



Review Article

ROLE OF AYURVEDA MODALITIES IN THE MANAGEMENT OF URDHWAG AMLAPITTA (GASTRO ESOPHAGEAL REFLUX DISEASE): A CRITICAL REVIEW

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Article info

Article History:

Received: 12-03-2023

Revised: 04-04-2023

Accepted: 26-04-2023

KEYWORDS:

Avipattikar churna, GERD, *Laghu-sutadhekhar Ras*, *Shodhana Chikitsa*, *Sutashekhar Ras*, *Urdhva Amlapitta*.

ABSTRACT

For long time various types of communicable diseases were biggest killer diseases globally. But now a days trend become changing towards increased prevalence of chronic diseases due to changing their diet pattern, lifestyle and behavioral pattern. In these chronic diseases Gastro Esophageal Reflux Disease (GERD) is the Gastro-intestinal disorder defined by recurrent troublesome heart-burn and regurgitation. Patient with GERD can be medicated empirically with Antacids and proton pump Inhibitor's but in most of the cases patient do not respond to such treatment absolutely and several adverse effects arises after prolonged use. Ayurvedic texts classifies the broad spectrum of *Amlapitta* into *Urdhwag* and *Adhog Amlapitta* in which GERD shows similarity with *Urdhwag Amlapitta* on the basis of causes and symptoms. **Aim and Objectives:** The current review article illustrates the mode of action of Ayurvedic procedures (*Shodhana Chikitsa*) and formulations (*Shamana Chikitsa*) which is safe and effective for GERD (*Urdhwag Amlapitta*) **Material and Methods:** Ayurvedic texts referred are *Charak Samhita*, *Yog Ratnakar*, *Bhaisiya ratnavali* and contemporary modern texts and published manuscripts. **Discussion:** Detailed protocol treatment for *Amlapitta* in the form of *Shodhana* and *Shamana Chikitsa* discussed in terms of drugs and diet, should be applied considering the association of *Dosha*. **Conclusion:** This review article will helpful to Ayurveda scholars, academicians, clinicians and researchers for the future prospect to plan the research work on same topics.

INTRODUCTION

Gastro-esophageal reflux is the most prevalent Gastrointestinal disorder and characterized as a condition that worsens a person's quality of life. GERD is defined by the Montreal definition as the back flow of stomach contents into the Esophagus. The recent nine studies concluded that prevalence of GERD ranged from 5% to 28.5% in world wide. The pooled prevalence of GERD in the Indian Population is 15.6% [1]. Anatomically Anti influx hedge at the Gastro-Oesophageal junction is a zone whose functional integrity is maintained by the Lower Oesophageal

Sphincter (LOS) pressure, extrinsic contraction of the LOS by the Crural Diaphragm, the Intra- abdominal position of the LOS, integrity of the Phreno-Oesophageal ligament, and conservation of the acute angle of His prevents the reflux of gastric contents into esophagus. Most common cause of GERD is transient LOS relaxation [2].

In Traditional Ayurvedic literature the symptoms of *Urdhwag Amlapitta* are comparable to GERD. *Amlapitta* firstly mentioned in *Kashyap Samhita* with name *Shuktak* with its *Nidan*, *Samprapti*, *Rupa*, *Chikitsa* and *Pathya Apathya*. *Amlapitta* is one of the *Annavaha srotas* disorder develops in *Aamashya* (stomach) due to vitiated *Pachaka pitta*. If this *Vidhai Pachaka pitta* moves in upward direction towards throat then it is known as *Urdhwag Amlapitta*. *Acharya Vagbhatta* states that *Pitta* is *Panchbhautik* and *Drava* (fluidity) in consistency, in spite of which it performs actions similar to *Agni* (digestive fire) because of its *Tejas guna* (fire element) which is present only in

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<https://doi.org/10.47070/ayushdhara.v10iSuppl2.1199>

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Pachaka pitta (one of the five subtypes of *Pitta* that is situated in between the *Amashaya* and *Pakvashaya*), by virtue of which it is able to perform the process of digestion of food [3]. But in case of *Urdhwag Amlapitta* the *Dravatva guna* of *Pachaka Pitta* gets increased and it changed from normal *Katu rasa* (alkaline) to *Amla rasa* (acid), as an outcome symptom of *Urdhwag Amlapitta* arises.

The treatment of *Urdhwag Amlapitta* by *Shodhan* (detoxification therapy) and *Shaman karma* (pacificatory measures) is described in Ayurveda traditions. Detoxification therapy aids in the removal of *Doshas* from the body and the restoration of *Agni's* (metabolism) functionality. *Shamana Chikitsa* might be advised after *Shodhana karma* to bring the remaining *Dosha* into balance. The classical texts of Ayurveda state that along the treatment of diseases, *Pathya* (wholesome) and *Apathya* (unwholesome) plays an important role in preventing disease recurrence.

AIMS AND OBJECTIVES

To review Gastro-esophageal reflux disease from Ayurveda modern point of view and to plan lifestyle modification along with its treatment principle.

MATERIALS AND METHODS

To fulfil the aim and objective relevant Ayurveda and modern literature, available literature on web, published manuscripts etc. were searched. The result regarding the same are described ahead. Various *Samhita Granthas* like *Brihatrayi*, *Laghutrayi* and different.

DISCUSSION

Aetio-pathogenesis

According to Ayurveda, faulty diet and lifestyle choices are the root cause of all diseases. Diet, eating habits, and lifestyle mistakes are some of the GERD etiological elements described in both classical and contemporary literature. The summary of etiological elements mentioned in table 1.

Table 1: Etiological factors of Amlapitta

Diet	Excessive intake of curd, white rice, sesame, black grams, mustard, fish meat, vinegar, drum sticks, carom seed
Dietary habits	Irregular meal times, eating too late at night, spicy food habits, salty and sour foods, overeating of fermented foods
Life style	Stressful daily routine, insufficient sleep at night, sleeping immediately after meals, lack of rest, suppression of urges, worries, exposure to excessive heat

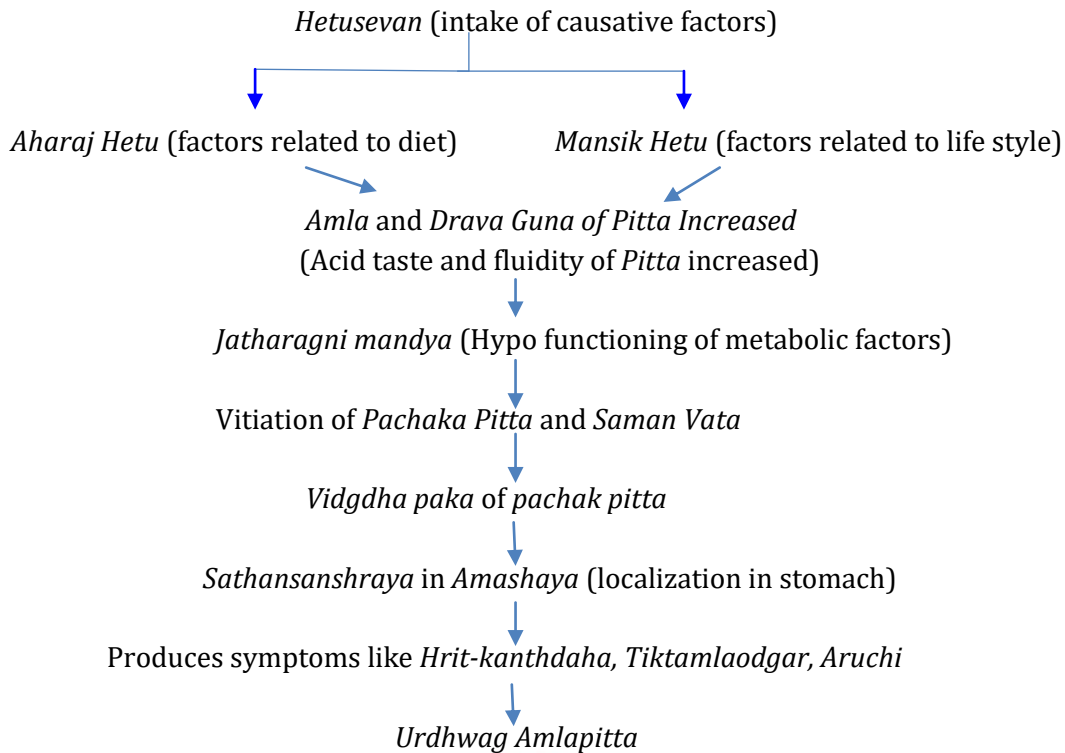
Pathogenesis

The common reason behind GERD is the reduced lower Esophageal sphincter tone, which permitting reflux of gastric contents into esophagus. The synchronization of defective esophageal peristalsis activity and delayed gastric emptying can also cause reflux due to frequent episodes of inappropriate sphincter relaxation. The commonly presenting symptoms of GERD are Heart burn, Regurgitation often triggered by bending, straining or lying down [4].

As per Ayurveda classics, these etiological factors affect the *Annavaha srotas* which have an impact on physiology of digestion. Either there would be a lesser secretion of the digestive juice or secreted at improper time and sometimes it may be secreted in excessive quantity, all these conditions aggravate *Pitta dosha* and hampers the *Jatharagni* (metabolic factors

located in digestive tract) i.e., *Jatharagni mandya* (Hypo functioning of *Agni*). During this stage, whatever food consume becomes *Vidagdh* and it lies in the Stomach stagnant. At this stage any food which is taken also becomes *vidagdh* and it is called *Vidgdhajirna* which is the *Purvaroopa* (prodromes) of disease. Further vitiated *Pitta* gets mixed with *Vidagdhanna* (indigestion leading to acidic food) and causes *Pitta-Ama Samurchhana*[5]. If it is not treated at this stage of disease progression then the disease advances further stage where the typical characteristic types like *Urdhwag* (upward direction) and *Adhoga* (downward direction) etc. differentiated. In advance stage of disease *Annadrava shul* (post digestive abdominal colic) and *Parinama shul* (Duodenal ulcer) may occur as complications. (Flow diagram-1)

Flow Diagramme-1: Pathogenesis of *Amlapita* in Ayurveda classics



Clinical Features

The predominant symptoms of GERD are Heart burn, Regurgitation often triggered by bending, straining or lying down, Water brash (excessive salivation caused by reflex salivary gland stimulation as acid enters the gullet), vomiting, anorexia, headache, influx chest pain and cough, dysphagia, hoarseness of voice [6]. In chronic state of GERD, erosion, ulcerations, stricture and columnar meta-plastic changes can occur in Esophagus and these have been described under classification system as MUSE [7].

The characteristic manifestations of the vitiated *Pitta* are *Tikt-amlaudgar* (acid eructation), *Charddi* (vomiting), *Hrit-kanthadaha* (heart burn and burning in throat), *Praseka* (excessive salivation), *Shira:shoola* (headache), *Alasya* (lassitude), *Aruchi* (anorexia) which resembles the description of GERD [8].

Modern Treatment Modalities for GERD [9]

Diet and Life style Modification- Patient was asked to take excessive oily spicy food avoiding foods that can exacerbate symptoms, elevating the head of the bed for people who see nocturnal symptoms, avoiding late meals, and quitting smoking.

Treatment: Proton Pump Inhibitors (PPIs), which are typically successful in alleviating symptoms and treating oesophagitis, should be given to those who do not react to these measures. Alginates and proprietary antacids may also provide distinctive advantages. Drugs that block the H₂ receptor treat the symptoms but do not cure oesophagitis.

Further Advanced Management

Laparoscopic anti-reflux surgery should be considered in patients who do not react to medical treatment, who are unwilling to use long-term PPIs, and whose primary symptom is severe regurgitation.

Long-term PPI medication is linked to decreased iron, vitamin B₁₂, and magnesium absorption as well as a slight but elevated risk of osteoporosis and fractures. The medications have lately been demonstrated to have an unfavorable effect on the composition of the gut microbiota and predispose to enteric infections with *Salmonella*, *Campylobacter*, and perhaps *Clostridium Difficile*. Long-term treatment raises the chance of the advancement of gastric mucosal atrophy associated with *Helicobacter*.

Ayurveda treatment modalities for *Amlapiita*

Treatment option for *Amlapitta* in Ayurveda include-

Avoidance of Etiological Factors [10]

In Ayurveda, *Nidan parivarjan* (avoid factors which disturbs homeostasis) is the first line of treatment for any disease. Hence it can be said that one should avoid causative factors which are responsible for *Amlapitta* such as insufficient sleep at night, irregular meal times, eating too late at night, spicy food habits, overeating of fermented foods, sleeping immediately after meal, suppression of urges etc.

Shodhana Chikitsa (detoxification therapy)

Shodhana Chikitsa helps to heal the disease and stop further progression by removing vitiated *Dosha* and morbid waste products from the body. The

Amashya with the *Doshas* associated with the *Aam* is defective in absorbing the drugs. *Shodhana karma* facilitates the absorption (bio availability) of medicines and the medicine is delivered to the intended spot where it can have a major impact. According to traditional Ayurveda medicine, *Amlapitta* is treated with *Vaman karma* (emesis therapy) followed by *Virechan karma* (purgation). After these therapies are appropriately administered, the patient should be given *Snehana* (oleation) therapy followed by *Anuvasana* (a type of medicated enema) therapy [11].

In *Amlapitta*, there is *Sthansanshrya* (stage of localization) of inordinate *Vidhai Pitta* in *Aamashya* which is one of the *Sthan* (location) of *Kapha*. In *Ayurvedic Samhita* it is mentioned that *Aagantu dosha* should be treated either after treating the *Sthanik dosha* (*Dosha* residing at its usual place) or indeed else (before treating the *Sthanik dosha*) [12]. On the basis of this principle, the primary route of the *Shodhana* for the expatriation of vitiated *Pitta* in *Aamashya* is *Vaman* (emesis) *karma*. *Vaman* drugs may cause stomach discomfort and which in turn stimulates the Vagus nerve. The vomiting center can rapidly be activated by the Vagus Nerve through CTZ (Chemoreceptor trigger zone). Impulses from the vomiting center travel towards the diaphragm, smooth muscle of stomach and the skeletal muscles of the abdominal wall. It may result compression develop in the diaphragm and anterior abdominal muscle. It may rise of intra-abdominal pressure and rise pressure of stomach also. Thus, lower oesophageal sphincter gets relax & there by leading to initiation of bouts. It might lead to

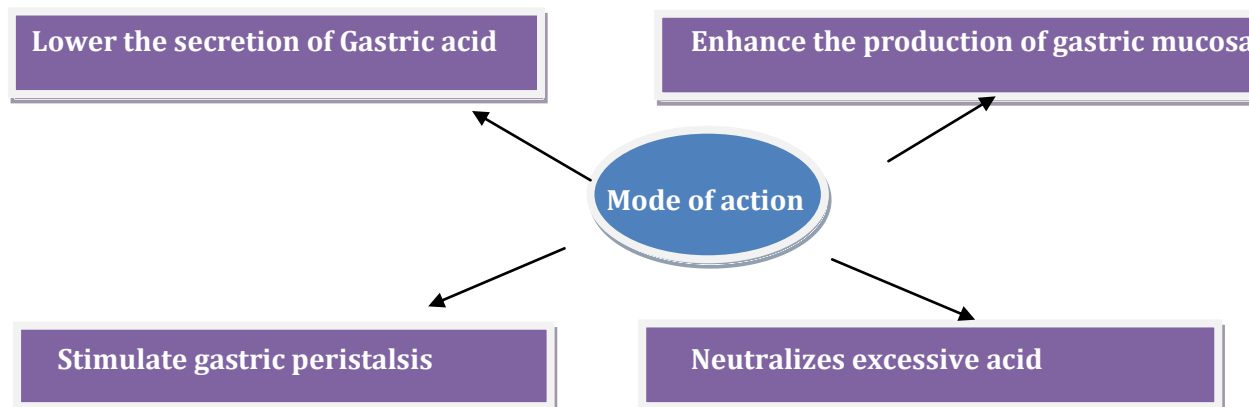
vitiated *Pitta* and *Kapha* being expelled by *Vaman* episodes, and *Agni* returning to normal [13].

Pakwashayagatha Dosha Nirharana (removal of *Doshas* from large intestine) should be done through *Virechana Karma* (Purgation therapy). *Virechana* may be an effective method for removing excessive *Pitta* and *Pitta* present in other *Avayavas* from the body. *Virechan* works on the level of *Dhatwagni* (metabolic factors located in *Dhatu*) in order to correct *Rasa dhatu's* (primary product of digested food) formation. It corrects *Agni Vaigunyata* and eliminates *Vayu's Avarana* from *Kostha*. There will be more bile secretion and peristaltic movements as a result of *Virechana* drugs. When relaxation phase of peristalsis begins; relaxed sphincter of Oddi allows influx of bile into G.I.T. Therefore, this bile can be compared to *Pitta*, which along with other toxins will be eliminated during *Virechana*. Hence *Virechana* reduces *Pitta Dushti* and normalizes *Agni* (digestive power) so it is beneficial for further digestion [14].

After *Virechan*, *Vata dosha* can be aggravates in body. To pacify the *Vata*, *Basti* (medicated enema) is the best therapy. *Basti* enters in *Pakvashaya* by its *Virya*, draws out the vitiated *Vata dosha* lodged in whole body from foot to head. After *Shodhana*, *Shamana Chikitsa* (Pacifactory measures) in terms of medicines and diet should be applied considering the association of *Dosha* to make the residual *Dosha* in harmony.

Ayurvedic classics illustrates various formulations in *Amlapitta* which works on the basis of following mechanisms [15] - (Flow diagramme-2)

Flow diagramme-2: Mode of action of Ayurveda remedies



Lower the secretion of Gastric acid:

The main cause in *Amlapitta* is increased *Drava guna* (fluidity) of *Pachaka pitta* which transforms *Katu rasa* of *Pachaka pitta* in *Vidhai Amla rasa* that may analogues to excessive gastric acid. *Tikta rasa* reduces the *Dravata* (fluid) by its *Ruksha* (dryness), *Laghu* (lightness) *guna* and *Shoshan karma* (absorption). *Ruksha guna* has the capacity to absorb the excessive

fluid from the Stomach. *Laghu guna*, *Katu rasa* increases *Agni* and helps in *Aam pachan*. By that means it reduces the production of acid in the stomach and protect the stomach mucosa from the damage caused by the acidic secretion, thus it relieves heartburn.

Enhance the production of gastric mucosa

Kashaya rasa (astringent taste) has *Sanshaman*, *Sanadhan* (tissue binding) and *Ropan karma*

(substances facilitating healing) which helps in the healing of gastric mucosa. It soothes the lining of the Stomach and the Esophagus and gives quick relief from sour eructation. *Sheet guna* reduces *Pitta* and increases *Vata* and *Kapha*. Hence, symptoms produced by *Pitta* like excessive thirst, burning sensations, fainting, acid eructation will reduce.

Stimulate gastric peristalsis

Drugs have the property of *Ushna virya* and *Snigdha guna* (oleation) causes *Vata- anuloman* and expel the *Vidagdha pitta* by the nearest path. *Madhur rasa* act as mood elevator therefore, it suppresses the anxiety, anger, depression and improves the Gut- Brain Axis (GBA) which in turns regulates the Gut motility.

Neutralizes excessive acid

Madhur (sweet), *Tikta* (bitter), *Kashaya* (astringent) *rasa* are *Pitta shamaka*. *Tikta rasa* counteracts the *Tikshna guna* of vitiated *Pitta* causing smoothening effect and also relieves *Daha* (burning sensation). It functions by bringing the stomach's pH levels back into balance and aids in reducing hyperacidity. *Sheeta guna* reduced *Ushnata* of *Vidagdha pitta* to keep *Agni* performing duly.

Shaman Chikitsa (Pacifactory measures)

Ras Yog

1. Sutshekhar ras

Indications: *Amlapitta*, *Grhani*, *Atisara* (diarrhea), *Chardi* (vomiting), *Sarvaroghar*, *Kasa* (cough), *Hikka* (hiccough), *Udavartnasak*.

Mode of action [16]: *Dhatura* metal is a main ingredient of *Sutshekhar rasa*. Atropine, scopolamine, hyoscyamine are the primary active constituents which work as anti-muscarinic, Anti-cholinergic which means they competitively antagonize muscarinic acetylcholine receptor. As a result, it inhibits basal acid secretion. So eventually *Dhatura* inhibits acid production in gastric mucosa and relives hyperacidity. *Tankan* (Borax) reacts with HCl and neutralizes it.

2. Kamadudha Ras

Indications- *Pittaj rog* (diseases of *Pitta*), *Amlapitta*, *Unmad* (insanity), *Som roga* (Leucorrhoea), *Jeerna jwar*.

Mode of action [17]: Calcium carbonate (i.e., mineral-calcite) is present in *Shankha bhasma* (*Turbinella pyrum*), *Kapardika Bhasma* (*Cypraea moneta* linn), *Muktashukti Bhasma* (Pearl oysters), *Pravala bhasma* (Coral), and *Pravala pishti*. In mucus and in the intercellular interaction of mucosa, calcium serves as a linker. The pressures that strip calcium from the mucus and mucosa decrease the gastrointestinal tract's protective layer, while calcium supplements strengthen it. Hence, calcium ions produced from calcium-based *Bhasmas* and *Pishti* boost the gastric mucosa's defense system [18].

Guduchi satwa (*Tinospora cordifolia*) reduces *Tridosha* (three regulatory functional factors of the body) and strengthens *Agni*. It soothes burning sensation, vomiting, and thirst, which are typical in *Amlapitta*. It also has antiseptic, anti-inflammatory, analgesic, and adaptogenic properties [19].

3. Laghu Sutshekhar Rasa

Indications- *Pittajanya sirsha shool*, *Ardhavybedak* (migraine), *Chardi* (vomiting), *Daha* (burning), *Urdhwag raktapitta*

Mode of action [20]: Betel leaf's gastroprotective, carminative, and anti-flatulent qualities can help to expedite healthy digestion. As numerous enzymes break down the meal and make it easier to digest, it encourages the production of saliva during digestion. It offers a variety of antioxidant characteristics that aid in controlling the stomach's pH level. It also contains a lot of vitamin C, which aids in the body's defense against and elimination of free radicals, a major contributor to chronic diseases.

Vati/Gutika

1. Gudadi modaka

Indications- *Pitta*, *Kapha* and *Mandagni nashak*

Mode of action [21]: The carminative, antibacterial, and antimicrobial characteristics of *Piper longum* can stimulate the digestive tract and increase hunger. Additionally, its anti-inflammatory qualities can combat ulcers. According to earlier research, dietary piperine favourably activates the digestive enzymes of the stomach and pancreas, improves the capacity for digestion, and dramatically shortens the transit time through the gastrointestinal tract.

It is possible that *Haritaki* (*Terminalia chebula*) will speed up or slow down gastrointestinal peristalsis. It had laxative and prokinetic properties that aid in removing vitiated *Pitta* from the stomach.

2. Drakshadi gutika

Indications- *Amlapitta*, *Hridya* and *Kantha daha* (heart burn and burning in throat), *Trisha* (excessive thirst), *Murcha*, *Mandagni* (weak state of *Agni*).

Mode of action: It may provide a potential benefit by reducing enteric inflammation. Dietary fibers from sun dried raisins effects on colonic functions, bile acid content, volatile fatty excretion and intestinal transit time.

Churnas

1. Avipattikar Churna

Indications- *Amlapitta*, *Mal evum Mutra Vibhandha* (problems related to flow of urine and stool), disorders caused due to *Agnimandya* (weak state of digestive fire), 20 types of *Prameha* (i.e., urinary disorders including diabetes), all types of *Arsha* (hemorrhoids)

Mode of action [22]: It has traditionally been used to eliminate too much *Pitta dosha* from the Intestines and Stomach. Moreover, it has laxative properties. This is a natural digestive tonic that treats acidity issues and aids in regularizing the digestion process. *Avipattikar churna* calms the tissues in the stomach and encourages normal. It helps in the downward movement of *Apana Vata* (one of the five subtypes of *Vata (Vayu)*, situated in the pelvic region), which encourages post-meal esophageal relaxation and proper evacuation.

2. *Eladi churna*

Indications- Chronic *Amlapitta*

Mode of action [23]: The *Chhardi Nigrahana* (anti-emetics) and *Trishna Nigrahana* (decrease thirst) properties of *Chandan (Santalum album)* and *Vanshalochan (Bambusa arundinacia)* relieve *Utklesha* (regurgitation of food) and *Trishna* (thirst) in *Amlapitta*. *Hruthkanthdaha* is also relieved by *Chandan*. The *Deepan* and *Aampachan* properties (digestion and metabolism enhancing) of *Ela (Elettaria cardamomum Maton)*, *Haritaki (Terminalia chebula)*, *Pippalimool (Piper longum)*, *Aamalki (Embllica officinalis)*, *Twak (Cinnamomum zeylanica)*, and *Tamal (Cinnamomum tamala)* aid in the transformation of *Sampitta (Pitta associated with Aam)* into *Niram Pitta (Pitta not associated with Ama)*, enhance digestion, and alleviate *Avipak* (indigestion), *Gauravta*, and *Aruchi*. All *Dhatu*s receive sufficient sustenance because of the *Rasayana* qualities of *Aamalki* and *Haritaki*, which cause *Dhatu Prasadana* (quality enhancement of *Dhatu*) to occur and relieve *Klama* (exhaustion without exertion). Most of the components in *Eladi Churna* have been accurately identified in *Pitta*-predominant diseases. Due to this property, it breaks the *Samprapti* (pathogenesis) of *Amlapitta* and normalises the state of *Agni* (digestive fire) by performing the function of *Strotovibandhanasana* (cure the obstructive pathology occurring in channels) and taking action against *Pitta*.

3. *Amlapittahar yog*

Indications- Vomiting caused by *Amlapitta*, *Annavidaha* (acidity due to indigestion)

Mode of action: *Bhringraj (Eclipta alba)* stimulates bile flow and balances *Pitta*. Due to its digestive and Appetiser characteristics, food is easier to digest and digestive function is improved. Due to its *Rasayana* (rejuvenating) function, it revitalises the body. As a liver tonic, it can be used to treat conditions like enlarged liver, fatty liver, and jaundice. It helps the body rid itself of impurities, avoids constipation, lowers acidity, and lowers the risk of gastric ulcers. It has an antioxidant effect, which lowers the risk of

stomach ulcers and aids in vitamin and mineral absorption.

Medicated ghee

1. *Pippali Ghrita*

Indications- *Amlapitta*

Mode of action [24]: *Ghrita*, the *Uttama sneha*, which has been used in the formulation is considered best for stimulation of digestion, promotion of longevity, promotion of memory and intellect, and is further described as *Yogavahi Rasayana* (lipophilic in nature), means that any drug processed with *Ghrita* will possess the quality of the added drug.

2. *Shatavari Ghrita*

Indications- *Amlapita*, *Raktapitta* (bleeding disorders), *Trisha* (morbid thirst), *Murcha* (fainting), *Swash* (asthma), *Santap* (burning sensations)

Mode of action [25]: *Shatavari (Asparagus racemosus)* has a predominant influence on mucosal protective factor through a significant reduction in cell shedding and an increase in mucin secretion. It shows an antiulcerogenic activity which is the result of inhibitory effect on release of gastric hydrochloric acid and protects gastric mucosal damage.

Avleha

1. *Narikela Khanda*

Indications: *Amlapitta*, *Aruchi* (anorexia), *Raktapitta*, *Chardi*

Mode of action [26]: The soothing effect of *Narikela (Cocos nucifera)* on the *Annavaaha Srotas* (digestive tract), which lessens the irritability, is described by the *Madhura Rasa*, *Sheeta Veerya*, *Mridu*, and *Snigdha Guna* with *Dahahara* and *Hridaya* characteristics. With the *Hridya* property, along with *Dhanyaka (Coriandrum sativum)*, *Pippali* and *Ela*, *Narikela* aids in the management of *Chardi*. The *Anulomana* action of the medications along with the *Tridosahara*, *Deepana*, *Pachana*, and *Ruchya* properties serve to address the pathophysiology of illness. Overall, the composition as well as the individual medications inside it act against *Amlapitta* depending on their *Guna* and *Karma*. The *Rasayana* characteristics that *Goghrita*, *Godugdha*, and *Pippali* also possess aid in *Dhatu Poshana*.

2. *Kushmand khanda*

Indications: *Amlapitta*

Mode of action: *Kushmanda (Benincasa hispida)* *Avleha* has following properties such as *Trishnashamak*, *Dahanashak*, *Agnideepan* and *Shleshmapitta upshoshan*. Due to its *Medhya* (intellect enhancer) characteristics, it is helpful in ailments like *Chinta* (stress) and *Shoka* (grief). Additionally, it has anti-oxidant, anti-ulcer, gastroprotective, and anti-diarrheal properties. *Amalaki* and *Godugdha* manage *Daha* due to their cooling abilities. Gastric and

duodenal ulcers can benefit from *Madhu* (honey) and *Ghrita*'s ability to heal wounds.

Pathya (wholesome)/Apathya (unwholesome)

For *Amlapitta Aahar* having properties like *Laghu*, *Ruksha*, *Ushna guna*, *Madhur*, *Katu* and *Tikta rasa*, *Madhur* and *Katu Vipaka*, *Shita virya*, is

considered as *Pathya*. *Aahar* having above properties prevents aggravation of *Pitta*, pacifies *Samana Vayu* and causes *Agnideepan*, *Amapachan* and *Vatanulomana*. *Ruksha aahar* absorbs the excessive *Dravtva* of *Pachaka Pitta*. (Table No-2)

Table 2: Pathya (Wholesome)/ Apathya (Unwholesome)

Items	Pathya	Apathya
Vegetables	Bottle gourd (<i>Tikta lauki</i>), <i>Bathua</i> (<i>Chenopodium album</i>), bitter gourd (<i>Karavellaka</i>), pointed gourd (<i>Parval</i>), pumpkin (<i>Kushmanda</i>)	Potato, sweet potato, brinjal, taro root
Fruits	Pomegranate (<i>Dadima</i>), gooseberry (<i>Amalaki</i>), coconut (<i>Narikel</i>), dried grapes (<i>Draksha</i>)	Banana, mango, pineapple, orange
Cereals	Red rice (<i>Rakta shali</i>), old rice (<i>Purana shali</i>) barley (<i>Yava</i>), wheat (<i>Godhuma</i>)	New rice (<i>Nava anna</i>)
Pulses	Green moong (<i>Mudag</i>)	Black gram (<i>Masha</i>), horse gram (<i>Kulath</i>)
Dairy products	Cow milk, cow ghee	<i>Curd</i> , goat milk, <i>Jaggery</i>
Drinks	Coconut water (<i>Narikela jala</i>), lukewarm water (<i>Sukoshna jala</i>), flour of roasted parched grain (<i>Lajasaktu</i>)	New wine (<i>Nutan madya</i>), cold water (<i>Sheetal jal</i>), <i>Kanji</i>
Spices	Garlic, dry ginger, clove, turmeric, saffron, cumin	Asafoetida, chilli, cinnamon, mustard seeds, pepper, tamarind
Nuts	Coconut	Peanut, groundnut, cashew nut
Oils	Sunflower oil, coconut oil	Mustard oil, sesame oil

Yogasana & Pranayama^[27]

According to Medical science, *Yoga* therapy is quite effective because it forms a balance of Gut- Brain-endocrine axis which directly show predominance on all the systems and organs of the body. For internal cleansing of body and strengthening of mind respectively *Yoga* and *Pranayam* is one the important therapeutic approach. There are following *Asana*'s and *Pranayam*, which plays major role in GERD management.

Yogasana: *Pavanmuktasana*: Useful in improving digestion and regulates the normal function of *Apan Vayu*. *Shashankaasana*, *Shalabhasana*, *Bhujangasana*, *Dhanurasana*: In these *Asana*'s abdomen and chest region is pressurized and blood circulation of that area is increased which improves the digestive secretion as well as helps in excretion of waste products.

Pranayam: *Anulom-Vilom*: It increases the digestive fire by maintaining the *Ida-Pingla-Sushumna* chakra i.e., balance the sympathetic and parasympathetic activities. It helps in reducing stress related indigestion because stress is one of the causative factors of *Amlapitta*. *Sheetakari* and *Sheetali*: Both these have cooling and soothing effect because it enhances the *Sheeta guna* of *Vata dosha* thus it may reduce extra heat and balance the *Pachaka pitta*. *Kunjla Kriya* and *Dahuti*: It is meant for purification of upper digestive tract. A thorough wash of the stomach like this can

offer permanent solution to a lot of health problems like Indigestion, acidity, flatulence etc.

CONCLUSION

The above review article illustrates an essential correlation of *Amlapitta* as GERD a disease of modern medicine. It concluded in the above study that the Ayurvedic modalities surely help to treat the ailments by herbal preparations. The Ayurvedic *Shodhana* followed by *Shamana* therapies along with diet and lifestyle modification definitely helpful to treat the disease.

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Cite this article as:

Agarwal Bhawana, N.R. Singh, Jitendra Varsakiya, Shushma Upadhyay. Role of Ayurveda Modalities in the Management of Urdhwag Amlapitta (Gastro Esophageal Reflux Disease): A Critical Review. AYUSHDHARA, 2023;10(Suppl 2):30-37.
<https://doi.org/10.47070/ayushdhara.v10iSuppl2.1199>

Source of support: Nil, Conflict of interest: None Declared

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