

Impact of Food Additives and Food Hybridization on Human Health

W. R. T. Gara Visha

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ABSTRACT

Food is an essential entity for all the living beings. Food habit is a key source of individual's health. The quality of healthy life is dependent on the quality of food the person consumes. There are some protocols explained in Ayurveda for the processing and consumption of food through which one can achieve a healthy life and can increase the life expectancy. Since many years raw food is being processed with some or the other chemicals for its better Shelf-life, Taste, Appearance, Smell etc. for the purpose of mass distribution, attractiveness, large selling, Easy to cook, Easy to eat etc. And these all processing and generative methods fall under the term of Hybridization and Food additive criteria. In spite of being used with good purpose, a long term use of these products will give a bad impact on human health system. The health issues and deadly diseases which we are observing since last few decades could be probably due to these processing methods. The diseases like Cancer, Coronary diseases, Liver failure, Organ toxicity, all the metabolic and endocrinal disorders etc. are in a peak stage. And one among the reason could be the quality of food which is being used. These types of changes in life style will unknowingly lead to exposure of toxins in one or the other way. Which we can call it as a Gara visha (artificial/concealed poison). Gara visha is a type visha which is produced by combination of two or more non poisonous / poisonous substances. Through this poisoning symptoms/ disease may manifest in few weeks to months. Poisoning may generate through improper food habit, drugs , medications etc. Gara visha will produce symptoms such as Pandu(Anemia), Grahani(IBS), Hridrog(Heart diseases), Gulma(Tumors) etc.

Keywords: Food additives, Food Hybridization, Gara visha

INTRODUCTION

Food is an essential entity for all the living beings. Food habit is a key source of individual's health. The quality of healthy life is dependent on the quality of food the person consumes. There are some protocols explained in Ayurveda for the processing and consumption of food through which one can achieve a healthy life and can increase the life expectancy. Since many years raw food is being processed with

some or the other chemicals for its better Shelf-life, Taste, Appearance, Smell etc. for the purpose of mass distribution, attractiveness, large selling, Easy to cook, Easy to eat etc. And these all processing and generative methods fall under the term of Hybridization and Food additive criteria. In spite of being used with good purpose, a long term use of these products will give a bad impact on human health system. The health issues and deadly diseases which we are observing since last few decades could be probably due to these processing methods. The diseases like Cancer, Coronary diseases, Liver failure, Organ toxicity, all the metabolic and endocrinal disorders etc. are in a peak stage. And one among the reason could be the quality of food which is being used. Which we can call it as a Gara visha (artificial/concealed poison). Gara visha is a type visha which is produced by combination of two or more non poisonous / poisonous substances. Through this poisoning symptoms/ disease may manifest in few weeks to months. Poisoning may generate through improper food habit, drugs, medications etc. Gara visha will produce symptoms such as Pandu(Anemia), Grahani(IBS), Hridrog(Heart diseases), Gulma(Tumors) etc.

MATERIALS-

A review of Concept of Gara visha (Concealed / artificial poison) and a critical review on food additives and food hybridization and their ill effects on the health. The data is collected from the e- sources and the text books.

METHODOLOGY-

1)Concept of Gara visha-

Description-

The Visha which is produced due to mixture of two or more poisonous or non-poisonous substances and gives harmful effect on a body. Which is also called as samyogaja visha. Gara visha will start manifestation of its signs and symptoms after few weeks to months^[1].

Etiological factors -

Visha is formed with Excreta of animals(Mala), Waste products of body(Anga), Several medicaments(Vividha aushadha), Mineral compounds (Bhasmas), incompatible food habits(Virudha ahara) etc^[2].

Clinical manifestations of Gara visha according to Acharya -

- a) **Chararaka-** Pandu(Anemia), Krisha(Weight loss), Alpaagni(reduced appetite), Hastpaad shopha(Edema to extremities), Grahani(IBS, GI upset), Yakshma(Tuberculosis), Gulma(Tumors), Jwara(Fever)^[3].
- b) **Vagbhatta-** Pandu(Anemia), Krisha(Weight loss), Alpaagni(reduced appetite), Hastpaad shopha(Edema to extremities), Grahani(IBS, GI upset), Yakshma(Tuberculosis), Gulma(Tumors), Jwara(Fever), Kasa(Cough), Shwas(Ashtma, COPD), Udara rog(Ascities), Yakrita vikara(Liver Disorders), Pleeha vikara(Spleen disorders), Shophavan(Inflammatory conditions), Shushka Pada kara(Dryness of foot) ^[4].
- c) **Madhava nidana-** Pandu(Anemia), Krisha(Weight loss), Alpaagni(reduced appetite), Hastpaad shopha(Edema to extremities), Grahani(IBS, GI upset), Yakshma(Tuberculosis), Gulma(Tumors), Jwara(Fever) ^[5].

- d) **Bhavaprakasha-** Pandu(Anemia), Krisha(Weight loss), Alpaagni(reduced appetite), Hastpaad shopha(Edema to extremities), Grahani(IBS, GI upset), Yakshma(Tuberculosis), Gulma(Tumors), Jwara(Fever) ^[6].
- e) **Yoga ratnakara-** Pandu(Anemia), Krisha(Weight loss), Alpaagni(reduced appetite), Hastpaad shopha(Edema to extremities), Grahani(IBS, GI upset), Yakshma(Tuberculosis), Gulma(Tumors), Jwara(Fever) ^[7].
- f) **Vangasen-** Pandu(Anemia), Krisha(Weight loss), Alpaagni(reduced appetite), Hastpaad shopha(Edema to extremities), Grahani(IBS, GI upset), Yakshma(Tuberculosis), Gulma(Tumors), Jwara(Fever) ^[8].

Note- Charakaacharya also mentioned some dream related signs which can be seen by the person who is suffering with the condition of Gara visha. In dreams he sees Cats, Jackals, Mangoos, Monkey, Dried rivers and trees, Having lost his sense organs, he sees, himself as fair complexion or devoid of ears and nose ^[9].

General line of treatment - Table:1

Charaka ^[10]	Vagbhatta ^[11]	Yogaratanakara ^[12]
Vamana- Emetic therapy	Vaman	Sharkarasuvarnadi leha
Hridaya shuddhi- Heart cleansing techniques with the help of Tamra bhasma(Copper powder along with Madhu (Honey) orally administered	Sharkarasuvarnadileha	
Suvarna Prasha- 1 Shana(3g) Suvarna bhasma (Powder of gold) orally administered	Suwarnamakshika and Suwarnabhasma when given with sugar and honey cure garvisha	PutrajivmajjaYog
Agadapana- buffalo ghee cooked with nagdanti ,trivittit, dantidravanti, milk latex of snuhiand madanfalaalong with one adakaof cow's urine is useful incurring patients suffering from the poisons of snake's bite, insects and from Gara visha	Milk and ghee is supposed to be the best diet in garavisha.	Grihdhumadigrita.
	Nagdantyadighrit (Ghee preparation)	Paravatadihima
	Treatment of mandagni- The powder of murva, amruta, tagar, pipli,patol, chavya, chitrak, vacha, musta, vidangamixed with either butter milk, warm water, water of curds, meat soup or sour	Garnashanras

	liquid should be consuming by the patient having Mandagni, destroyed by artificial poisoning.	
	Treatment of pain- trishna, kas, shwas,hikka,jwarupdrava-ghritaand trifalajuice with makoyshake- shwaskasnashak. -decoction prepared from the meat of the pigeon, shathiand pushkarmulcooled and consume.	
	Treatment in damaged skin- Apply lepa of renuka, chandan,priyangu,khason skin.	
	Treatment of ojkshaya- Ubtan(lepa) of manjishta, apamarg, neem, haldi, papal and chandan.	

2) Concept of Food additives and Food hybridization-

Description- Since many decades food additives are being used in the processing of food as in the form of Preservatives, Coloring agents, Odor enhancers, Appearance enhancers etc. And a hybridization is also being conducted in a huge amount to get a maximum yield in a short /period, to improve crops, to develop a crop which is more efficient than its parent crop, or to the intention of consumers demand (like; Seedless fruits, Nuts, easy to eat, attractiveness etc.). Though these are been tested for the safety and toxins, they exhibit health hazards after the period of time.

Some food additives and some compounds used in food hybridization and the respective health hazards produced by those compounds ^[13].

Table:2

SI. NO.	Chemical Compounds	Health Hazards
1	Tartazine	Hyperactivity, Asthma, Skin rashes, and Migraine
2	Sunset yellow	Growth Retardation, Severe weight loss, Cancer
3	Allura red	Asthma, Rhinitis, Urticaria
4	Indigo Carmine	Nausea, Vomiting, Skin rashes, Breathing problems, Brain tumors.
5	Potassium nitrate	Lowers Oxygen carrying capacity of blood, negatively effect the Adrenal gland
6	Calcium Sulphite	Causes bronchial problems, flushing, low blood pressure tingling and anaphylactic shock.
7	Butylated Hydroxy anisole	Cancer
8	Monosodium Gluatamate	Obesity
9	Acesulphame potassium	Cancer, Hypoglycemia, Lung tumours, leukaemia ,obesity
10	Saccharine	Interfere with blood coagulation, Blood sugar level and digestive function , Cancer
11	High Fructose corn syrup	Obesity, Diabetes mellitus, increase uric acid, Chronic

		Diarrhoea
12	Caustic soda(Sodium Hydroxide)	Cancer
13	Soft drinks Dissolves tooth enamel (Pepsi, soda, Fanta, sprite etc.)	Asthma Kidney stone Sugar overload Obesity Osteoporosis Increase risk of Diabetes
14	Artificial fruit Ripener(Acetylene, Ethylene)	Cancer, Cardiovascular disease, Kidney and liver dysfunction, Hormonal imbalance, Reproductive disorders.
15	Urea (Nano Urea, Coated Urea)	Lung damage, parkinsonism, Nephrotic syndrome, Neurotoxicity, Cancer.
16	Nitrates	Neural tube defects, Cancer, Diabetes, Thyroid
17	Ammonium phosphate	Vomiting, Fever, Low blood pressure, Cyanosis, Body spasms, Systemic poisoning.
18	Muriate and Sulphate of Potash	Skin irritations, Respiratory disorders, Disorders of Digestive organs.

RESULT

Though the Food additives or Food hybridization will not show immediate adverse effect on the body but after some time period we can observe some kind of health issues such as GI disorders, Respiratory conditions, Skin reactions, Endocrinal disorders, Vitamin & nutritional deficiencies, Cancer, Sterility, Blood and Cardiovascular disorders etc. in a population. These conditions can be correlated with health issues caused due to Gara visha (Concealed/ Artificial poisoning) such as Grahani(IBS/GI upset), Daurbalya(Nutritional deficiency), Yakrit and Pleeha roga(Liver and spleen disorders), Kushta (Skin disorders), Shwas(COPD, Asthma), Kasa(Cough), Gulma(Tumors) etc. which are mentioned in Ayurveda in the context of Agadtantra by various acharya. Hence if people follow few of the food habits or the food processing techniques in a traditional way and if the conditions are treated earlier through the line of treatment given in the Ayurveda i.e., in the context of Gara visha one can achieve a better health and can reduce a risk of life threatening health events also.

DISCUSSION

The food which we are eating is in the incompatible form where the originality is lost due to one or the other way. The previous traditional method of cultivation, the food processing, or the eating habit is bit hard to bring out due to certain circumstances but if one follows few traditional methods which will show some sort of health benefits. As the research is growing people are gradually getting awareness regarding the facts. So following these incompatible food habits we are able to observe some health issues which are at its peak. And according to Agadtantra those can be correlated with the conditions caused due to the Gara visha (Concealed / Artificial poisoning). And early prevention and diagnosis is equally important for the better health.

CONCLUSION

The purpose of choosing this concept is to compare the health conditions which are being produced by the prolonged usage food containing additives and hybridized varieties with the conditions of Gara visha. And with this critical analysis we are able to see that many of the disease conditions are of similar nature in both the concepts. So with the further help of analytical and experimental studies one can work

over the specific parts such as their preventive aspects , diagnostic parameters and as well as treating those conditions with the help of Agada remedies or with the concepts of Ayurveda treatment.

REFERENCES

1. Acharya YT. Charakasamhita of Agnivesa revised by Chharaka and Dridabala with Ayurveda dipika commentary of Chakrapanidatta Reprint. chaukhambha orientalia Varanasi, 2011.
2. Acharya JT. SusrutaSamhita of susruta with nibandhasangraha Commentary of Sri dalhanacharya and NyayachandrikaPanjika of sriGayadasacharya Reprint. Varanasi: Chaukhambha Sanskrit sansthan, 2010,
3. Charak Samhita, Harishchandra Singh Kushvaha, Chaukhamba orientalia Varanasi, Part -II, Edition- , Chikitsasthan, Ch 23.
4. Vagbhatta. AstangaSamgraha (Saroj Hindi commentary). Ravi DuttTripathi, editor. 1 st ed. Delhi: Chaukhamba Sanskrit Pratishthan; Sutra sthana, 2001; 9
5. https://www.researchgate.net/publication/350121664_LITERARY_REVIEW_ON_GARA_VISHA_WSR_IN_AYURVEDIC_RESERVE.
6. Bhavaprakash, Madhyam khanda, 4th chapter
7. VaidyaLaxmipatiShastri, YogratnakarUttarardha, VishadhikarAdhyay, ChoukhambaPrakashan, Varanasi, edition, 2013.
8. Vangasen samhita, Nirmal Saxena, Chaukhamba Sanskriti Series Office Varanasi, Volume 2, 75th chapter, Page 1002.
9. Acharya JT. SusrutaSamhita of susruta with nibandhasangraha Commentary of Sri dalhanacharya and NyayachandrikaPanjika of sriGayadasacharya Reprint. Varanasi: Chaukhambha Sanskrit sansthan, 2010.
10. Charak Samhita, Harishchandra Singh Kushvaha, Chaukhamba orientalia Varanasi, Part -II, Edition- , Chikitsasthan, Ch 23.
11. Vagbhatta. AstangaSamgraha (Saroj Hindi commentary). Ravi DuttTripathi, editor. 1 st ed. Delhi: Chaukhamba Sanskrit Pratishthan; Sutra sthana, 2001; 9
12. VaidyaLaxmipatiShastri, YogratnakarUttarardha, VishadhikarAdhyay, ChoukhambaPrakashan, Varanasi, edition, 2013.
13. https://www.researchgate.net/publication/350121664_LITERARY_REVIEW_ON_GARA_VISHA_WSR_IN_AYURVEDIC_RESERVE.