

**A LITERARY REVIEW ON KHANDA SHUNTHI AND PRASARNI AVALEHA FOR THE  
MANAGEMENT OF AMA VATA****Chinky Goyal<sup>1\*</sup>, Amrit Malik<sup>2</sup>, Rimpaljeet Kaur<sup>3</sup> and Sudhir Malik<sup>4</sup>**<sup>1</sup>Associate Professor, Department of Rasa Shastra & Bhaishjya Kalpana, Shri Dhanwantry Ayurvedic College and Hospital, Chandigarh, India.<sup>2</sup>Associate Professor, Department of Agad Tantra, Shri Dhanwantry Ayurvedic College and Hospital, Chandigarh, India.<sup>3</sup>Assistant Professor, Department of Roga Nidan, Dayanand Ayurvedic College, Jalandhar.<sup>4</sup>Assistant Professor, Department of Kaumarbhritya, Shri Krishna Govt Ayurvedic College, Kurukshetra, Haryana.**\*Corresponding Author: Dr. Chinky Goyal**

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**ABSTRACT**

*Ayurveda*, the fountain head of Indian medicine was conceived as a science and preached in this country some thousands of years ago, long before the other countries could dream of systematizing the concept of the remedies for human ailments. With the march of time, most of the dietary habits, social structure, life style, and environment have been changing. Occurrence of *Amavata* on large scale is one of the outcomes of this modification. It is commonest among chronic inflammatory joint diseases in which joints become swollen, painful, and stiff. It is a debilitating disease in view of its chronicity and complications. *Ayurveda* with safe and effective goodness has been pouring its valuable treasures to mankind since time unknown. Literature enlists a number of preparations in the management of *Amavata*. In the present study literature regarding *Khand Shunthi* and *Prasarni Avaleha* quoted in *Bhava Prakash (Madhyam Khanda)* under *Amavata rogadhikar* is expounded with all possible details. Individual drugs of the chosen formulation is expanded with respect to their synonyms, botanical details including Latin name, family, botanical description and parts used, *Rasa Panchaka*, chemical constituents and modern research references related to RA that can prove beneficial for mankind.

**KEYWORDS:** *Khanda Shunthi*, *Prasarni Avaleha*, Rheumatoid Arthritis, *Amavata*.**INTRODUCTION**

*Aushadhi* has been given great importance in *ayurveda*. In *trisutra ayurveda* "*aushadhi*" is one of three *sutras*.<sup>[1]</sup> *Dravya* or *aushadhi* has potential to bring about the reversal in the process of pathogenesis (*samprapti vighatana*) and eradication of the sign and symptoms.

*Acharya Charka* said that there is no substance in the universe which can't be used as medicine, subject to rational use with definite object.<sup>[2]</sup> *Khanda Sunthi and Prasarni avleha* has been mentioned in *Bhava Prakash (Madhyam Khanda)* under *Amavata rogadhikara* containing following ingredients:

**Table no. 1: Ingredients of *khanda shunthi*.**

Sr. No	Sanskrit Name	Botanical Name	Part used	Proportion
1	<i>Shunthi</i>	<i>Zingiber officinale</i>	Rhizome	32 parts
2	<i>Ghrita</i>	Cow's Ghee	--	80 parts
3	<i>Go Dugdha</i>	Cow's milk	--	128 parts
4	<i>Khanda Sharkara</i>	Sugar candy	--	200 parts
5	<i>Shunthi</i>	<i>Zingiber officinale</i>	Rhizome	1 Part
6	<i>Maricha</i>	<i>Piper nigrum</i>	Fruit	1 Part
7	<i>Pippali</i>	<i>Piper longum</i>	Fruit	1 Part
8	<i>Twak</i>	<i>Cinnamomum zeylanicum</i>	Bark	1 Part
9	<i>Tejapatra</i>	<i>Cinnamomum tAmal</i>	Leaf	1 Part
10	<i>Ela</i>	<i>Elettaria cardamomum</i>	Fruit	1 Part

Table no. 2: Ingredients of *prasarni avleh*.

Sr. No	Sanskrit Name	Botanical Name	Part used	Proportion
1	<i>Prasarni kwatha</i>	<i>Paederia foetida</i>	Whole Plant	1 Adhaka
2	<i>Guda rasa</i>	Jaggery	--	1 prastha
3	<i>Pippali</i>	<i>Piper longum</i>	Fruit	1 Part
4	<i>Pippali moola</i>	<i>Piper longum</i>	Root	1 Part
5	<i>Chavya</i>	<i>Piper chaba</i>	Fruit	1 Part
6	<i>Chitraka</i>	<i>Plumbago zeylenica</i>	Root	1 Part
7	<i>Shunthi</i>	<i>Zingiber officinale</i>	Rhizome	1 Part

### 1. *Shunthi*<sup>[3]</sup>

**Sanskrit Name:** *Shunthi*

**Latin name:** *Zingiber officinale*

**Family:** Zingiberaceae

**Synonyms:** Nagara, Sringavera, Viswa, visvabhesaja, katubhadra, mahousadha.

#### Vernacular names

**Hindi** – Sonth; **English** – Ginger; **Telugu**- Allaem, sunthi **Bengali** – Sont, **Marathi** – Suntee **Gujarati** – Sunt, **Malayalam** – Chukka; **Tamil** – Cukku.

**Part used:** Scrapped and dried rhizome.

**Properties:** *Rasa*– *Katu*; *Guna* - *Laghu, ruksha, tikshna*

*Veerya* - *Ushna Vipaka* –*Madhura*

**Karma:** *Vatakaphahara, deepana, bhedana*

**Indication:** *Sula, Amavata, AdhAmana, Raktapitta, Atisara, Slipada, Kasa, swasa, Hridroha, soph, vivandha, Pandu, Vrana, Jvara, Kusta, Agnimandya* etc.

#### Major chemical constituents

$\alpha$ -curcumene,  $\beta$ -D-curcumene,  $\beta$ -bourbornene, dborneal, citral, d-camphene, citronellol, geraniol, gingerol,  $\alpha$ & $\beta$ -zingiberenes, zingiberol, zingerone, gingerols, paradol, gingerone A, ginger glycolipids A,B& C, gingerdiol, gingerone B&C ect.

**Dosage:** Powder 1– 2 gm.

**Vishishtha yoga:** *Nagaradi kashaya, Kottamchukkadi tail, Adraka khandavaleha, Adraka ghrita, Soubhagya sunti, PanchasAma churna, Ajmodadi churna* etc.

### 2. *Pippali*<sup>[4]</sup>

**Sanskrit Name:** *Pippali/Pippali moolam*

**Latin name:** *Piper longum* linn.

**Family:** Piperaceae

**Synonyms:** *Kana, Krishna, kola, chapala, tikshna, tandula, magadhi, vaidehi, ushana, oundi.*

#### Vernacular names

**Hindi** – Peepal; **English** – Long pepper **Telugu**-Pippallu, **Bengali** – Pipul; **Marathi** – Pipali; **Tamil** – Tippili; **Malayalam** – Tippali **Part used:**

Fruit & root **Properties:** *Rasa* – *Katu*; *Guna* - *Laghu, snigdha, teekshna*

*Veerya* - *Ushna Vipaka* – *Madhura*

**Karma:** *Vatakaphahara, deepana, vrishya, rasayana*

**Indication:** *Udara, Phiranga, jwara, Kusta, prameha, gulma, arsa, sula, Amavata.*

#### Major chemical constituents

Essential oil, mono and sesquiterpenes, caryophyllene, piperine, pipartine, piperlongumine, piperlonguminine, pipernonaline, piperundecalidine, piperide, sesamin,  $\beta$ -sitosterol etc.

**Dosage:** Powder ½-1gms *Vishishta yoga: Pippalyadi ghrita, pipplyasava, vyoshadi vati, yakrit plihari loha, yakrit pippali yoga, Ajmodadi churna, chousata prahara pippali, Pipplyadi leha.*

### 3. *Maricha*<sup>[5]</sup>

**Sanskrit Name:** *Maricha*

**Latin name:** *Piper nigrum* linn.

**Family:** Piperaceae

**Synonyms:** *Ushna, Krishna, Dhanavantari, Dharmapatana, Vellaja, sakanga.*

#### Vernacular names

**Hindi** – Kali mirchi, **English** – Black pepper, **Telugu** – Miriyalu **Bengali** – Golmaricha, **Marathi** – Mirin, **Gujarati** – KalAmari, **Malayalam** – Nalla muluku, **Tamil** – Milagu

**Part used:** Fruit.

**Properties:** *Rasa* – *Katu*; *Guna* - *Laghu, teekshna*

*Veerya* - *Ushna Vipaka* – *Katu*

**Karma:** *Vatakaphahara, avrishya, deepana, prAmathi.*

**Indication:** *Pinasa, kasa, pravahika, hierogram, krimi, swasa, sula.*

#### Major chemical constituents

Piperene, piperethine, piperolein A&B, feruperine, dihydroferuperine, citronellol, cryptone, dihydrocarveol,  $\alpha$  &  $\beta$ pinene, piperonal, camphene,  $\beta$ -caryophyllene  $\beta$ -alanine, pipercolic acid, carotene, ascorbic acid, piperide etc.

**Dosage:** Powder 0.5 – 1 gm.

**Vishishtha yoga:** *Ajmodadi churna, agnitundi vati, MahAmarichyadi tail, marichyadi tail, tekraja maricha, marichyadi churna.*

### 4. *Chitraka moola*<sup>[6]</sup>

**Sanskrit Name:** *Chitrak moolam*

**Latin name:** *Plumbago zeylancia* linn

**Family:** Plumbaginaceae

**Synonyms:** *Anala, Dahana, vahnisanjnaka, Agni, Agnika, jyoti, Neerdahana, vahini, such, hutasana.*

**Vernacular names****Hindi** –Cheeta, Chitra, Chitraka, **English** –Leadwort,**Telugu**- Chitramulam, **Bengali** –Chita**Marathi** – Chitramul; **Gujarati** – Chitro; **Tamil** – Chittiri**Part used:** Moola, twak (root bark)**Properties:** *Rasa* – *Katu*; *Guna* - *Laghu*, *Ruksha*, *ushna*, *teekshna**Veerya* - *Ushna Vipaka* – *Katu Karma*: *Vatakaphahara*, *deepana*, *pachana*, *Grahi*, *Rasayana***Indication:** *Shoola*, *Arshas*, *Grahani*, *Udara*, *krimi*, *Pandu*, *Kasa*

Major chemical constituents:

Chitranone, plumbagin, 3-chloroplumbagin, droserone, Elliptinone, isozeylinone, Isozeylanone, Zeylanone and zeylinone, maritone, plumbagic acid, digydrosterone,  $\beta$ -sitosterol etc.**Dosage:** Powder 1-2gms**Vishista yoga:** *Chitraka hareetaki*, *chitrakadi vati*, *Ajmodadi churna*, *chitraka ghreeta*, *chitrakadi leha*, *chitraka rasayana*, *saddharana yoga*.**5. Go-Ghrita (Butyrum departum)**

Ghrita is one of the most important milk products. It is one of the products very widely used in India from immemorial times. Among Sneha Dravya, it is considered as best owing to its special properties i.e. "Samskarasya Anuvartana" means that Ghee carries property of drug without leaving its own property.

**Pharmacodynamics****Rasa:** *Madhura Guna:* *Guru*, *Snigdha*, *Mrudu***Virya:** *Sheeta Vipaka* : *Madhura***Doshakarma** : *Vata-pittahara***Pharmacological Action:** *Medhya Rasayana*, *Chakshushya*, *Vrishya* and *Balya*.**Chemical composition of Ghee** Chemically Ghee is complex molecule of lipid containing –  
Triglyceride - 97.98%

Diglycerides - 0.25 – 4.0%

Monoglycerides - 0.16 – 0.38%

Ketoacid Glyceride - 0.015 – 0.018

Glycerglesters - 0.011 – 0.015

Free fatty acid - 0.1 – 0.44

Phospholipids - 0.2 – 1.0

Sterol - 0.22 – 0.41

Vitamin A - 2500 I.U./ 100 gm

Vitamin D - 8.5 x 10<sup>7</sup> gm/100gm

Vitamin E - 24 x 10 – 3gm/100gm

Vitamin K - 01 x 10<sup>-4</sup> gm/100gm

Ghee taken within normal limit does not increase or decrease cholesterol level (Vasudevan - Text book of biochemistry). So, Shuddha Ghrita does not elevate cholesterol level. Here, Goghrita has been taken for 3 to 7 days which is for short duration to affect the cholesterol level. Vitamin A and E are antioxidant that helps in preventing oxidative injury to the body. Due to the palatability of Ghee even at higher dose, relative to oil it is most acceptable to the internal environment of

the body. Thus, it can be used for the internal Snehana of body prior to the Sanshodhana process. The individuals which are affected with heat and that are injured by weapons and poison are also the indications for the administration of Ghrita.

**6. Guda (Jaggery)**

It is dark, coarse, unrefined sugar, sometimes referred to as "Palm Sugar". It can be made either from the sap of various palm trees or from sugarcane juice. It is primarily used in India, where many categories of sugar made from sugarcane as Jaggery and that processed from palm trees as "Gur". Jaggery has a sweet wine like fragrance and flavor that lends to distinction to whatever food it embellishes.

**Ayurvedic review**

Jaggery is explained under the heading of Ikshu Varga in all the Samhita, Nighantu. It is prepared by the juice of sugarcane when sugarcane juice is heated up to thick and somewhat hard then it is termed as Guda. According to Ch. Su. 27/289, before the formation of jaggery, the sugarcane juice undergoes three stages viz. –

1) *Chaturbhaga-vasheshita* - 1/4 remain2) *Tribhaga-vasheshita* - 1/3 remain3) *Ardhabhaga-vasheshita* - 1/2 remain

These three varieties are called "Kshudra Guda" and they are light for digestion in their ascending order.

**Dhauta guda:** The finally formed Guda that is clean and of good quality is called Dhauta Guda and is used for medicinal purpose as well as dietetic purpose.

**Pharmacodynamics****Rasa:** *Madhura Guna:* *Snigdha*, *Ushna***Virya:** *Ushna Vipaka:* *Madhura***Doshaghnnata:** *Tridosha ShAmaka* (According to *Anupana*).**Properties**

*Deepana*, *Pachana*, *Anulomana*, *Vrishya*, *Mutra-Raktashodhaka* increases *Medodhatu*, *Kapha* and *Krimi*, *Pittaghna*, *VatashAmaka* and its efficacy is considered to increase after one year (Su. Su. 45/160-161).

**Properties of nava guda (New Jaggery)**

Newly prepared jaggery is *Kapha*, *Swasa-Kasa Krita*, *Krimikara* and *Agnideepaka*.

**Preparation of purana guda**

It is *Laghu*, *Pathya*, *Anabhishyandi*, *Agnivardhaka*, *Vatapittaghna*, *Madhura*, *Vrishya*, *Rakta Prasadana*.

**Modern review**

It is rich in minerals, iron and instant glucose. It is not only easily digestible but has various minerals and vitamin in right proportion, which is extremely useful for our body. Jaggery and sugar not only differ in their composition but also in their effect on human metabolism.

**Chemical constituents of guda**

The good quality jaggery contains moisture 3.6%, sucrose 6.85%, invert sugar 10-15%, ash 2.5%, protein 4%, mineral matter 6%, calcium 80 mg/100gm, phosphorus 40mg/100gm, iron 11.4mg/100gm. It also contain carotene, vitamin A, Thiamine 0.02mg, Nicotinic acid 10mg/100gm.

**7. Twaka<sup>[7]</sup>**

**Latin name-**Cinnamomum zeylanicum Breyn.

**Sanskrit name:** Twaka, Utkata,

**Hindi name:** Daalchini

**Vernacular names:**

**English** –Cinnamon **Telugu-** Sanliphu Bengali – Daruchini Marathi – Taja

**Gujarati** – Taja **Tamil** – Karuya

**Pharmacodynamics:**

**Rasa:** Katu, Tikta, Madhura **Guna:** Laghu Ruksha, Teekshna **Virya:** Ushna **Vipaka:** Katu

**Doshagnata:** Kaphavata shAmaka and Pitta vardhaka

**Chemical composition:** Eugenol, cinnAmaldehyde

**Indication:** Hridaya rog, Basti rog, Arsha, Peenas, Kasa, Peenas

**8. Ela<sup>[8]</sup>**

**Latin name-** Elettaria cardamomum

**Family-** Zingiberaceae

**Sanskrita name:** Ela, Truti, Triputa, Dravini

**Hindi name:** Elayachi

**Vernacular names**

**English** –Lesser cardamom, **Telugu-** Yellakkapalu

**Bengali** –Chot elach, **Marathi** – Belchi, Veldode

**Gujarati** –Elachi, **Tamil** – Yellakru

**Pharmacodynamics**

**Rasa:** Katu, Madhura **Guna:** Laghu Ruksha,

**Virya:** Sheeta **Vipaka:** Madhur

**Doshagnata:** Tridoshhara

**Chemical composition:** Potassium salt, Starch, cineol, terpineol, terpinene, limonene & sabinene

**Indication:** Mutra, Swash, kasha, Arsha, hradaroga and Gulma

**9. Chavya<sup>[9]</sup>**

**Latin name-** Piper chaba

**Family-** Piperaceae

**Hindi name:** Chavya

**Pharmacodynamics**

**Rasa:** Katu, **Guna:** Laghu, Snigdha, Teekshna

**Virya:** Sheet, **Vipaka:** Madhura

**Doshagnata:** Vatakapha hara, and PittashAmaka

**Chemical composition:** Piperine, pipartin, Sesamin, Piplsterol

**Indication:** Mutra, Swash, kasha, Arsha, Pleeha rog, Aajeerna, Agnimandya, Jwara, Vrasya, Heart disease, Krami and Pandu

**10. Prasarni<sup>[10]</sup>**

**Latin name-** Paederia foetida

**Shanskrit Name:** Prasarni, Gandhadhadhya, Balya, Rajabala, Sarani

**Family-** Rubiaceae

**Hindi name:** Gandhali

**Pharmacodynamics**

**Rasa:** Tikta, **Guna:** Guru, Sara

**Virya :** Ushna **Vipaka :** Katu

**Doshagnata:** Kaphavata shamaka

**Chemical composition:** Asperuloside, Padedersoidic acid, paederoside, scandoside – iridous Glycosides; Valine, Tyrosine, Histidine, Carotene, Vit. Cursolic acid; Epifridelinol.

**Indication:** Vatavikara, Sotha, Vranasotha, Ardita, Pakshaghat, Raktapitta, Sukrameha, Pradara, Mutrakraccha, jwara, Udar shool.

**DISCUSSION**

Different drugs and pharmaceutical procedures consequence into a formulation and potency of which alters with change in qualities of drugs. Before fabricating any formulation, prime importance must be given to the calibration of its constituents. So, to ascertain the qualities of Khanda Shunthi and Prasarni Avleha, detail of its ingredients are narrated in this present study. Action of drug is based on 5 mechanisms of actions or attributes; namely rasa, guna, virya and vipaka along with certain specific properties called prabhava. The drugs jointly act as an antagonist to the morbid dosha and dushya and cause 'Samprapti Vighatana'. As pain is the cardinal symptom of Vatadushti, KhandaShunthi can prove beneficial as it is made from Ghrita which is having Vatashamaka property. As Shunthi is one of the main Dravya and Prakshepadravaya in formulation and Shunthi is Vatakaphashamak, so it can work as anti-inflammatory also. In the condition of Stabdhatta, Khanada Shunthi can be used as in Aamvata stiffness presents due to Vata and Kapha, Khandashunthi is having Ghrita and Shunthi. Ghrita is Vatashamak and Shunthi is Vatakaphashamak and Amapachaka so Khandashunthi can reduce the stiffness. In Aamvata, Fever occurs due to the Aamdoshya and Saam Pitta. Shunthi is having Ghrita, Khanda sharkara and Shunthi so its combination subside all Dosha and cure the fever. InAmavata, there is Dushti of Rasa Dhatu as a result Uttrotar Dhatu Dushti and further Dhatus are not formed in proper quantity and quality. In present review, selected drugs i.e Khandashunthi is having Ghrita and Shunthi. Ghrita is Agnideepan and Shunthi is the best Aampachaka, deepana, Rochak, Hridya and Vrishya so it digests Aam properly and makes Rasa Dhatu resulting into formation of Uttrotar Dhatu Pushti. So, Khandashunthi can increase Haemoglobin levels also. Khandasunthi is Vatakaphahara, Vedanasthapana, Shoolaprashaamaka and Vataanulomka as a result of which grip strength and walking time of person can also be improved with its use. Also, Prasarni Avleha having Prasarni as the main

ingredient which itself is *Kaphavatashamak* and also possess *Shunthi* as one of the ingredient can also work as an adjunct to *Khanda Shunthi* in the treatment of *Amavata*.

### CONCLUSION

As per the findings of present review, *Khanda Shunthi* and *Prasarni Avleha* both possess all the aspects of Pharmaco-therapeutic effect required for the management of Rheumatoid Arthritis like Anti-inflammatory, Anti-pyretic etc. Both the drugs in combination can be used in Clinical trials to validate the findings of present review.

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