



## ROLE OF LAGHU SUTASEKHAR RAS IN UDARDA W.S.R TO URTICARIA- EXPLORING THROUGH GUT-SKIN AXIS

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### Abstract:

**BACKGROUND AND OBJECTIVES:** The skin is the most commonly affected organ in food allergies, with urticaria, angioedema, and erythema being frequent manifestations. Incompatible food combinations may provoke or aggravate allergic skin reactions, most often presenting as acute urticaria. In Ayurveda, the consumption of *viruddhahara* (incompatible food) leads to ama formation and dhatu *saithilya*, predisposing to allergic disorders such as Udarda, a pitta-kapha dominant condition resembling urticaria, characterized by *daha* and *kandu*. *Laghu Sutasekhar Ras*, with its primary ingredients *Gairika* and *Shunti*, is well-documented for its ama pachana and pitta-rakta dosha pacifying properties, making it a promising formulation for managing food-induced urticaria. **METHODOLOGY:** Literature collected on *Udarda*, Urticaria, *Laghusutasekhar Rasa* and gut-skin axis from classical Ayurvedic texts like *Ashtanga Sangraha*, *Madhava Nidana*, *Rasa Ratna Samuchaya* and scientific databases such as Google Scholar, PubMed, ResearchGate. **RESULTS:** Food allergens trigger mast cell activation, leading to the release of histamine and proinflammatory cytokines, which result in *rasa-rakta dushti* and characteristic inflammatory skin lesions. This pathophysiology reflects the Gut-Skin Axis, where gut dysbiosis and increased intestinal permeability contribute to systemic inflammation and skin hypersensitivity reactions. In Ayurvedic understanding, these mechanisms correlate with *Udarda*, a *pitta-kapha* dominant disorder arising from *ama* formation and *dhatu saithilya* due to consumption of *viruddhahara*. *Laghu Sutasekhar Ras*, containing *Gairika* and *Shunti*, exhibits *ama pachana* and *pitta-rakta shamana* properties that help restore gut integrity and pacify aggravated doshas. By harmonizing the Gut-Skin Axis through the principles of *Guna Siddhanta*, it offers a holistic therapeutic approach for managing food-induced urticaria and reestablishing systemic balance.

**KEYWORDS:** Gut dysbiosis, *Laghu Sutasekhar Ras*, *Saama Pitta*, Urticaria.

## Introduction

Urticaria is characterized by red, itchy, and swollen areas of the skin of varying sizes, which may appear suddenly on any part of the body. It is commonly triggered by allergic reactions. Based on duration, urticaria lasting for less than six weeks is defined as acute urticaria, whereas episodes recurring for more than six weeks are termed chronic urticaria. Acute urticaria is more prevalent in younger individuals and often associated with food allergens, while chronic urticaria is frequently linked to IgE-mediated hypersensitivity reactions. However, food is often only perceived as a causative factor in chronic cases.<sup>[1]</sup>

Food allergy manifestations are diverse, arising from intricate interactions between food proteins, the gastrointestinal tract, the immune system, and target organs. Although the gastrointestinal mucosa is the first site of allergen contact, the skin remains the most commonly affected target organ, accounting for nearly 40–60% of IgE-mediated reactions.<sup>[2]</sup> This highlights the concept of the Gut-Skin Axis, a bidirectional communication system between the gastrointestinal and integumentary systems. Both gut and skin microbiota play pivotal roles in host defense, regulation of inflammatory pathways, and immune modulation.

In Ayurveda, the root cause of all diseases is described as *Mandagni* (impaired digestive fire). Consumption of *Asatmya Ahara* (incompatible diet) is said to provoke allergic reactions, with conditions resembling urticaria described under *Shitapitta*, *Udarda*, and *Kotha* by *Madhavakara*. Among these, *Udarda* is explained as a disorder presenting with inflammatory eruptions resembling wasp stings (*Vartidansha*), often

### **Samprapti Ghataka**

<b>Dosha</b>	<i>Pitta, Kapha</i>
<b>Agni</b>	<i>Mandagni</i>
<b>Doshagati</b>	<i>Vridhhi, Tiryak, Shakha</i>

accompanied by *Kandu* (itching), *Toda* (pricking pain), *Daha* (burning), *Vamana* (vomiting), or *Jwara* (fever). It is considered a *Tridoshaja* condition with predominance of *Pitta* and *Kapha*.<sup>[3]</sup>

*Laghu Sutasekhara Rasa*, a classical herbo-mineral formulation prepared with two parts of *Gairika* (red ochre), one part of *Sunthi* (*Zingiber officinale*), and levigated with *Nagavalli Swarasa* (*Piper betle* leaf juice), is traditionally employed in disorders of this nature. This short review aims to explore the role of *Laghu Sutasekhara Rasa* in the management of food-induced urticaria, with particular emphasis on its action in restoring balance across the gut-skin axis.<sup>[4]</sup>

### **Materials and Methods**

Information on *Laghu Sutasekhara Rasa*, *Udarda*, and food-induced urticaria was explored through a comprehensive review of classical Ayurvedic literature, including the *Brihatrayi*, *Laghutrayi*, and *Rasa Tantra Sara*. In addition, relevant contemporary evidence was retrieved from scientific databases such as Google Scholar, PubMed, and AYUSH Dhara to support and correlate classical concepts with modern research findings.

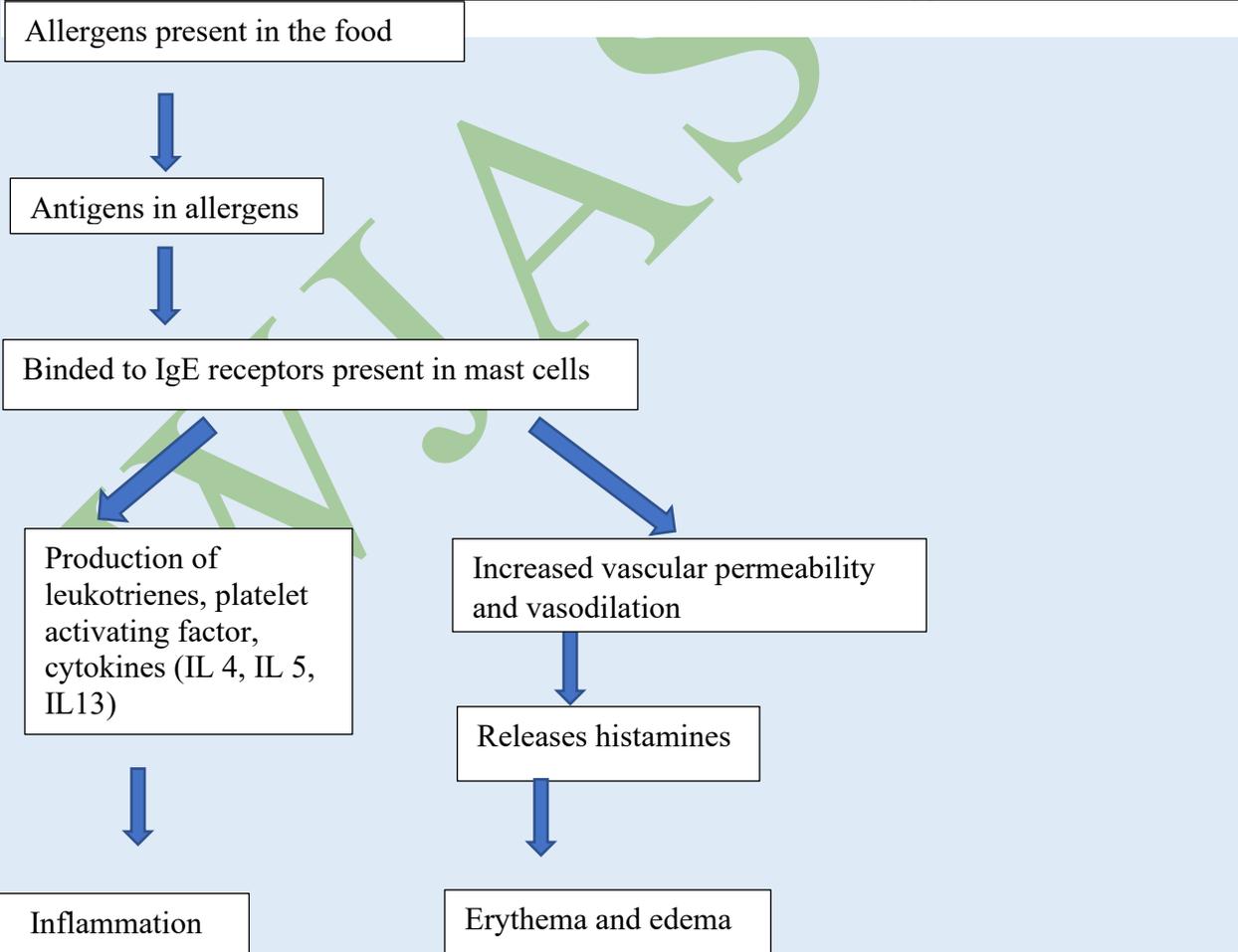
### **Results**

In Ayurvedic texts, *Nidana and Samprapti* of *Udarda* is explained as a *Tridoshaja* disorder with predominance of *Pitta* and *Kapha*. Exposure to *Sheeta Maruta* (cold wind) is considered a primary causative factor, wherein vitiated *Vata* and *Kapha* combine with *Pitta* and spread internally and externally, resulting in the manifestation of *Udarda*. Dietary factors (*Aharaja Nidana*) such as excessive intake of sour (*Amla*), salty (*Lavana*), heavy (*Guru*), unctuous (*Snigdha*) foods, curd, and incompatible diet (*Viruddha Ahara*) are also major contributors.

<b><i>Vyadhimarga</i></b>	<i>Bahya</i>
<b><i>Dushya</i></b>	<i>Rasa, Rakta</i>
<b><i>Srotas</i></b>	<i>Rasavaha, Raktavaha</i>
<b><i>Srotodushti Prakara</i></b>	<i>Vimarga Gamana</i>
<b><i>Udbhava Sthana</i></b>	<i>Amashaya</i>
<b><i>Vyakti Sthana</i></b>	<i>Tvak</i>
<b><i>Svabhava</i></b>	<i>Ashukari</i>

**Rupa (Clinical Manifestations)**

<ul style="list-style-type: none"> <li>• <i>Vartidamsha Samsthana Shotha</i> –</li> </ul>	<ul style="list-style-type: none"> <li>• Inflammatory swellings resembling insect bites</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Kandu Bahula</i> –</li> </ul>	<ul style="list-style-type: none"> <li>• Severe itching</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Toda Bahula</i> –</li> </ul>	<ul style="list-style-type: none"> <li>• Pricking type of pain</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Chardi</i> –</li> </ul>	<ul style="list-style-type: none"> <li>• Vomiting</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Jvara</i> –</li> </ul>	<ul style="list-style-type: none"> <li>• Fever</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Vidaha</i> –</li> </ul>	<ul style="list-style-type: none"> <li>• Burning sensation</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Sotsanga Saraga Mandala</i> –</li> </ul>	<ul style="list-style-type: none"> <li>• Raised erythematous lesions</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Kshanika Utpatti Vinasha</i> –</li> </ul>	<ul style="list-style-type: none"> <li>• Sudden appearance and disappearance of lesions<sup>[5]</sup></li> </ul>



## LAGHU SUTASEKHAR RAS

**Table 1: Ingredients and Rasa Panchaka of Laghusutasekhar Ras**

S.no	Ingredients	Quantity	Rasa	Guna	Veerya	Vipaka
1	Shuddha gairika	2 parts	kashaya, madhura	snigdha, vishada	sheeta	madhura
2	Shunthi	1 part	katu	Snigdha	Ushna	madhura
3	Nagavalli swarasa	quantity required for bhavana	katu, tiktha	laghu, tikshna, vishadha	Ushna	Katu

**Pharmacological Actions of Ingredients in Laghu Sutasekhara Rasa**

- **Gairika (Red Ochre):** Acts as an antitoxin, *Chakshushya* (eye tonic), *Varnya* (improves complexion), and *Balya* (strength-promoting). It reduces body heat, exhibits *Raktasthambaka* (hemostatic) properties, and is effective in *Raktavaha Srotovikara*. As per *Rasa Tarangini*, it is specifically beneficial in *Udarda*.<sup>[8]</sup>
- **Sunthi (Zingiber officinale, Dry Ginger):** Possesses anti-inflammatory, antimicrobial, *Deepana* (appetizer), and *Pachana* (digestive) actions. It is indicated in conditions like *Kustha* (skin diseases), *Vrana* (wounds), *Raktapitta* (bleeding disorders), *Agnimandya* (indigestion), *Pandu* (anemia), and *Shotha* (edema/inflammation).<sup>[9]</sup>
- **Nagavalli (Piper betle, Betel Leaf):** Known for its appetite-stimulant, carminative, and anti-inflammatory properties. Modern studies highlight the anti-allergic activity of its ethanol extract, validating its role in hypersensitivity conditions.<sup>[10]</sup>

This formulation is traditionally prescribed for a range of *Pittaja* disorders, including *Pittaja Shirashoola*, *Ardhavabhedaka*, *Suryavarta*, *Mastaka Shoola*, *Vamana*, *Nidranasha*, *Pittaja Unmada*, *Daha*, *Urdhwaga Raktapitta*.<sup>[11]</sup>

**Discussion**

In Ayurveda, the consumption of *Viruddha Ahara* (incompatible diet) or

allergen-containing foods can be considered as an *Ama Avastha* (state of metabolic toxins). From a modern perspective, this aligns with antigen binding to IgE receptors on mast cells, leading to the release of mediators such as leukotrienes, platelet-activating factors, and cytokines, which drive inflammatory responses. This process can be correlated with the vitiation of *Pitta* and *Kapha*. The histamine-induced vascular permeability and vasodilation observed in urticaria are comparable to the enhanced *Sara* (mobility) and *Drava Guna* (fluidity) of aggravated *Pitta*. The circulation of *Ama Visha* together with deranged *Pitta* and *Kapha* through *Rasavaha* and *Raktavaha Srotas* results in erythema, edema, and wheals supporting the observation that the skin is the most affected distal organ in urticaria. Based on the *Samprapti Ghataka* of *Udarda* (*Pitta-Kapha* predominance, *Mandagni*, involvement of *Rasa* and *Rakta Dhatus*), *Laghu Sutasekhara Rasa* emerges as a rational formulation for intervention. Its components provide a multipronged action.

*Gairika* (Red Ochre) with *Raktasthambaka* (hemostatic) and antitoxic actions, it reduces the excess *Sara* and *Drava Guna* of *Pitta* while eliminating circulating *Ama Visha*. Being hematite (iron oxide), it is also a rich source of iron, and earlier research has shown improvement in chronic urticaria with oral iron supplementation, suggesting an additional supportive mechanism. The ethanol extract of *Nagavalli* leaves exhibits anti-allergic activity, partly through

histamine-lowering effects, making it a valuable agent in hypersensitivity-related conditions such as urticaria. *Ama Pachana* property of *Sunthi* (*Zingiber officinale*) helps to eliminate *Ama* from the gastrointestinal tract, while its anti-inflammatory action alleviates swelling and irritation. The antimicrobial activity of *Sunthi* also supports gut health by regulating dysbiosis, which plays a key role in the gut-skin axis.

Recent studies further indicate that *Laghu Sutasekhara Rasa* possesses prebiotic properties, enhancing the growth of beneficial gut microbiota such as *Saccharomyces boulardii*, *Lactobacillus paracasei*, and *Lactobacillus plantarum*, while suppressing pathogenic strains including *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa*, and *Bacillus subtilis*.<sup>[12]</sup> This dual role in ameliorating hypersensitivity reactions and modulating the gut microbiome highlights its potential in regulating the gut-skin axis beyond its traditional indication in food-induced urticaria. Gut microbiota imbalance or “leaky gut syndrome” can trigger systemic inflammation by allowing toxins and antigens to enter the bloodstream, reflecting the Gut-Skin Axis — a bidirectional link between gut and skin health. Both systems regulate immunity and inflammation through their microbiota. The strength of this review lies in integrating Ayurvedic *Samprapti* with modern immunology and pharmacology, while also drawing on both classical texts and recent microbiome research. However, the discussion is limited by the scarcity of direct clinical trials and the reliance on secondary sources, with much of the pharmacological evidence still preliminary. Nonetheless, the scope for future research is promising, with opportunities to clinically validate the efficacy and safety of *Laghu Sutasekhara Rasa*, explore its immunomodulatory and microbiome-modulating potential, and assess

its role in broader hypersensitivity and inflammatory skin disorders.

## CONCLUSION

Food-induced urticaria exemplifies the complex interaction between allergens, the immune system, and the gut-skin axis. Ayurveda attributes such conditions to *Mandagni* and *Ama*, with *Udarda* described as a *Tridoshaja* disorder predominantly involving *Pitta* and *Kapha*. The classical formulation *Laghu Sutasekhara Rasa*, composed of *Gairika*, *Sunthi*, and *Nagavalli*, demonstrates therapeutic potential in this context. Its antitoxic, anti-allergic, anti-inflammatory, and prebiotic actions address both the systemic pathogenesis and the gut-skin relationship underlying urticaria. By integrating Ayurvedic principles with modern insights, this review highlights *Laghu Sutasekhara Rasa* as a promising intervention in food-induced urticaria. However, further clinical and mechanistic studies are needed to confirm its efficacy and safety.

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