oldest known literature available today and have been a rich source of knowledge for varied sciences.

References regarding Anupana are found in the commentary on Chandogyopanishad where it is considered to be a drink, to be had near at hand. In the context of describing various Dravya-Gunas, Anupana is dealt under Hitahita Anupanavidhi.

Samhita Period: (1000 B.C – 500 A.D)

Charaka Samhita:

Charakacharya deals about Anupana in the context of Annapanavidhi in Sutrasthana. After Krutanna varga, in Aharayogi varga the description, qualities, mode of action, criteria for selection of specific Anupanas are vividly dealt. The action of Anupana is related in accordance with the Ahara upayogitva here. However while describing the selection of Anupanas based on disorders like Sthoulya, Tandra and Alpagni, specific Anupanas are prescribed too.

Further, the author says if the prescribed Anupana is not available then based on the habitat, suitable Anupanas are to be considered. From the list of 84 Asavas and
other Peyas like Jala are advised to be evaluated and then considered for administration.

Sushruta Samhita$^4$:

Following the description of Manda-PEyadi pathya kalpanas in Krutanna varga and various delicacies in Bhakshya varga, Anupana is distinguishedly dealt in a Varga in Sutrasthana, Annapanavidhi adhyaya of this treatise. Under this varga, list of various Anupana dravyas, specific Anupana: for set of drugs belonging to a particular varga, specific to a drug, dosha and disorders are detailed. Benefits, properties, action of Anupana are also stated in this context.

Kashyapa Samhita$^5$:

Unlike the earlier treatises, Kashyapa has not separately expounded about Anupana. However applications of Anupana are extensively found in this text. For instance, in Snehadhyaya of Sutrasthana specific Anupanas for snehas viz., Ghrita, Taila, Vasa and Majja – Ushnodaka, Yusha and Manda are indicated respectively.

Bhela Samhita$^6$:

Treading the common footsteps, Bhela too elaborates Anupana in association with Ahara and Ahara dravyas. Wholesome Anupanas for specific Mamsa, Dhanyas, fruits, Ganas, Snehas and so on are mentioned. Guna karma of Anupanas like Pachana, Rochana and Satmyatam prayacchana are stated in this context.

Sangraha Kala:

Ashtanga Hrudaya$^7$:

In Sutrasthana, Matrashiteeyadhyaya, describing Ahara vidhana, Bhojana vyavastha, Bhojya padarthes, Anupana Pramana and Samaya concept of Anupana is

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
dealt. General and specific qualities of Anupana, indication w.r.t. dosha, roga, drug selected and constitution are described here. Anupana ayogya roga and rogi are also discussed here.

**Ashtanga Sangraha**:

This treatise too discusses about Anupana in the context of Annapana vidhi adhyaya of Sutrasthana, subsequent to Ahara kalpana vidhi and Bhojanavidhi. Following Anupana, Bhojanottara kartavya, Ahara parinamakara bhava, Viruddha aharadi topics are dealt. Anupana is discussed with regards to its properties and action. Apart from this, methods of selection of Anupana based on Roga, Rogi, Dosha, kalpana, Rasa, Kala, Vayah and such factors are incorporated here.

Madhava dravya guna, one of the earliest Nighantu in its 28th chapter discusses about Anupana under the heading Anupanavidhi. List of Anupana dravya like Toya, Asava, Yusha and so on are advocated in accordance with the suitability. Mode of action of Anupana is depicted with the illustration of oil spreading swiftly when dropped on water surface. Here, the oil drop is compared to the Pradhana oushadha while water simulates the role of Anupana. Further various selection criterias for Anupanas based on drugs, formulations, disease condition and so on are dealt with besides the importance and uses of Anupanam.

Chakrapanidatta in his work Dravya guna sangraha has dedicated a complete Varga for Anupana emphasizing its importance in Ayurveda. He details regarding the Anupana dravyas, directions for selecting the Anupanas, contraindications for the usage of Anupana, Samanya Anupana Karma and based on time of administration and the dosage of Anupana.
Kaiyyadeva Nighantukara\textsuperscript{10} under Viharavarga inducts Anupana. His description appears to be taken from Sushruta’s treatise.

Information of Anupana is found in Mishraka varga of Madanapala nighantu\textsuperscript{11} and is similar to the description of Kaiyyadeva.

In Kalyanakaraka\textsuperscript{12}, Anupana is contented in Anupanadhikara. Anupana for various Rasas are given importance in this text rather than other criterias. Such drugs are advocated whose Rasa is liked by the patient apart from being wholesome and beneficial. In the previous pariccheda, Anupana for various food items, time of administration and its benefits are told. For Rasayana purpose, Kwatha prepared from the ingredients of the Rasayana yoga is specially indicated in this text.

Under Churna kalpana, Anupana and its dosage for Churnadi yogas is dealt by Sharangadhara in his Madhyama khanda\textsuperscript{13}. More information regarding this context is provided by the commentators Adhamalla and Kashirama. They write the Nirukti, Paribhasha, dosage and state Jala as the foremost among Anupanas apart from clarifying the mode of action of Anupana with the oil-water illustration.

We find that Bhavamishra\textsuperscript{14} has not elaborated like other authors regarding Anupana. However, in the context of Bheshaja vidhanaprakarana, Sharangadhara’s opinion of dosage and mode of action are found to be followed by this author.

Raja Nighantukara\textsuperscript{15} Narahari Pandit is the only person who has mentioned about 2 types of Anupana viz. Kramana and Pachana Anupana. Apart from this, not much details regarding Anupana are available.

**Adhunika Kala:** (1700 A.D onwards)

In Yogaratnakara, the last topic discussed by the author after Rasayanadhikara is Anupanam. He has given importance to the Anupanas specific to particular diseases

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“Critical analysis of anupana with special reference to YogaRaja Guggulu”
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like Kirata, Musta, Parpata in Jwara and so on. Interestingly, we find many dravyas apart from the commonly prescribed Anupanas like: Svarna, in Gara; Guggulu in Vatavyadhi and so on. All other authors till now mentioned have advocated Anupana to be administered through oral routes only but author of Yogaratnakara has prescribed diversified routes of administration of Anupana. To mention a few, Virechana as Anupana in Udara, Nidra in Ajirna, Aruchi, Toshana in Bhaya, Nasya in Urdhvajatruroga, Sheeta vidhi in Murccha, Raktamokshana in Vidradhi and so on. Further, the author says Anupana influences on the prime drugs’ strength and effectivity.

Bhaishajya Ratnavali, Vangasena, Gada nigraha and other works incorporate descriptions of various Yogas to be administered with particular Anupanas to derive the desired effects in specific indications.

Incidentally, diversified applications of Anupanas are found in the Rasashastreeeya literature among all other Ayurvedic texts. Rasashastra a non-conventional branch of Ayurveda evolved into a branch by itself, and rose to its zenith in development more recently. In the course of evolution, the scientists involved, tried to squeeze the basic concepts available in our science and adopt them to the fullest extent in the development of this science. Probably, during this process, Anupana could be one such concept worked upon for which we find its extensive references in these texts. For instance, usage of Rasasindoora with various Anupana like Chitraka, Sharkara in Kapharoga, Pittaroga and so on is found in Ayurveda Prakasha\textsuperscript{16}. Rasa Taranginikara\textsuperscript{16} has vividly described the mode of action of Anupana as that which disintegrates the Paramanus of the Yoga thus aids in carrying it swiftly in the body. He adds, Rogaghna Bhaishajya as synonym to Anupana. In Rasa jala nidhi\textsuperscript{17},

\textbf{“Critical analysis of anupana with special reference to YogaRaja Guggulu”}
Gandhaka and its diversified utility due to usage of various Anupanas and many such formulations are mentioned.

Few books are dedicated to the concept of Anupana alone and constitute a compilation of numerous Rasaoushadhas in majority and few Kashtoushadhas in minority and their specific Anupanas. However critical analysis of Anupana is not elaborated in these texts. To mention a few: Anupanamanjari by Vishrama; Anupanatarangini by Raghunath Prasad; Anupana Kalpataru by Jagannath Prasad Shukla; Anupanavidhi by Shyam Sundara Acharya Vaidya and Anupana darpana by Jnarasara Sharma.

In modern lexicons like Monier Williams and Stedmans Medical dictionary, Anupana is a fluid vehicle taken with or after medicine or eating. Monier Williams described it as:

- that which aids or assists the action of main ingredient
- a synergist, an adminiculum
- a vehicle to enhance antigenicity -Immunology
- in adjuvant therapy- use of another form of treatment in addition to primary surgical therapy as in Oncology\(^18\).
MODERN PHARMACOLOGICAL TEXTS:

Based on the information in lexicons, the term Adjuvant can be incorporated under the concept of Anupana. While doing so, concept of Adjuvant along with other relevant concepts will be dealt in parlance with Anupana from here on. In modern pharmacology, Adjuvant again is also a drug According to W.H.O. definition:

A Drug is any substance or product that is used to modify or explore physiological systems or pathological states for the benefit of the recipient. In the context of medicine, it means a chemical used in prevention, diagnosis or treatment of diseases. It is to be noted that benefits are in terms of physical, mental and economical value.

An ideal prescription contains inscription as its main part. This constitutes of (a) Basis - the primary drug which is responsible for the main action of the prescription. (b) Adjuvant- this is a drug which facilitates or promotes the action of the primary drug. (c) Corrective - this is added to modify or eliminate the undesired effects of the basis. (d) Vehicle- this is a carrier, commonly a solvent which facilitates the administration of preparation into human body.

However, under the name Adjuvant, Corrective and Vehicle too are inducted. In modern prescription, firstly Basis is written, followed by Adjuvants but are not mentioned.

Further, extensive details of the concept of Adjuvant are not dealt as a distinct topic in modern literature. However Drug interactions and Biopharmaceutics are the sectors of modern pharmacology which speak of drug or formulation combinations and their effect - harmful or beneficial on therapeutic activity. These topics can be inducted under the concept of Anupanam.
AMA VATA – HISTORICAL REVIEW

An offshoot of Atharva and Rigveda, this science of medicine is without beginning, but Ayurveda saw throughout many people, who organized it into beautifully woven treatises, incorporating newer diseases and their treatment which cropped up during their times. It is evident in the Samhitas that the most prevalent and deadly diseases have been devoted separate chapters were included as secondary diseases under the major category.

Amavata might not have been widely prevalent and severely crippling as it was during the time of Madhava Nidana, as we see only passing references to the disease have been made in the Bruhatrayees. Madhava was the first person to devote separate chapter for Amavata. Thus the birth of this disease and its formative years can be glanced, starting from Vedic period.

Vedic Period: (5000 BC to 1000 BC)

The word Ama has been used in Rigaveda in various forms like ‘Amayath’ and ‘Amayatham’. In Atharvaveda ‘Amaya’ and ‘Amayam’ words were mentioned in the sense of a disease caused by a toxic substance Ama. The concept of Ama, its similarity with visha and its role in causing many other diseases has been discussed. Vata dosha has been mentioned in Atharvaveda with five types Prana, Samana, Udana, Vyana and Apana. Also reference about Sandhi Vikriti caused by Sleshma Vikriti is available in Atharvaveda. Here it is clear that Ama and Vata have been described separately but no direct reference of the disease Amavata is available during Vedic period.
**Samhita Period**: (1000 BC TO 600 AD)

**Charaka Samhita**:

Charaka has described in detail Ama and Ama Pradoshaja Vikara and their treatment with Langhana and Ullekhana\(^{20}\).

Charaka had described treatment for Amavata while dealing with Avarana Chikitsa in Vatavyadhi, which indicate Pramehahara and Medohara Vidhi. Amavata finds a mention in the list of therapeutic indication of Kamsa Hareetaki\(^{21}\) in Shwayathu Chikitsa and Vishaladi Phanta in Pandu Chikitsa\(^{22}\).

The treatment of Shariragata Ama in Grahani Chikitsa by Charaka\(^{23}\) is similar to the description of Amavata Chikitsa by Bhava Mishra i.e. Langhana,

Pachana and oral administration of Panchakola Phanta\(^{24}\), same is the case with Amavata Chikitsa of Chakrapani in Chakradatta\(^{25}\).

**Sushruta Samhita**:

The description of Amavata in Sushruta Samhita is conspicuous by its absence.

**Bhela Samhita**:

The tenth chapter in Sutra Sthana deals with Ama Pradosha. This description has some resemblance with that of Amavata.

**Harita Samhita**:

A complete chapter on Amavata finds a mention in Harita Samhita\(^{26}\). The classification of Amavata is quite unique and not followed by any of the later works in this field.

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*“Critical analysis of anupana with special reference to YogaRaja Guggulu”*
Anjana Nidana:

This work is claimed to be written by Acharya Agnivesha, contains detailed description about etiology, premonitory symptoms, clinical manifestations, and complications.

Sangraha Kala: (600AD-1600AD)

Astanga Sangraha and Astanga Hridaya have ignored the disease though the word Amavata is included in the therapeutic index of compounds Vatsakadi Yoga and Vyoshadi Yoga.

Madhava Nidana:

Madhavakara accorded this disease the status of an independent disease and has dealt the topic threadbare.

Chakradutta:

Chakrapanidutta has described the treatment for Amavata.

Vangasena and Vrinda Madhava followed Madhava with few additions in the treatment aspect. Works like Bhava Prakasha, Yogaratnakara and Bhaishajya Ratnavali have only corroborated the descriptions with additional principles of treatment.

Adhunika Kala: (1600AD onwards):

Mahopadhyaya Acharya Gananath Sen has coined the term Rasavata for Amavata.

In Yoga Shastra the practice of Shushka Basti for improving Jatharagni and treating Amavata has been mentioned. Y. N. Upadhyaya (1955) has correlated the disease with rheumatoid arthritis. Later research workers have agreed with Y. N. Upadhyaya.
MODERN HISTORY OF RHEUMATOID ARTHRITIS:

First Century A.D:

The rheumatoid/rheumatology is derived from the root ‘Rheuma’, which refers to a substance that flows and probably was derived from phlegm, an ancient primary humor, which was believed to originate from brain and flow to various parts of the body causing ailments.

1642 A.D:

The word rheumatism is introduced into the literature by the French physician Dr. G. Baillou who emphasized that arthritis could be a systemic disorder.

1800 A.D:

Landre Baervier, a physician from Salta Petruver in Paris, seemed to have described the disease for the first time he called it Gartte Asthanique Primitivae.

1857 A.D:

Sir Garrod proposed the name Rheumatoid Arthritis, Bannatyne also in 1959 published his pathological observations on the disease but he could differentiate it from Osteoarthritis only in his later edition.

1928 A.D:

The American committee for the control of rheumatism is established in U.S. by Dr. R. Pemberton, renamed American Association for the study and control of rheumatic disease (1934), then American Rheumatism Association (1937) and finally American college of Rheumatology (ACR) (1988).
1940 A.D:

The terms Drs. Hollander and Comroe first coin Rheumatology and Rheumatologist respectively.

1948 A.D:

Roses identified some criteria for diagnosis of Rheumatoid arthritis.

1958 A.D:

American Rheumatic Association suggested uniform criteria for diagnosis.

1987 A.D:

The criteria were revised.

In the beginning it was thought to be an infective condition especially in early 20th century. French scientists thought it to be due to tuberculosis.

Hench and Kendell introduced steroids in the management of rheumatoid arthritis described pediatric onset, juvenile RA in 1896. Later Felty A.R. described Felty’s syndrome.

Recent advancement in immunology has opened new vistas in the management of Rheumatoid arthritis. Unfortunately till date the etiology of Rheumatoid arthritis is unknown the pathogenesis is speculative, the treatment is only palliative and there is no cure to this disease.
CONCEPT OF AMA AND VATA

In Ayurveda, most of the diseases are named taking into consideration the vitiated dosha, Dushya, Avayava, Marga, Lakshan and Karma. In the same way Amavata has been named, taking into account two predominant pathological factors i.e. Ama and Vata having their important place in Chikitsa and Nidana.

Here first of all separate description of Ama and Vata is being given and later on of the disease Amavata will be mentioned

Concept of Ama:

Nearly all diseases as per the Ayurvedic view have their origin from amadosa. Even one of the synonyms of Vyadhi - amaya indicates it. The foremost step after intake of unwholesome diet and daily regimen is vitiation of Agni and this malfunctioning Agni produces Ama. Hence it is very important to know in detail about Ama.

ETYMOLOGY:

The word Ama is derived from

Amyate Eshath Pachyathe/aa-ama+ Karmanaa

Which indicates that -

Which undergo slight ‘Paaka’

Paaka means-

Paakascha Agni samyogatha kalavastha Va vasthu parinama

visheshah ||
The Changes occurring in a substance during the time of Agni samyoga. Lack of that specific Agni interaction results in aama.

Amyate Gamyate Pakadyartham Iti Amah |

i.e. the substance, which is not, digested properly and needs further digestion.

So Ama denotes a substance or group of substances, which is near to poison or acts like a poison. So a substance that harms normal healthy state of body or any part of body can be considered as Ama. Therefore depending upon etymology Ama can be described as - raw, uncooked, unripe, immature, undigested or incompletely oxidized / metabolized or similar to a toxin.

Again in Madhava Nidana it is stated that due to the feebleness of Agni a residue of Ahara rasa which is still left as undigested. It is then known as Ama, which is the root cause of all diseases.

Amam Anna Rasam Kechit Kechit Malasanchayam |

Prathamam Dosha Dushtim Cha Kechit Amam Prachakshate ||

There is no direct definition of Ama available in Charaka Samhita but in 15th chapter of Chikitsa Sthana while describing pathogenesis (Samprapti) of grahani roga indirect reference of Ama is available which is

…..Dusyatyagnih, sa dustoannam na tat pacati laghvapi

Apachyamanam suktatavam yatyannam visaruptam||

i.e. due to Nidana sevana when Agni is vitiated it becomes incapable in digesting the ingested food, and this undigested food after getting fermented turns into poisonous substance
The poisonous characteristic of *Ama* can be seen in following description of Vagbhata.

**Amadosha mahaghoram varjyedwisajsajhyakam||**

Means amadosa is very dreadful and hence is considered like poison\(^{38}\).

**Symptomatology of *Ama*:**

Various symptoms produced due to presence of Ama in body, are described in texts. These symptoms help in diagnosis of Ama clinically. Sama and Nirama stage of disease can also be identified with presence or absence of these symptoms. Symptoms described by Vagbhata in *Astang Hridya*\(^{39}\) are:

**Srotorodhbalabhramsagauravanilmudhtah |**

**Aalasyapaktinisthivamalasangaruchikalamah ||**

Here srotorodha, balabhransa, gaurava, anilamudhta aalasya, apakti, nisthiva, malasanga, Aruchi, klama are described as the symptoms produced due to Ama. Also Acharya Madhava describes many symptoms in chapter of Amavata, which can be summed as - angamarda, trishna, jwara, suntanganam, praseka, utsahahani, vairasyata, Daha, Bahumutrata, kukshikathinta, nidraviparyaya, chardi, shrama, murcha, hridgraha, vitavibandham, jadyata etc.

When this Ama comes in contact with Dosha, Dushya and Mala it is termed as Sama Dosha, Sama Dushya and Sama Mala. Assessment of Sama-Nirama is very much helpful for the treatment.

Summing up, Ama is resultant of improper digestion or partial digestion of the food materials in presence of hypo functioning of Jatharagni. It is also the accumulation of Malas and Prathma doshasushti. In case of Dhatavagnimandya it refers to the partially or incompletely metabolized dhatu.
**Concept of Vata:**

As earlier said Amavata is resultant of combination of Ama and vitiated Vata Dosha. So discussion of Vata Dosha is also important in connection to Amavata.

Vata is the chief functional operator of the all types of bodily movements. All type of movements whether voluntary or involuntary are possible only under the influence of Vata Dosha. The symptoms like pain, stiffness and restricted movements in Amavata are due to the vitiation of Vata Dosha. Thus the predominance of Vata Dosha in causation of Amavata is very well understood.

**Nirukti:**

The Nirukti of Vata is as follows, the term Vata is derived from the root “Va” with “Tan” Pratyaya, and it forms the word Vata. The root Vata summarizes the essential Karma of Vata-Gati and Gandhana.

**Guna:**


**Bheda:**

There are five classification of Vata Dosha based on the location and function. They are Prana, Udana, Samana, Vyana and Apana.

**Importance:**

Following opinions shows the importance and supremacy of Vata:

Charaka opines that the Vayu in its abode with unimpaired functions in its normalcy facilitates the Ayus of an individual to be hundred years.

The Pitta, Kapha, Mala and Dhatus are inert (Pangu) until mobilized by Vata, which takes them to get localized in specific location and cause disease; hence Vata controls all other Doshas Dhatus and Malas.
Vata, Pitta and Kapha are circulating all over the body, Vata the subtle among them provokes Kapha and Pitta and causes them to lodge in various places from where the disease originates. The Pitta and Kapha hence occludes the channels of Vata, thus vitiating Vata; diminution of tissue elements, which may be an independent cause, or an effect of occlusion also vitiates it.

**Etiological factors of vitiation of Vata:**

Etiological factors, which vitiate Vata, can be brought under Aharaja, Viharaja, Manasika and Anya Hetuja.

**Ahara:**

**Vihara:**
- Vyavaya, Atiprajagara, Vishama Upachara, Langhana, Plavana, Atyadva, Atichesta, Dukhashayya Asana, Divaswapna, Abhighata, Marmaghata.

**Manasika Karanas:**
- Includes Chinta, Shoka, Krodha, and Bhaya.

**Anyahetuja:**
- Dhatu Sankshaya and Rogatikarshya.

**Symptoms of Vata Prakopa:**

**Symptoms of Vata Kshaya:**
- Kshaya of Vata leads to Manda Chesta, Alpavak, Apraharsha and Mudha Samjnyata.
NIRUKTHI

ANUPANA:

Vyutpatti: 40, 41

Anupanam:

Neuter gender

Anu + Dhatu Pa

Anu:

• after, along, with

• subordinate to, inferior to, near to

• following methodically, orderly, accordingly

Pana:

• a drink

• observing, keeping, protection, defence

Anupana:

• to drink after, drink at

• to preserve, cherish, keep, wait for

Adjuvant: (L)

• ad – juvo

• juvans – to give, aid to
Nirukti:

- Anugatam panam Anupanam\textsuperscript{42}

- Anu saha paschat va piyate iti Anupanam\textsuperscript{43}

- Oushadha bhakshanopari yatpitam tadAnupanam\textsuperscript{44}

- Annat anupaschat piyate iti Anupanam\textsuperscript{45}

**AMAVATA - NIRUKTI**

Vyutpatti:

1. **Amam Cha Vatam Cha Amavata**
   
   The word Amavata comprises of two meaningful terms Ama and Vata, which form the pathogenic basis of the disease.\textsuperscript{46}

2. **Amena Sahito Vata Amavata**
   
   This derivation highlights the propulsion of Ama by Vata to produce Amavata.\textsuperscript{47}

3. **Amo Apaaka Hetuh Vataha Swanaama Khyaata Rogavisheshaha**
   
   That which is the result of improper digestion is Ama and with Vata the disease is popularly known as Amavata.\textsuperscript{48}
ANUPANA

- Anupanamiti anu shabdam lakshanarthamahuh |
  Aharam lakshikrutyapanaṃ .. sukha-pakarthaṃ \(^{49}\)

- Tena bhavi bhojanam trushnam chanulakshikrutyapiyata ityanupanam \(^{50}\)

- Yadyogena rasadinam vibhaktah paramanavah |
  Drutamangeshu sarpati sahapanā taducyate \||
  Tattt rogaghaṃ bhaishajeṃ bhesajasyanupiyate |
  Yaccha sahayakari syadanupanam taducyate \(^{51}\)

- Oushadhangapeya vishesha taccha oushadhapananantaram vilambya
  prayojanam \(^{52}\)
AMAVATA - PARIBHASHA

Yugapath Kupithavantaha Trikasandhi Praveshakau

Stabdham Cha Kuruthe Gatramamavathaha Sa Uchyate

Amavata is a condition where Stabdhata of the body occurs due to lodging of vitiated Ama and Vata in the Trika Sandhi.

Prof. Y.N. Upadhyaya and other experienced doctors and research scholars keep Amavata equivalent to Rheumatoid Arthritis.

Definition: 53

Rheumatoid Arthritis is the commonest form of chronic inflammatory joint disease. In its typical form it is a symmetrical, destructive and deforming poly arthritis affecting small and large synovial joints with associated systemic disturbances.
ANUPANA:

**Synonyms**

- Anupanam
- Sahapanam
- Rogaghna bhaishajyam
ANUPANA

Anupana Swaroopam:

Before proceeding with the details of Anupana, it is essential to resolve the Swaroopa of Anupana as to its (i) usage in Ahara vidhi only or in Bhesaja vidhi also and (ii) the nature of Anupana - liquids only or others too could be considered under this heading. The contexts under which Anupana is dealt in various Ayurvedic texts are enlisted below:

- Cha. Sa. Su. 27 Annapanavidhi - Aharayogivarga
- Ash. Hr. Su. 8 Matrashitiyadhyaya - Bhojanavidhi
- Ash. Sa. Su. 10 Annapana Vidhi – Bhojanavidhi
- Bhe. Sa. Su. 27 Annapanavidhi
- Dr. Gu. Sa. 14 Anupanavarga
- Kal. Ka. 5 par – Anupanadhikara
- Kai. Ni. Vihara varga – Anupana
- Yo. Ra. - Anupana
- Bh. Pr. Mishraka varga - Bheshajavidhana prakarana

From this, it is evident that authors of older times have dealt with this topic in relation to Ahara vidhi and Ahara dravya while the later authors have tried to highlight its therapeutic value for which, they devoted separate sectors for its discussion. Sushruta while describing the planning of selecting an Anupana, says that a Hita dravya of suitable Matra in particular Kala should be administered only after considering the disease in which it would be administered.

Rasa Taranganiyaka’s synonym Rogaghna bhaishajyam and indication to administer Anupana following Bhesaja makes it very clear that Anupana is to be
administered with Oushadha. Adhamalla\textsuperscript{57} lucidly defines that Anupana is that which is administered following Oushadha as “ Oushadha Bhakshanopari ”. Bhavaprakasha has deliberately dealt about Anupana in Bheshajavidhana prakarana. Similarly, Yogaratnakara says Oushadhas are given to patient along with Anupana based on the diseased state. Apart from this, we find plenty of references of specific Anupanas to be used along with particular Yogas to obtain the required effect in a particular disorder/disease. By this, we can see that Anupana is that which is given with both Ahara dravyas - regularly and Oushadha dravyas - specifically.

**Nature of Anupana:**

The term Anupana\textsuperscript{58,59} is in itself suggestive of a substance which is administered for drinking. Sushruta describing the qualities of the Shreshta Anupana – water, says, by virtue of its Toyatmakatva\textsuperscript{60} and presence of Sarvarasa, it is the most favourable Anupana. The list of dravyas meant for utilization as Anupana constitutes only Drava Pradhana dravyas in Sushrutha samhita. However, we find many references of solids being prescribed as Anupana in all these texts. For instance,

- Guda as Anupana to Guduchi in Vibandha – Bha. Pra. Vol I
- Sita as Anupana to Guduchi in Pittaroga – Bha. Pra. vol I
- Chitraka churna as Anupana to Rasa sindura in Kapharoga – Ay Pr. 1 /404

This reveals that Anupana includes substances other than liquid forms also.

**Anupana Bheda:**\textsuperscript{61}

Except for Raja Nighantukara, no other author speaks of Anupana Bheda. Accordingly the two types of Anupana are:
Anupana

i) Kramana Anupana is that which is administered in delay following the Basis.

ii) Pachana Anupana is given in the night, without delaying but immediately.

No lucid information regarding type of adjuvant is available in most of the modern literature. From the available information, adjuvant can be understood under three classes:

1. Adjuvant - which facilitates and promotes the action of Basis
2. Corrective - which modifies or eliminates the undesired effect of the Basis
3. Vechicle - a carrier, commonly a solvent which facilitates the administration of preparation into human body.

Anupana Dravyas:

We find numerous substances belonging to diverse drug groups which are indicated in accordance with the requirement. Enlisting them are:

- Sheeta jala, Ushna jala, Madhu, Ghrita, Taila
- Asava of various drugs like Durva, Chitraka, Pippali, Nyagrodha, Kapittha, Shireesha phala
- Ksheera, Mastu, Takra, Udashwit, Mahisha payah, Mamsarasa, Yusha, Manda
- Dhanyamla, Madhya, Madhvasava, Souveera, Kanji, Chukra, Sura, Ikshuras
- Sharkarodaka, Triphalodaka, Ardrakodaka, Madhudaka

Majority of the authors prescribe Meghambu collected in a clean container as the superiormost Anupana and that this could be used in all conditions. However,
pioneers of Rasashastra advocate Madhu in the absence of required Anupana and with all the Basis\textsuperscript{67,68}

**Anupana Matra:**

It is a well know fact that even poison acts as a life saving drug provided its dosage is judiciously fixed. Information regarding the dosage of Anupana is found to be varying from author to author. Based on the doshas involved and form of basis dosage of Anupana too varies as recorded below:

- According to Sharangadhara, Anupana matra is 3, 2 and 1 pala for Vataja, Pittaja and Kaphaja rogas respectively\textsuperscript{69}.
- According to Madhava, Chakrapanidutta, Bhavamishra and Kashirama vaidya, the dosages are 3, 2 and 1 pala respectively in Pittaja, Vataja and Kaphaja disorders.
- According to Sharangadhara\textsuperscript{69}, 2 and 1 pala dravas are advised to be used with the Churna when consumed in the form of linctus or drink respectively.

**Anupana Kala:**

Opinions of various authors with regard to the administration of Anupana are accounted below:

- The term Anupana\textsuperscript{70,71} suggests that it should be administered after the consumption of the primary drug
- Sahapana a synonym of Anupana indicates its usage along with the prime drug
- Raja Nighantukara\textsuperscript{72} advocates Kramana Anupana to be delayed in administration while Pachana Anupana is advised not to be delayed and is indicated in the night
- In the context of Aharavidhi, three Kalas are indicated for Anupana and their effects are also described i.e., before food for Karshanartham, inbetween food for Sthapanartham and after food for Brumhanartham. This Vidhi probably holds good only for Jala in Aharavidhi\textsuperscript{73,74}.
Anupanavcharana Vidhi\textsuperscript{75}:

In Rasa jala nidhi, mode of administration of both Breshaja and Anupana are portrayed in the context of Anupana in Rasoushadhas. Here, both Breshaja and the Anupana are directed to be triturated with Madhu in a Khalva yantra and then to be consumed following recitation of Aghoramantram or offering prayers to the esteemed deity.

Anukte – Anupana Yojana:

Charakarcharya\textsuperscript{76} clarifies stating that it is not possible to describe all the Anupana dravyas in toto. Sometimes those Anupanas advocated in a particular Desha need not be beneficial in another or may not be available. In such a condition, he advices one should critically evaluate the drug and only those which are beneficial\textsuperscript{32}, not possessing fallacies by nature, but possess qualities useful in relation to the Ahara or Bheshaja should be selected.

Charaka and other authors like Vagbhata, Chakrapani, Gangadhara, Sushruta opine that the Anupana dravya should possess opposite qualities in terms of Rasa, Guna to that of the Ahara or Bheshaja but should not be Viruddha to it to obtain the desired effect\textsuperscript{77}.

Sushruta emphasizes that one should judiciously evaluate the consideration of Anupana in terms of the disease involved; Kala - Roga kala, Rogi kala, Nitya kala and Matra\textsuperscript{34}. Further, he indicates that the selected drug should be wholesome to the patient or person administered\textsuperscript{78}.

However, water is to be consumed as the adminiculam says Sharangadhara\textsuperscript{79} when no specified Anupana is mentioned. Vagbhata indirectly hints that Anupana dravya should be Satmyakara and possess Jeevanadi guna in it\textsuperscript{80}. Rasa jala nidhikara\textsuperscript{81} gives the liberty to change to another Anupana in due consideration to Desha, Kala.
and requirement\(^2\). Ras anusara selection of Anupana should be such that it should be Parasparaviruddha, Ruchikrut, Satmyam, Hitam, Sukhakaram says Sushruta\(^3\).

**Uktanupanah:**

Abundant illustrations of Anupana are found in the text. For a better understanding of this concept, here is an attempt to classify these illustrations under various factors which influence the effect of Anupana viz. Rasa, Guna, Dravya, Dravya varga, Kalpana, Yoga, Kala, Vaya, Dosha, Roga-avastha and Swasthya.

**Anupana in Swasthya:**

Sushrutha, Chakrapanidutta specify that amidst food, Chitram-various types of Paniya and other dravyas which do not alter the doshic homoeostasis are to be consumed by the healthy persons\(^4\).

Gangadhara commenting on Charaka’s similar view defines Chitram as Chitraka udaka and indicates its consumption by normal persons\(^5\).

**Table No.01: Based on Rasa:**

<table>
<thead>
<tr>
<th>Rasa</th>
<th>Anupanam</th>
<th>References</th>
</tr>
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<tbody>
<tr>
<td>Madhura</td>
<td>Katu rasa</td>
<td>Kal. Ka. 5 Pa/39-42</td>
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<td>Amla</td>
<td>Lavana rasa</td>
<td>Kal. Ka. 5 Pa/39-42</td>
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<tr>
<td></td>
<td>Madhura rasa</td>
<td>Su. Su. 46/419-Da.</td>
</tr>
<tr>
<td>Katu</td>
<td>Tikta rasa</td>
<td>Kal. Ka. 5 pa/39-42</td>
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<td>Durvanalavetrasava</td>
<td>Su. Su. 46/432</td>
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**Table No.02: Based on Guna:**

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### Table No.03: Based on Ahara and Oushadha dravya – Samanya Anupana:

<table>
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<th>Ahara/Oushadha dravya</th>
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<tr>
<td>Shali, Shastikashali</td>
<td>Ksheera</td>
<td>As. Sa. Su. 10/43-44</td>
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<tr>
<td>Mudgadi Dhanya</td>
<td>Mamsa rasa</td>
<td>Su. Su. 46/423-433</td>
</tr>
<tr>
<td>Odana</td>
<td>Takra</td>
<td>Kal. Ka. 4 Pa./18</td>
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<tr>
<td>Vaidala supa</td>
<td>Souvira</td>
<td>Kal. Ka. 4 Pa./18</td>
</tr>
<tr>
<td>Dhanyadi</td>
<td>Phala Khandasava, Dadhi, Chukra</td>
<td>Bhe. Sa. 27/31</td>
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<tr>
<td>Shaka Mudgadi vikaras</td>
<td>Dhanyamla, Mastu, Takra</td>
<td>As. Hr. Su. 8/48</td>
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<tr>
<td>Yava, Godhuma,</td>
<td>Sheeta jala</td>
<td>Su. Su. 46/423-433</td>
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<tr>
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<td>As. Sa. Su. 10/43-44</td>
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<td>Bisagranthi, Dadhi,</td>
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<td>As. Hr. Su. 8/47</td>
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<tr>
<td>Madhu, Madhyavikaras,</td>
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<td>Sneha</td>
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<td>Mamsa-Varahamamsa</td>
<td>Koshna jala</td>
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<td>Aja mamsa, Hayamamsa</td>
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<tr>
<td></td>
<td>Sheetakashaya, Udaka, Khadirodaka, Yushamlakanji</td>
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<td>Vasa majja sneha</td>
<td>Manda</td>
<td>Kas. Sa. 22/11</td>
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<td>Varuni</td>
<td>Kakubha</td>
<td>Bhe. Sa. 27/36</td>
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<td>Ashwagandha kashaya</td>
<td>Varuni, Manda</td>
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### Table No.04: Based on Ahara and Oushadha dravya – Rogabhedena Anupanam:

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<tr>
<th>Dravya</th>
<th>Roga / Vikara</th>
<th>Anupanam</th>
<th>References</th>
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### Table No.05: Anupana Based on Dravya Varga:

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<td>Bhadramlam</td>
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<td>Jangala Dhanvajanam</td>
<td>Pippalyasavam</td>
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<td>Vishkiranam</td>
<td>Kolabadarasavam</td>
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<td>Pratudanam</td>
<td>Ksheerivrukshasavam</td>
<td>Su su 46/433</td>
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<td>Sura Draksha- kashmarya</td>
<td>Bhe sa 27/35</td>
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<td>Guheshayanam</td>
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<td>Of kapitha shireesa</td>
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<td>Triphalasavam</td>
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**Table No.06: Based on Kalpanas:**

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### Table No.07: Based on yogas:

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<th>Anupannam</th>
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<td>Vrana</td>
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<td>Varuna</td>
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<td>Varana kushta</td>
<td>Khadira kwatha</td>
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<td>Anrla-teeksha dravya</td>
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<td>Gullma</td>
<td>Ghruta,ksherra</td>
<td>Anela Madhya</td>
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<td></td>
<td>Ushnodaka</td>
<td>Sha. ma. 7/53-55</td>
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<td>Tridoshaja Gulma</td>
<td>Dashanula</td>
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<td>Rasnadikwatha</td>
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Table No.08: Based on Kala:

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<td>Ushna kale</td>
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<td>Amala kanji with Taila</td>
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<td>Sharad Greeshna Hemanta</td>
<td>Sheeta jala</td>
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<td>Su Sha</td>
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<td>Ksheerannada</td>
<td>Ksheerararpi – matrgaha and Dhatryaha</td>
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Table No.10: Based on Dosha:

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<td>Kanjika, manuarasa</td>
<td>Cha Su 27/321 Gang</td>
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<td>Pitta</td>
<td>Sheeta Madhura</td>
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<td>Shakarodakam Sita</td>
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<td>Kapha</td>
<td>Ruksha Ushna Dravam</td>
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<td>Skenoudra Ardra kadakam</td>
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Table No.11: Anupana based on Roga / Arstha:

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<th>Roga /Vikara</th>
<th>Anupanam</th>
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<td>Musta Parpata kirata</td>
<td>Raktapitta</td>
<td>Vala, Ikshurasa</td>
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<td>Grahani</td>
<td>Takram</td>
<td>Kruni</td>
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<td>Prameha</td>
<td>Nishamalaka, Triphala</td>
<td>Ashmari</td>
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<td>Bhallataka, chitrka</td>
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<td>Ajya rasonaka Guggulu</td>
<td>Apasmeare</td>
<td>Vacha Brahmi</td>
</tr>
<tr>
<td>Kshaya</td>
<td>Shitajith, Marsa</td>
<td>Udara</td>
<td>Virechaka dreva</td>
</tr>
<tr>
<td>Puranajwara</td>
<td>Madhu– Maricha</td>
<td>Vataekta</td>
<td>Guduchi</td>
</tr>
<tr>
<td>Sheela</td>
<td>Ghritanvita hingu</td>
<td>Ardita</td>
<td>Masharataks</td>
</tr>
<tr>
<td>Visha</td>
<td>Kostinajala, Hema</td>
<td>Medaroga</td>
<td>Madhudeka</td>
</tr>
<tr>
<td>Sthoulya</td>
<td>Madhudaka</td>
<td>Prallara</td>
<td>Lodhra</td>
</tr>
<tr>
<td>Krusha Shrama</td>
<td>Sura</td>
<td>Aruchi</td>
<td>Matulunga</td>
</tr>
<tr>
<td>Pandu</td>
<td>Loha kita</td>
<td>Vrana</td>
<td>Guggulu</td>
</tr>
<tr>
<td>Chardi</td>
<td>Laja</td>
<td>Amlapitta</td>
<td>Draksha</td>
</tr>
<tr>
<td>Atisara</td>
<td>Kutaja</td>
<td>Mutrakrucha</td>
<td>Shatavari kushmandea</td>
</tr>
<tr>
<td>Unmada</td>
<td>Punarnaghrina</td>
<td>Kushta</td>
<td>Khadisa sara</td>
</tr>
<tr>
<td>Nidrakshaya</td>
<td>Mahisha ghrita</td>
<td>Parshwarhula</td>
<td>Pushkara mula</td>
</tr>
<tr>
<td>Shwitra</td>
<td>Bakuchi</td>
<td>Gulma</td>
<td>Shigrutwacha</td>
</tr>
</tbody>
</table>

Shwasa – samadhu trikatu, sashunti Brahmadandi

Vishagni Shastra – Arkaselu, Shireesha kapitha phalasavam Sheetodaka hate

Alpagni – Madhya if Madhya satnya

**Anupanam Avastha:**

Ksheera     Atapa Upvasa Langhana, Adhwa, Bhashya, Vyayam, klanta Vyavaya stri Balye, Vardhakya

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
Dhnyamala  Anidra Tandra Bhaya klame
Dhadhi mastu

**Anupana Ayogyaha:**

Most of the times the knowledge of patients in whom particular drugs are contraindicated becomes more important than in whom it is indicated. Ayurvedic scholars\(^{86}\) like Charaka, Vagbhatta, Chakrapani have propounded that people suffering from:

Urdhwanga Vata, Hikka, Shwasa, Kasa, Urah kshata, Praseka Swaropahata, Medhra – Akshi – Galaroga, Praklinnadeha and those who are engaged in Geeta, Bhashya, Adhyayana should refrain from Anupana following consumption.

Charaka reasons, for this contraindication as: in these persons Anupana stagnates in Kanta and Uras because of which Aharaja sneha is withheld resulting in re-causation of the Doshas.

Chakrapani and Shivadas Sen elaborate this reasoning as follows: Udakadi Anupana combines with Ahara and results in Aharasneha i.e., Aharasara janana by virtue of its Snigdhatva. However, in patients suffering from Shwasadiroga due to the predominantly vitiated Vata the procession of Anupana lower down, is hindered due to the absence of Dravamsha appropriate Pachana does not take place. Consequently Sara or Snehajanana does not occur resulting in only vitiating the Vatadi Doshas again. Vagbhata\(^{87}\) adds to this stating that thus vitiated Vatadi Doshas result in disorders like Agnisada, Chardi, Syandana - sleshma sravana and so on.

Indukara\(^{88}\), commentator of Ashtanga Sangraha quotes that according to some, Anupana here refers to only jala while Ksheeradi in Kasadi roga can be permitted. Further he clarifies according to his school of thought in Urdwajatrugatadi rogas in

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“Critical analysis of anupana with special reference to YogaRaja Guggula”
general all Anupanas are prohibited. But Ksheeradi in Kasadiroga are considered as exceptions.

Shivadas Sen\textsuperscript{89} opines that Alpa pana could be allowed since \textquotedblleft No\textquotedblright means Isha i.e. Alpam.

**Nishidha Anupanas:**

Sometimes, certain combination of drugs are likely to produce certain untoward or toxic effects in the body. In this context, Sushruta\textsuperscript{90} advises prohibition of usage of Ushnajala along with Bhallataka and Tuvaraka Sneha. While, Kashyapa inhibits the utility of Ushnodaka along with Paya, Dadhi and Madhu and in disorders of Pitta, Raktasrava, Garbhachyavana and Garbhadaha\textsuperscript{91}.

It is more likely that this topic could be understood better under the topic of Virudhatwa i.e., incompatibility According to Charaka drugs are harmful if they are incompatible from the point of view of Desha, Kala, Matra, Veerya, Samyoga, Gunadi - 11 factors\textsuperscript{92}.

In modern parlance, Drug - Drug interactions; Drug - Food interactions, Drug formulations interactions could be considered here.

**Anupananntaram Nishiddha Karma\textsuperscript{93}**

We come across references which advises the following activities to be avoided immediately after the consumption of Anupana viz., Adhayayana, Bhashana, Gayana, Adhwagamana. Dalhana supporting author scholars reasons out stating that by such of these activities doshas get vitiated and result in Chhardyadi Vikaras, similar to the consequences of Anupana administered in Ayogyaha.

**Anupana Guna Karma\textsuperscript{94}:**

Dealing with the rationality of drugs combination Charka states that two or more drugs together exhibit some special properties which can never be produced by
the individual components. Accordingly utility of Anupana by virtue of its combination produces diversified actions and these are enlisted in the table ‘I’.

On screening this list of Anupana Karma following implications could be derived.

Charaka, Vagbhata have described the effect of Anupana under Annapanavidhi and in relation to Ahara/Anna. While Sushruta, Sharangadhara and Rasataranginikara speak of the role of Anupana on influencing the Beshaja and its therapeutic effect. On the whole, the effect of Anupana can be understood at four levels.

(i) Effect on Ahara:


(ii) Effect on Oushadha:

Bhaishajyam Kshanena angeshu prasarpati, Oushadha gunakaram, Rasadeenam paramanavaha vibhajayati, Rasadeenam drutam agenshu sarpati, Bheshajam paribrumhaya, Yogavahi-yuktaha karyavardhanamcha. Rasataranginikara quotes Charaka’s Anupana Guna karma and comments similar to the effect of Anupana on Anna, its influence on other dravyas too can be considered: Based on this, probably all those effects of Anupana over Ahara could be emulated in the context of Oushadha dravyas too to some extent.

(iii) Effect on Roga/Vikara

Dosha Shamanam, Dosha – Sanghata bhedanam, Pipasam harati, Shrama Klamahram, Rogahna Bhaishajyam sahayakari, Rogahari shakti – gunavati cha.
(iv) Effect on the Rogi/Swastha

Tarpayati Preenayati Urjayati, Brumhayati, Ayu-jeeva balam karoti, Drudhangatam karoti, Sukham-swasthyam dadati, Rochayati, Deepanam Vrshyam, Varngam.

Table No.12: Anupana Guna Karma:\textsuperscript{101}

<table>
<thead>
<tr>
<th>Guna – Karma</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tarpayati- Chakshuradi prasadam Janayati</td>
<td>a, b, d, i</td>
</tr>
<tr>
<td>Preenayati – Manah prasadanam Janayati</td>
<td>a, b, d,</td>
</tr>
<tr>
<td>Urjayati - Utsaham Janayati, Bala Jeevanayoh</td>
<td>a, b, d,</td>
</tr>
<tr>
<td>Brumhayati</td>
<td>a, b, i</td>
</tr>
<tr>
<td>Deha - paryaptim Abhivardhayati – Aloluptamvjanayati</td>
<td>a, b,</td>
</tr>
<tr>
<td>Adhobhagam nayati</td>
<td></td>
</tr>
<tr>
<td>Bhuktam Avasadhayati – Shathilatam janayati</td>
<td>a, b, d</td>
</tr>
<tr>
<td>- Adhobhagam nayati</td>
<td></td>
</tr>
<tr>
<td>Anna sanghatam – Kathingam</td>
<td>a, b</td>
</tr>
<tr>
<td>- Bhinnatti</td>
<td></td>
</tr>
<tr>
<td>- Kledayati</td>
<td>a, b</td>
</tr>
<tr>
<td>- Marda vatam apadayati sharira komalatam</td>
<td>a, b, i</td>
</tr>
<tr>
<td>- Sukham parinamati</td>
<td></td>
</tr>
<tr>
<td>- Ashu vyarayitamapnuyati – Akhita deha vyapkatvam Janayati</td>
<td>a, b, i</td>
</tr>
<tr>
<td>Ayu - Balaya Hitam, Jeevayati, Balavantamkaroti</td>
<td>b, i</td>
</tr>
<tr>
<td>- Drudangatam karoti</td>
<td></td>
</tr>
<tr>
<td>Satmyatam prayacchati</td>
<td>e</td>
</tr>
<tr>
<td>Bhashajyam kshanena Angeshu prasurpati</td>
<td>f</td>
</tr>
<tr>
<td>Oushadha gunakaram</td>
<td>g</td>
</tr>
<tr>
<td>Sukham dadati - swasthyotpadakem</td>
<td>i</td>
</tr>
<tr>
<td>Rochayati</td>
<td>i</td>
</tr>
<tr>
<td>Pipasam harati</td>
<td>i</td>
</tr>
<tr>
<td>Doshala - Guru – Atimatra bhuktam sukham jeeryati</td>
<td>h, i</td>
</tr>
</tbody>
</table>

\textsuperscript{101} "Critical analysis of anupana with special reference to YogaRaja Guggula"
Further we can distinguish these Karmas based on the duration of the effect as follows:

(i) **Immediate effect:**

Generally medicines as compared to Ahara are meant to obtain immediate action. Hence all the Karma listed against effect on Oushadha and those against effect on Roga/Vikara could be considered here.

The purpose of intake of Anupana with Ahara dravya is to procure easier and Sukha Parinamana. These effects though not found as early as in case of Oushadha yukta but still could be put under this category

**Distant effect:**

Tarpana, Brumhanadi effects listed under effect on Swasthya are apparently achieved after a prolonged duration. However in some cases of Rogas the benefits may not be immediate as in case of Vrushaya Karma. Hence, effect on Swastha and on few cases of Rogi could be accounted here.
Balavaranakarama – refers to long terms effect of Ahara but may refer to its effect in abala and twakrogi too.

Dosha Sanghata bhedanam – aids in samprapti righatana in rogi or the dasha Sanghata in the drug like the undesired harmful effects properties, constituents of the drug are removed or destroyed. Eg : Vatsnabha is always administered with Tankana, Tamra with Ardrika swarasa

Urgyati – utsaha as well as may indicate vyadhikshamatwa too Sukham Jarayati- aids in beneficial and faster metabolism of medicines vyaptimapnuyat – aids in the spread of the pradhana oushada.

This might refer to its capacity to navigate the pradhana oushadha to reach the desired site of action maybe to particular Dhatu eg yogaraj guggulu with madhu in medorga I or to a specific Arayava - eg: yogaraja Guggulu with Triphalodaka in Netraroga, Guduchi kwatha in Vatasaka

Apart from this it indicates that by the properties of Anupana Basis is carried to even the remote corners of the body passing across the other wise barriers.

Anupana Karmukata:

Deriving the mode of action of a drug is a complex matter for a given drug. We know that a single drug has been consisting of various fractions on analysis and its action might be due to each one of them or in sum toto. In a compound, it becomes even more necessary to enquire the effect produced by the compound as a whole is due to the some total effect of all composing ingredients or in units.

Also Charaka says the effect exerted by the whole compound need not be same as that of individual drugs. We can see such an evidence especially in the Rasoushadhas wherein their range of effect i.e., widened and improved with
Anupama. Looking into the Ayurvedic literature except for Sharangadara and Rasataranginikara vivid description of mode of action of Anupama is not available\textsuperscript{102}.

Sarangadara illustrates “as oil in contact of water readily radiates all over the surface of water, similarly drug followed by Anupana soon pervades all over the body”.

Rasataranginikara being a recent author, seems to be influenced by Modern science and tries to imbibe its fundamentals. According to him Anupana aids in disintegrating the complex basis into its components and then carrying swiftly in the body. Anupana augmenting the effect of the primary drug thus helps in producing a therapeutic effect.

The Karmas described in relation to Ahara are said to be applied for other dravyas too like Bhuktam avasadhayate, Kathinyam bhinnati, Kledayati, Mardavatam apadayati, Akhila deham ashu vyapakatvam janayati and Sukham parinamati which could be considered for Oushadha dravyas too as said ny Taranginikara.

**Modern references aiding in understanding the mode of action of Anupana**

**Anupana in the form of solution\textsuperscript{103}**:

For absorption from gastro intestinal tract (GIT) the drug must be in solution. When not in solution the rate of absorption slows down due to time required for disintegration and release from the dosage form and time needed for dissolution in to GIT fluid. Once drug is in solution, absorption is a function of GIT membrane and follows the process of simple diffusion across lipid membranes with water filled pores. GIT membrane is permeable to lipid soluble forms, unionized and weak acids.

**Anupana and various solvents and suspensions**

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\textsuperscript{102} Critical analysis of anupana with special reference to YogaRaja Guggula
Drugs in aqueous forms are absorbed faster and more completely than solid forms like tablets or suspensions. Microcrystalline suspensions are better absorbed than their coarser counterparts.

Drugs with high lipid-water partition coefficient, lipid solubility, low degree of ionization have greater absorption in GIT and from the basic criteria for entry in to the Blood Brain Barrier\textsuperscript{104}.

**Anupana and absorption in GIT**

Drugs which accelerate gastric emptying time aid the drug to reach large absorptive surface of small intestine sooner and increases the drug absorption. Basic drugs are best absorbed from alkaline environment of small intestine\textsuperscript{105}.

**Anupana and Renal clearance**

Resultant metabolites are almost always more polar and water soluble, this facilitates rapid rate of renal clearance as renal tubular reabsorption decreases\textsuperscript{106}.

**Anupana vis-à-vis Controlled Release Drug Delivery Systems:**

Some drugs when combined with certain other chemicals agents, form chemical complexes which are slowly soluble in body fluids depending upon the pH of the environment. This slow dissolution rate provides a constant release of the drug for sustained action. This type of drug designing provides:

- Prolonged duration of action – used in treating chronic ailments
- Sustained drug action – of those having rapid rate of absorption and excretion
- Reduced frequency of administration - for drugs required in small doses
- Stable plasma concentration maintenance :
  - to have reduced potential for adverse effects and
  - to aid in uniform absorption from GIT\textsuperscript{107}

**Anupana vis-à-vis Drug interactions**
“Biopharmaceutics” is the study of the influence of formulations on the therapeutic activity. When two substances are administered simultaneously one may alter the response of the other which may be a beneficial - desired effect or a harmful undesired effect. This interaction between the two substances could be understood under Drug-Drug interaction, Drug-Food interaction in vivo and pharmaceutical interaction in vitro wherein chemical principals are involved.

There are basically two mechanisms responsible for drug interaction:

(1) Pharmacodynamic interaction

(2) Pharmacokinetic interaction

(1) Pharmacodynamic Interaction:

This involves modification of pharmacological response without altering the concentration of the drug in the tissue fluid i.e. when two drugs with similar pharmacological effects are administered with each other, they may alter the sensitivity of the effect or organ resulting in a synergistic: addition or potentiation effect or in a antagonistic effect: physiological or functional antagonism. The drugs may act on some or different receptors or processes to produce the response.

(2) Pharmacokinetic interaction:

Here there is a change in the concentration of the drug at the target site and could be due to alteration in drug absorption, distribution, metabolism and excretion. These interaction may result in synergism antagonism.

(a) Interaction at the site of the absorption

In the gut, drugs may interfere with each others absorption by (i) chemical interaction. (ii) Effecting gut motility. (iii) Changing gut flora.

(b) Interaction during distribution:
This includes (i) Competition for plasma protein binding site

(ii) Displacement from tissue binding sites

(c) Interaction during metabolism

Altered response at this stage is because of

i) Enzyme induction

ii) Enzyme inhibition

(d) Interaction during excretion:

This results due to (i) Interference with active transport. (ii) Diuretic activity.

As Charaka says one should always equip oneself with excellent appliances for the advancement of science. In the light of modern pharmacology the mode of action of drug complex thus detailed here could be adopted in better understanding the effect of Anupana complex.

Anupana Pradhanyata

Commending the efficiency of Anupana Vagbhata says whether the dravya is Alpadoshayukta or Nirdosha, Anupana brings about Sukhaparinamana. Kayyadeva adds to it stating that eventhough Laghu, Satmyhara is consumed in an appropriate time, Atyambupana, Vishamasana, Sandharana and Swapna Viparyaya result in Apaka. In such a state utilization of Anupana results in Sukhajeerana.

Furthermore, utilization of Anupana is emphasized by the Ayurvedic scholars\textsuperscript{108}, without which consequences like Ajeerna bhada are said to be resulted.

This reveals to us the need of Anupana in both daily life as well as in diseased conditions.
AMAVATA NIDANA

Nidana:

The word creation is a neologue. It should be actually called as evolution. Similarly destruction is called involution, because something can come from something not from nothing.

Circumstances favoring the evolution of an existence are the cause. The effect can be useful or harmful. Man’s indulgence governs the good or bad effects he has to enjoy. If his indulgence is Hita, leads to peace. If it is Ahita, leads to commotion. Besides, the contents of ahita are highly disease specific. Though being common to quite a few diseases, they lead only to Amavata.

Identifying the causative factors and understanding the role of these causative factors in the manifestation of the disease is utmost important to make a proper diagnosis, to predict prognosis and to plan treatment.

Madhavakara has explained following Nidanas for Amavata.\(^{109}\)

1. Viruddha Ahara
2. Viruddha Chesta
3. Mandagni
4. Nischalata
5. Vyayama soon after Snigdha Ahara.

Besides this, Harita opines that a person consuming Guru Ahara, Kanda Shaka (tubers) in excess and indulging in excessive Vyavaya is the Nidana of Amavata.\(^{110}\)
1. **Viruddha Ahara:**

   Factors that provoke doshas but do not eliminate them out of the body are called Viruddha. Acharya Charaka has described 18 types of Viruddha aharas (both drug and diet). Indulgence in any of these viruddhahara leads to provocation of tridosha, causing vitiation of Agni, which leads to production of Ama. Besides these, food intake without following the Asta-Ahara-Vidhi- Visheshayatana is also considered, as Viruddha. Dwadashapravichara should also be followed while taking food otherwise it is considered Viruddha.

2. **Viruddha Chesta:**

   The habits, which exert unfavorable effect on body humors, are considered as Viruddha chesta. In our classics viruddha ahara has been described extensively, but Viruddha cheshta is not mentioned clearly. In Viruddha chesta following factors can be considered, which are responsible of Dosha Utklesha - Vega vidharana, Vega udirana, Diwaswapana, Ratrijagarana, Ativyayama, Visham shayya shayana, Ativyavaya. Asthis and Sandhis are the most affected parts in Amavata. Root source of these are Majjavaha Srotas and it is directly afflicted with Viruddha sevana. So we can say that Viruddha Ahara and Viruddha Chesta both contribute as nidanas in pathogenesis of Amavata.

3. **Mandagni:**

   As it is said that Mandagni is the root cause of all diseases. It includes hypo functioning of various forms of dehagni (i.e. Jatharagni, Bhutagni and Dhatvagni). All these types of Agni to form Poshaka and Vardhaka dhatus in the body digest the ingested food. Mandagni leads to formation of Ama, which causes srotorodha and
results in reduced Dhatuposhana in turn causing Dhatukshaya. This Dhatukshaya leads to vata prakopa.\textsuperscript{117}

4. **Nishchalata: -**

Nishchalata causes kapha vriddhi ultimately leading to Agnimandya. A person who is lazy and less active by his nature, in such person continuous consumption of nutritious or even normal diet produces accumulation of Kapha dominant Dhatus. Also due to sedentary habits, Agni gets vitiated which in turn leads to vitiation of doshas and production of Ama; it along with Ama causes pathogenesis of Amavata.

5. **Snigdham bhuktavato hiannam vyayamam: -**

Though exercise just after any type of meal is unhealthy, but Vyayama after taking Snigdha Ahara has been specially mentioned in causation of Amavata. Here Vyayama means any type of physical activity. Normally a good blood supply is very essentials in gastro-intestinal tract for the digestion of heavy meal. But when a person indulges in any type of physical activity just after consuming meal, blood circulation to the skeletal muscle increases resulting in decrease of blood supply to the gastro-intestinal tract comparatively. This act seriously hampers the process of digestion and absorption. Therefore improper digestion leads to formation of Ama, which is the foremost pathological factor of Amavata. Also exercise after taking food causes Vata prakopa that affects the metabolism and assimilation of ahara.\textsuperscript{118}

In nutshell different etiological factors of Amavata have been tabulated as follow according to different Acharyas.
Table No.13: Nidanas of Amavata According to Different Authors:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Nidana</th>
<th>H.S.</th>
<th>M.N.</th>
<th>A.N.</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>Viruddha ahara</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>ii.</td>
<td>Guru ahara</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>iii.</td>
<td>Tarpite kandashakastu</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>iv.</td>
<td>Mandagni</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>v.</td>
<td>Viruddha chesta</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>vi.</td>
<td>Avyayama</td>
<td>+</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>vii.</td>
<td>Snigdha bhuktavato hiannam vyayama</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>viii.</td>
<td>Swa prakopnaiha:</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Vatadosha</td>
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<td></td>
<td>Pittadosha</td>
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<tr>
<td></td>
<td>Kaphadosha</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>ix.</td>
<td>Vyavayina</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Bhava Mishra, Vangsena and Yoga Ratnakara have followed the Madhavakara.

After going through the study of all etiological factors of Amavata, it is found that above factors individually or together lead to the Kapha prakopa or Vataprakopa or both, and both of them are responsible for disease Amavata\textsuperscript{119}. 
AETIOLOGY OF RHEUMATOID ARTHRITIS

Many theories regarding aetiology of Rheumatoid arthritis have been laid down however the exact cause is still to be explored. The most accepted concept regarding Rheumatoid arthritis is that it is an autoimmune disorder. All the possible causative factors are given below:

1. **Heredity:**

   The disease is triggered by T- lymphocyte activation in genetically predisposed individuals with defined HLA class II haplotypes.\(^{120}\)

2. **Infection:**

   Infectious agents like Mycoplasma, E-B Virus, CMV, Parvo virus or Rubella virus may be having a role in the manifestation of Rheumatoid arthritis as chronic inflammatory diseases cause the changes in joints.

3. **Super Antigen Driven Disorder:**

   Super Antigens are proteins produced by a number of microorganisms like Staphylococci, Streptococci, M. arthritidis etc. They have capacity to bind to HLA-DR molecules and T-cell receptors, which stimulates specific T-cells.\(^{121}\)

4. **Nutrition and Metabolism:**

   In some instances a history of prolonged malnutrition and intake of incompatible diet and habit may be found.

5. **Endocrine Secretions:**

   The incidence of Rheumatoid arthritis in females and striking amelioration during pregnancy has suggested a possible disturbance of gonadal functions.\(^{122}\) Some studies suggest that women with R.A. have reduced fertility because
antispermatozoan or anti ovarian antibodies may be involved in autoimmune diseases.\textsuperscript{123}

6. **Autoimmunity:**

Most recently R.A. has been classified among the diseases of autoimmune disorder, due to immune response against autologous immunoglobulin G (IgG) (Cecil 1985). It has been suggested that sensitization to self antigens could be a consequence of enzymatic or free radical change to proteins such as Immunoglobulin (IgG) or type II collagen leading to the development of idiotypic antibodies or a defect in glycosylation of IgG.

7. **Psychological Factors:**

Clinical experiences support this concept, that in certain patients, the course of the disease appears to be influenced by emotional and personality factors.
AMAVATA SAMPRAPTI

The term Samprapti is applied to express the course of the appearance of disease right from the Nidana sevana to Vyadhi Utapatti. The study of Samprapti is most essential part of treatment as the Samprapti vighatana is said to be done by treatment.

According to the commentators on Madhava Nidana the Samprapti of Amavata can be summarized as under:

**Sanchaya & Prakopa:**

When a person is exposed to aetiological factors like Viruddha Ahara, does Vyayama after intake of Snigdha Ahara, Chinta, Krodha etc., Agnimandya is there leading to Tridosha dushti (specially Vata) and Amotpatti. Ama because of its guru, sheeta, sthira, Snigdha, and picchila guna further reduces the Agni. During these stages, the dosha becomes virulent and capable of inflicting others, but remain at their own site during this stage.

**Prasara:**

With the help of Vata, this Ama gets Prasara to shleshma sthana producing mild sandhishoola etc. along with Ama symptoms. Then Ama gets interacted with Tridosha and further modified (Vidagdha) to great extent and yugapatakupitavanta of Ama and Vata takes place via Rasavaha srotasa (Dhamani).

**Sthana Samshraya:**

Thus prasarita Ama, which viscid, unctuous and guru along with prakupita Vata endures Sthana Samshraya in Hridaya, Trika Sandhi and Sarvanga (Srotoabhishyanda) leading to Dosha-dushya Sammurchchana. Vata acts as avaraka
and blocks srotasas. Primarily the disease is not manifested completely, so only initial mild symptoms like Aruchi; Apaka etc. are observed which can be considered as purva rupa of the disease Amavata.

**Vyakti:**

In this stage, if the patient is not managed or the patient continuous to indulge in the etiological factors then the disease passes to the next stage where manifestation of the disease occur and it is known as Vyakti Avastha.

In Vyakti Avastha most of the symptoms of Amavata are manifested like Vrishchika damshavata vedana, Stabdhata, Sandhi sotha, Gaurava etc.

**Bheda:**

In chronic stage or if the disease is left untreated it reaches Bhedavastha i.e. producing updrava life Samkocha, Khanjata, etc.
Illustration No.1 Schematic Representation of Amavata Samprapti:

SAMPRAPTI OF AMAVATA

Viruddahara → Niscalatva → Viruddha chesta

Snigdha Bhojanottara Vyayam (Vata caya)

Pre-existing Mandagni

Vitiation of Saman Vayu Pacak pitta Kledak kapha

Mandagni

Amotpatti Evam Vataprakopa.

Vyayuna Previto Ama Slesma Sthane Pradhavati

Dhatvagnimandya

Bhuyo dusti of ama by Malasancayarupa Kapha etc. Dosa and dhatudusti.

Sroto abhisyanda

Sthanasamsraya and dosa dusya sammurcchana

Manifestation of Amavata

Anyani Updrava like Sankocha, Khanjata etc

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
SAMPRAPTI GHATAKA:

In the process of disease, a vast number of factors invariably take part in the manifestation of a disease and are collectively called as samprapti ghatakas. Consideration of these ghatakas is quite essential for the proper understanding of disease. The samprapti ghataka of Amavata are as under.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dosa</strong></td>
<td>Kaphavata pradhana Tridosha</td>
</tr>
<tr>
<td><strong>Dusya</strong></td>
<td>Rasa, Asthi, Sandhi</td>
</tr>
<tr>
<td><strong>Agni</strong></td>
<td>Jatharagni, Dhatvagni</td>
</tr>
<tr>
<td><strong>Aam</strong></td>
<td>Tatjanya Ama</td>
</tr>
<tr>
<td><strong>Udbhava sthana</strong></td>
<td>Amasaya</td>
</tr>
<tr>
<td><strong>Sanchara sthana</strong></td>
<td>Rasayni, sarvasareera.</td>
</tr>
<tr>
<td><strong>Adhisthana</strong></td>
<td>Sleshmasthana, Sandhi</td>
</tr>
<tr>
<td><strong>Vyakta sthana</strong></td>
<td>Sandhis</td>
</tr>
<tr>
<td><strong>Srotas</strong></td>
<td>Rasavaha Srotas</td>
</tr>
<tr>
<td><strong>Srotodusti</strong></td>
<td>Sanga</td>
</tr>
<tr>
<td><strong>Roga marga</strong></td>
<td>Madhyama</td>
</tr>
<tr>
<td><strong>Vyadhi svabhava</strong></td>
<td>Chirkari.</td>
</tr>
</tbody>
</table>

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
**SAMPRAPTI BHEDA:**

**Samkhya Samprapti evam Vidhi Samprapti:**

On the basis of doshik involvement Amavata is classified into seven types, viz.

1. Vataja  
2. Pittaja  
3. Kaphaja  
4. Vatapittaja  
5. Vatakaphaja  
6. Pittakaphaj  
7. Sannipataja

**Vikalpa Samprapti:**

- Kapha dravyatah gunatah vridhi
- Vatah karmatah vikriti
- Aama - jathragnimandyajanya aam

**Pradhanya Samprapti:**

- Pradhantah aam
- Vata kapha

**Bala Samprapti:**

- Roga bala to be understood by Nidana panchaka
- Rogi bala is to be understood by dasavidha pareeksha.

Thus a detailed review of the Samprapti of Amavata has been dealt.
PATHOGENESIS OF RHEUMATOID ARTHRITIS: 125

The cause of rheumatoid arthritis is unknown, but it is suspected that certain infectious agents or a genetical susceptibility or immunologically mechanism cause non-specific inflammation. In this process T/B cell activation of synoviocytes occurs and they cause inflammatory synovitis.

The exact pathogenesis of rheumatoid arthritis is not known. Many hypotheses have been put forward. The primary event is inflammation of synovium which is immunologically mediated. The proposed sequence of events, which leads to joint damage, is as follows:

The first event is presentation of the putative antigen by macrophages to the CD4+ helper cells in genetically predisposed individuals. The antigen could be of bacterial or viral origin.

Activation of Helper T cells results in release of interleukin 2, which in turn amplifies the Helper T cells by a positive feedback mechanism. Cytokines like IL-4, IL-6 and gamma IFN are also released by the activated CD4+ cells. These cytokines increase the expression of adhesion molecules like ICAM-1, LFA-1 and Mac-1, which help in the localization of the inflammatory cells. Cytokines stimulate the activation, proliferation, and differentiation of B-cells into antibody-producing plasma cells. These plasma cells produce antibodies against the Fc fragment of IgG, which is termed as the Rheumatoid Factor.

Rheumatoid factor forms immune complexes with IgG. These activate the complement cascade. This result in production of C3a, C5a, C3b and C56789 (membrane attack complex) is capable of damaging cells by drilling pores in their membranes.
Infiltration with Neutrophills result in further amplification of the inflammatory insult through release of oxygen free radicals, inflammatory metabolites of arachidonic acid pathway like prostaglandin’s and leukotrienes, metalloproteinases like collagenase, elastage, gelatinase and stromelysin.

These inflammatory mediators lead to damage of the articular cartilage, demineralisation of the underlying bone, erosion of the joint margins, laxity of the joint capsule and ligaments and finally total derangement of the affected joint leading to joint deformities.

**Figure No.01: Pathogenesis of Rheumatoid Arthritis:**

**Pathology:**

In earliest changes the synovium becomes oedematous, filled with fibrin exudates and cellular infiltrates. There is an increase in Synovial fluid. As the inflammation persists the synovium gets hypertrophied and surrounds the periphery of the articular cartilage to form a Pannus. The articular cartilage loses its smooth shiny appearance. With further progress of the disease the cartilage becomes worn off and the bone surfaces become raw. The joints get deformed, initially because of severe
muscle spasm associated with pain but later due to fibrosis of the capsule and other soft tissue structure.

In an advanced disease, the hypertrophied synovium and synovial fluid distend the joint capsule and the ligaments supporting the joint are stretched, resulting in subluxation of joint. Osteoporosis develops in the bones adjacent to the diseased joint. Periarticular tissues, notably tendons and muscles become oedematous and infiltrated with cells and may rupture spontaneously.

The course of disease varies from patient to patient. In some, it is no more than a mild arthritis, which totally recovers; in others it may be severe, chronic debilitating disease, ultimately ending up in deformity.

**Stages of Rheumatoid Arthritis:**

From clinical viewpoint rheumatoid arthritis can be divided into following stages:-

1) **Potentially reversible soft tissue proliferation:** In this stage, the disease is limited to the synovium. Their occurs synovial hypertrophy and effusion. No destructive changes can be seen on X-ray.

2) **Controllable but irreversible soft-tissue destruction and early Cartilage Erosions:** X-ray shows a reduction in the joint space, but the outline of the articular surface is maintained.

3) **Irreversible soft-tissue and bony changes:** The Pannus ultimately destroys the articular cartilage and erodes the subchondral bones. The joint becomes ankylosed usually in a deformed position. It may be subluxated or dislocated.
POORVAROOPA

The Purvarupa of Amavata has not been clearly mentioned anywhere in the classics. Early clinical manifestation of the signs/symptoms can be considered as Purvarupa of the disease.

When the prakupita Ama via Rasavaha srotasa endures Sthana samshraya in Hridaya, Sandhi etc. before getting fully manifested as disease Amavata, in the early stage produces mild symptoms like Apaka, Aruchi etc. that can be considered as Purvarupa of Amavata. Vangasena has given Shiroruja and Gatraruja as Purvarupa of Amavata.

PREMONITORY SYMPTOMS OF RHEUMATOID ARTHRITIS:

In Western system of medicine, it is described that the prodromal symptoms like fatigue, weakness, joint stiffness; vague arthralgia, myalgia and paraesthesia of extremities may precede the appearance of joint swelling by several weeks. Anorexia, weight loss, lethargy and myalgia occur commonly throughout its course and may also precede the onset of articular symptoms by weeks or months.
Roopa have been very clearly mentioned in Madhava Nidana. Almost same has been mentioned by Bhava Prakasha and Yogaratnakara.

The signs and symptom of Amavata mentioned in Ayurvedic classics can be categorized and described under the following headings.

1. Pratyatama Roopa
2. Samanya Roopa
3. Doshanubandha Roopa
4. Pravridhha Roopa

**Pratyatma Lakshana (Cardinal Signs and Symptoms)**

Pratyatma Lakshanas are main clinical features on which the disease can be clearly differentiated from other identical forms of disease. In Amavata, sandhis are the main site of manifestation of clinical features, thus joint associated symptoms are considered as Pratyatma lakshana of disease Amavata.

These are as follows:

**A). Sandhi Shoola (Pain in Joints)**

Sandhishoola is the characteristic feature complained by the patients suffering from Amavata. It may be severe and continuous characteristically like that of scorpion sting (Vrishchika Damshavata) usually disturb the patient in sleep, aggravate by movement. It also indicates the presence of Vitiated Vata Dosha as Vata causes all pains. This pain aggravates during cold and cloudy weather and on performing any type of massage with oily preparations. This is the characteristics evidence of involvement of Ama.
B). Sandhi Shotha (Swelling in Joints)\textsuperscript{127}:

Shotha is the result of accumulation of Ama in Sandhi Sthana. It is caused by Srotorodha i.e. obstruction of Ama by vitiated Vata Dosha.

C). Stabdha\textsuperscript{128}:

Difficulty in performing movements in involved joints constitutes the Gatrat-Stabdha (Stiffness). This is due to the affliction of the joint by Samavata. It is generally felt in the morning but may precede the whole day.

D). Sparshasahatva\textsuperscript{129}:

Sparshasahatava means tenderness in affected part. Though it is not separately referred in Ayurvedic texts but objective pain i.e. pain on pressure may be considered as sparshasahatva. It is usually present in the affected joints.

E). Sashabda Sandhi:

This symptom has been mentioned in Yogaratnakara. It means crepitation on movement of the joint. Such type of affliction joint is due to vitiated Vata Dosha.

Samanya Rupa\textsuperscript{130}:

In addition to Pratyatama Rupa the patient suffering from Amavata may have a number of Samanya Rupa constitutional feature depending upon severity and chronicity of the disease.

Acharya Madhavakara has mentioned Angamarda, Aruchi, Trishana, Alasya, Gaurava, Jwara, Apaka, and Angasunnata as Samanya Rupa of Amavata.
Dosha Anubandha Rupa:

In Madhava Nidana the symptoms of involved Dosha has also been described which are as follows.

1. Vatanubandha Lakshana - Sandhi Shoola
2. Pittanubandha Lakshana - Sadaha Raga

1. Vatanubandha:

Though pain in joints is the main feature of the Amavata, severe throbbing pain that aggravate in night and cold atmosphere is the characteristics of Vatanubandha.

2. Pittanubandha:

Redness and burning sensation on the affected joint confirms the presence of pitta in the patient of Amavata.

3. Kaphanubandha:

A subjective feeling as the body parts being covered by wet cloth is there in case of Kaphanubandha.

- Guruta may be present in all types of Amavata but it is predominantly present in Kaphanuga Amavata.

- Itching (kandu) sensation on the affected parts is the characteristics of Khaphanubandha.
1. **Dosha Samsarga Lakshana:**

   Any two doshas may be involved in Amavata, which can be inferred by doshik lakshana explained previously.

2. **Sannipataja Lakshana:**

   This can be understood by overviewing single dosha lakshana as the disease Amavata, may picturise the symptoms showing equal involvement of all doshas.

**Pravriddha Lakshana of Amavata:**

   It is the advanced stage of disease and very troublesome to patients as well as for physicians. According to Kriyakaal and stage wise development, it is the worst stage of disease. Acharya Madhavakara, Bhava Mishra and Yoga Ratnakara have elucidated articular and Extra-articular feature present in this stage. These features are Sarujam Sandhishotha, Vrishchika damshavata vedana, Utsahahani, Bahumutrata, Kukshikathinya, Kukshishool, Nidra Viparyaya, Chardi\(^{131}\), Bhrama, Murcha, Hritgraha, Vibandha, Antrakujana, Anaha, Agnimandya, Praseka, Gaurava\(^{132}\). Daha Trishna.
Table No.14: Rupa of Amavata in Ayurvedic Classics by Various Acharyas:

<table>
<thead>
<tr>
<th>Sr.</th>
<th>Rupa</th>
<th>Harita Samhita</th>
<th>Madhava Nidana</th>
<th>Anjana Nidana</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Angamarda</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Aruchi</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Trishna</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>4</td>
<td>Angagaurava</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>5</td>
<td>Angasunnata</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Agnisada</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>7</td>
<td>Praseka</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>8</td>
<td>Alasya</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>Staimitya</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>Asyavairasya</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>11</td>
<td>Apaka</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>12</td>
<td>Daurbalya</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>13</td>
<td>Kandu</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>14</td>
<td>Chhardi</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>15</td>
<td>Bahumutrata</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>16</td>
<td>Hridgraaha</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>17</td>
<td>Angavaikalya</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>18</td>
<td>Bhrama</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>19</td>
<td>Nidraviparyaya</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>20</td>
<td>Hasta, Pada, Shiro, Gulpha, Trika, Janu Sandhi Ruja &amp; Shotha</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>21</td>
<td>Kukshishhoola</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>22</td>
<td>Kukshikathinya</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>23</td>
<td>Jadyata</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>24</td>
<td>Murcha</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>25</td>
<td>Trikashoolha</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>26</td>
<td>Utsahahan</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>27</td>
<td>Jwara</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>28</td>
<td>Trishna</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>29</td>
<td>Daha</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

Bhava Mishra and Yoga Ratnakara have followed Madhavakara.

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
CLINICAL FEATURES OF RHEUMATOID ARTHRITIS

In majority of patients, the onset is insidious with joint pain, stiffness and symmetrical swelling of a number of peripheral joints but other disease patterns can occur.

Table No.15 : Patterns of onset:

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Insidious</td>
<td>70%</td>
</tr>
<tr>
<td>Acute</td>
<td>15%</td>
</tr>
<tr>
<td>Systemic</td>
<td>10%</td>
</tr>
<tr>
<td>Palindromic</td>
<td>05%</td>
</tr>
<tr>
<td>B) Oligoarticular</td>
<td>44%</td>
</tr>
<tr>
<td>Polyarticular</td>
<td>35%</td>
</tr>
<tr>
<td>Monoarticular</td>
<td>21%</td>
</tr>
</tbody>
</table>

Initially pain may be experienced only on movement of joints, but rest pain and especially early morning stiffness is characteristic feature of all kind of inflammatory arthritis.

In typical case the small joints of the fingers and toes are the first to be affected. Swelling of proximal but not the distal, Interphalangeal joints gives the fingers a “Spindled” appearance and swelling of the Metatarsophalangeal joints result in “Broadening” of the forefoot. As the disease progresses with or without intervening remission, there is a tendency for it to spread to involve the wrist, elbow, shoulder, knees, ankles, subtalar and mid-tarsal joints. The Hip joints become involved only in the more severely affected. The temporo-mandibular, acromioclavicular, sternoclavicular joints are sometimes affected as indeed are all synovial joints.
Table No.16: Joints affected in Rheumatoid Arthritis:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Common</th>
<th>Less common</th>
<th>Uncommon</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Metacarpophalangeal joints of hands</td>
<td>Hip joint</td>
<td>Atlanto-axial joint</td>
</tr>
<tr>
<td>2.</td>
<td>Proximal interphalangeal joints of hands</td>
<td>Temporo-mandibular joint</td>
<td>Facet joint of cervical spine</td>
</tr>
<tr>
<td>3.</td>
<td>Wrist, Knee, Elbow, Ankle</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Progression:

As the disease advances, muscle atrophy, tendon sheath and joint destruction results in limitation of joint movement, joint instability, subluxation and deformities but later permanent contracture develops.

Characteristic deformities include flexion, contracture of small joints of hands and feet, the knee, hips, and elbow.

Table No.17: Different deformities in Rheumatoid arthritis:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Part of the Body</th>
<th>Deformity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Hand</td>
<td>Ulnar Drift of Hand</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Boutannier deformity (Button-Hole)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Swan- neck Deformity</td>
</tr>
<tr>
<td>2.</td>
<td>Thumb</td>
<td>Z- Deformity</td>
</tr>
<tr>
<td>3.</td>
<td>Elbow</td>
<td>Flexion deformity</td>
</tr>
<tr>
<td>4.</td>
<td>Knee</td>
<td>Early – Flexion Deformity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Late – Triple subluxation (flexion, posterior subluxation, external rotation)</td>
</tr>
<tr>
<td>5.</td>
<td>Ankle</td>
<td>Equinus deformity</td>
</tr>
<tr>
<td>6.</td>
<td>Foot</td>
<td>Hallux valgus, Hammer toe etc.</td>
</tr>
</tbody>
</table>
Extra-articular Features:

Rheumatoid arthritis is a systemic disease. Anorexia, weight loss, lethargy and myalgia occur commonly throughout its course and may precede the onset of articular symptoms by week or month. The many extra articular feature of the disease are as follows –

- **Systemic feature**: Fever, weight loss, fatigue, susceptibility of infection.
- **Haematological feature**: Anaemia (Anomochromic, normocytic anaemia).
- **Lymphatic feature**: Spleenomegaly, felty’s syndrome, lymphadenopathy.
- **Musculoskeletal feature**: Muscle wasting, tynosynovitis, bursitis, osteoporosis.
- **Ocular feature**: Scleritis, episcleritis, keratoconjunctivitis Sicca, scleromalacia
- **Neurological feature**: Cervical cord compression, compression neuropathies, peripheral neuropathy, mononeuritis multiplex.
  - **Cervical cord compression**: It can result in cord compression and sudden death if the neck in manipulated inadvertently under an anesthetic.
- **Vascular feature**:
  - **Digital arteritis**: Ulcer, polyderma gangrenosum, mononeuritis multiplex, visceral arteritis.
- **Cardiac features**: Pericarditis, myocarditis, endocarditis, conduction defect, coronary vasculitis, granalomatous arthritis.
BHEDA

Madhavakara has classified Amavata according to predominance of doshas\textsuperscript{133}, which are as follows:

1. **Ek Doshaja\textsuperscript{135}:**
   
   (a) Vataja
   
   (b) Pittaja
   
   (c) Kaphaja

2. **Dwi Doshaja\textsuperscript{136}:**
   
   (a) Vata-pittaja
   
   (b) Pitta-kaphaja
   
   (c) Kapha-vataja

3. **Tri Doshaja\textsuperscript{137}:**
   
   These varieties of Amavata can be differentiated on the basis of characteristic symptoms of Dosha involved.

   Acharya Harita has classified Amavata into following four types on the basis of clinical manifestation:\textsuperscript{134}

   1. **Vishtambhi** – In Vishtambhi type of Amavata Gatra-gaurava, Adhamana and Bastishoola are present.

   2. **Gulmi** – In this type Jathargarjana (Bowel sounds), Gulmavatapeeda and Katijadata are present.

   3. **Snehi** – Gatra snigdhata, Jadya, Mandagni and Excretion of vijjala and snigdha Ama are present in such type of Amavata.

   4. **Sarvangi** – Excretion of Peeta, Shyama, Vijjala and Pakwa Ama, Shrama and Klama are present in this type.
Again it can be classified according to:\(^{138}\):

(A) **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.

(B) **Chronicity:**

Depending on the chronicity, the disease is classified into:

1. Navina Amavata
2. Jeerna Amavata

Up to one year of onset it is said to be Navina and more than one year it is called Jeerna Amavata.
UPADRAVA

Upadrava of Amavata is not mentioned with separate headings and they are included in Pravriddha Lakshna of Amavata.

Madhava Nidana had considered Khanja, Samkoca, as the upadravas of Amavata.

Acharya Harita had considered Angavaikalya as the Upadrava of Amavata.

COMPLICATION OF RHEUMATOID ARTHRITIS\textsuperscript{139}

- Septic Arthritis

- Amyloidosis – The synovium is infiltrated with amyloid protein.

- Systemic Vasculitis

- Spinal Cord Compression

- Felty’s syndrome – Spleenomegaly with neutropenia leads to repeated infections and weight loss known as Felty’s syndrome.
UPASHAYA – ANUPASHAYA

Use of medicaments, dietary regimens and viharas, which bring lasting relief, are known as Upashaya. On the contrary, anupashaya aggravates the disease. In classics there is no direct reference regarding Upashaya and anupashaya of Amavata except Acharya Harita who mentions that cold-water bath increases the condition.

The other things related to Ahara Vihara that can be considered as Upashaya and anupashaya are given in the table.

Table No.18: Showing Upashaya – anupashaya of Amavata:

<table>
<thead>
<tr>
<th>Upashaya of Amavata</th>
<th>Anupashaya of Amavata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Katu, Tikta, Ruksha drugs</td>
<td>Amla Rasa</td>
</tr>
<tr>
<td>Deepan, Pachan drugs</td>
<td>Samtarpana</td>
</tr>
<tr>
<td>Langhana, Ruksha Sweda</td>
<td>Abhyanga, Snehayukta Sweda</td>
</tr>
<tr>
<td>Ushna Kaal etc.</td>
<td>Sheeta Kaal, Meghodaya Kaal and Prataha Kaal</td>
</tr>
</tbody>
</table>
Physician who wants to be successful should have clear knowledge of curable and incurable disease, and start treatment in time with well understanding of various aspects of the disease. This will help in accomplishing his goal of curing diseases. Physician treating incurable diseases would loose wealth, fame and earn bad reputation. He will become victim of legal sanctions.

Generally Amavata is a Krichrasadhya Vyadhi as it includes Madhyama Rogamarga. It is also difficult to treat because of opposite nature of Ama and Vata. Diseases accompanied by Upadrava becomes Asadhya the same is applicable to Amavata.

Ekadoshaja Amavata caused by Minimum Nidana, with few Lakshanas, of recent origin is Sadhya and Harita adds Pakwama type of Amavata is Sukhasadhya. When the disease is Dwidoshaja, having many Nidanas and Lakshanas, then it become Yapya. Disease becomes Krichrasadhya by the involvement of Tridosha and when associated with Sarvangashotha. Snehi ama, Vishtambhi, Gulmi types of Amavata is Kasthasadhya.¹⁴⁰

Shopha anaha, Jadya, Ghana udara, Aruchi and Amatisara yukta Snehi Amavata is Asadhya according to Harita.
PROGNOSIS OF RHEUMATOID ARTHRITIS\textsuperscript{141}:

The course and prognosis in Rheumatoid arthritis is very difficult to predict because of its variability. 25\% of the severe patients may have complete remission of symptoms and fit for all normal activities. 40\% of the cases suffer with moderate type of functional impairment despite exaggeration and remission. 25\% may be more severely disabled and 10\% may be severely crippled almost limited to bed.

**Prognosis may be very poor in many cases as follows:**

1. High titer of rheumatoid factor

2. Insidious onset of the disease

3. More than one year with active phase without any remission

4. Early development of nodules and erosions

5. Extra-articular manifestation

6. Several functional impairment the median life expectancy of persons suffering with Rheumatoid Arthritis is shortened by three to seven years. Factors co-related with early death include disability, disease duration or severity, glucocorticoid use and age of onset of disease.
SAPEKSHA NIDANA

For the diagnosis of any disease physician should have clear knowledge of other conditions that mimic particular condition. This can avoid the physician from embarrassment and prevents the patient from taking the unwanted pain and complications. While diagnosing a case of Amavata it is necessary to identify and exclude those diseases which have a close bearing on the trail of Amavata in its signs and symptoms some of them are Vatarakta, Sandhigata Vata, Kroshtuka Sheersa, Sandhigata Sannipata jwara, etc.

1. **Vata Shonita**\(^{142,143}\):

   In the disease process of Vata Shonita, Rakta Dushti plays an important role. Vata and Shonita get vitiated due to each other’s own causative factors. Though this disease presents with Shotha in Parshva Sandhi and big joints also, it classically begins with affliction of big toe with skin manifestations unlike Amavata.

2. **Kroshtuka Sheersha**\(^{144}\):

   This is a disease of the knee joint and the question of involvement of other joints does not arise. Swollen Knee has the appearance of head of a jackal (Jambuka Shira). Here too Vata and Shonita are the two factors involved.

3. **Sandhigata Vata**\(^{145}\):

   Sandhigata Vata typically presents with swelling of the joint that gives a feeling of a bag inflated with air. Notably, use of oil here results in improvement of symptoms rather than aggravation.
4. **Sandhigata Sannipata Jwara**\(^{146}\):  

In this disease the joint manifestations are secondary to Jwara that is the cardinal symptom. Besides, excessive mucoid secretion from mouth, Insomnia and Saruja Kasa differentiates this condition from Amavata.  

Along with the above-mentioned diseases, Shotha\(^ {147}\) and Shoola in Sandhi, like in Amavata can be seen in Vataja Atisara\(^ {148}\), Grahani\(^ {149}\), Kshayaja Kasa\(^ {150}\), Vatodara\(^ {151}\), Arsha\(^ {152}\), and Antarvega Jwara. But these can be differentiated from Amavata by their own characteristic features.

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**DIFFERENTIAL DIAGNOSIS OF RHEUMATOID ARTHRITIS**

Rheumatoid Arthritis differentiated from other diseases having similar features like Joint Pain on the basis of presenting Signs and Symptoms & biochemical investigations. These diseases are as follows\(^ {153}\):

1. **Gout:**

   In pathological investigation high serum uric acid level is present. Response to administration of Colchicine is found in this condition.

2. **Osteoarthiritis:** -


3. **Polymyalgia Rheumatica:** -

   In this condition ESR is very high and peripheral joint signs are minimal.  
   (Onset of Rheumatoid Arthritis in elderly mimic Polymyalgia Rheumatica)
4. **Polyarthritis Nodosa:**

   May resemble Rheumatoid Arthritis, but radiological changes are minimal. Severe systemic symptoms and necrotising vasculitis at early stage of polyarthritis may be present, but joint erosions and typical Rheumatoid Arthritis deformity are rare in later stage.

5. **Systemic Lupus Erythematosus:**

   It is characterized by the presence of numerous autoantibodies, circulating immune complexes and widespread immunologically determined tissue damage. Chronic inflammatory arthritis and tenosynovitis may lead to deformities and contractures, but erosive changes are very uncommon.

6. **Rheumatic Fever:**

   First, attacks are usually under 15 years of age in 70% of case. It is characterized by flitting type of joint pain and sustained fever. Spindling of finger joint is rare. Myocarditis, endocarditis and nodules on the different histological picture are present.

**Table No.19: Symptoms of Rheumatoid Arthritis, which may require differential diagnosis:**

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Possibilities to be considered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute or severe pain in one or</td>
<td>Joint sepsis – fever may be absent</td>
</tr>
<tr>
<td>a few joints</td>
<td>Fracture – even without obvious trauma</td>
</tr>
<tr>
<td>Unexplained weakness</td>
<td>Cervical spine involvement producing cord compression</td>
</tr>
<tr>
<td>Unilateral calf swelling</td>
<td>Ruptured Baker’s cyst – this is frequently misdiagnosed as a deep venous thrombosis (which may</td>
</tr>
<tr>
<td></td>
<td>however occur in association with a ruptured joint</td>
</tr>
<tr>
<td>Painful red eye</td>
<td>Scleritis – requires expert ophthalmological assessment</td>
</tr>
</tbody>
</table>
### Table No.20: SAPEEKSHA NIDANA CHART:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Amavata</th>
<th>Vata sonita</th>
<th>Kroshtuka Sheersha</th>
<th>Sandhigata Vata</th>
<th>Sandhigata Sannipata Jwara</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>At first the smaller joints are affected</td>
<td>At first the great toe is usually affected</td>
<td>Only the knee are affected</td>
<td>Weight bearing joints are affected</td>
<td>Both small and big joints</td>
</tr>
<tr>
<td>02.</td>
<td>Mild fever present</td>
<td>Fever present</td>
<td>Fever absent</td>
<td>Fever absent</td>
<td>Fever present</td>
</tr>
<tr>
<td>03.</td>
<td>Swelling over the affected joint followed by pain</td>
<td>Swelling over the affected joint followed by pain</td>
<td>Typical jackal’s head shape of knee joint with pain</td>
<td>Pain and swelling over the affected joint</td>
<td>Pain in all the joints of the body</td>
</tr>
<tr>
<td>04.</td>
<td>Tridoshaja mainly vata kapha predominant</td>
<td>Tridoshaja mainly vata rakta predominant</td>
<td>Tridoshaja mainly vata predominant</td>
<td>Vata predominant</td>
<td>Tridoshaja mainly kapha predominant</td>
</tr>
<tr>
<td>05.</td>
<td>Hritgaurava present</td>
<td>Absent</td>
<td>Absent</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>06.</td>
<td>Dusya rasa</td>
<td>Dusya rakta</td>
<td>Dusya rasa rakta</td>
<td>Dusya rasa</td>
<td>Dusya rasa</td>
</tr>
<tr>
<td>07.</td>
<td>No relief by Rakta-mokshana</td>
<td>Relief by Rakta-mokshana</td>
<td>No relief by Rakta-mokshana</td>
<td>No relief by Rakta-mokshana</td>
<td>No relief by Rakta-mokshana</td>
</tr>
<tr>
<td>08.</td>
<td>Apakwa in nature</td>
<td>Pakwa in nature</td>
<td>Apakwa in nature</td>
<td>Apakwa in nature</td>
<td>Apakwa - pakwa in nature</td>
</tr>
</tbody>
</table>
**PATHYA APATHYA**

The pathyas mentioned in Yoga Ratnakava and Bhaisajyaratnavali for Amavata can be classified and listed as under.

**Pathya**

<table>
<thead>
<tr>
<th>Varga</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anna varga</td>
<td>Purana sali, purana sastikasali yava, pancakola siddha anupana</td>
</tr>
<tr>
<td>Saka varga</td>
<td>Patola, Karavellaka, Sigru, Varuna goksura, nimba patra.</td>
</tr>
<tr>
<td>Kanda varga</td>
<td>Lasuna and Adraka</td>
</tr>
<tr>
<td>Mamsa varga</td>
<td>Takra siddha lava mamsa, jangala mamsa</td>
</tr>
<tr>
<td>Jala varga</td>
<td>Usna jala</td>
</tr>
<tr>
<td>Mutra varga</td>
<td>Gomutra</td>
</tr>
<tr>
<td>Ksira varga</td>
<td>Takra and Mastu</td>
</tr>
<tr>
<td>Madya varga</td>
<td>Purana madya</td>
</tr>
</tbody>
</table>

**Apathya**

<table>
<thead>
<tr>
<th>Varga</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annavarga</td>
<td>Masa</td>
</tr>
<tr>
<td>Saka varga</td>
<td>Upodika</td>
</tr>
<tr>
<td>Mamsa varga</td>
<td>Anupa mamsa, matsya</td>
</tr>
<tr>
<td>Taila varga</td>
<td>Tila taila</td>
</tr>
<tr>
<td>Jala varga</td>
<td>Dusta jala, sita jala</td>
</tr>
<tr>
<td>Ksira varga</td>
<td>Dadhi</td>
</tr>
<tr>
<td>Anya</td>
<td>Viruddhahara, Vegavidharana, Visamasana etc.</td>
</tr>
</tbody>
</table>
In general it can be said that any drug or diet that is katu, Tikta by rasa, usna by guna and having Vatahara Kaphahara and amapacana in action can be considered as pathya for Amavata.

The drugs and diet that possess Madhura and amla rasa, guru, picchila, Atisnigdha Sita and abhisyandi guna and which causes provocation of vata, kapha and formation of ama are apathya for Amavata.
**AMAVATA CIKITSA SIDDHANTA**

Acharya Chakrapani was the pioneer in describing the principles of treatment of Amavata, which are Langhana, Swedana, and drugs having tikta-katu rasa and Dipana property, virecana, snehapana and Basti\(^{154}\). In Yogaratnakar similar description regarding the etiology and principles of treatment is available. In addition to ruksha sweda like Valuka pottali and upanaha have been mentioned for the management of Amavata. In Yogaratnakar and Chakradatta a lot of recipes in the form of Kwatha, churna and lepana have been enumerated. Acharya Bhavamishra also followed the same steps in these aspects.

**Langhana:**

Langhana is the first and must measure that has been advised for Amavata chikitsa. Agnimandya and Ama is the chief initiating factors of Amavata, which are best, conquered by langhana.\(^{155}\) Further Amavata is considered as an amasayottha Vyadhi and langhana is the first line of treatment in such conditions.

**Swedana:**

In the management of Amavata, Ruksha Sweda has been advocated mostly in the form of valuka pottali due to its Amapacana, Kaphahara, and Soshana etc. properties. Moreover Bhava prakasha and Yogaratnakar also prescribe upanaha sweda without sneha in Amavata. But in the chronic stage of the disease when rukshata takes place due to vatavriddhi, snigdha sweda should be employed, as it is Mardavakara and Balakara.
**Tikta-katu and Dipana drugs:**

Tikta and katu rasa have got the antagonistic properties that of ama and kapha. Because of their Agni Vardhaka property, they increase digestive power, which digests amarasa and reduces the excessive production of kapha and also removes the obstruction of channels. Dipana drugs act through the same mechanism. These all properties also help in transportation of the doshas from sakhas to kostha and thus help in the samprapti vighatana process.

**Virechana:**

In Amavata the procedure of virechana is specially adopted to expel out the Ama and Kapha obstructed in the Rasavaha Srotasa. The virechana drugs, which are comparatively higher in concentration than, that of ama attract it into the kostha and from there it is expelled out. The re-opening of rasavaha srotas establishes the proper nutrition of consecutive dhatus. The Agni becomes sharp and helps in digestion of amarasa.

**Snehapana:**

Snehapana has been indicated in the nirama stage of the disease. The therapeutic measures employed so far are likely to produce rukshata in the tissues of the patient, which may provoke the vatadosa and further aggravate the disease process. This is best prevented by snehapana. Moreover samana sneha has been stated to augment the Agni as it influences the digestion by softening the food and stimulating the Agni, which is the primary requirement in Amavata. It also pacifies the vitiated vata.
Basti:

In Amavata both Anuvasana as well as Niruha basti have been advocated. The Niruha basti eliminates dosa from the body brought into the kostha by the langhana and allied therapies. In addition to generalized effects Basti produces local beneficial effects also by removing the anaha, antrakujana, vibandha etc. Anuvasana Basti removes the 'rukshata' of the body caused by the amahara chikitsa.

In nutshell, sequential employment of Dipana, Amapacana, Sodhana and Samana therapies constitute the holistic approach in the treatment of Amavata.

Table No. 21: Showing different ousadha yogas according to different Acharya:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of the Yoga</th>
<th>Ch. D</th>
<th>B.P</th>
<th>BYT</th>
<th>Y.T</th>
<th>Y.R</th>
<th>B.R</th>
<th>G. N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rasnadi Panchaka kwatha</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Rasna saptak kwatha</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Rasnadi Kwatha</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Rasnadidasmoola kwatha</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>Rasonadi kasaya</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>Sunthyadi kwatha</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Shatyadi kwatha</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>8.</td>
<td>Dasmooladi Kwatha</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Pippalyadi Kwatha</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10.</td>
<td>Panchkola Kwatha</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11.</td>
<td>Punarnava Kasaya</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>12.</td>
<td>Madhyam Rasnadi Kwatha</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>13.</td>
<td>Maharasndi Kwatha</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>14.</td>
<td>Erandadi Kwatha</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of the Yoga</th>
<th>Ch. D</th>
<th>B.P</th>
<th>BYT</th>
<th>Y.T</th>
<th>Y.R</th>
<th>B.R</th>
<th>G. N</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.</td>
<td>Simhasyadi Kwatha</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>16.</td>
<td>Vishwa Pathya amruta kwatha</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>17.</td>
<td>Rasaka yusha with Kanjika</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>18.</td>
<td>Guduchi with sunthi kwatha</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>19.</td>
<td>Rasona sura sindhika sidhmala</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>20.</td>
<td>Guduchi nagar kwath</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td><strong>Churna yoga</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>Ajmodadi churna</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>22.</td>
<td>Panchasma churna</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>23.</td>
<td>Hingwadhya churna</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>24.</td>
<td>Nagaradi churna</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>25.</td>
<td>Vaishwanara churna</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>26.</td>
<td>Panchkola churna</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>27.</td>
<td>Chitrakadi churna</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>28.</td>
<td>Alambhushadhyya churna</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>29.</td>
<td>Pathyadi churna</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>30.</td>
<td>Punarnavadi churna</td>
<td>-</td>
<td>+</td>
<td>+</td>
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</table>
MANAGEMENT OF RHEUMATOID ARTHRITIS

Outline of treatment in Rheumatoid Arthritis\textsuperscript{157}:

1. **Rest and Nutrition:**

   Complete bed rest for short period during most active painful stage. Fish or plant oil supplements may partially relieve symptoms because they can decrease production of prostaglandins.

2. **First Line Drugs:**

   NSAIDs (e.g. ibuprofen, indomethacin and Salicylates) produce symptomatic relief of pain and stiffness – will not abolish pain. It has rapid onset of benefit and rapid loss of effect on cessation of therapy. Has no effect on laboratory parameters.

   Salicylates are relatively safe, inexpensive analgesic and anti-inflammatory and can still be a cornerstone of drug therapy. E.g. - Acetylsalicylic acid (aspirin).

3. **Second Line Drugs:**

   DMARDs e.g. Gold, Penicillamine, Sulphasalazine and Anti-Malarials (add to first line drugs in face of active R.A., poorly controlled by NSAIDs.

   Decrease pain and stiffness and increase grip strength and functional ability. Slow onset of benefit – allow 12-24 weeks to assess affect. E.S.R. if elevated will decrease, titre of rheumatoid factor will come down and Hb will tend to increase.

4. **Third Line Drugs:** Corticosteroids and Cytotoxics

   Corticosteroids e.g. Oral-prednisolone are the most dramatically effective short term Anti-inflammatory drugs. But the patients should be cautioned about the complication with long-term use.

---

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
Cytotoxic or Immunosuppressive drugs are effective similar to those of the DMARDs with the variety of toxic side effects. So these drugs have been reserved for patients who have clearly failed therapy with DMARDs e.g. Methotrexate, Azathioprine, Cyclosporine.

5. **Intra-articular Injections of Corticosteroids**: - e.g. Trimacolinone hexacetonide

   Temporary (2-3 months) reduction of pain and stiffness in that joint. Possible general marginal benefit because of slight systemic absorption in some instances.

6. **Exercise and Physiotherapy**: -

   - Active Exercise: to restore muscle mass and maintain the normal joint movements.
   - Passive Exercise: to prevent contracture
   - Joint Splinting: reduces local inflammation

7. **Surgery for severely damaged joint**:

   - Synovectomy
   - Osteotomy
   - Arthrodesis
   - Excision
   - Joint replacement.
### Table No. 22: Some surgical procedures in Rheumatoid Arthritis:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Problem</th>
<th>Surgery</th>
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<tbody>
<tr>
<td>1.</td>
<td>Carpal tunnel</td>
<td>Decompression</td>
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<td></td>
<td>Tarsal tunnel</td>
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<td>2.</td>
<td>Tendon attrition</td>
<td>Tendon repair and / or Tendon transfer</td>
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<tr>
<td>3.</td>
<td>Ulnar nerve entrapment</td>
<td>Decompression + Ulnar nerve repositioning</td>
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<td>4.</td>
<td>Persistent Synovitis of a joint without joint damage</td>
<td>Synovectomy</td>
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<tr>
<td>5.</td>
<td>Persistent dorsal tenosynovitis at wrist</td>
<td>Synovectomy</td>
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<td>6.</td>
<td>Pain, subluxation radio-ulnar joint</td>
<td>Excision arthroplasty</td>
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<td></td>
<td>Pain acromio-clavicular joint Metatarsalgia</td>
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<td>7.</td>
<td>Pain relief or improve function of PIP, MCP, wrist, ankle subtalar joints</td>
<td>Arthrodesis</td>
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<tr>
<td>8.</td>
<td>Persistent pain +/- Dysfunction of knee, hip, MCP, elbow, shoulder</td>
<td>Joint replacement</td>
</tr>
<tr>
<td>9.</td>
<td>Alanto-axial subluxation</td>
<td>Fixation</td>
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</table>
Illustration No.2 Showing the Pyramidal approach to Therapy in rheumatoid Arthritis

- New experimental therapies e.g. Cyclosporin, Lymphoid irradiation
  - Azathioprime, Cyclophosphamide, Chlorambucil
    - D-Penicillamine
      - Methotrexate
        - Gold Intramuscular/oral
          - Antiinflammatory: Sulphasalazine
            - Education, rest, exercise, social service, salicylates or other NSAIDS

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
GUGGULU KALPANA

Guggulu Definition:

‘Gunjo Vyadhe: Gudati Rakshati’
Which protect from the vyadhi.

Kalpana Definition:

‘Kalpayate Vidheeyate Asou Vidhee:’ (Sa.Ka.Dr)
‘Prakalpanaam Samskaaraanaam Iti’ (Chakrapani)
‘Kalpanaam Yojyaamityartha:’ (Arunadatta)

Kalpana is a method/process or a kind of modification, transformation (samsakaran), or plan of preparation of medicine using either a single drug or several drug.

References:

We are having good knowledge about guggulu from ancient time.

We can get references in Atharva Veda.

‘Vishvascastaamaad Yakshmaa Mrugaa Ashwaa Ive Rate |
Yad Guggulu Saindhavam Yad Vaapyaasi Samudriyam |
Ubhayatograte Naamaastaa Aristataataye | (Atharva Veda)

In the ancient time it was used for Homa, Havan, Dhupana etc.

References from samhita’s:

Ch.Su.4/48 – sankhasthapan mahakasay, Ch.Vi.8/114 – kasaya skandh
Su.Su.38/24 – eladi gan and katuk varga
A.H.Su.15/43,44 – eladi gana
Bhavaprakash – karpuradi varga
Yogaratnakar – chandanadi varga
Raja Nighantu, Adarsh Nighantu – gugguluvadi varga

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
Types:

Acc. To bavaprakash nighantu (karpuradi varga)

Based on color:-

1. Mahshaksha – black, used foe human
2. Mahaneed – blue
3. Kumud - white
4. Padma – brown, for animal
5. Kana guggulu – yellow, for human

Vyavaharik bheda:-

1. Kana guggulu – raktabh pita varna, soft, granular
2. Bhaisa guggulu – haritabh varna, brittle & soft

Another two varieties:-

1. Nava guggulu – Brahman
2. Puran guggulu – karshan / lekahan

Botanical description:

Latin name:- commiphora mukul
Kula:- guggulu kula
Family:- burseraceae

Morphology:- it is tree, grow up to 1.5-2 mt. height

Leaves:- imperipinate, compound, composite
Leaflates:- sessile to subssile
Flowers:- brownish, 5 petals
Fruit:- pulpy round and red colour
Gum:- thick, scented, multicolored, burnt on fire, liquefies in sun heat, when dissolved In waters, it turns milky white

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
Guggulu Kalpana

Critical analysis of anupana with special reference to YogaRaja Guggulu

Guna:

Guna – laghu, tikshana, snigdh, picchilla, sukshama, & sara

Rasa – tikta, katu, madhur, kasaya

Veerya – usna

Vipaka – katu

Prabhava – tridoshahara

Karma – hridya, rasayan, balya, varnya, swarya, dhatuposhak, agnidipak, kasaghna, buddhivardhak, shukrakjanan, virya, aartavriddhikar, asthisandhankar. (su.ci.5/40)

Grahya Lakshana:

pure guggulu is snigdha, mrudu, sweet smell, tikta rasa, yellowish tinge, soluble in water, not contaminated with mud or sand.

Any other variety other then these qualities should be considered as impure.

Shodhana:

Shodhan is necessary for removing the unwanted and non-conducive qualities and to generate useful and good qualities.

Shodhan is done in 2 process

1. Samanya shodhana

2. Vishishta shodhana

1. Samanya Shodhana

Samanya shodhan is done for remove the physical impurities like sand, stone, leaf etc.

Procedure :-

Take guggulu 1 part and usna jjala 4 parts and kept it over night. Next day morning give mandagni to it and reduce up to ½ part. Filter it with cloth. Dried it I sun light.
2. Vishishta Shodhana

When guggulu is heated with other kwatha then it will work as quality of that kwatha and also showing it’s own quality.

As per ayurvedic formulary of India part 1, 1st edition page no. 55:-

- 1st remove physical impurities then crushed into pieces.
- Then bundled in a piece of cloth and boiled in dolayantra containing any one of the following fluids.
  - Gomutra,
  - Triphala kwatha,
  - Vasaputra kasaya,
  - Vasa patra swarasa,
  - Nirgundi swarasa with haridra churna,
  - Dugdha.

- The boiling of guggulu in dolayantra is carried on until all the guggulu passes into the fluid through cloth.

- The residue in the bundle is discarded. The fluid is filtered and again boiled till it forms a mass.

- The mass is dried in the sun and the pounded with paste in a stone mortar add little quantity of ghrita till it become waxy.

**Characteristics feature of shodhit guggulu:**

Soft, waxy and brown in colour.

**Shelf life:**

2yrs - when prepared with ingredients of plant origin

Infine – when prepared with metals and minerals.
GUGGULU KALPANA:
The formulation which uses Guggulu as main is called as Guggulu kalpana.

1st kalpana Named by vanaspati dravya.

Main types of contents:
a) adhar dravya: shuddha guggulu
b) adheya dravya: churna, bhasma etc
c) drava dravya: ernada tel, goghrita, kashaya, gomutra etc.
d) prakshepa drvaya: churna etc

TYPES OF GUGGULU KALPA:
Guggulupradhankalpa: guggulu acts as main active ingredient eg: triphala
Guggulus ahayogikalpa: guggulu acts as co-ordinating or
synergestic e.g. chandraprabhi vati

TYPE OF PROCESSES:
Processes classified according to the methodology of application of heat.

Main 3 types
1. somapaka
2. aditya paka
3. agni paka

1) SOMAPAKA
Absence of direct heating during preparation,
(either by heating or by using heat of sun).

Therefore it is called as somapaka.

• Types of somapaka:
a) kuttan somapaka   b) mardan somapaka.
**KUTTANA SOMAPAKA PROCESS:**

Shuddha guggulu and other ingredients are mixed accordingly and sneha is added. Further heavy pounding is done over the mixture till very fine powder is obtained.

Heat: supplied due to continuous pounding.

Types: shatapiittit, sahastrapittit, dashasahastra pittit

**ADVANTAGES:**

1. More the pounding better the efficacy.
2. Ingredients finely powdered and mixed properly.
3. Sukshmata, laghuta, supachya.

Eg: yograj guggulu ra .yo . s a, vatari guggulu bha.bhai.ra

**MARDANA SOMAPAKA:**

Use of kashaya instead of sneha. Principle Mardanam guna vardhanam

Process:

- Shuddha guggulu mixed with kashaya and other ingredients are added.
- Mardan for 3, 7, 14, 21 days.

Eg: amavatari guggulu

**ADVANTAGES:**

- Guggulu pachan easier due to proper samskar of mardan.
- Homogenous mixture formed.
- Liquid state of guggulu enhances the ability of binding to larger no of particles.
- Suskshamata, shalskshanta.

**2)ADITYAPAKA:**

Prepared with the help of heat of sun.

Process:

- Shuddha guggulu mixed well with the kwath or other liquid.
- mixed well properly and spread in a flat large pan for drying in sun
- powdered well after drying
- The required liquid solute is added and mixed well for every time. The process is repeated for 7, 14, 21 times.
- The process can be repeated even before drying continuously
- Appropriate time for drying: afternoon
- Appropriate season: Nov to Feb.
  - Precaution: At last stage - roll the preparation into small pills to avoid fungal contamination.
  
  Eg: adipaka guggulu (va nga sen)

3) AGNIPAKA:

  - Process:
    - Shuddha guggulu is heated with kashaya or water till required paka lakshan is achieved.
    - the required churna or bhasma are added to the guggulu.
    - pills are rolled quickly.
  
  - Precautions:
    - Heat on mild flame
    - Continuous stirring to avoid kharpaka at bottom
    - Stop heating immediately after achieving paka lashanas
    - Add powders after the heating is stopped
    - Start rolling pills as soon as the powders are mixed homogenously.

Eg: vajra guggulu (ra.yo.sa)
ADVERSE EFFECTS CAUSES:

- ashuddha guggulu.
- dose variation.
- absence of anupan.
- negligence of determining factors like vaya, kala, vyadi avsatha etc.
- adulterated raw material.
- apthya kar ahar vihar by patient.

SOME OF THE ADVERSE EFFECTS:

- mukhapaka.
- urodaha
- asamyaka grathit mala pravritti.
- twaka kandu

VARIOUS TYPES OF KALPANA:

Use of guggulu in various kalpana

- Vati: Vajra Guggulu (ra.yo.sa) Yograj guggulu
- Asava: Guggulasava (a.hri chi)
- Ghrita: Guggulu tikta ghrita (s ahastrayo ga)
- Avleha: Guggulu tikta madhusnuhi rasayana.
- Dhooma: Dhatyadi dhooma (rasaratnakara)
- Lepa: Baladi lepa (charaka)
- Kwath: Manjisthadi kwath (sharangdhar samhita)

DOSAGE:

By seeing rogi vaya, bala, agni, can be given 1-4 tolas. (Hareeta Samhita)

Starting from 1 tola to 4 tolas, but not more than 4 tolas. (Gada Nigraha)
Acc. To bhavaprakash

Hina kostha – 4 masa

Madhyam kostha – 8 masa

Uttam kostha – 12 masa

**Anupana (Su.Ch)**

- Triphala kwatha
- Darvi kwatha
- Patola kwatha
- Kusha kwatha
- Gomutra
- Kshara
- Usna jala

**Acc. To Rtu:**

Varsha and hemant – ghrita

Sharat and vasant – triphala kwatha

Hemant and shishir – gomutra

**Acc. To Dosha:**

**Vata** – sura, sauvirak, tushodak, mairey, dhanyaamla, phalamla, amla dravya etc.

Pitta – mruddika , amalaki, madhu, madhuk, purushak, phanit, kshiradi.

Kapha – madhu, gomuti, kasaya.

- Commonly in vata and kapha dosa usna jala can be taken as anupana
- In pitta and raktaj vikara sita jala can be taken as anupana
**Pathyapathya:**

**Pathya**

After getting digest the guggulu mudga/yusha/mamsarasa with mudgayusha, shastik shali with milk make it soft and take it. (Hareeta Samhita)

**Apathya**

Amla rasa dravya, tikshna, ajirna, maithun, excessive/hard work(vyayam/shram), walking, aatapsevan, madhya, angryness(rosa),

**PHARMACEUTICAL ACTION OF GUGGULU:**

Guggulu is resin known to increase white blood cell counts and possess strong disinfecting properties. It has long been known to lower cholesterol and triglycerides, while maintain or improve the hdl and ldl ratio. It is one of the very first “broad spectrum drug” with a wide therapeutic range. A broad mode of action makes this herb very helpful even in protecting against ailments such as common cold, and various skin, dental and ophthalmic infection.

Hypolipidaemic, antibacterial, arthrosclerotic, antheminitic, anti-arthritic, antiviral, antiinflammatory, antirheumatic, hypolipaemic, antifertility, increase serum cholesterol, fibrinolytic activity.

Increase blood count, promotes strength and vitality,

Remove stone from kidneys, various skin diseases, anti-inflammatory.

**SIDE EFFECT OF GUGGULU:**

There are no known serious side effects to taking Guggul. It is non-toxic and well-tolerated. However, prolonged use may be associated with mild stomach upset. It may stimulate the thyroid and uterus, so it is best to avoid in cases of hyperthyroidism and pregnancy.
DRUG REVIEW

As explained before, the treatment principles for the management of IBS also mainly depends on principles of Agni Deepana, Ama Pachana, and then to Grahi and Stambhana measures has to be adopted.

In the present study entitled “Clinical Management of Irritable Bowel Syndrome (IBS) through Takra Vasti and Sangrahi Vasti” was carried out with following drugs;

1. Yogaraja Guggulu
2. Rasnadi Kwatha (Sahasra Yoga, Kasaya Prakarna, Vatahara Kasaya)
3. Kana Kwatha (Bhava Prakasha, Purva Kanda 6(Ii) /53-58)
4. Punarnavadi Kwatha (Sahasra Yoga, Kasaya Prakarna. Panduhara Kasaya)
5. Madhu (Bhava Prakasha, Purva Kanda.6.22/1-5)
6. Ushnodaka (Bhava Prakasha, Purva Kanda 1/81-84)

1. Yogaraj Guggulu:

1. Shunti
2. Pippalimoola
3. Pippali
4. Chavya
5. Chitraka
6. Hingu
7. Ajamoda
8. Sarshapa
9. Sweta Jeeraka
10. krishna jeera
11. Renuka
12. Indrayava
13. Patha
14. Vidanga
15. Gajapippali
16. Katuka
17. Ativsha
18. Bharangi
19. Vacha
20. Moorva

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
Drug Review

Method of preparation:

The choorna of all the above mentioned drugs is taken in equal quantity ie 1 shana each approx 5 gms totally. 10 tola of triphala choorna and 15 tola of shodhita guggulu to be taken. Vanga, roupya ,naga ,loha ,abhraka ,mandoora, the bhasma of these along with rasasindhoora has to be taken in quantity of 1 pala each. Initially guggulu has to be boiled in water, when it becomes thick add all the above mentioned drugs accordingly. when the mixture becomes eligible for making pills then prepare guggulu of 1 to 2 shana each. this yogaraj guggulu is indicated in all vatavyadhis.

Table No.23: Showing Ingredients and its Rasa panchaka of Yogaraja Guggulu:

<table>
<thead>
<tr>
<th>Sanskrit Name</th>
<th>Latin Name</th>
<th>Rasa</th>
<th>Guna</th>
<th>Veerya</th>
<th>Vipaka</th>
<th>Dosha Karma</th>
<th>Samanya Karma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shunti</td>
<td>Zingiber officinale</td>
<td>Katu</td>
<td>Laghu, Snigdha</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Kapha Vata Shamaka</td>
<td>Agni Deepana, Shothahara</td>
</tr>
<tr>
<td>Pippali Mula</td>
<td>Piper longum</td>
<td>Katu</td>
<td>Laghu, Ruksha</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kapha Vata Shamaka</td>
<td>Kasahara</td>
</tr>
<tr>
<td>Pippali</td>
<td>Piper Longum</td>
<td>Katu</td>
<td>Laghu, Snighda</td>
<td>Anusna Seeta</td>
<td>Katu</td>
<td>Vaata Kapha Hara</td>
<td></td>
</tr>
<tr>
<td>Chavya</td>
<td>Piper Chaba</td>
<td>Katu</td>
<td>Laghu, Ruksha</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kapha Vata Shamaka</td>
<td></td>
</tr>
<tr>
<td>Chitraka</td>
<td>Plumbago zeylanica</td>
<td>Katu</td>
<td>Laghu, Ruksha, Tikshna</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kapha Vata Shamaka</td>
<td>Deepana</td>
</tr>
<tr>
<td>Hingu</td>
<td>Ferula foetida</td>
<td>Katu</td>
<td>Laghu, Snigdha</td>
<td>Ushna</td>
<td>Katu</td>
<td>Vata Kapha hara property</td>
<td></td>
</tr>
<tr>
<td>Ajamoda</td>
<td>Apium graveolans</td>
<td>Katu, Tikta</td>
<td>Laghu, Ruksha,</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kapha Vata</td>
<td>Deepana, hridya,</td>
</tr>
</tbody>
</table>
2. Rasnadi Kwatha:

**Ingredients:**

Rasna, Bhumiamalaki, Vasa, Agaru, Kachura, Chitraka, Mustaka, Chavya, Pashana
Bheda, Amalaki, Bharangi, Patola, Puskara Mula, Haridra, Soureyaka, Shunti,
Chitraka Mula, Dasamula, Devadaru → Boil → Add Saindava And Misri → Pana

**Uses** → Tridoshothara Vata Nasaka.
Table No.24: Showing Ingredients and its Rasa panchaka of Rasnadi Kwatha:

<table>
<thead>
<tr>
<th>Sanskrit Name</th>
<th>Latin Name</th>
<th>Rasa</th>
<th>Guna</th>
<th>Veerya</th>
<th>Vipaka</th>
<th>Dosha Karma</th>
<th>Samanya Karma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chitraka.</td>
<td>Plumbago Zeylanica</td>
<td>Katu</td>
<td>Laghu, Ruksha, Tikshna</td>
<td>Ushna</td>
<td>Katu</td>
<td>Kapha Vata Shamaka</td>
<td>Deepana</td>
</tr>
<tr>
<td>Chavya.</td>
<td>Piper Chaba</td>
<td>Katu</td>
<td>Laghu, Ruksha</td>
<td>Ushna</td>
<td>Katu.</td>
<td>Kapha Vata Shamaka</td>
<td>Deepana</td>
</tr>
<tr>
<td>Puskara Mula.</td>
<td>Inula Racemosa</td>
<td>Tikta.</td>
<td>Laghu Tikshna</td>
<td>Ushna</td>
<td>Katu.</td>
<td>Kapha Vata Shamaka</td>
<td>Swasahara</td>
</tr>
<tr>
<td>Shunti.</td>
<td>Zingiber Officinale</td>
<td>Katu</td>
<td>Laghu, Snigdha</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Kapha Vata</td>
<td>Agni Deepana,</td>
</tr>
</tbody>
</table>

“Critical analysis of anupana with special reference to YogaRaja Guggulu”
Critical analysis of anupana with special reference to YogaRaja Guggulu

Shamaka

Chitraka
Mula. Plumbago Zeylanica Katu Laghu, Ruksha, Tikshna Ushna Katu Kapha Vata Shamaka Shothahara

Dasamula. - Katu Laghu, Snigdha Ushna Madhura Kapha Vata Shamaka Agni Deepana, Shothahara

Devadaru. Cedrus Deodara Tikta Laghu Snigdha Ushna Katu Kapha Vata Shamaka Vedana Stapaka

3. Kana Kwatha:

**Ingredients:** Pippali

**Uses:** Medo Kapha Nasa, Swasa, Kasa, Jwarahara, Vrushya, Medhya, Agnivardana, Jeerna Jwara, Adnimandya, Kasa, Ajeerna, Aruchi, Pandu, Krimi Roga.

**Table No.25: Showing Ingredients and its Rasa panchaka of Kanadi Kwatha:**

<table>
<thead>
<tr>
<th>Sanskrit Name</th>
<th>Latin Name</th>
<th>Rasa</th>
<th>Guna</th>
<th>Veerya</th>
<th>Vipaka</th>
<th>Dosha Karma</th>
<th>Samanya Karma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pippali</td>
<td>Piper Longum</td>
<td>Katu</td>
<td>Laghu, Snighda</td>
<td>Anusna Seeta</td>
<td>Katu</td>
<td>Vaata Kapha Hara</td>
<td>Kasa hara</td>
</tr>
</tbody>
</table>

4. Punaranavadhi Kwata:

**Ingredients:**

Punarnava, Nimbha, Patola, Shunti, Kiratha Tiktha, Guduchi, Daru Haridra, Haritaki.

→ Kasaya→ Pana.

**Uses:**

Sarvanga Shofa, Jwara, Kasa, Swasa, Shoola, Upadrava Yukta Pandu.
Table No.26: Showing Ingredients and its Rasa panchaka of Punarnavadi Kwatha:

<table>
<thead>
<tr>
<th>Sanskrit Name</th>
<th>Latin Name</th>
<th>Rasa</th>
<th>Guna</th>
<th>Veerya</th>
<th>Vipaka</th>
<th>Dosha Karma</th>
<th>Samanya Karma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punarnava</td>
<td>Boerhavia diffusa</td>
<td>Madura Tikta Kasaya</td>
<td>Laghu</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Tridoshahara</td>
<td>Mutra virajaniya</td>
</tr>
<tr>
<td>Patola.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shunti.</td>
<td>Zingiber officinale</td>
<td>Katu</td>
<td>Laghu, Snigdha</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Kapha Vata Shamaka</td>
<td>Agni Deepana, Shothahara</td>
</tr>
<tr>
<td>Guduchi.</td>
<td>Tinospora cordifolia</td>
<td>Tikta Kasaya</td>
<td>Guru Snigdha</td>
<td>Ushna</td>
<td>Madhura</td>
<td>Tridoshahara</td>
<td>Rasayana</td>
</tr>
<tr>
<td>Haritaki.</td>
<td>Terminalia chebula</td>
<td>Lavana rahta pancha rasa</td>
<td>Guru Ruksa</td>
<td>Ushna</td>
<td>Madhura.</td>
<td>Tridoshahara</td>
<td>Rasayana</td>
</tr>
</tbody>
</table>

5. Madhu

Madhu is used for the preparation of Vasti in both the Groups. Madhu is having the qualities like Madhura Rasa, Sheeta Rukha Laghu Guna, Grahi, Deepana and Ropana. It is best among the vehicles because of its Yogavahi Guna. It contains sucrose and lot of enzymes.

6. Ushnodaka

Hot water consumed at nights, breaks the masses of slesma (kapha), expels the flatus, and digests the undigested food matter quickly.

Water boiled during day becomes hard for digestion at the night; so also that boiled during night and consumed in the day becomes hard for digestion.