

KAMADUDHA RASA AN EFFECTIVE AYURVEDIC FORMULATION FOR AMLA PITTA (HYPERACIDITY/ACID PEPTIC DISORDER)- A REVIEW

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ABSTRACT

Amlapitta, or hyperacidity, is a prevalent and troublesome illness that can lead to severe issues if untreated. Its symptoms closely resemble gastritis or hyperacidity. The primary cause is the increased activity of the body's *Pitta Dosha*. When *Pitta's Katu Rasa* transforms into *Amla Rasa* and its *Dravata* increases, it leads to *Amlapitta*. Junk food consumption, which causes 50% of gastrointestinal tract disorders, is a significant contributor. For normal digestion, a balance between *Pachak Pitta*, *Kledak Kapha*, and *Saman Vayu* is essential, with *Pachak Pitta* playing a vital role. In *Amlapitta*, due to certain causes, *Tridosha – Prakop* occurs, especially the *Amla* and *Drava Guna* of *Pitta*, leading to *Agnimandya* and subsequently *Amlapitta*. Symptoms include indigestion (*Avipaka*), sour belching (*Amlodgara*), heartburn (*Hrid-Kanta Daha*), and loss of appetite (*Aruchi*). *Kamadudha Rasa* is

an essential medication for *Amlapitta*. This review paper aims to provide a scientifically sound explanation of its mechanism of action. *Rasaushadhis*, which are mineral and herbo-mineral Ayurvedic medicines, offer benefits like longer shelf life and better therapeutic efficacy at low doses. *Kamadudha Rasa*, mentioned in *Rasendrasara*, is one such medicine. It is prepared from seven different *Bhasmas* (calcined preparations). These unique dosage forms are highly effective in treating *Amlapitta* by balancing the aggravated *Pitta Dosha* and restoring normal digestive functions.

KEYWORD: Hyperacidity, *Kamadudha Rasa*, *Amlapitta*, *Agnimandya*, *Pitta dosha*, *Rasaushadhis*, Acid Peptic Disorder.

INTRODUCTION

Health is the supreme foundation of virtue wealth enjoyment and salvation. For centuries, drugs have been used to preserve health and manage disorders. Societies have relied on natural resources for health maintenance and illness prevention. Ayurveda aims to maintain health and cure diseases, addressing physical, mental, and spiritual well-being. *Mandagni*, or weak digestive fire, is the root cause of many diseases, leading to indigestion (*Ajeerna*). If neglected, it can result in *Amlapitta* (hyperacidity), a common issue in both developed and developing countries. Correlating Ayurvedic diseases with allopathic ones is challenging, but similarities can be found based on symptoms and treatments. *Amlapitta* can be compared to acid reflux syndrome, including GERD, gastritis, dyspepsia, peptic ulcer, and hyperacidity.

Kamadudha Rasa is one of the ancient formulations used since centuries to treat *Amlapitta* (hyper acidity), *Jirna Jwara* (chronic fever), *Unmada* (insanity) etc. The ingredients of *Kamadudha Rasa* like *Bhasmas* (Powder obtained by calcinations of mixture of minerals and herbs or any one) of *Mukta* (Pearl), *Pravala* (Coral: *Corallium rubrum*), *Shankha* (Conch shell), *Shukti* (Oyster shell) and *Varatika* (Cowries shell: *Cypreamoneta* Linn.) are the *Sudha Varga Dravyas* (calcium containing group) which are known for their importance in the management of *Amlapitta*, *Pittaja Vikara*, (disorder related to biological fire or metabolic catabolic enzymes), *Jirna Jwara* (Chronic Fevers) and *Somaroga* (The condition in which there is an excessive urination in women). In the present review, an attempt was made to understand the possible mode of action of *Kamadudha Rasa* as a gastro-protective and for its anti-ulcer activity.

What is *Pitta*

- In Ayurveda, *Pitta* pertains to fire and water elements and governs metabolism.
- It is situated between the stomach and the smaller intestine and digests all food and drink.
- *Pitta* is hot (*Ushna*), light (*Laghu*), quickly penetrating (*Saram*), liquid (*Dravam*), slightly viscid (*Sneha*), active (*Teekshna*), slightly foul smelling (*Visrum*).
- *Pitta* is the source of all internal heat including digestion, hunger, thirst, intelligence, imagination, understanding, memory, etc.
- Its main function is to produce heat.
- The imbalance of *Pitta* causes burning sensation in the body, hyperacidity, sleeplessness, erratic digestion, constipation or diarrhea, vomiting, etc.

- Excess of salty and acidic food can vitiate *Pitta*.
- Astringent, sweet and bitter fruits and vegetables balances *Pitta* (e.g. *Patola*, *Amla*, honey, *Ghee*).
- *Kamdudha Ras Moti Yukt*/with pearl is used for treating *Amlapitta* (hyperacidity), bleeding disorders (*Rakta Pitta*) and another *Pitta-Vikar*.

Ingredients of *Kamdudha Ras Moti Yukt*

The complete list of *Kamdudha Ras* with Pearl given below:

- *Mukta Pishti* (pearl *Mytilus margaritiferus*) 1 Part
- *Praval* (coral) *Pishti* 1 Part
- *Shauktik Mauktik* (Shell *Mytilus margaritiferu*) *Pishti* 1 Part
- *Kapardik Bhasma* (Calcinated and purified *Cypraea moneta* shells) 1 Part
- *Shankh Bhasma* (Calcinated and purified *turbinella rapa* shells) 1 Part
- *Shudh Gairik* (Calcinated and purified ochre) 1 Part
- *Guduchi Satva* (*Tinospora cordifolia* extract) 1 Part

Benefits of *Kamadudha Ras (Mauktik Yukta)*

- It is useful in all *Pitta-vikar*.
- It gives relief in bleeding disorders.
- It is a cooling in nature.
- It pacifies excess *Pitta*.
- It helps in faster wound healing.
- It gives relief in the burning sensation due to excess *Pitta*.
- It improves iron and calcium level in blood.
- It is mild and well tolerated.

Therapeutic Use of *Kamdudha Ras Moti Yukt*

- Disorder of *Pitta Dosha*
- Hyper acidity/*Amlapitta*, peptic ulcer
- Fever (*Pitta Jwar*)
- Burning sensation
- Bleeding from nose, urethra, vagina, rectum, etc. (*Rakta Pitta*)
- Burning sensation in palms and soles, eyes, urination.

- Syncope
- *Bhrama* (Vertigo)
- Headache
- *Somaroga* (Polyuria in females)
- *Pradar* (Excessive vaginal discharge)
- *Raktapitta* (Bleeding disorder)
- *Mukhapaka* or Stomatitis
- Urticaria

The Dosage of Kamdudha Ras Moti Yukt

250 mg twice a day after the meal with *Mishri/Jeera* powder/*Amalki Churna* or *Ghrita* or take as directed by a physician. Please note, the doses of Ayurvedic medicines are not fixed. The exact dose depends on the age, strength, digestive power of the patient, the nature of the illness, the state of the viscera and humours, and the properties of individual drugs.

Ayurvedic medicines containing detoxified, toxic material/ poisonous substances, heavy metals should be taken only under medical supervision. You can buy this medicine online or from medical stores.

This medicine is manufactured by Baidyanath (*Kamdudha Ras Moti Yukt*), Dabur (*Kamdudha Ras with Moti*), Patanjali Divya Pharmacy (*Kam Dudha Ras* (A.F.I-II)), Shri Dhootapapeshwar Limited (*Kamadudha with Mouktiky ukta Gutti-Vati*), and many other Ayurvedic pharmacies.

Table 1: Kamadudha Rasa in classical Ayurvedic text.

	<i>Jwaradhikara</i> (<i>Hariprapannaji</i> , 1999)	<i>Amlapittadhikara</i> (<i>Hariprapannaji</i> , 1999)	<i>Amlapittadhikara</i> (<i>Hariprapannaji</i> , 1999)	<i>Rtana Pradhan</i> <i>Yoga</i> (<i>Joshi & Rao</i> , 2003)
Ingredients	<i>Swarana Gairika</i> , <i>Ghrita</i> , <i>Amalaki</i> <i>Swarasa</i>	<i>Guduchi Satva</i> , <i>Swarana Gairika</i> , <i>Abharaka</i> <i>Bhasma Karsha</i>	<i>Mukata Bhasma</i> , <i>Praval</i> <i>Bhasma</i> , <i>Shukti</i> <i>Bhasma</i> , <i>Kapardika</i> <i>Bhasma</i> , <i>Shankha</i> <i>Bhasma</i> , <i>Shuddha</i> <i>Gairika</i> , <i>Guduchi Satva</i> , <i>all in equal quality</i> .	<i>Swarana Gairika</i> , <i>Guduchi Satva</i> , <i>Sharkara</i> , <i>Amalki</i> <i>Swarasa</i> .
Preparation	<i>Bharjana</i> (frying) of <i>Swarana Gairika</i> done with <i>Grita</i> , powdered and 7 <i>Bhavanas</i> (trituration) with	All the ingredients are finally powdered and mixed well.	All the ingredients are taken in equal quantity and triturated homogenously.	<i>Shodhit Swarana</i> <i>Gairika</i> triturated with <i>Amalaka</i> <i>Swaras</i> for 21 days, dried and powdered. Add equal <i>Guduchi</i>

	<i>Amalaka Swarasa.</i>			<i>Satava & sugar to it & grind well.</i>
Indications	<i>Pitta Roga, Prameha (diabetes) Pradara, Pandu, (anaemia), Kamala (jaundice), Daha.</i>	<i>Prameha, Pradara.</i>	<i>Jirna Jwara, Bhrama, Unmada, Pitta Roga, Amlapitta & Somaroga.</i>	<i>Rakta Pitta, Trishna, Daha, Bhrama, Murcha.</i>

As long as *Samprapti* (etiopathogenesis) of *Amlapitta* is concerned, it is explained with the help of *Samprapti* of *Grahani Roga* mentioned by *Charaka*. In *Amlapitta* the *Nidanas* (etiology) are predominantly from the non-compliance of dietetic code of selection and eating. However psychological status of a person also plays an important role. The etiological factors like *Atisnigdha Ahara*, *Atiruksha Ahara*, *Vishamashana*, *Akale bhojana*, *Akale Anashana*, *Veganigraha* (suppression of natural urges) *Vidahi Anna Sevana*, *Vidahi Pana Sevana*, *Dusta Anna Sevana* and seasonal variation etc. cause the vitiation of *Dosha* (especially liquidity of *Pitta*) and *Agni* which results in *Agnimandhya* (digestive weakness).

Once *Agnidushti* occurs it results in *Ajirna* (indigestion). In this state of whatsoever food material are consumed by an unwise person, become *Vidagdha* (acidic) and are converted into *Shukta* (acid) form which leads to formation of *Amavisha*. Thus, *Amavisha* (acidic dietary toxins in the body) produced disturbs the *Grahani* and once it happened it further produces the *Amadosha* (excessive accumulation of dietary toxins) and vicious cycle starts.

Amavisha produced by this *Samprapti* when mixes with *Pitta*, it will produce *Amlapitta* (Jadavji, 2004). In the present review an attempt has been made to understand and explore the possible mode of gastro-protective and anti-ulcer activity of *Kamadudha Rasa*.

Mode of Action of *Kamadudha Rasa* Ayurvedic Perspective

Some of the ingredients of *Kamadudha Rasa* such as *Pravala* and *Mukta* have *Dipana* (appetizer) and *Pachana* (digestive) properties (Kulkarni, 2006) maintain the normalcy of *Agni* (digestive fire) and thus help in curing and preventing the production of ulcers (Ghosh and Baghel, 2011). The *Kshariya* (alkaline) nature of these drugs would reduce the *Amliyata* (acidic nature) and help in *Vrana Ropana* (promotes wound healing). These are *Sita Virya Dravyas* (the drug having cold potency or cooling effect usually resembles to endothermic) which does *Pitta Shamana* (pacify the biological fire) and *Vrana Ropana*. *Shankha Bhasma* being *Sita Virya*, alkaline in nature, *Grahi* (absorption enhancing), it is indicated in gastrointestinal disorders like *Amlapitta*, *Parinama Shula*, *Grahani* (irritable bowel

syndrome) and *Agnimandhya* (Shastri, 1989) which is clinically proved (Pandey, 2000). *Gairika* is another ingredient which is *Madhura* (Sweet), *Kashaya* (Astringent), *Snigdha* (smooth), *Hima* (cold), *Rakta-pittahara* (effective in bleeding diathesis) and *Vrana Ropaka*. These properties are very necessary in the healing of ulcer. *Guduchi Satva* being another important ingredient is known for its *Rasayana* property (Upadhyay et al., 2010). It is having *Tikta* (Bitter), *Kashaya Rasa* with *Madhura Vipaka* (post digestive effect which is sweet in nature), *Snigdha Guna* and is *Tridosha Shamaka* (pacify three Bio energy Principles, *Vata*, *Pitta*, and *Kapha*), *Dipaniya*. These all would support in the anti-ulcer activity along with Rejuvenation. *Pitta* is having *Tiksha* (sharpness), *Usna* (heat), *Sara* (mobility), *Laghu* (lightness), *Snigdha*, etc. properties by which it brings biochemical changes at the cellular and tissue levels. *Pitta* maintains digestion, thirst, appetite energy production and body temperature, colour, complexion. *Pitta* is *Drava* (liquid) in consistency, in spite of which, it performs actions similar to *Agni*, in the course of process of digestion, largely due to its actual *Teja* (heat) component (discarding its liquidity-*Drava*). This fact is inferred from the way in which *Pachaka Pitta* (digestive component of biological fire) performs *Pachana* (digestive) *Karma* (action). The capacity of digestion also depends on the qualitative increase of *Usna Guna* of *Pitta*. Conceptually it was concluded that substances having the properties like *Ruksha*, *Kasaya*, *Laghu* had the effect to decrease the *Drava Guna* of *Pitta* and maintaining the proper function of *Agni*. Similarly, substances having *Madhura*, *Sita* properties, decreased the *Usna* property of *Pitta* to maintain the proper function of *Agni*.

Modern Perspective

Kamadudha Rasa primarily contains calcium compounds like calcium carbonate (CaCO_3), calcium oxide (CaO), and calcium silicates (Loevenhart and Crandall, 1927; Meletis et al, 2008). Calcium carbonate, a fast-acting antacid, reduces gastric acidity and increases stomach pH (Akhter, 2007). Calcium plays crucial roles in blood clotting, nerve conduction, muscle contraction, enzyme activity regulation, and cell membrane function (Piste et al., 2013). It aids in nutrient transport, blood coagulation, muscle function (Piste et al., 2013), and regulates potassium and magnesium balance (Swaminathan, 2003). Calcium helps prevent blood loss from bleeding ulcers, promotes healing through muscle contraction, reduces pain by regulating nerve function (Piste et al., 2013), and acts as a buffer to neutralize acids, maintaining proper pH levels (Akhter, 2007).

Excess calcium intake can lead to peptic ulcers by stimulating acid secretion and increasing gastrin levels (Petersen et al., 1984). Acid secretion by parietal cells is triggered by acetylcholine, histamine, and gastrin, with histamine increasing adenylate cyclase activity and acetylcholine and gastrin raising cytosolic free calcium (Zhou et al., 1997). *Kamadudha Rasa* contains calcium and other minerals, reducing excess calcium absorption. Magnesium, present in *Kamadudha Rasa*, slightly reduces calcium absorption in the intestine. Additionally, *Kamadudha Rasa* includes essential minerals like iron, oxygen, sodium, zinc, aluminium, silicon, and potassium, which are vital for maintaining a healthy body.

Zinc, aluminium, and magnesium aid in ulcer healing (Varas et al., 1991; Frommer 1975; Watanabe T, et al., 1995; Itoh et al., 2004; McIntosh and Sutherland, 1940). *Kamadudha Rasa* shows gastroprotective activity and reduces gastric secretion (Chandra et al., 2010). Its ingredients are effective individually for peptic ulcers. Studies, such as those by Kirtikumar et al. (2010), compare Jala Shukti Bhasma and Mukta Shukti Bhasma for *Amlapitta*, supporting its efficacy. Pandya (1968) found *Pravalapanchamrita* effective for *Amlapitta*. Momin Ali (1970) confirmed *Shukti Bhasma*'s clinical efficacy. *Shankha Bhasma* acts as an antacid (Pandey, 2000), reducing ulcer index and TBARS in indomethacin-treated rats without altering serum calcium levels (Pandith et al., 2000). Guduchi Satva is highly effective against hyperacidity (Prashanth et al., 2011), reducing ulcer index and total acidity while increasing gastric fluid pH in pylorus-ligated and ethanol-induced gastric mucosal injury models (Bairya et al., 2001; Kaur et al., 2012; Chandan et al., 2013). These findings highlight *Kamadudha Rasa*'s comprehensive benefits in managing hyperacidity and related conditions.

DISCUSSION

Amlapitta is caused by aggravated *Pitta* due to excessive intake of pungent and sour food items, alcoholic preparations, salt, hot and sharp stuff. This aggravated *Pitta* cause burning sensations. To pacify the *Pitta*, anger, fear, excessive exposure to sun and fire, intake of dry vegetables and alkalis, irregularity in taking food, and all *Pitta Prakopak* factors should be avoided. Various drugs are described for treatment of *Amlapitta*. Among these *Avipattikar Churna*, *Leela Vilas Ras*, *Amla- Pittantak Lauha*, *Triphala Mandur*, *Kushmand Khand*, *Prawaal Panchamrit*, *Shankh Bhasm*, *Prawaal Pishti*, *Mukta Pishti*, and *Yavakshar* are the main drugs. *Kamadudha Rasa* is used very commonly in *Amlapitta*. But due to lack of scientific explanation, nobody wants to believe that it is as useful as allopathy drugs. After scientific explanation of its mechanism everyone has pride in the concepts of Ayurveda that

it is also very scientific.

CONCLUSION

In the present era, various types of allopathic drugs are used to treat PUD, but the most important lacunas in them are their side effects. Some alternative therapies from the natural sources are used in the treatment of peptic ulcer disease. *Kamagudha Rasa*, a Herbo–mineral formulation is widely used for the treatment of PUD in common practice. It is expected that this formulation would be beneficial for society to eradicate this problem and their further use would also be expected. The advanced research may discover its exact mechanism in PUD. In context to the present review, it can be concluded that the ingredients of *Kamadudha Rasa* can be regarded as the contributing factors in the treatment of peptic ulcer disease. It is worthy of exploring the opportunity of employing the therapeutic advantages of *Kamadudha Rasa*.

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