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Review Article

A LITERARY REVIEW ON THE EFFECT OF GARA VISHA WITH SPECIAL REFERENCE TO FOOD PRESERVATIVES AND ADDITIVES

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ABSTRACT

The ever-growing era of technology has given us plenty of boons but has also burdened us with innumerable banes, one of which is the poisonous effect of food additives and preservatives. Reports show that the dependency of an average man on preserved and packed food is expected to show an increase of 8% in just the span of 5 years i.e. 2015-2020, this is directly proportional to the increase in number of various disorders like *Kushtha* (skin ailments), *Raktachapa* (Blood pressure variations). The long term usage of food preservatives and additives can be considered as *Gara Visha*, the type of poison which impacts the body of an individual on long term usage. This usage of *viruddha* (preservatives and additives) leads to formation of *Gara Visha* in the body of an individual.

KEYWORDS: Agada tantra, Gara visha, Food Additives and preservatives

INTRODUCTION

Agadatantra is a clinical branch of Ayurveda that has been practised from the beginning of time. Natural toxins (Sthavara and Jangama visha) are discussed in detail in Agadatantra, as well as Artificial toxins (Gara visha) are also discussed. Gara visha is well-explained in all Ayurvedic classics and traditional texts. Gara visha is made artificially by combining several ingredients to cause a variety of ailments. This form of poison does not kill a person instantly since it takes time for it to be digested, absorbed and to yield its effect on the individual. People are exposed to poisons from many angles in today's period due to the effect of rapid life, fast foods, adulteration, pesticides, environmental contaminants, and ever-growing need, which will eventually become unacceptable in terms of health.¹

Today, man is frequently exposed to manmade poisons made from a mixture of deadly and non-poisonous elements. As a result, it is critical to have a thorough understanding of all the potential toxins to which we are unintentionally exposed.²

There are various phrases on the labels of packaged items like E282(Propionate), E220 (sulphur di oxide), E250(sodium nitrite), INS 627, E100(turmeric). In all these phrases, E stands for European.

A food additive is any substance that is not a food in itself or an ingredient in food, but when added to a product for processing purposes, it becomes part of the food.³

1. Colours—E100–E199
2. Preservatives and acidity regulators—E200–E299
3. Antioxidants and synergists—E300–E399
4. Stabilising, thickening, emulsifying, coating, and bulking substances—E400–E499
5. Other substances—E500 and above.⁴

Some of the commonly used food additives and preservatives

- Propionate (used as preservative in breads) – Although it is naturally synthesized in our gut but synthetically is used as E282 and research show that it increases blood sugar level and hence causing DM.
- Monosodium Glutamate (used as additive to enhance taste)- Commonly known as ajinomoto, it damages the hypothalamic-pituitary-adrenal axis and causes obesity. Chinese restaurant syndrome is associated with this.
- Ammonia caramel (E150c) and sulphite ammonia caramel (E150d) are fairly common colours. Under natural conditions, this substance is created when sugar is heated. As a food additive, it is produced chemically using ammonia, as well as phosphates, sulphates, and sulphites.
- Saffron, a yellow food colour made from the flower of the *Crocus sativa* plant, has been linked to anaphylaxis in some people. Many additional food colouring agents are less popular, yet they can cause allergic reactions in some individuals. Sunset yellow (yellow #6), amaranth (red #2), erythrosine (red #3), and quinoline yellow are just a few other examples.
- To keep fats and oils from spoiling, antioxidants such as BHA (butylated hydroxyanisole) and BHT (butylated hydroxytoluene) are added. Urticaria and angioedema are considered to be caused by BHA and BHT.
- Lecithin is a soyabean and egg emulsifier that may contain soyabean proteins. Even in soy-allergic people, reactions to soy lecithin are uncommon because the amount of this addition in most foods is usually quite low, but regular consumption of such products results in various ailments caused by this.
- Gums are utilised as emulsifiers and stabilisers in food and are used as food additives. Guar, tragacanth, xanthan,

carrageenan, acacia (Arabic), and locust bean are some of the most common gums. When inhaled, many of these gums have been shown to aggravate asthma, particularly in the workplace, while others have been shown to produce allergic reactions when consumed.

- Nitrates and Nitrites: These additives are used as curing agents in meat products. Few reports of reactions to nitrates and nitrites exist, and include urticaria, itching and anaphylaxis.
- This substance is approved for use under EU law; however, there are studies that have confirmed that it negatively affects human health. It has been proven that this colour can cause liver, thyroid, and lung neoplasms and also impair immunity.

Classical view on Gara

The word gara comes from Gru (Root Word) and Ach(Suffix) which means to dilute or in liquid form .⁵

According To Acharya Vagbhata (Ashtanga Hrudya)

Combination of parts of body and excreta of various animals, incompatible drugs, ashes and poisonous substances which are having mild potency is known as *Gara Visha*.⁶

In the commentary of definition of gara, *Vishanam Chalpaviryanam* has been commented upon as *Vishanam chastokviryanama* which clearly indicates the slow acting nature of GARA VISHA, due to the virtue of same property we can consider additives and preservatives to be a type of GARA.

The definition of *Gara Visha* clearly states about incompatible drugs and ashes, in the similar manner the preservatives and additives which are added to food substances are incompatible in nature and are in powdered form, which in turn suggests that food preservatives and additives can be considered as *Gara Visha*.

According To Acharya Charaka

Gara Visha is a *Samyogaja Visha* (artificial poison) which exerts toxic effects after interval of time and as such does not kill the patient instantly and is a cause in production of various diseases.⁷

Acharya Charaka has also mentioned *Kalantaraavipakitvaan*, which also indicates the slow acting property of *Gara Visha*.

As *Samyogaja* (artificial poison) has been mentioned as an attribute of *Gara Visha* by Acharya Charaka, the same property is also observed in case of food additives and preservatives as in this case too these substances are artificially added to the food substances.

Kalantaraavipakitvaan (slow acting nature of *GaraVisha*) is also observed in case of food additives and preservatives, as they gradually cause diseases in an individual.

Current significance of gara visha

Most of the *gara visha adhishtanas* mentioned in Ayurvedic classics can be correlated to resources that are used on daily basis. So, any form of incompatible drug combination or less potent toxins that are consumed on daily basis can be considered as *Gara*.

The food, drinks, medicines, etc. are accumulated as one or other form of poison, but people are least aware about this and they are negligent to even read the labels of the food products and drinks they use on daily basis. The alarming increase of severe diseases

like cancer, stroke, heart attack, etc. can also be attributed to the effect of these poisons through our daily intake of various products. Statistics of these diseases which are distressingly increasing from past years show the relevance of this problem.⁸

Gara visha is a vast aspect mentioned in the ayurvedic classics, which can be compared with various sources of exposure of toxins through our daily life activities.

So, with these attributes of *Gara visha*, we can summarize that slow acting various side effects of preservatives and additives make them an eligible candidate to be a part of GARA VISHA.

TREATMENT OF GARA VISHA

The first and foremost step in treatment of *Gara Visha* is *Vamana*.

Effect of *Vamana*: The long-term intake of *Visha* (food additives and preservatives), leads to its absorption into *Dhatus*, in order to extract it out from the level of *Dhatu*, *Vamana* is an essential process.

After giving *Vamana*, one must take care of *Pathya* for *Pana* and *Bhojana*.⁹

According to Ashtanga hridya sutra 7/28:

As a protective as well as curative measure one can be administered ***Hema Churna***, which encovers and cleanses the *Hrudya* (hrudya being the sthana for *ojas, prana, chetas*)¹⁰

YOGAS

1. Moorvadi Yoga
2. Bilwadi gutika
3. Paravathamishadi Yoga
4. Sharkarsuvarnadi Leha
5. Putrajiv majja yoga

DISCUSSION

The term *Gara Visha* is a broad term encompassing various aspects like *Viruddhaahara* (Incompatible food items), *Viruddh Aushadha*(Incompatible medicines), *Bhasma* and *Alpa Virya Visha* (Poison used as minute powder and less potent poison). Along with all these, food additives and preservatives also act as a branch of the same tree.

It is the *Viprikrishht Nidana* (Slow acting cause) in manifestation of various disorders.

The disease caused by continuous usage of food additives and preservatives is an alarming issue in today's era, due to the ever increasing number of these cases in the population.

The avoidance of food additives in our daily life is a process which seems next to impossible, and hence Ayurveda must come in play in order to protect as well as revive an individual from toxic effects of *Gara Visha* (food additives and preservatives)

CONCLUSION

The study concludes that the amount of food additives and preservatives used in food articles is directly linked to the increasing incidents of manifestation of diseases. Due to virtue of various properties of *Gara Visha*, we can conclude that food additives and preservatives can also be said to be one among the components of *Gara Visha*. The treatment for *Gara Visha* mentioned in Ayurvedic classics can act as a preventive as well as a curative measure for diseases caused by continuous usage of food additives and preservatives.

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