



GARA VISHA AND FOOD ADULTERATION: A COMPARATIVE STUDY OF AYURVEDIC TOXICOLOGY AND MODERN INSIGHTS

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ABSTRACT

Ayurveda defines *Garavisha* as a poison, whether toxic or non-toxic, which is created through the combination of two or more substances, forming a dangerous concoction. This hazardous mixture may not pose an immediate threat to life, but the cumulative effect of these substances will lead to severe chronic issues. In the past, the idea was rooted in intentional poisoning through a combination of substances or the inadvertent eating of combinations of food that could potentially harm the body. In today's world, the definition of *Gara Visha* has broadened to incorporate numerous toxins stemming from one's environment and lifestyle. An example would be the consumption of adulterated food. Such food may harbor *Gara visha* in the form of synthetic colorings, pesticides, preservatives, or any other chemical additives. At first, they are not fatal; in due time, however, the long-term damage brought about when such substances are consumed day after day becomes debilitating. *Gara visha*, just like these food additives, poisons the body slowly without outwardly seeming to do so. The similarity lies in how these substances can go unnoticed and unappreciated until they've already done irreparable damage. *Gara visha* mimics the basic slow toxicity associated with food adulteration through its subtle attacks on the body. This parallel is noteworthy because it illustrates how ancient *Ayurvedic* wisdom could be applied to comprehend and address contemporary health threats like food adulteration. Both are slow poisons that gradually affect the system after going unnoticed for a long time. We can also give the holistic health movement more weight and practice dietary vigilance when we acknowledge that contaminated food is the modern-day *Gara visha*.

Keywords: *Garavisha*, *Ayurveda*, Food Adulteration, Chronic Toxicity.

INTRODUCTION

Visha is defined as any substance that, as soon as introduced into the body, vitiates health and dhatus, or kills a healthy person. ⁽¹⁾ *Acharya Charaka* classified *visha* into three: *sthavara visha*, which is inanimate poison, *jangama*, which is animate poison, and *samyogaja*, which is artificial poison, including *gara* and *kritrima*. ⁽²⁾

The word *Gara* comes from the root word "Gri" with a suffix 'Ac', meaning diluted or reduced in potency. ⁽³⁾

Of particular importance regarding the modern context of environmental and diet toxicity is *Kritrim Visha*, which denotes poisons, whether on purpose or by accident, created artificially by combining substances that in isolation are harmless but become toxic in a mixture. Within this category, the concept of *Gara Visha* holds ancient significance. Described by *Acharya Charaka*, *Gara Visha* is an artificial poison that does not lead to immediate fatality but manifests damaging effects over time. This delay is *Kalantara Vipakitvaan* – chronic disorders, which in temporise meantime become difficult to diagnose and cure. ⁽⁴⁾

Gara Visha is frequently linked to the ingestion of chemically modified substances, adulterated foods, or *Viruddha Ahara* (incompatible food combinations), which is similar to many of the issues brought up in contemporary toxicology.

Ahara, or pure and wholesome food, is regarded in *Ayurveda* as the cornerstone of longevity, health, and strength. It is considered the most important of the three pillars of life, which are *Brahmacharya* (controlled celibacy or self-control), *Nidra* (sleep), and *Ahara* (food). Food quality, compatibility, and purity are prioritized for disease prevention, *doshic* balance, and nourishment. ⁽⁵⁾ According to *Acharya Chakrapani*, *Ahara* means that which is ingested and, thus it includes both diet and drugs. *Acharya Gangadhara* also supports this view of *Chakrapani*. Therefore, drugs are also included in *Ahara*. ⁽⁶⁾ *Acharyas* emphasize that proper nutrition maintains the balance of *doshas*, nourishes the *dhatu*s (tissues), and supports optimal functioning of *agni* (digestive fire). Any compromise in the purity or compatibility of food is viewed as a direct threat to well-being.

'*Praninam Punarmulamaharo Balavaranaoujasam Cha*' means food is the cause of strength, colour (complexion) of man, and vitality of all life. ⁽⁷⁾ It is evident from the above sentence that nutritious food is to be eaten to have good health. According to *Acharya Charaka*, the word *Gara Visha* refers to artificial or incompatible things having a delayed but deleterious effect on the body. These substances frequently enter the body accidentally in food or medicine. These toxins have the potential to develop chronic diseases by disrupting the natural balance of the body over a long period. ⁽⁸⁾ It shows how food adulteration with harmful contents is not only a contemporary issue but also an *Ayurvedic* dietary principal transgression, as *Ayurveda* also acknowledges food as a potent source of good or bad health.

This realization of the importance of healthy food is not only based on ancient health systems but also reiterated by global health officials. In a world where food becomes the focal point of public health, ensuring the safety of food has become an international priority.

WHO also acknowledges food safety challenges and opportunities associated with it and therefore realizes and supports the significance of food under the theme for 2015, "From farm to plate, make food safe". ⁽⁹⁾

Both modern nutritional knowledge and ancient *Ayurvedic* philosophy put a strong focus on the fact that food is not merely a source of nutrition but also a foundation for health and longevity. But with the era of mass production and commercialization, the sanctity of food is being lost increasingly through adulteration, which renders food tainted, risky, and often poisonous. *Acharya Charaka* has also referred to *Kalantara avipakitvaan*, which also refers to the slow-acting nature of *Gara Visha*. This virtue clearly defines *Gara Visha*, differentiating it from instantaneously acting toxins. The *Ayurvedic* definition of *Gara Visha*, therefore, encompasses those that are incompatible or man-made toxins that act slowly but result in long-lasting, serious damage to the body, which relates very closely to this emerging issue.

The use of harmful coloring agents, preservatives, and inedible materials, as well as contamination with heavy metals and pesticide residues, are examples of adulteration in food nowadays. Similar to the delayed but detrimental effect attributed to *Gara Visha* in *Ayurvedic* literature, these chemicals might not always produce acute toxicity but rather more often lead to chronic health issues such as neurological manifestations, metabolic diseases, gastrointestinal upset, hormonal imbalance, etc., and even carcinogenesis.

Profit-seeking motives, lack of enforcement of policies, consumer unawareness, and loopholes in supply chain monitoring are the key reasons responsible for food adulteration. These adulterants are known public health threats according to modern toxicology, and organizations like the WHO, FSSAI, and Codex Alimentarius have been working to check and regulate their application. Even with raised awareness

and policy provisions, food adulteration remains widespread, particularly in urbanized and developing countries.

According to data sourced from FSSAI annual reports. The food adulteration rate in India stood at 13% in 2011-12, which increased to 23% in 2016-17. The latest available data from the Food Safety and Standards Authority of India (FSSAI) indicates that a significant portion of food samples tested are adulterated. In 2018-19, about 26.4% of the samples tested were adulterated, while 23.4% of them were adulterated in 2016-17. A more recent 2023-24 analysis revealed that over 1.5 lakh samples were tested, over 33,000 were non-conforming.⁽¹⁰⁾

This general contamination of the food supply not only brings to light the enormity of the problem but also indicates the need to realize the enormity of the health repercussions of prolonged exposure to such toxins.

A COMMON FOOD ADULTERANTS LIST AND THEIR EFFECTS ON OUR HEALTH⁽¹¹⁾

Food Item	Adulterant	Harmful Effects
Milk	Water, Urea, Starch	Gastrointestinal irritation, vomiting, diarrhea, Reduced nutritional value, Digestive issues
Sugar	Washing soda, Sand, Chalk	Severe stomach problems, abdominal pain, irritation, Weakening of bones, and digestive obstruction
Turmeric Powder	Lead Chromate, Metanil yellow	Lead poisoning, anaemia, brain damage, Liver damage, Skin disorders
Red Chili Powder	Brick Powder, Artificial Colorants	Digestive problems, Stomach irritation, Cancer (Sudan dye is carcinogenic)
Black Pepper	Papaya Seeds, Millet Flour	Digestive problems, Respiratory issues
Ghee	Vanaspati, Animal Fat	Contains trans fats – causes heart disease, obesity, and hypertension.
Honey	Sugar Syrup, Jagged crystal sugar / Molasses	Raises blood sugar rapidly, not safe for diabetics, Digestive issues.
Olive Oil	Other oils (palm oil), colourants,	May lead to allergic reactions, compromised heart health.
Green Leafy Vegetables	Malachite green (synthetic dye), Pesticides, Insecticides	Carcinogenic, affects liver and kidneys, Nervous system disorders, Respiratory issues
Pulses	Kesari Dal, Stones	Lathyrism- a neurological disease-causing paralysis, and Dental problems
Tea	Used Tea Leaves, Artificial Colourants	Reduced quality, Digestive issues, Liver disorder, cancer risk due to non-edible dyes
Spices (e.g., Cumin)	Sawdust, Starch	Reduced flavour, Stomach irritation, food poisoning.

Fruits	Calcium Carbide, Ethephon	Cancer, neurological disorders, and mouth ulcers.
Edible Oil	Argemone Oil, Non-edible Oils	Argemone is toxic – causes dropsy, eye damage, cardiac issues.
Coffee	Coal tar dye (for color)	Toxic; may cause cancer, liver damage, allergic reactions.
Flour (e.g., Wheat)	Chalk Powder, Adulterated Flour	Calcium deficiency, Digestive problems, Reduced nutritional value

In addition to modern insights, the *Ayurvedic* concept of *Gara Visha* elucidates the delayed and chronic effects of such toxins as detailed in classical literature. ⁽¹²⁾

Somatic symptoms:

- Paleness of body (*pandu*)
- Leanness in the body (*karshya*)
- Reduced digestive fire (*alpagni*)
- Tachycardia (*marmapradhaman*)
- Abdominal distension (*adhyaman*)
- Oedema in the extremities (*shoth*)
- Abdominal disorders (*jatar dosha*)
- Duodenal disorders (*ghrani dosha*)
- Tuberculosis (*yakshma*)
- Phantom tumours (*gulm*)
- Emaciation (*kshaya*)
- Pyrexia (*jwar*)

Psychological Symptoms:

- Anxiety and Restlessness: A constant state of unease and nervousness.
- Disturbing Dreams: Dreams involving animals like jackals, cats, or snakes indicate mental disturbances.
- Depression and Confusion: Feelings of sadness, hopelessness, and lack of clarity.
- Visual Distortions: Perceiving one's body parts as distorted or seeing non-existent objects.

MANAGEMENT OF GAR VISHA POISONING ACCORDING TO AYURVEDA

- Both *Acharya Charak* and *Acharya Vagbhatt* describe *vamana*, or emesis, as the first and most crucial stage in curing *Gara Visha*. By aiding in the early removal of toxins and delaying their absorption into the bloodstream, it lowers the possibility of long-term consequences such as neurological or metabolic abnormalities, typical of *gar visha* poisoning. For this, *Acharya Charak* suggested that the patient lick *tamra churna* with *madhu*. This induces *Haridya Shuddhi* and aids in emesis operations.
- Following the *hridya Shuddhi*, *Swarna churna* is combined with *Madhu* and taken orally. *Swarn* assists in getting rid of all kinds of *vish* and *gar vishas*.
- *Acharya Charaka* identified *Tamra Churna* as the best *Vamanakaraka* and *Swarna* as the greatest *Vishaghna Dravya* in *Visha Chikitsa*. ⁽¹³⁾

- *Hema Churna* can be used as a treatment for emesis and cleanses the *Hrudya*, which is the *sthana* for *ojas*, *prana*, and *chetas*, according to *Acharya Vagbhata*.⁽¹⁴⁾
- *Shamak yog*, which combines *Swarna makshik* and *Swarna bhasm* with *sharkara* and *madhu*, can be administered.⁽¹⁵⁾
- *Acharya Vagbhata* mentions *ksheer* and *sarpi* as the best *Pathya Dravya* in *gara visha*.
- Other *yogas* which are mentioned in the *Ashtang Sangrah* are:⁽¹⁶⁾
 - *Moorvadi Yoga* – for *aruchi* and *mandagni*
 - *Paravatdi yoga* – for *Trishna*, *kasa*, *shwasa*, *hikka* and, *jwar*.
 - *Harenuadi lepan*- for skin manifestations.
 - *Manjisthadi pragarshan* – in *oja kshya*

DISCUSSION AND CONCLUSION

Food adulteration continues to be an ongoing and widespread public health issue, especially in densely populated and developing areas, where economic incentives and regulatory loopholes further fuel the issue. Exposure to harmful adulterants—from toxic dyes and heavy metals to incompatible chemical preservatives—has profound long-term health consequences, ranging from metabolic disorders to neurological damage, hormonal imbalances, and carcinogenesis.

From an *Ayurvedic* standpoint, such adulterated food closely approximates *Gara Visha*, a class of synthetic poisons that classical literature described as inducing insidious and chronic poisoning instead of acute mortality. *Ayurveda's* integrated approach stresses the paramount importance of *Ahara Shuddhi* (purity of diet), strict avoidance of *Viruddha Ahara* (incompatible foodstuffs), and compliance with *Dinacharya* and *Ritucharya*—daily and seasonal regimens aimed at establishing equilibrium and resistance to subtle toxic insult.

In addition, *Ayurvedic* preventive modalities, such as detoxification treatments like *Panchakarma*, are also crucial in clearing built-up toxins and reestablishing physiological balance. The therapeutic strategies described in *Agada Tantra* provide a tried-and-tested model for controlling toxic exposures and emphasize the importance of blending ancient knowledge with contemporary toxicological understanding.

Given the mounting incidence of food adulteration, synergizing *Ayurvedic* concepts with modern food safety measures is a viable option to strengthen public health. Increased awareness, strict regulation, and implementation of preventive and therapeutic strategies based on *Ayurveda* have the potential to greatly address the problem of chronic poisoning due to food adulteration.

Ultimately, safeguarding the purity of food, central to *Ayurvedic* health philosophy, is essential not only for individual well-being but also for the broader goal of sustainable, toxin-free nutrition in our societies.

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