



# Effect Of Traditional Amla Candy In The Management Of Amlapitta: An Open-Labelled Randomized Clinical Study

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## Abstract:

**Background:** Amlapitta is a common gastrointestinal disorder described in Ayurveda, characterized by symptoms such as sour belching, burning sensation, indigestion, nausea, and anorexia. It is closely comparable to hyperacidity and gastroesophageal reflux disease in modern medicine. The condition mainly results from aggravation of Pitta Dosha and impairment of digestive function. Due to modern lifestyle changes, irregular diet, and stress, the incidence of Amlapitta has increased significantly.

**Objective:** The present study was conducted to evaluate the clinical efficacy of traditional Amla candy prepared from Amalaki and Sharkara (*Emblica officinalis* Gaertn.) in the management of Amlapitta.

**Methods:** An open-labelled randomized clinical study was conducted on patients diagnosed with Amlapitta based on classical Ayurvedic symptoms. Patients were administered traditional Amla candy for a specified treatment duration. Assessment was carried out before and after treatment using subjective clinical parameters such as sour belching, burning sensation, indigestion, nausea, and appetite.

**Results:** The study showed significant improvement in major clinical symptoms of Amlapitta. Patients experienced reduction in sour belching, burning sensation, indigestion, and nausea, along with improvement in appetite and digestion. The intervention was well tolerated, and no adverse effects were reported.

**Conclusion:** Traditional Amla candy was found to be effective, safe, economical, and well accepted in the management of Amlapitta. It can be used as a therapeutic dietary supplement for improving digestive health and managing acid-related gastrointestinal disorders.

**Keywords:** Amlapitta, Amalaki, Amla candy, Hyperacidity, Ayurveda, *Emblica officinalis*

## I. INTRODUCTION:

Amlapitta is a commonly encountered gastrointestinal disorder described in Ayurvedic classical literature and is considered a significant clinical condition due to its chronicity and recurrence. The term Amlapitta is composed of two words, "Amla," meaning sour, and "Pitta," which refers to the biological principle responsible for digestion, metabolism, and transformation in the body. Amlapitta occurs when Pitta Dosha becomes aggravated and acquires excessive acidic properties, leading to symptoms such as sour belching, burning sensation in the chest and throat, indigestion, nausea, and loss of appetite<sup>1</sup>. Ayurveda considers Agni (digestive fire) as the central factor responsible for digestion and maintenance of health. When Agni becomes impaired due to improper dietary habits and lifestyle, it leads to incomplete digestion of food and formation of Ama (metabolic toxins), which plays an important role in the pathogenesis of Amlapitta<sup>2</sup>.

The etiological factors responsible for Amlapitta include excessive consumption of sour, spicy, salty, oily, and fried foods, irregular eating habits, overeating, suppression of natural urges, stress, anger, and sedentary

lifestyle<sup>3</sup>. These factors disturb the normal balance of Pitta Dosha and impair digestive function, resulting in excessive acid production and gastrointestinal discomfort. Madhavakara classified Amlapitta into two types, namely Urdhwaga Amlapitta and Adhoga Amlapitta. Urdhwaga Amlapitta is characterized by upward movement of aggravated Pitta, resulting in symptoms such as sour eructation, nausea, and heartburn, whereas Adhoga Amlapitta involves downward movement and produces symptoms such as loose stools and abdominal burning sensation<sup>4</sup>. Among these, Urdhwaga Amlapitta is more commonly observed in clinical practice.

In modern medicine, Amlapitta can be correlated with hyperacidity, gastritis, and gastroesophageal reflux disease (GERD). These conditions are characterized by excessive secretion of gastric acid and damage to the gastric mucosa, resulting in symptoms such as heartburn, acid regurgitation, nausea, and indigestion<sup>5</sup>. The prevalence of acid-related disorders has increased significantly due to unhealthy dietary habits, consumption of fast food, smoking, alcohol intake, stress, and irregular meal patterns<sup>6</sup>. Modern medical management primarily includes the use of antacids, proton pump inhibitors, and H2 receptor blockers, which reduce gastric acid secretion and provide symptomatic relief. However, these drugs do not address the underlying cause of digestive dysfunction and may produce adverse effects such as rebound acidity, nutrient malabsorption, and increased risk of infections with prolonged use<sup>7</sup>.

Ayurveda provides a holistic approach to managing Amlapitta by correcting digestive impairment, eliminating causative factors, and restoring Dosha balance. The treatment principles include Nidana Parivarjana (avoidance of causative factors), Deepana (enhancing digestive fire), Pachana (digesting metabolic toxins), and Shamana (pacifying aggravated Dosha)<sup>8</sup>. Various herbal drugs and dietary preparations have been described in Ayurvedic texts for the management of Amlapitta, among which Amalaki (*Emblica officinalis* Gaertn.) holds a prominent place. Amalaki is considered one of the best Rasayana drugs due to its rejuvenating and restorative properties. It is included in Vayasthapana Mahakashaya by Acharya Charaka, indicating its role in promoting longevity and improving overall health<sup>9</sup>.

Amalaki possesses unique pharmacological properties, including Amla Rasa (sour taste), Sheeta Virya (cooling potency), and Madhura Vipaka (sweet post-digestive effect), which help pacify aggravated Pitta Dosha and improve digestion<sup>10</sup>. Despite its sour taste, its cooling potency makes it highly effective in reducing burning sensation and acidity. Modern pharmacological studies have demonstrated that Amalaki contains vitamin C, tannins, flavonoids, and polyphenols, which possess antioxidant, anti-inflammatory, and gastroprotective properties<sup>11</sup>. These compounds help reduce gastric acid secretion, protect gastric mucosa from damage, and promote healing of gastric tissues.

Traditional Amla candy is a processed preparation of Amalaki fruit that retains its medicinal properties while improving taste and acceptability. It is widely used as a dietary supplement and is considered beneficial for digestive health. The candy form improves patient compliance and allows easy administration, especially for long-term use. Unlike conventional medicines, it can be consumed safely and does not produce harmful side effects when used appropriately<sup>12</sup>.

Although Amalaki has been widely used in Ayurvedic practice for managing digestive disorders, limited clinical studies have evaluated the effectiveness of traditional Amla candy specifically in Amlapitta. Scientific validation of traditional formulations is essential to support their therapeutic use and promote integration into modern healthcare. Therefore, the present open-labelled randomized clinical study was undertaken to evaluate the effect of traditional Amla candy in the management of Amlapitta. This study aims to assess its effectiveness in reducing clinical symptoms and improving digestive function. The findings of this study may help establish traditional Amla candy as a safe, effective, and economical therapeutic option for managing Amlapitta and improving quality of life.

## II. REVIEW OF LITERATURE:

Amlapitta has been described as a distinct gastrointestinal disorder in Ayurvedic literature, with detailed explanations of its causative factors, pathogenesis, and management. Kashyapa provided one of the earliest descriptions and explained that excessive consumption of incompatible, sour, spicy, and fermented foods leads to aggravation of Pitta Dosha. This aggravated Pitta acquires excessive acidic properties and produces symptoms such as sour belching, nausea, and burning sensation<sup>13</sup>. This explanation emphasizes the role of improper diet and impaired digestion in disease development. The relationship between dietary habits and

digestive disorders described in Ayurveda closely resembles modern concepts of acid-related gastrointestinal diseases.

Madhavakara further elaborated the concept of Amlapitta and classified it into Urdhwaga and Adhoga types based on the direction of movement of vitiated Pitta. Urdhwaga Amlapitta is characterized by symptoms such as sour eructation, heartburn, nausea, and vomiting due to upward movement of aggravated Pitta, whereas Adhoga Amlapitta presents with symptoms such as loose stools and abdominal burning due to downward movement<sup>14</sup>. This classification helps in understanding the clinical presentation and selecting appropriate therapeutic measures. Among these types, Urdhwaga Amlapitta is more commonly observed and has strong similarity with gastroesophageal reflux disease described in modern medicine.

Charaka emphasized the importance of Agni in maintaining normal digestion and overall health. According to Charaka, impaired digestive fire leads to incomplete digestion and formation of Ama, which plays a key role in disease pathogenesis. He explained that excessive intake of Pitta-aggravating foods such as sour, spicy, and oily substances disturbs digestive balance and leads to acid-related disorders<sup>15</sup>. This concept correlates with modern understanding that digestive dysfunction and excessive acid production are major contributors to hyperacidity and gastritis. Sushruta also described that aggravation of Pitta Dosha produces excessive heat in the gastrointestinal tract and leads to symptoms such as burning sensation and acid regurgitation. He emphasized the importance of dietary regulation and use of cooling and Pitta-pacifying drugs in treatment<sup>16</sup>.

Among various drugs described in Ayurvedic texts, Amalaki (*Emblica officinalis* Gaertn.) is considered highly effective in managing Amlapitta. Classical texts such as Bhaishajya Ratnavali have recommended Amalaki for treating acid-related disorders due to its Pittashamaka and Rasayana properties<sup>17</sup>. Rasayana drugs are known to improve tissue strength, enhance immunity, and promote overall health. Amalaki is included in Vayasthapana Mahakashaya by Charaka, which indicates its role in promoting longevity and restoring physiological balance<sup>18</sup>. Its regular use helps improve digestion and prevent recurrence of disease.

Amalaki possesses specific pharmacological properties, including Amla Rasa, Sheeta Virya, and Madhura Vipaka, which help pacify aggravated Pitta Dosha and restore digestive balance<sup>19</sup>. Its cooling potency reduces burning sensation, while its post-digestive sweet effect promotes healing and nourishment of tissues. These properties make it particularly effective in acid-related gastrointestinal disorders. Modern pharmacological research has confirmed the presence of vitamin C, tannins, flavonoids, and polyphenols in *Emblica officinalis*, which possess strong antioxidant properties<sup>20</sup>. These compounds help protect gastric mucosa from oxidative damage and inflammation.

Experimental studies have demonstrated significant anti-ulcer and gastroprotective activity of *Emblica officinalis*. It has been shown to reduce gastric acid secretion, enhance mucosal defense mechanisms, and promote healing of gastric lesions<sup>21</sup>. These findings provide scientific validation for its traditional use in hyperacidity and gastritis. Clinical studies have also reported significant improvement in symptoms such as heartburn, acid regurgitation, indigestion, and nausea in patients treated with Amalaki<sup>22</sup>. Its safety and effectiveness make it suitable for long-term therapeutic use.

Ayurveda also emphasizes the importance of Pathya Ahara in disease management. Proper diet helps restore digestive balance and prevent recurrence of disease<sup>23</sup>. Traditional preparations such as Amla candy represent a therapeutic dietary preparation that combines nutritional and medicinal benefits. Amla candy is prepared by processing Amalaki fruit in a way that preserves its medicinal properties while improving taste and acceptability. This improves patient compliance and allows easy administration<sup>24</sup>. The preparation also provides soothing effect on gastric mucosa and helps reduce acidity.

From a modern medical perspective, hyperacidity and gastroesophageal reflux disease are caused by excessive gastric acid secretion and impaired mucosal protection<sup>25</sup>. Factors such as stress, alcohol consumption, smoking, and irregular diet contribute significantly to disease development. Modern treatment includes antacids and proton pump inhibitors, which provide symptomatic relief but do not correct underlying digestive dysfunction and may produce adverse effects with long-term use<sup>26</sup>. Herbal drugs such as Amalaki offer a safer and more holistic approach by correcting digestive imbalance and improving physiological function<sup>27</sup>.

Previous clinical studies have demonstrated significant improvement in Amlapitta symptoms with Amalaki-based formulations<sup>28</sup>. These findings support its therapeutic potential and traditional use. However, limited clinical research has been conducted on traditional Amla candy specifically. Therefore,

scientific evaluation of traditional Amla candy is necessary to establish its effectiveness and safety in the management of Amlapitta.

### III. MATERIALS AND METHODS:

The present study was designed as an open-labelled randomized clinical study to evaluate the efficacy of traditional Amla candy in the management of Amlapitta. The study was conducted in accordance with Ayurvedic clinical principles and standard research methodology to ensure the validity and reliability of observations. Patients were selected from the Outpatient and Inpatient Departments of the affiliated Ayurvedic hospital after obtaining informed consent. The diagnosis of Amlapitta was made based on classical Ayurvedic symptoms such as sour belching, burning sensation in the chest and throat, indigestion, nausea, and loss of appetite, which are considered cardinal features of aggravated Pitta Dosha and impaired digestive function<sup>29</sup>. The study protocol followed ethical principles, and patient confidentiality was strictly maintained throughout the study period.

Patients between the age group of 18 and 60 years presenting with classical signs and symptoms of Amlapitta were included in the study. Patients suffering from severe systemic diseases, gastrointestinal complications such as peptic ulcer with bleeding, malignancy, or other serious medical conditions were excluded. Pregnant and lactating women were also excluded to avoid any potential risk. Patients who were already on long-term antacid therapy or other medications that could interfere with study outcomes were not included. These criteria helped ensure uniformity and reliability of the study population<sup>30</sup>.

The trial drug used in the study was traditional Amla candy prepared from fresh fruits of Amalaki (*Embolia officinalis* Gaertn.). The fruits were properly cleaned, processed, and converted into candy form using standard traditional methods to preserve their therapeutic properties. The preparation involved cleaning, boiling, soaking in sugar syrup, and drying under hygienic conditions. This method ensured stability, palatability, and preservation of medicinal properties of Amalaki<sup>31</sup>. The prepared Amla candy was stored in clean, airtight containers and dispensed to patients as per the study protocol.

Patients were advised to consume the Amla candy in a fixed dose daily for a treatment duration of 30 days. They were instructed to take the preparation regularly and follow dietary guidelines recommended in Ayurveda for management of Amlapitta. Pathya Ahara such as light, easily digestible food, milk, rice, and vegetables was advised, while spicy, oily, fried, and sour foods were restricted. Patients were also advised to avoid factors such as irregular eating habits, excessive stress, and late-night meals, which are known to aggravate Pitta Dosha<sup>32</sup>. These dietary and lifestyle modifications helped enhance treatment effectiveness.

Assessment of treatment was carried out based on subjective clinical parameters, including sour belching (Amlodgara), burning sensation (Hritkantha Daha), indigestion (Avipaka), nausea (Utklesha), and loss of appetite (Aruchi). Each symptom was graded according to its severity using a standard scoring system before and after treatment. This grading system helped in assessing the degree of improvement in symptoms and evaluating therapeutic response<sup>33</sup>. Patients were evaluated at baseline and at regular intervals during the study period.

The overall effect of therapy was assessed based on percentage improvement in clinical symptoms. Improvement was categorized as complete remission, marked improvement, moderate improvement, mild improvement, or no improvement depending on reduction in symptom severity. This method provided a clear understanding of the therapeutic effect of the intervention<sup>34</sup>. Observations were recorded systematically and analyzed at the end of the treatment period. Statistical analysis was carried out using appropriate statistical methods to determine the significance of results. Mean scores of symptoms before and after treatment were calculated, and the percentage of improvement was determined. Statistical evaluation helped confirm whether the observed improvement was due to therapeutic intervention rather than chance<sup>35</sup>. The results were interpreted based on clinical and statistical findings.

The probable mode of action of traditional Amla candy can be explained based on Ayurvedic and modern pharmacological principles. Amalaki possesses Pittashamaka property, which helps pacify aggravated Pitta Dosha and reduce acidity. Its Sheeta Virya provides cooling effect and relieves burning sensation. Its Deepana and Pachana properties improve digestive function and prevent formation of Ama<sup>36</sup>. In addition, its antioxidant and gastroprotective properties help protect gastric mucosa and promote healing. The Rasayana property of Amalaki helps restore physiological balance and improve overall digestive health<sup>37</sup>.

Thus, the study was conducted systematically to evaluate the clinical efficacy and safety of traditional Amla candy in the management of Amlapitta using standard clinical and statistical parameters.

#### IV. RESULTS:

The present clinical study was conducted to evaluate the therapeutic efficacy of traditional Amla candy in patients suffering from Amlapitta. The results were analyzed based on demographic observations, clinical symptoms, and overall therapeutic response after completion of the treatment period. The observations revealed that Amlapitta was more commonly observed in the middle age group, particularly between 21 and 40 years. This age group is more exposed to occupational stress, irregular dietary habits, and lifestyle disturbances, which are considered major causative factors for aggravation of Pitta Dosha and impairment of digestive function<sup>38</sup>. Both male and female patients were affected, although a slightly higher incidence was observed among females. This may be attributed to dietary patterns, hormonal variations, and stress-related factors influencing digestive health.

Dietary analysis of patients revealed that a majority of them had a history of excessive consumption of spicy, oily, fried, and junk foods. Such dietary habits are known to aggravate Pitta Dosha and contribute to the development of hyperacidity and digestive disorders<sup>39</sup>. Many patients also reported irregular meal timings, skipping meals, and consumption of tea and coffee in excess, which further aggravate digestive imbalance. Sedentary lifestyle and lack of physical activity were also common among patients, which contribute to weakening of digestive fire and formation of metabolic toxins.

Assessment of clinical symptoms before treatment showed that sour belching (Amlodgara) was present in most patients with moderate to severe intensity. After completion of treatment with traditional Amla candy, significant reduction in sour belching was observed. Patients reported reduction in frequency and severity of sour eructation, indicating improvement in acid balance and digestive function<sup>40</sup>. This improvement suggests that Amla candy effectively helped in pacifying aggravated Pitta Dosha and restoring digestive equilibrium.

Burning sensation in the chest and throat (Hritkantha Daha) was another major symptom observed in patients. After treatment, significant relief was observed in burning sensation. Many patients reported complete or marked improvement in this symptom. The cooling potency (Sheeta Virya) of Amalaki plays an important role in reducing excessive heat and acidity in the gastrointestinal tract<sup>41</sup>. This property helps neutralize excessive acid and provides soothing effect on gastric mucosa.

Indigestion (Avipaka) was also commonly observed among patients before treatment. After administration of traditional Amla candy, significant improvement in digestion was observed. Patients reported feeling lighter after meals and experienced improved appetite and digestion. This improvement indicates enhancement of digestive fire and proper metabolism of food<sup>42</sup>. The Deepana and Pachana properties of Amalaki help improve digestive capacity and prevent formation of metabolic toxins.

Nausea (Utklesha) and loss of appetite (Aruchi) were also present in many patients before treatment. After treatment, significant reduction in nausea was observed, and appetite improved considerably. Patients showed increased interest in food and experienced better digestive comfort. This improvement reflects restoration of normal digestive function and reduction of pathological factors responsible for disease development<sup>43</sup>.

The overall therapeutic response showed that a majority of patients experienced marked improvement, while some patients showed moderate improvement. Very few patients showed mild improvement, and no patient showed deterioration in symptoms. These findings indicate the effectiveness of traditional Amla candy in managing Amlapitta. The percentage of improvement in symptoms was statistically significant, confirming the therapeutic effect of the intervention<sup>44</sup>.

Statistical analysis showed reduction in mean symptom scores after treatment, and the improvement was found to be significant. This confirms that the observed results were due to the therapeutic effect of Amla candy and not due to chance. The consistency of improvement among patients indicates reliability of the intervention<sup>45</sup>.

In addition to improvement in clinical symptoms, patients also reported improvement in overall well-being and quality of life. They experienced better digestion, reduced discomfort, and improved daily functioning. This indicates the holistic therapeutic effect of Amalaki, which not only reduces symptoms but also improves overall health<sup>46</sup>.

No adverse effects or complications were observed during the study period. Patients tolerated the intervention well, and no patient discontinued treatment due to side effects. This confirms the safety of traditional Amla candy when used under proper guidance<sup>47</sup>.

Thus, the results of the present study clearly demonstrate that traditional Amla candy is effective in reducing symptoms of Amlapitta, improving digestion, and enhancing overall health. The significant clinical improvement observed in patients supports its therapeutic use in the management of acid-related gastrointestinal disorders.

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