



Conceptual Study of Viruddha Ahara W.R.T. Contemporary Life Style

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Abstract

Amongst three basic life sustaining pillars Aahara- dietary pattern, Nidra- sleep pattern, Brahmacharya- physical desire pattern and progeny, Ayurveda describes Aahara as a pillar of prominence in development and maintenance of human body throughout all phases of life. This is possible only when it is consumed considering various factors such as *Ashta Aaharavidhivisheshaytan*, *Dwadasha pravicharnayen*. With the rapid advancement of the society unwittingly, we are consuming various incompatible food combinations (*Viruddha Aahara*) which leads to numerous hazardous disorders. In the current article, examples of such hazardous incompatible food combinations that are consumed in day-to- day life along with their mode of action causing various perilous disorders has been studied. So, before consuming food items, one should consider these combinations into mind and should avoid consuming them.

Keywords: Ayurveda; Incompatible food combinations; Aahara; Viruddha Aahara; Ashta Aaharavidhivisheshaytan

Abbreviations

HNE: 4- Hydroxy- Trans- 2-Nonenal; SOD: Superoxide Dismutase; GSH: Glutathione peroxidase; TBARS: Thio Barbituric Acid Reactive Substances; LOS: Lipoprotein Oxidation Susceptibility; CRP: C- Reactive Protein; TNF- α : Tumour Necrosis Factor- α

Introduction

Ayurveda considers food as a powerful regime to maintain health of human body. Various references are found in texts of *Ayurveda* that food is considered equally powerful as that of usage of medicine in maintaining health of body and mind. In fact, acharya Kashyapa highlights "*Aaharo mahabheshajayamuchyate*" which means that "food is medicine when consumed properly." [1]. The rapid advancement is leading to unnatural and non beneficial changes in eating habits due to blind copying of western food cultures. Each part of the world follows certain eating mannerisms based upon weather conditions, physical health pattern and requirements of that land. Due to incorrect adaption of any other eating pattern which is unknown to our genetic structure and unfavourable to gut health causes bad effects on human health. Due to Ignorance of the dietary code only to promote contemporary culture and pseudo-satisfaction, we are getting used to unhealthy eating. The Ayurvedic scholars have mentioned these hazardous meals and provided a basic and thorough description of the *Viruddha*

Aahara (Dietary incompatibility). Within the framework of an unhealthy diet, Acharya Charak has stated, "Food that maintains the body's *Sama Dhatus* in its natural state and also, equals and balances the *Vikrit Dhatus*, is said to be *Hitakara Dravyas*, while on the contrary is "*Ahitakara dravyas*" [2]. While explaining the concept of *Pathya* and *Apathya* Aahara, Acharya Charaka said any *Pathya* substance can become *Apathya* as a result of variations in its quantity (*Matra*), time (*Kala*), action (*Karma*), land (*Bhumi*), body (*Desha*) and *Dosha* [3]. The substances that, when consumed, aggravates *doshas* but doesn't escape outside *sharir* and result in anomalies in the *Rasa*, etc. *dhatu*s, are referred to as *Viruddha aahara* (incompatible diet) [4]. This *Viruddha Aahara* is said to be the cause for various systemic disorders and can even also lead to death according to Acharya Charaka. Apart from these disorders, Acharya Vagbhata in *Ashtanga Samgraha* has mentioned other disorders as *Visphota*, *Shophya*, *Mada*, *Vidradhi*, *Rajyakshama*, and also included *Ashtamahagada* as a result of this *Viruddha Aahara* [5].

The meaning of *Viruddha* is opposite or incompatible or contradictory hence, *Viruddha Aahara* is those incompatible diet whose properties are opposite to *Dhatu* of the body which means prolonged practice of *Viruddha aahara* causes debility in strength of seven basic body elements and make them prone to combine with aggravated *dosha* and further to form a disease condition. Acharya

Charaka has explained 18 types of *Viruddha Ahara* on the basis of *Desh*, *Kala*, *Agni*, *Matra*, *Satmya*, *Vatadi Doshas*, *Samskara*, *Veerya*, *Koshtha*, *Avastha*, *Krama*, *Parihara*, *Upchara*, *Paaka*, *Samyoga*, *Hridya*, *Sampada*, *Vidhi* [6]. In today's era, we are consuming various incompatible dietary patterns which are responsible for various disorders like obesity, skin disorders, neurological manifestations, vascular complications in Diabetes mellitus, Fatty changes in liver, mild to moderate myocarditis, Renal filtration alteration, glomerulopathy, immunologic disorders, etc. To avoid such health hazards, one should identify new food incompatibilities which could be practised in day- to-day as per ayurvedic perspective. In today's fast life culture where junk, stale preserved, fast food packed in plastic containers while hot, is in use on priority basis for time saving, late night parties and lethargy, unhealthy sleeping habits, excessive amenities demolished the very own idea of food.

Materials and Methods

Literature has been studied from various samhita, modern books and previous published articles.

Results and Discussion

Firstly, we will see the classification of 18 types of viruddha ahara as explained by acharaya Charaka:

- **Deshviruddha:** It's important to adapt *Ahara* and *Vihara* (one's diet and lifestyle) to suit the geographical region they live in. Different regions, such as *Jaangala* (forested areas), *Anoopa* (watery places), and *Sadharana desha* (general areas), have their own characteristics. Depending on the region, dietary choices should be made accordingly. For instance, someone in a forested area, where the *vata dosha* tends to be predominant, should avoid foods that aggravate *vata dosha* in the body.
- **Kalaviruddha:** Each *rutu* has its own characteristics in terms of *guna* and *rasa*. For example, during the *Hemantarutu*, qualities like *snigdha guna* and *madhura rasa* are prevalent. Therefore, it's advisable to consume foods with qualities and tastes that counterbalance those of the season.
- **Agniviruddha:** It's commonly believed that *mandagni* is the primary factor behind the development of various illnesses, while the *agni* functions as heat. This *agni* is crucial for breaking down food into energy through digestion and metabolism. When food intake doesn't match the strength of one's digestive fire, it leads to what's termed as *agni Viruddha*, or incompatible digestion. This is categorized into four types: *mandagni*, *teekshnagi*, *vishamagni*, and *samagni*, corresponding to the predominance of *kapha*, *pitta*, *vata*, and the three doshas respectively.
- **Matraviruddha:** Consuming food in appropriate amounts, either alone or in combination, is known as *matravata ahara*. However, when food is taken in *heenamatra* or *adhimamatra*, or when incompatible foods are consumed in equal amounts, it's termed as *matraViruddha*. For example, consuming equal quantities of honey and ghee is considered *matraviruddha*.
- **Satmyaviruddha:** *Satmya* refers to substances that are familiar and comforting to an individual. Whereas *Satmya virudhha* is the event where a person suddenly accepts or practices a type of food or pattern of behaviour to which the person is well acquainted and which has become a part of his life pattern due to prolonged or continuous practice of it. For instance, if someone who typically consumes sweet and cold substances suddenly ingests spicy and hot foods, it would be considered *Satmya Viruddha*.
- **Doshviruddha:** *Dosha Viruddha* refers to dietary or behavioural choices that are contradictory to specific *doshas*. When an individual consumes food, engages in activities, or uses medications that possess qualities similar to natural balance of dosha according to basic body constitution of the individual(*Deha prakriti*). Consumption or acceptance of such leads to abnormal aggravation of dosha qualities further to progress into formation of a disease. Hence it is termed as "dosha virudhaa ." For example, someone with a predominance of the *vata dosha* who consumes excessive dry or cold substances would be considered to be experiencing *Dosha viruddha*.
- **Samskara Viruddha:** *Samskara Viruddha* occurs when contradictory properties develop during the preparation of a substance, caused by factors like heating, dilution, or mixing, leading to potentially harmful effects. For example, heating honey.
- **Viryaviruddha:** *Veerya* is viewed as the essence of potency or efficacy, and its *Viruddha* signifies an incompatible combination of potencies. In today's era many recipes of fish or meat are trended to be prepared by addition of milk derivatives which in long run is harmful for human health.
- **Koshtaviruddha:** The term *koshta* represents bowel movement tendencies in different individuals. There are different types of *koshta* that is *mridu*- easy response to laxative food contents/purgation, *madhyama*- moderate response to laxative food contents/purgation, *krura*- hard response to laxative food contents/purgation. Administration of strong *veerya dravya* to person with *mridu koshta* and vice versa is considered as the *Koshta Viruddha*.
- **Avsthaviruddha:** *Avastha* refers to the condition of *doshas* within the body. in case of dosha kshaya that is depletion in normal strength of dosha, sexual activity, or physical exertion, it is advisable to consume oily food contents, clarified butter, and warm foods. If someone consumes foods that aggravate *vata dosha* during this state, it's termed as *avastha Viruddha*. *Avastha* also refers to stage of a particular disease. For example, it is advised to wait and watch with simple home remedies when *Atisara* is in *ama avastha* meaning new or acute condition and start actual medications on attaining *Pakva avastha* meaning mature stage . if a *vaidya* due to ignorance or wrong

- diagnosis starts medication in acute condition of loose motions adverse effects are observed on the patient instead of relief.
- **Kramaviruddha:** Ayurveda describes certain rules to be followed for ingestion of food, this refers to krama. Consuming food before emptying the bowels or bladder, or alongside the elimination of waste material (*mala and mutra*), is an example of *Kramaviruddha*.
 - **Pariharviruddha:** Eating pork after consuming clarified butter is regarded as *parihara Viruddha*.
 - **Upacharviruddha:** *Upachara* refers to treatment that opposes the illness, while incompatible food intake is used as part of the treatment. For example, consuming cold items after *snehapana* (oleation therapy) is considered part of the treatment strategy.
 - **Pakaviruddha:** *Paka* refers to the method of food preparation, which includes undercooking, overcooking, or using poor quality fuel. These factors can affect the food's quality and are termed as *pakaViruddha*.
 - **Saiyogviruddha:** *SamyogaViruddha* denotes the harmful combination of two or more substances, resulting in an adverse effect. For example, consuming sour substances with milk is considered a *samyogaViruddha*
 - **Hridyaviruddha:** *Hrit* is manas. Unpalatable food that doesn't satisfy the taste buds, heart, and mind is termed as *hritViruddha*.
 - **Sampadviruddha:** *Sampat* refers to the richness or quality of food. Consuming substances that are either unripe or overly ripe, and have been excessively purified, resulting in toxicity, is termed as *SampatViruddha*
 - **Vidhiviruddha:** It's essential to adhere strictly to the dietary guidelines outlined in the *Ashtaahara Vidhivisheshaayatana*. Failure to do so is deemed as *vidhi Viruddha*.
- Some examples of modern dietary incompatibilities**
- **Milk and Banana:** In the modern era, this combination is most popular among fitness enthusiasts and foodies. But, in Ayurveda this is considered as *Samyoga Viruddhahara*. A study has been conducted which shows its effects on various haematological parameters where it has been found that on repeated administration there is increase in total and direct serum bilirubin levels, Increased serum urea levels (due to some muscle tissue breakdown or excess of catabolic proteins), low serum creatinine [7]. Increase in body weight on follow ups after every week.
 - Histopathological Examination reveals mild to moderate changes in both liver and heart, increased SGOT and SGPT levels. Mild to moderate myocarditis in heart sections. Apart from these, micro fatty changes in liver sections are found, mild to moderate increase in white pulp of spleen.
 - **Milk and Curd:** These both are animal sourced proteins and hence, are advised not to be consumed together as it causes diarrhoea, acidity, bloating. Moreover, it precipitates milk inside stomach that may irritate and induce vomiting [8]. Also, Yogurt is sour, heavy and increases secretions from glands present inside the body and these properties are antagonistic to milk. Any fermented products should not be taken with milk as this will lead to obstructions of the channels (*Srotas*), thus results in ill- health.
 - **Jaggery + Milk:** This is considered as *Veerya Viruddha Ahara* as jaggery is having hot potency while, milk is of cold potency.
 - **Food combinations such as Proteins+ Starch:** These should not be taken together as they decrease each other's absorption [9]. Proteins+ sugar in absence of water forms AGE (Advanced Glycation End products) which damages functioning of biomolecules thus, causes various age-related disorders such as, Diabetic vascular complications, neurodegenerative disorders, and carcinoma [8]. e.g.: eggs+ toast, fried chicken + potato chips, Meat+ Potatoes, Nuts/peanut butter+ starchy vegetables.
 - **Sugar+ Citrus Fruits:** Together these items hamper salivary secretion, ptyalin, pepsin and thus delays digestion. E.g.: Orange juice+ Cereals, various fruit jams, marmalades, fruit syrups etc.
 - **Fats and Proteins:** Fats decreases secretion of digestive juices (such as pepsin and HCl). E.g.: Nuts+ Olive oil taken as components in various types of salads.
 - **Green tea/Black tea+ Milk:** Tea contains flavonoids (catechins) having antioxidant, anti-inflammatory and anti-cancerous, hypotensive effects while, milk contains caseins. When they both combined together caseins will decrease the concentration of catechins [8].
 - **Food combinations such as Cinnamon + Ginger/Tea+ Peanut Butter/Coffee+ Garlic Bread:** When these are taken together, it increases the bleeding risk due to their anti-coagulant effect [10].
 - **Wine + lemon enriched starters:** These have synergistic effect in blocking cytochrome P450 3A4 enzyme system in intestine which leads to the higher serum levels of unmetabolized entity of medications leading to toxicity [11].
 - **Alcohol + unripe potatoes/tomatoes:** Alpha solanine is found in alcoholic beverages and solanine is found in potatoes, which when taken together have synergistic sedative effect [12].
 - **French fries/Potato chips:** Deep frying of potatoes leads to Acrylamide which is having carcinogenic property [13].
 - **Reheating of Oil (Roadside Bread Pakora and Samosa):** It comes under *Paakaviruddha*. Reheated oil when consumed increases oxidative stress and hence, increases free radicals.

Also, when fatty acids are exposed to O₂ in presence of heat/light, it forms H₂O₂ compounds which deteriorate vitamin A and E, forms aldehyde molecules which leads to oxidative stress in body cells and increases risk of degenerative diseases and atherosclerosis [14].

- **Deep fried foods+ Corn/sunflower/soyabean oil:** They form HNE (4- Hydroxy- trans- 2-nonenal) toxin which leads to Cardiovascular diseases, stroke, Parkinson’s disease, Alzheimer’s, liver disorders and cancer [15].
- **Processed baked foods/corn chips/Tofu:** These all are omega-6 rich foods (corn chips: 85% per cup, tofu: 64% per cup) which aggravates inflammatory pathology [16].
- **Overripen grains, vegetables, fruits:** This can be considered under *Sampat-viruddha*. All these have some protein in them, when these turns brown in colour, it is an indication of AGE (Advanced Glycation End products) that ultimately leads to various systemic disorders.
- **Milk + Eggs, reheated cow’s milk, consuming too much sugar+ saturated fats:** leads to immunological disorders.
- **Raw meat, uncooked eggs:** These can be considered under *Paaka-viruddha*. These contains Salmonella bacteria which causes gastroenteritis in humans and salmonella poisoning which leads to serious complications.
- **Cold drink with hot food stuff- after samosa:** These can be considered under *Parihar viruddha*.
- **Melon+ Grains:** These should not be consumed together as melon digests quickly but, grains take more time. E.g. Fruit salad with roti.
- **Milk+ Solanaceae [17]:** Members of Solanaceae family contains complex array compounds that once ingested leads to potentially dramatic cascade of chemical reactions in the body. These are difficult to digest and disturbs homeostasis as well. When Solanaceae members are taken with milk/milk products, they overburden the digestive fire.
- **Hot food items packed in plastic bags:** Hormonal and metabolic abnormalities are associated with this [18]. Plastic containers contain BPA, DEHA, polypropylene, polystyrene, polyethylene, cellulose ether, all these have disorganised polymer chains having weak bonds which on combining with hot food items breaks and releases free radicles that contributes to the aetiology of various chronic disorders of reproductive and cardiovascular system, cataract and ultimately cancer [19]. Another study reveals that plastic bags include styrene which is carcinogenic, phthalates and Bisphenol A leads to diabetes, heart and liver diseases.
- **Food preservatives/Additives:** It contain Sodium benzoate that leads to cellular damage, enters into blood vessels which interfere genes that are involved in blood clotting factor synthesis [20]. It contains Aspartame which seems to cause neurological damage especially in younger children where brain in still growing, it breaks down into phenylalanine which contributes to obesity.

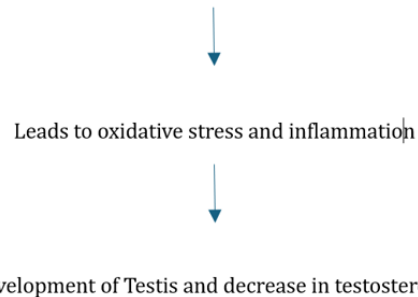
Several studies shows that food additives leads to various health concerns such as asthma, ADHD, obesity, heart difficulties and carcinoma.

Viruddha Aahara and Shandhyatva [21]

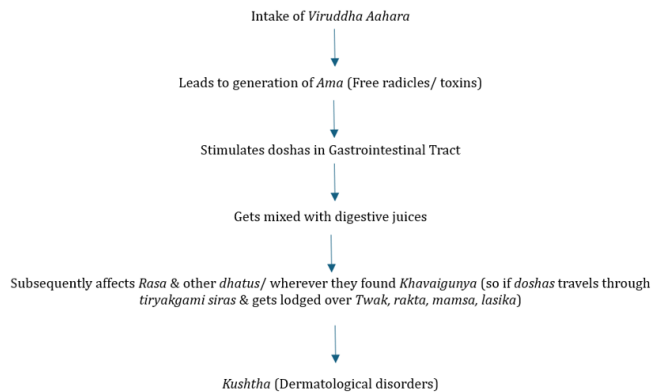
Shandhyatva refers to the infertility which can be due to genetic expresion in growing fetus if parents are indulged in regular viruddha aahara consumption. *Viruddha aahara* leads to increase in energy density and decrease in essential micronutrients density especially zinc on which various antioxidant processes are dependent. These incompatible dietary habits also leads to severe decrease in antioxidant vitamins and iron accumulation takes place.

Zinc deficiency is directly proportional to SOD (superoxide dismutase) GSH (Glutathione peroxidase), antioxidant and testosterone; and is inversely proportional to TBARS (Thio Barbituric Acid Reactive Substances), LOS (Lipoprotein Oxidation Susceptibility), CRP (C- Reactive Protein), TNF - α (Tumour Necrosis Factor- α).

$$\text{Zn Deficiency} \propto \frac{\text{SOD, GSH, Antioxidant, testosterone}}{\text{TBARS, LOS, CRP, TNF-}\alpha}$$



Viruddha Aahara and dermatological disorders

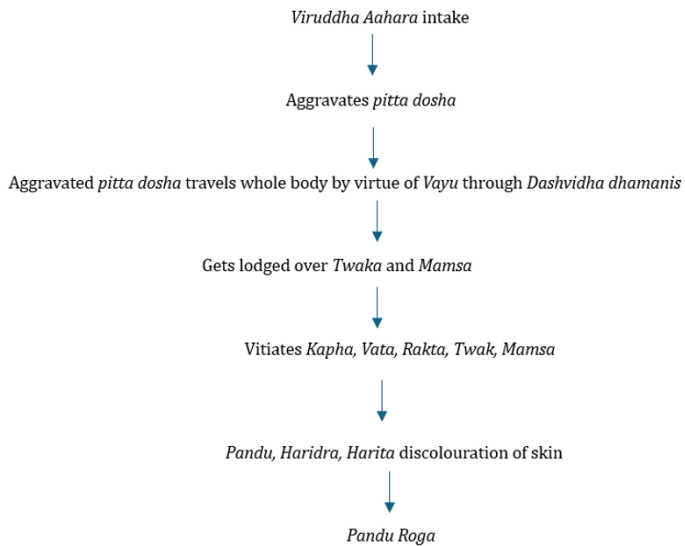


Contribution of AGE (Advanced Glycation Endproducts)

Over or excessively Processed of food items may detoriates its nutrient value or converts into RAGE (Receptor for Advanced Glycosylated Endproducts). Also, AGE’s accumulation progresses in normal ageing and extremely increased in diabetes mellitus, various age- related disorders such as neurological diseases. When AGE interacts with RAGE, it leads to oxidative stress which damages the normal functioning of biomolecules hence, leading to disorders mentioned above.

Viruddha Aahara and Pandu

In ayurveda, pandu has been explained in which the colour of skin becomes discoloured like pollen of Pandanous tectotias (*keta-ki dhoola sannibha*), Haridra or persuing greenish tinge.



Homogenous Sickle cell Anaemia is a condition of oxidative stress (whenever there is hypoxic condition, RBC's gets sickled in shape). A study shows that plasma AGE levels and the rate of RBC AGE accumulation were significantly increased in patients of sickle cell anaemia compared to controls [22]. This study concluded that AGE levels are strongly influenced by endogenous antioxidant status and may play role in the vascular pathology of sickle cell anaemia.

Viruddha Aahara and Amavata

In ayurveda, Amavata has been described as a disease having highest incurable tendency once gets aggravated. In Amavata, although tridoshas are involved but the chief factors involved are vata-kapha doshas and ama. An observational study has been conducted on minimum of 30 patients diagnosed with Amavata to observe the role of Viruddha Aahara in the etiopathogenesis of Amavata w.s.r. Rheumatoid Arthritis, where, it has been observed that Kala viruddha and Samyaga viruddha has been assumed as the most probable cause of Amavata among different types of Viruddha Aahara as their frequency was 75%-100% [23]. Veerya, Satmaya, Karma, Desha, Samskara, Sampat viruddha frequency was between 50%-75%. Rest all were not identified as the significant cause in manifestation of Amavata.

Conclusion

In current scenario, since everyone is heading towards adopting modern culture, they have started inculcating improper dietary habits. This leads to various perilous disorders unwittingly to the individual. Hence, it is important to avoid consuming such lethal food combinations and draft them such that people avoid them. Various other incompatible food combinations should be noted

and the mechanism of those leading to numerous disorders should be properly studied in detail for further enhancement in this field.

Conflict of Interest

There were no any conflicts of result.

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