



“ROLE OF DEEPANIYA MAHAKASHAYA IN AGNIMANDYA AS AN AYURVEDIC APPETIZER”

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ABSTRACT

In the present scenario the faulty life style, food habits, food quality, sleep habits, increased level of stress etc. leads to *Tridosh Prakopa* & Vitiated *Jatharagni* (digestive fire) results in *Agnimandya* & *Ajirna*. Vitiated *Jatharagni* means improper digestion is marked as the reason of formation of *Aama* which later on initiates different types of pathogenesis. So it is important to keep the *Jatharagni* in balanced state for health and to avoid the diseases caused by *Aama*. As the digestion starts from the oral cavity there is a very important role of appetite stimulators in the process of digestion of food. *Acharya Charaka* has described *Deepaniya Mahakashaya* as appetizer. This review article is an attempt made to explain and compare the *Deepan* action, properties & mode of action of 10 drugs mentioned in *Deepaneeya Mahakashaya* according to *Ayurveda* & modern medical science.

KEYWORDS: *Agnimandya*, *Deepan karam*, *Mahakashaya*, Ayurvedic Appetizers.

INTRODUCTION

Ahara is accepted as the most important factor for life. It is mentioned in *traya- upastambha* i.e. 3 sub-pillars of the healthy body.^[1] A properly taken healthy diet provides nourishment to our tissues and produces energy for all the vital functions of our body if digested properly. Digestion of food, formation of *Ahara-rasa*, its absorption, assimilation and transformation all depends on *Agni*. Therefore, *Ayurveda* considers that *Agni* is the cause of life, complexion, strength, health, nourishment, luster, *Oja*, *Teja* (energy) and *Prana* (life energy).^[2] In *Sama Avastha* i.e. balanced state it represents the health whereas in vitiated condition it represents disturbed metabolism and diseased condition.^[3] Vitiating of *Agni* is mainly of three types i.e. *Vishmagni*, *Tikshanagni* & *Mandagni*. *Vishmagni* i.e. disturbed digestive fire considered as *Vata* dominant state manifests as alternating episodes of strong appetite with loss of appetite. In *Tikshanagni* i.e. increased digestive fire due to *Pitta* dominant state, person can easily digest even high amount of ingested food. Sometimes in the absence of food it starts consuming body's own tissues (*Dhatu*). *Mandagni* i.e. decreased digestive fire because of *Kapha* dominant state manifests as poor appetite, slow metabolism and tendency to weight gain despite optimal food consumption.^[4] Out of these three vitiating states of *Agni*, state of *Mandagni* is considered as the basic cause of various diseases as described in a general postulation of *Ayurveda*, "*Rogaah sarve api mandagne smrute.*"^[5]

In the present scenario the faulty life style, food habits, food quality, sleep habits, increased level of stress etc. leads to *Tridosh Prakopa* & vitiating of *Jatharagni* in form of *Vishmagni*, *Tikshanagni* & *Mandagni* that further results in *Agnimandya* & *Ajirna*.^[6]

As the process of digestion starts from the oral cavity there is a very important role of appetite stimulators in the process of digestion of food. The food consumed in the presence of good appetite will be digested properly and provide nourishment to body tissues without causing any hindrance to the *Jatharagni*. To stimulate good appetite *Acharya Charaka* has described group of drugs known as *Deepan Mahakashaya*.

Definition of *Deepan Karma*

According to Monier Williams, "*Deepan*" means 'inflaming the fire' or stimulating fire.^[7] According to *Charaka Samhita* commentator *Gangadharsen*, *Deepana* means helpful to stimulate *Agni*. According to *Charaka Samhita* commentator *Yogindranathsen*, *Antaragni Sandhukshan* means *Deepana*.^[8] According to *Asthang Hridaya*, *Deeapna* means to stimulate *Agni* and it may digest *Ama* or not.^[9]

According to *Acharya Sharangdhar*, *Deepan karma* means *Agni Sandhukshana* i.e. process which stimulates digestion or enhances digestive fire but do not digest the *Ama* (undigested food).^[10] Whereas *Pachana Dravyas*

digest the *Ama* but do not enhances the appetite. *Acharya Bhavaprakash* also stated that *Deepan Dravya* stimulates

Jatharagni and that increases the appetite but not sufficient to digest the food.

Table 1: Introduction of *Deepaniya Mahakashaya*.^[11]

Sanskrit Name	English Name	Latin Name	Family	Synonyms
<i>Pippali</i> ^[12]	Long pepper	<i>Piper longum</i>	<i>Piperaceae</i>	<i>Magadhi, Krishna, Vaidehi, Chapla, Kana, Upkulya, Ushana, Shoundi, Kola, Teekshna-tandula.</i>
<i>Pippali-Mul</i>	Root of long pepper	Root of <i>Piper longum</i>	<i>Piperaceae</i>	<i>Granthik, Ushana, chatkashir</i>
<i>Chavya</i> ^[13]	Java long pepper	<i>Piper retrofractum</i>	<i>Piperaceae</i>	<i>Chavika, Ushana, Chabh Fruit : Gajapippali, kاپivalli</i>
<i>Chitraka</i> ^[14]	White Leadwort	<i>Plumbago zeylanika</i>	<i>Piperaceae</i>	<i>Analnama, Pathi, Vyala, Ushana</i>
<i>Shunthi</i> ^[15]	Dry Ginger	<i>Zingiber officinale</i>	<i>Zingiberaceae</i>	<i>Vishva, nagar, vishvbheshaj, Ushan, Katubhadr, Shringaver, mahoshadh.</i>
<i>Amalvetas</i> ^[16]	Bor thekera	<i>Garcinia pedunculata</i>	<i>Guttiferae</i>	<i>Shatvedhi</i>
<i>Maricha</i> ^[17]	Black pepper	<i>Piper nigrum</i>	<i>Piperaceae</i>	<i>Vellaja, Krishna, Ushana, Dharmapattan.</i>
<i>Ajmoda</i> ^[18]	Celery fruit	<i>Carum roxburghianum</i>	<i>Umbelliferae</i>	<i>Kharashva, Deepyak, Karvi, Brahmkusha, Lochmastka.</i> ^[19]
<i>Bhallatakasthi</i> ^[20]	Seed of Marking nut	<i>Semecarpus anacardium</i>	<i>Anacardiaceae</i>	<i>Arushak, Arushkar, Agnik, Agnimukhi, Veervriksh, Shophkrit</i>
<i>Hingu-niryasa</i> ^[21]	Asafoetida	<i>Ferula narthex</i>	<i>Umbelliferae</i>	<i>Sahastravedhi, Jatuka, Hingu, Ramatha</i>

Table 2: Properties of *Deepaniya Dravya*.

<i>Deepan Dravya</i>	<i>Rasa</i>	<i>Guna</i>	<i>Virya</i>	<i>Vipaka</i>	Functional Component
<i>Pippali</i>	<i>Katu</i>	<i>Laghu, Snigdha</i>	<i>Anushna</i>	<i>Madhur</i>	Piperine, Chavicine ^[22]
<i>Pippali mula</i>	<i>Katu</i>	<i>Laghu, Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	Piperine, Chavicine
<i>Chavya</i>	<i>Katu</i>	<i>Laghu, Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	Piperine, Piplartine.
<i>Chitraka</i>	<i>Katu</i>	<i>Laghu, Ruksha, Teekshna</i>	<i>Ushna</i>	<i>Katu</i>	Plumbagine, fructose etc.
<i>Shunthi</i>	<i>Katu</i>	<i>Laghu, Snigdha</i>	<i>Ushna</i>	<i>Madhur</i>	Gingerol, Shogaol, Zingerone.
<i>Amalvetas</i>	<i>Amla</i>	<i>Laghu, Ruksha, Teekshna</i>	<i>Ushna</i>	<i>Amla</i>	Malic acid
<i>Maricha</i>	<i>Katu</i>	<i>Laghu, Teekshna</i>	<i>Ushna</i>	<i>Katu</i>	Piperine, piperidine, Piprettine, chavicine.
<i>Ajmoda</i>	<i>Katu, Tikta</i>	<i>Laghu, Ruksha, Teekshna</i>	<i>Ushna</i>	<i>Katu</i>	Volatile oils.
<i>Bhallatakasthi</i>	<i>Katu, Tikta, Kashaya</i>	<i>Laghu, Teekshna</i>	<i>Ushna</i>	<i>Madhur</i>	Bhilawanol, Semecarpol.
<i>Hingu-niryasa</i>	<i>Katu</i>	<i>Teekshna</i>	<i>Ushna</i>	<i>Katu</i>	Hydroxyumbelliprenins, Asafoetidin, Ferocolicin, Disulphides

Table 3: *Prayojyanga, Matra, Deepaniya Yoga*.

<i>Deepan Dravya</i>	<i>Prayojyang</i>	<i>Dose</i>	<i>Deepaniya Yoga</i>
<i>Pippali</i>	Fruit	Powder: ½-1gm.	<i>Trikatu, Panchkol, Chatur-ushana, Shadushana, Hingwashtak churna,</i> ^[23] <i>Agnimukha churna,</i> ^[24] <i>Lavan Bhaskar churna,</i> ^[25] <i>Vyoshadi churna,</i> ^[26] <i>Yavanishadava churna.</i> ^[27]
<i>Pippali mula</i>	Root of <i>P. longum</i>	½-1 gm.	<i>Chatur-ushana, Panchkol, Shadushana, Vyoshadi churna.</i>
<i>Chavya</i>	Root & fruit	1-2gm.	<i>Panchkol, Shadushana, Vyoshadi churna.</i>
<i>Chitraka</i>	Root bark	0.5-2gm.	<i>Panchkol, Shadushana, Agnimukha churna, Vyoshadi churna.</i>

<i>Shunthi</i>	Dried rhizome	250-1000mg.	<i>Trikatu, Chatur-ushana, Panchkol, Shadushana, Hingwashtak churna, Agnimukh churna, Vyoshadi churna, Yavanishadava churna.</i>
<i>Amalvetas</i>	Fruit	Swaras: 5-10ml.	<i>Yavanishadava churna.</i>
<i>Maricha</i>	Fruit	250-500mg	<i>Trikatu, Chatur-ushana, Hingwashtak churna, Vyoshadi churna, Yavanishadava churna.</i>
<i>Ajmoda</i>	Fruit	1-4gm	<i>Chaturbeeja, Hingwashtak churna, Agnimukha churna, Vyoshadi churna, Yavanishadava churna.</i>
<i>Bhallatakasthi</i>	Seed	Oil: 1-2 drop/ Ksheerpak: 10-20ml	<i>Sanjivani Vati, Vrihadagni Ghrit.^[28]</i>
<i>Hingu- niryasa</i>	Resin	½- 4 gm	<i>Hingwashtak churna, Agnimukh churna, Vyoshadi churna.</i>

Mode of action of *Deepan Dravya*

Appetite is a psycho-physiological phenomenon in living beings which can be referred to the urge for consuming food. It is influenced by many factors such as food intake, energy expenditure, nutrition and active ingredients such as spices and passive components as polycarbohydrates etc.^[29] The hypothalamus is the regulating center of appetite and energy homeostasis. It controls food intake by sensing metabolic signals from peripheral organs and modulating feeding behaviors. To accomplish these important roles, the hypothalamus communicates with other brain areas such as the brainstem and limbic pathways. Gut hormones such as cholecystokinin, peptide YY, pancreatic polypeptide, glucagon-like peptide 1, and oxyntomodulin transfer satiety signals to the brain and ghrelin relays hunger signals.^[30] Memory of the taste of food, its olfactory and visual perception also plays an important role in the physiological regulation of food intake, as a pleasant taste, smell and presentation of food enhances the appetite i.e. sensory-specific appetite. It has been revealed in a study that food odor increases appetite for products that are similar, both in taste and energy density.^[31] So the process and product which enhances the appetite are considered as appetizers and can be correlated with the *Deepan karma* and *Deepaniya dravya* in *Ayurveda*.

On analyzing *Deepan karma* with the help of modern physiology of digestive juice secretion and reflex action, it is seen that sight, smell or thought of food stimulates hunger contractions and induces salivary secretions in the first step and enhances interest in food. On the second step the food taken after the strong appetite will be easy to digest due to the enhanced gastric secretions. Most of the *Deepan Dravya* possess *katu* (pungent)^[32] *tikta* (acid, piping)^[33] & *amla* (sour)^[34] *rasa* with *ushna virya* and *katu vipak* promotes *agni* at the molecular level. Piperine is active principle of *chavya*,^[35] whereas piperine, piperidine and chavicine has been reported as the active principle of *Piper nigrum*, gingerol and shogaol are identified as the active principle of ginger. All these active principles are responsible for the hot and pungent properties of *Deepan Dravya*.^[36] Pungent compounds are known for stimulating the trigeminal nerve enhancing saliva secretion as well as the secretions

in the gastro-intestinal tract which improve the digestion.^[37]

Out of these ten drugs the *Bhallatakasthi* i.e. seed of *Semicarpus Anacardium*, should be advised to use carefully due to its toxic effects. It should be subjected to the process of *Shodhan* (purification and detoxification) before using for medical purpose. The most common process of *Shodhan* involves rubbing of the *Bhallatak* seeds with brick powder and later washing them with warm water.^[38] It is used in various Ayurvedic medicinal compositions due to its beneficial effects such as carminative, digestive, anti-helminthic, liver stimulating, cardiac stimulant, diuretic, nervine tonic, aphrodisiac and *Rasayana* etc.^[39] and regarded as a stimulant of appetite due to its *katu, tikta, kashaya rasa* and *ushana* property by which it also works as pacifiers of *Vata & Kapha Dosh*.^[40]

Difference between *Deepan* (appetizers) & *Pachan* (digestives)

Deepan & Pachan drugs having similar properties *katu rasa, katu vipaka & usna virya*, but act in different ways. *Deepaniya dravya* like *Chitraka, Maricha, Pippali, Pippalimula* and *Jiraka* having *katu rasa, katu vipaka & usna virya* are taken before the meals, so excites the salivary glands for secretions and stimulate the appetite center to take the meal. *Pachana* drugs like *Hingu, Guduchi, Nagkeshar, Musta & Ajmoda* also having *katu-tikta rasa, ushana virya, katu vipaka* are prescribed after meal therefore increase secretion of digestive enzymes which helps to digest the food properly. These drugs also stimulate peristaltic movement of intestine, increases local blood supply and absorption of nutrients from the tract.

DISCUSSION

Deepaniya Mahakashaya is a group of ten drugs described by *Acharya Charak* for improvement of *Agni* that stimulates the appetite. These drugs are of pungent, piping and sour taste possesses several medicinal properties. Each of these drugs have its active principles which are responsible for its hot and pungent property, and if used as spice it imparts pleasant flavor, color and pungency to a dull looking food stuff and turn it into an attractive appetizing meal. Presence of an attractive

appetizing meal stimulates the secretions of digestive tract and produces sensory-specific appetite. So many references and simple formulations are available in Ayurveda by which these drugs can be used for the improvement of appetite. For example *Bhavprakash* states *Pippali* (*Piper longum*) & its root promotes *jatharagni* if taken with honey, and it is prescribed to increase appetite in case of *jirna jvara* i.e. chronic fever and *agnimandya*.^[41] It has been reported that *Piper longum* also enhances the bioavailability of food and drugs,^[43] and having anti-amoebic, anti-fungal, anti-asthmatic, anti-diabetic, antioxidant, anti-inflammatory, Immunomodulatory properties.^[43] *Chavya* (*Piper retrofractum*) & *Chitrak* (*Plumbago zeylanica* Linn.) both are also considered in the *triptighan mahakashaya* i.e. satiation relieving group of drugs by *Acharya charak*.^[44] *Chitrak* (*Plumbago zeylanica* Linn.) have been also reported to show anti-bacterial, anti-plasmodial, anti-tumour, hepatoprotective, central nervous system stimulatory activity, anti-fungal, anti-inflammatory, anti-hyperglycemic, anti-cancer, anti-atherosclerotic activity etc.^[45] *Shunthi* (*Zingiber officinale*) is one of the most common aromatic spices used all over the world and behaves as appetite stimulant by producing a beautiful aroma, special flavor and taste to our food. According to *Acharya Bhavprakash Shunthi* is taken with *lavan* before meal it promotes digestion, improves appetite and increases interest in food.^[46] Zingerone one of the active principle of *Shunthi*, has potent anti-oxidant, anti-inflammatory, anti-diabetic, anti-cancer, anti-diarrheic, anti-emetic, antispasmodic properties.^[47]

Amlavetas (*G. pedunculata*), also described under *Hridya Mahakashaya* i.e. cardiac tonic groups of drugs,^[46] and as an important ingredient of *Yavani Shadav Churna* stated for anorexia by *charak*. It has been traditionally used for cooking and as a garnish possess a variety of benefits including antioxidant, antimicrobial, anti-inflammatory, hepato-protective properties etc. However, the specific chemical compounds responsible for its beneficial effects have not yet been identified.^[49] Traditionally it is also used in the treatment of different stomach related diseases. *Marich* (*Piper nigrum*), one of the ingredient of *Trikatu* & *Panchkola* is frequently used as carminative and appetite stimulant and also advised for the treatment of cholera, flatulence, indigestion, irritable bowel syndrome and anorexia. It acts as appetizer as a result of the liver function improvement.^[50] Piperine which is reported as the active principle of *Pippali*, *Pippalimula*, *Chavya* and *Marich*, has been found to have immune-modulatory, anti-oxidant, anti-asthmatic, anti-carcinogenic, anti-inflammatory, anti-ulcer, and anti-amoebic properties.^[51]

Ajmoda is traditionally used as remedy for gastric disturbances and as a digestive aid. Its digestive and carminative property helps to maintain good appetite and provide relief in nausea, vomiting, stomach discomfort,

indigestion and bloating.^[52] *Hingu* (*ferula asafoetida*), induces hunger and salivary secretions by its aroma only and used widely all over the world as a flavoring spice in a variety of foods. It has been reported that *ferula asafoetida* prominently enhances pancreatic lipase activity and by this contribute to improve digestion.^[53] It is one of the best remedies available for flatulence and is an essential ingredient for most of the digestive powders.

Ayurvedic formulations of these *Deepaniya* drugs enlisted above can be used for the better treatment of *Agnimandya*, either seen as a symptom, disease or as a complication. *Trikatu*,^[54] *Chaturushana*,^[55] *Panchkola*,^[56] *Shadushan* are the combination of these *deepaniya mahakashaya* can be used in the form of powder with honey or in the form of decoction in diseased condition. It has been reported that *Panchkola Churna*, (contains *Pippali*, *Pippalimula*, *Chavya*, *Chitrak* & *Nagar*) showing highly efficient results on *Agnimandya* patients in a clinical study conducted at I.P.G.T. and R.A., Hospital Jamnagar.^[57]

CONCLUSION

Faulty food habits, incompatible food products, physical inactivity, stress and disturbed biological clock are the etiological factors to disturb the *Agni* in different ways, which is considered as the state of *Agnimandya*. Due to vitiated *Agni* the food isn't get digested properly and gives rise to formation of *Ama* that accumulates in different parts of the body and further leads to multiple diseases. So the *Ayurveda* has described *Deepan* and *Pachan karma* to keep the *Jatharagni* (digestive fire) in appropriate condition. *Deepan karma* promotes the *Jatharagni* for the proper digestion of food, and creates urge for food. The herbs of *Deepaniya Mahakashaya* are mostly belongs to the group of spices, if used as ingredient adds flavor to our food and increases interest to take food which also enhances the appetite, whereas the medicinal compositions of these drugs are used to treat the state of anorexia in case of *Agnimandya*.

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