

A CRITICAL APPRAISAL OF ATISARA NIDANA IN ASHTANGA HRIDAYAM**C. Krishna Devaki^{1*}, Gujjarwar Vidula², Kushwaha Nidhi³, Sharma Sahil⁴**^{1,3,4}PG Scholar, Roga Nidana Evum Vikriti Vigyana, Ch. Brahm Prakash Ayurveda Charak Sansthan, New Delhi.²HOD and Professor, Roga Nidana Evum Vikriti Vigyana, Ch. Brahm Prakash Ayurveda Charak Sansthan, New Delhi.***Corresponding Author: C Krishna Devaki**

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ABSTRACT

Atisara is the abnormal passage of liquid stool, wherein *Agnimandya* (impaired digestive fire) leading to *Ama* (unassimilated food) is the root cause. This review examines the *Nidanas* described in *Ashtanga Hridaya* from a current medical perspective, highlighting their similarity in concepts with the contemporary disease mechanisms of diarrhoea. Classical Ayurvedic literature elaborates causes such as excessive fluid intake, unaccustomed dietary intake, irregular meal patterns, suppressing urges, regular use of dry meat, sesame, flour preparations, sprouts, and alcohol that closely align with the modern mechanisms, including high osmotic load, dysbiosis, modifications in gut microbiota composition, impairment in digestive function, alteration in gut motility and intestinal permeability and circadian rhythm disruption. Understanding these connections helps physicians in the early detection of these precipitating factors, thereby planning a multidisciplinary management strategy and implementing better choices in patient care.

KEYWORDS: Diarrhoea, Ayurveda, *Agnimandya*, *Ama*, *Atipravarthi*, *causative factors*.**INTRODUCTION**

Atisara, comparable to diarrhoea in modern science, is a serious worldwide health concern that is typified by the frequent passing of loose or watery faeces. Even though it might seem trivial, *Atisara* causes a substantial amount of morbidity and mortality globally, especially in developing nations. The Global Burden of Disease Study estimated that diarrhoea accounted for approximately 1.17 million deaths worldwide in 2021.^[1] In line with this, UNICEF data recognise diarrhoea as a leading cause of child mortality, responsible for roughly 444,000 deaths annually in this population.^[2] The primary cause of *Atisara*, according to Ayurveda, is poor dietary and lifestyle choices (*Mithya Ahara Vihara*), which impede digestive processes (*Agnimandya*) and lead to indigestion and abnormalities in the gastrointestinal absorption process. Together, "Ati" and "Saranam" form the term "Atisara," which means diarrhoea^[3]. *Saranam* signifies flow, whereas *Ati* signifies excess. Acharya Charaka and Vagbhata mentioned six types of *Atisara*: *Vataja*, *Pittaja*, *Kaphaja*, *Sannipataja*, *Shokaja*, and *Bhayaja*.^[4,5] Acharya Susrutha also specified six *Atisaras* but used

Amaja instead of *Bhayaja*.^[6] Following Acharya Charaka's interpretation, Madhava Nidana and Sarangadhara each added one more type, namely *Raktaja* and *Amaja*, resulting in a total of seven divisions. Bhaishajyaratnavali lists eight kinds, including the *Jwaraja* form. Based on *Avastha*, Bhavaprakasha further classified *Atisara* into *Amavastha*, *Pakwavastha*, and *Raktavastha*. The Hareeta Samhita discusses only one type, *Jwara Atisara*.^[7] The most important contributing factor to the pathophysiology of *Atisara* (diarrhoea) is *Mandagni*. The etiological elements lead to *Agninasha*, which results in the derangement of "Ap Dhatu" (body fluids, including *Pitta*, *Rakta*, *Kapha*, *Jala*, *Mootra*, *Sweda*, and *Rasa*)^[8] and is driven downward by the *Samana* and *Apanavata*, causing most water-mixed faeces to be eliminated through *Vitmarga*. In *Atisara*, *Vata* is the most noticeable *Dosha*. *Agnimandya* and *Ama* are brought about by impairment in *Pachakapitta*. *Ama* resembles *Kledaka Kapha* in its *Gunas* and leads to *Srotorodha*, which presents as diarrhoea. The World Health Organisation defines diarrhoea as having three or more loose or liquid stools per day, or more stools than a

person generally has. Despite being widely thought of as a transient illness, diarrhoea has a substantial influence on world health, especially in low- and middle-income countries, where it continues to be a major source of morbidity and mortality, especially in children under five. There are several ways that diarrhoea can be triggered, either separately or in combination. Water is drawn into the intestinal lumen by poorly absorbed solutes, causing osmotic diarrhoea. When toxins or inflammation cause the body to actively secrete water and electrolytes, secretory diarrhoea results. Mucosal injury from exudative diarrhoea brings about bloody stools and the loss of plasma proteins. It is essential to comprehend the mechanism, causes, signs and symptoms, treatment, and preventative strategies to improve public health and boost patient outcomes.

MATERIALS AND METHODS

A comprehensive literature review was carried out to uncover and analyse the *nidana* of *atisara* as mentioned in *Ashtanga Hridayam Nidana Sthana* 8th chapter, *Atisara Grahanidosha Nidanam Adhyaya*. Additionally, classical textbooks such as *Charaka Samhitha*, *Susrutha Samhitha*, and *Ashtanga Samgraha*, as well as current research publications (PubMed, ResearchGate, etc.), were thoroughly assessed to conclude on the pathogenetic factors of diarrhoea.

RESULT AND DISCUSSION

The *Samanya Nidanas* of *Atisara*, as enumerated by Acharya Vagbhata, are as follows^[9]

Atyambu panam: As described in *Ashtanga Hridaya Sutrasthana*, excessive water intake (*Atiyogena Salila*) leads to the vitiation of *Kapha* and *Pitta*,^[10] resulting in the aggravation of their *Snigdha* (unctuous), *Sara* (laxative), and *Drava* (liquidity) *Gunas*. This can increase mucus secretion and internal heat, causing inflammatory changes, contributing to *Ajeerna* (indigestion). *Vishtamba* (constipation) or *Atipravarthi* (diarrhoea)^[11] are the common features of *Ajeerna*, wherein weakened *Agni* (digestive fire) fails to digest even *Laghu Ahara* (light food), progressing towards the formation of *Apakva* (unripe), fermenting and contaminating food remains termed as *Ama*. Together with the vitiated *Doshas*, it gives rise to *Srothodushti* (obstruction of micro channels) and functional disruption in the *Dhatus* (tissue elements) and *Koshta* (alimentary tract). These undigested and poorly absorbed products (*Ama*) can create a high osmotic load within the lumen of the intestine, passively drawing water from the body along the osmotic gradient, increasing luminal fluidity and manifesting clinically as osmotic diarrhoea.^[12]

Krishna Sushka Amisham: *Krishna Mamsa* indicates meat obtained from emaciated, diseased, or malnourished animals, and *Sushka Mamsa* refers to dried meat. These are described under the *Nitya Asevaniya dravyas*^[13,14] (non-consumable regularly), given that they are *Guru* (heavy to digest) and predispose the aggravation of *Tridoshas* (*Vata*, *Pitta*, and *Kapha*)^[15], resulting in

Ajeerna. In the current clinical context, the heightened consumption of fast foods, junk foods, preservatives, broiler-processed, oven-dried, refrigerated for a prolonged period, excessively dehydrated and undercooked meat, all serve as a major source of food-borne pathogens such as *Salmonella typhimurium*, *Campylobacter jejuni*, *Escherichia coli*, and *Listeria monocytogenes*.^[16] Ingestion of such meat produces gastrointestinal disorders such as diarrhoea. Inflammatory or haemorrhagic colitis was also documented in some cases.

Asatmya bhojanam: *Asatmya* denotes food and dietary practices to which our body is unaccustomed. *Viruddhahara*, *Vishamashana* (consuming less or large quantities at irregular timings), *Samashana* (a mixed diet of suitable and improper items), *Adhyashana* (consuming food before the proper digestion of the previous meal), and even nonadherence to *Ahara Vidhi Vidhana* (methods of meal intake), described in our classical texts, may collectively be considered as types of *Asatmya Bhojanam*. *Viruddha* are incompatible substances that provoke the *Doshas* but not expelling them properly^[17], resulting in the buildup of *Ama* and *Grahani Dosh*^[18], characterised by indigestion and loose motions. All these aforementioned factors can bring about *Agnidushti* (weakened digestive fire), *Pureeshavaha Srothodushti* (obstruction of channels carrying faeces), and severe health issues, such as *Gulma* and can even be fatal.

Irregular eating habits serve as a risk factor for disturbances in the circadian rhythm of the Gastrointestinal tract^[19], thereby altering gut motility, microbial composition and structure, intestinal permeability, and lipid, protein, and carbohydrate metabolism, which can advance towards IBS (irritable bowel syndrome) symptoms. Modification of the intestinal flora on activation of the HPA axis (Hypothalamic Pituitary Adrenal axis) on the release of stress hormones (cortisol, Corticotropin Releasing hormone, Adrenocorticotropic Hormone)^[20] aligns with the traditional description of eating with a normal mental state and with proper concentration. Diarrhoeal symptoms were consistently noted across cases such as Lactose intolerance^[21], Food Protein-induced Enterocolitis Syndrome (non-IgE mediated food allergy commonly found with soy, cow milk, rice, oats, shellfish)^[22], Eosinophilic gut disease^[23], combinations^[24] like milk and melon, coffee with onion and garlic, potato, beef, lamb, pork, rice, corn, wheat and string beans, items like peanuts, cottonseed oil etc.

Thila pishta virudaka: *Thila* (*Sesamum indicum*) is a *Guru Dravya* (heavy to digest) with *Ushna Veerya* (hot in potency), thus producing *Kapha Pitta Vardhana*^[25] (aggravation) when taken in excess. *Pishta* (flour preparations) and *Virudaka* (sprouts) are *Apathya*^[26] (unsuitable) for daily consumption, owing to their *Guru* attribute^[27], ultimately giving rise to *Ama* and *Agnimandya*. The latter, when used regularly, can

aggravate all three *Doshas*. Sprouts, irrespective of being highly nutritious, low in calories and rich in proteins, can cause bacterial infections such as *Salmonella* and *E. coli*, if prepared under unhygienic conditions. The warm, humid environment under which it is processed is contributing further to it^[28]. Increasing the intake of dietary fibres too quickly, without giving time for the gastrointestinal tract to adapt to it, and not drinking sufficient fluids along with them, can cause gastric mucosal irritation and loose motions. Fodmaps (fermented carbs) can lead to an extended colon, drawing water into the intestinal lumen, causing diarrhoea.^[29] Raw flour containing *Shiga* toxin-producing *E. coli*^[30] and lipid and protein allergens in sesame^[31] was reported to cause diarrhoea.

Madhyapana: Intake of *Madhya* (alcohol) can aggravate *Pitta Dosh*a and *Drava* and *Sara* qualities, by virtue of its *Teekshna* (sharp) and *Ushna*^[32] (hot) attributes, thereby promoting the liquefaction of stool. Moreover, its inherent *Rooksha* property contributes to *Agnimandya*, manifesting as *Ama*. When propelled to the colon, this toxin can increase luminal fluidity and accelerate bowel movements, leading to *Atisara*. The contemporary findings of “leaky gut”, dysbiosis, microbial translocation, inflammation, small intestinal bacterial overgrowth (SIBO), and impaired nutrient absorption, all associated with diarrhoea,^[33-35] in alcohol dependent individuals, they closely resemble the classical description.

Rooksha ahara: Consuming dry foods can exacerbate *Vata Dosh*a and impair the digestive fire. *Vata*, due to its *Chala* (mobility) attribute, propels body fluids, such as *Mootra* (urine) and *Sweda* (sweat), towards the colon,^[36] thereby increasing the liquidity of stool and increasing bowel frequency. Drying of foods, widely used nowadays for preservation, has been shown to decrease nutritional value^[37] due to high temperature, long drying time and unhygienic handling methods used. High levels of moisture during the storage and packaging of dried foods can result in spoilage from mould growth, especially by *Eurotium*, *Penicillium*, *Aspergillus*, and *Xeromyces* species.^[38] Additionally, *Aspergillus parasiticus*, *Aspergillus niger* and *Aspergillus niger* produce mycotoxins that are hepatocarcinogenic.

Athi Matra bhojana: Individuals with *Durbalagni* (weak fire) and who are *Krish*a (emaciated), produce vitiation of *Pureeshavaha Srotas* on eating excess, resulting in loose stools. Overconsumption is also a contributing factor to *Annavaha Srotodusti*^[39] (obstruction of channels carrying food), which in turn leads to indigestion. Overeating can provoke the three *Doshas*, which, along with the undigested food, form *Ama* and manifest as *Vishuchika*^[40] (diarrhoea or vomiting). Binge-eating disorder (BED), eating large quantities in short periods of time, frequently, is known to cause gastrointestinal complaints such as diarrhoea,^[41] bloating and abdominal pain.

Arsho roga: Loose, watery and copious stools, described among the clinical presentations of *Pittaja Arsas*,^[42] reflect gastrointestinal discomfort, thereby supporting the inclusion of *Arsas* as a causative factor for *Atisara*. *Agnimardavam* (diminished digestive activity)^[43] is highlighted in the *Samprapthi* of *Arsoroga*, which is the root cause of all ailments. Patients with functional bowel disorders, such as IBS, develop increased anorectal venous pressure on repeated straining and loose stools, thus serving as a risk factor for haemorrhoidal diseases, indicating a bidirectional relationship between piles and diarrhoea.

Sneha vibhramath: “*Snehana*” is one among the *Shad-upakramas*, as outlined in the *Langhanabrimhaneeya Adhyaya* of *Charaka Samhitha*. It is “*Snehavisyandamardavakleda karaka*”^[44] - one producing unctuousness, lubrication, moistness, fluidity and ooziness in the body. Among the three *Koshtas*, *Mridu Koshta*, being predominantly influenced by *Pitta Dosh*a,^[45] inherently possesses *Sara*, *Drava* and *Snigdha Gunas* (attributes), with relatively less *Vata* and *Kapha*, thereby facilitating easy bowel evacuation. For this reason, individuals with this type of *Koshta* are advised to be administered *Madhyama Matra* (medium dose)^[46]. Instead, if *Uthama Matra* (high dose) is administered, it can intensify *Pitta Gunas*, further enhancing intestinal fluidity and motility, which can result in diarrhoea. *Guda srava* (discharge from the anus), *Pravahika* (painful loose stools), and poorly formed faeces are listed among the *Ati Sneha lakshanas*^[47], indicating the symptoms arising from excess oleation. Chronic consumption of a high-fat diet can induce gastric disturbances,^[48] leading to the development and worsening of inflammatory bowel diseases such as Ulcerative Colitis and Crohn's Disease. It is also found to be associated with an increased risk of colorectal cancer. Excessive dietary fat alters the composition and structure of lactose-producing bacteria.^[49] It remains incompletely digested, thereby inhibiting pancreatic lipase activity, leading to frequent bowel malabsorption of fat and steatorrhea (oily stools).

Krimi Dosh: Acharyas have enumerated several *Pureeshaja Krimi*^[50] (parasites in the intestinal lumen), namely *Kakeruka*, *Makeruka*, *Sausurada*, *Sashulaka*, *Cipya*, *Kipya*, *Vijaya*, *Ajava*, *Churava*, *Gandupada*, *Leliha*, and *Dvimukha*, known to disturb bowel function, often presented with diarrhoea. Besides this, *Kaphaja Krimi* residing in the *Amashaya* (stomach) contributes to weakened metabolic function. *Atisara* is clearly mentioned among the *Krimi samanya lakshanas*, indicating parasitic infestation^[51] as a recognised causative factor in the pathogenesis of diarrhoea. Studies have reported the presence of *Entamoeba histolytica*, *Giardia lamblia*, *Hymenolepis nana*, *Entamoeba coli*, *Ascaris lumbricoides*, *Blastocystis hominis*, and *Lodamoeba butschlii* in individuals with chronic and persistent diarrhoea. Infestations by Roundworms such as *Strongyloides stercoralis* (commonly found in soil of tropical and subtropical regions) and *Capillaria*

philippinensis (acquired through consuming raw, infected fresh water fish), Hookworms like *Ancylostoma duodenale*, Whipworms such as *Trichuris trichiura* (linked to poor sanitation), Pinworms like *Enterobius vermicularis* (associated with poor hygiene), Blood flukes such as *Schistosoma japonicum* (from contaminated water), Intestinal flukes like *Fasciolopsis buski* (from infected fish or molluscs), are all known to be associated with diarrhoea.^[52,53]

Vegadharana: Suppression of natural urges is a fundamental etiological factor for disease development. It primarily provokes *Vata Dosha*, which subsequently leads to the vitiation of *Pitta* and *Kapha*, resulting in *Dosha Dushya Sammurchana* (conglomeration) and *Srotodushti*, which, in certain contexts, is clinically manifested as *Atipravarthi* (in excess) of bodily functions. *Vegadharana* leads to *Pureeshavaha Srotodushti*, thereby forming *Ati drava* (watery, loose) and *Ati bahu* (in excess) stools.^[54] Repeated suppression of urges can affect the brain–gut axis adversely, creating visceral hypersensitivity^[55] and alterations in colonic motility, mostly observed in IBS patients. Regular stool withholding in children results in faeces accumulation and hardening. Relaxation of sphincter muscles, thus, causes fluid to leak from between the rectal wall and faecal mass, known as Encopresis.^[56]

CONCLUSION

Acharya Vagbhata frames *Atisara* as a disease primarily originating from *Agnidourblya* (impaired digestive fire), leading to abnormal expulsion of liquid stools. *Nidanas* mentioned here have a remarkable similarity with the contemporary pathogenesis of diarrhoeal diseases. Products of incomplete digestion, drawing water into the intestinal lumen, resulting in osmotic diarrhoea, parallel with the traditional concept of *Ama Prabhava Atisara*. *Asatmya bhojana* and *Viruddhahara* can be understood through food intolerance and hypersensitivity reactions, causing diarrhoea. Irregular eating habits such as *Vishamashana*, *Adhyasana*, and *Samashana* disturb the circadian regulation of the digestive enzymes and impair *Agni*. Ultimately, all these *Nidanas* lead to the aggravation of bodily *Doshas*. *Vata* causes rapid intestinal movements and gurgling sounds, *Pitta* triggers inflammatory and metabolic changes, and *Kapha* induces mucus secretions and slow digestive fire. More than just dietary restrictions, the *Nidanas* described in Ashtanga Hridaya offer a holistic approach toward the prevention and management of *Atisara*.

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