

Dietary Vigilance Depicted by Priya Nighantu: A Portrayal

Review Article

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Abstract

Ayurveda focuses on diverse aspects of dietetics and nutrition along with its therapeutic potential. Along with classics have also guided on rules, regulations and cautions of use. The rise in non-communicable diseases has brought attention to AYUSH, with *AYUSH AHARA* offering a promising health solutions. However, neglecting precautions and regular or excessive consumption of certain ingredients can lead serious health concerns. Priya Nighantu, is the latest lexicon that have focused on use and cautions of dietary ingredients and recipes used in present era. Present review was done by meticulous analysis of diet explained by Priya Nighantu considering pharmacovigilance concern. Out of total 722 reviewed dietary ingredients; 76 diets are reported for its effect on vitiation of *Dosha* (increase & decrease of *Dosha*), 26 diets reported for having vigilant action on *Dhatu* (tissue) and 78 diets vitiate *Mala* (excretory byproducts). Apart from these, diet which affects organs and central nervous system are described. The data has been presented in tables and pictorials for easy capture and understanding of readers. Priya Nighantu *in toto*; have described cautions and vigilance of 207 diets; if consumed on regular basis. A proactive approach towards these data will help practitioners, dietician, nutritionist and researchers to understand AYUSH AHARA, its therapeutic and vigilant application.

Keywords: AYUSH AHARA, Diet, Health, Pharmacovigilance, SDG:3, Well-being.

Introduction

Ayurveda, the traditional Indian medicinal system remains the most ancient yet living traditions with sound philosophical and experimental basis. It is a science of life with a holistic approach to health and personalized medicine. It is known to be a complete medical system that comprised physical, psychological, philosophical, ethical, and spiritual health. (1) Researchers across globe are recognizing Ayurveda for obtaining solutions against lifestyle and non-communicable diseases (NCDs) and issues like antibiotic resistance, side effects of synthetic medicines, invasive treatments of modern science, autoimmune disorders etc. (2) For health preservation; WHO has implemented action plan of Sustainable Development Goals (SDG) 3 i.e. Good health and well-being. In support and implementation of SDG 3, researchers from allied domain and companies are exploring and marketing various diet based products.

This is also evident from the recent reports, stating there is tremendous growth since year 2014 in manufacturing sector for AYUSH. has grown from

Compound Annual Growth Rate (CAGR) of more than 30% from 2014 to 2020 and is expected to reach US\$ 18 billion in 2020 and US\$ 24 billion by 2024.

Ayurveda approach for treating diseases comprises dietary and lifestyle modifications, herbal and herbo-mineral medicines and *Panchakarma*. It provides emphasize on balanced diet and proper eating habits rather than prescribing medicines. It is well said in Ayurveda that diet is '*Mahabheshaja*' (best medicine).

Most of the herbal group are safe to administer, However, medicines of *Visha* (Poisonous) *Upavisha* (semi-poisonous) if not administered by proper clinical evaluation or not manufactured as per standard operating procedure may causes side effect up to fatality.

Ayurveda have provided vivid description of dietary ingredients and stated therapeutic indications and vigilance concern as well. All *Nighantu* have information for diet. Priya Nighantu, is latest among all written by Acharya Priyavat Sharma. It highlights currently used diet and recipes, its properties, indications, contraindications etc. The present article delineates pharmaco-therapeutic vigilance of dietary ingredients explained in Priya Nighantu.

When diet used for right indication serves as best medicine and if improperly consumed, it may show side effects.(3) Before prescribing the medication or diet, Ayurveda advises thorough examination of its suitability and compatibility with *Dosha* (individual humors), *Prakruti* (individual constitution), *Kala* (time),

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Vaya (age), Agni (digestive ability) etc. (4) Present review is done with aim to provide one hand compilation on vigilant aspect of various dietary ingredients; which will help to frame individualized dietary protocols, in the era; where physicians across world are looking for personalized medicine approach.

Material & methods

Priya nighantu was reviewed meticulously for dietary ingredient description by reading and understanding each word. The action or unfavorable effects on *Dosha* (humor), *Dhatu* (tissue), and *Mala* (excretory waste) or any contraindication. The following search terms were used for *Dosha* (*Vata*, *Pitta* & *Kapha*) were as follows:

'Vatala', 'Vataprakopini', 'Vatakrudnyeyama', 'Vatacara', 'Vatakari', 'Vatakruda', 'Vatavardhaka', 'Vatavivardhana', 'Pittada', 'Pittakaraka', 'Pittakarini', 'Pittavardhini', 'Pittabha-hutaram', 'Pitta-prakopam', 'Pittaprakopaka', 'Pittakruta', 'Kaphavaha', 'Shleshmala', 'Shleshmakarini', 'Shleshmapradama', 'Shleshmakruta', 'Shleshmada', 'Shleshmakara', 'Kaphada', 'Kaphaprada', 'Kaphavardhaka', 'Kaphakarama', 'Kaphakaraka', 'Kaphadama', 'Kaphakara'.

The action stating increase or decrease of *Dhatu* namely *Rasa*, *Rakta*, *Mamsa*, *Meda*, *Asthi*, *Majja*, *Shukra* were evaluated. The actions (increase or decrease) on *Upadhatu* were searched, by terms 'Stanyakara', 'Stanyakari', 'Stanyavardhini', 'Stanyavivardhanama', 'Stanyajanana', 'Raktashodhana', 'Raktashodhaka', 'Raktashodhini', 'Raktadoshahara', 'Rudhira-rogakari', 'Kashta-artavahara', 'Raktavardhaka', 'Raktastambhankaraka', 'Rudhiravrodhaka', 'Rudhire', 'Shonita vrudhhikara', 'Shonitavardhana', 'Raktastambhankaraka', 'Mansavardhaka', 'Shukrala', 'Shukravardhaka', 'Shukrakari', 'Shukrakrita', 'Shukravrudhhikara', 'Shukravardhaka', 'Klaibyakara', 'Shukrastambhana', 'Punsatwaghna', 'Shukravighatkara', 'Shukraghna', 'Shukrakshaya', 'Shukravinishini'.

Search strategies used to evaluate action on *Mala* were

- **Action on Purisha:** 'Sara', 'Saraka', 'Sangrahika', 'Sangrahi', 'Grahi', 'Malagrahi', 'Malasangrahi', 'Vistambhi', 'Vishtambhama', 'Vishtambha kruda', 'Vibambha janana', 'Vishtabhi', 'Bhedana', 'Bhedini', 'Rechana', 'Rechini', 'Sukharechini', 'Malashodhini', 'Malavatokakruta', 'Malabandhakruta', 'Mala karshana krut', 'Tikshna rechana', 'Tikshna Virechana', 'Tikshna virechani.'
- **Action on Mutra:** 'Mutrala', 'Mutrakara', 'Mutryama', 'Bastishodhini', 'Mutrajanana', 'Mutravivardhana', 'Mutrapravaha-janana', 'Mutravirechaniya'
- **Action on Sweda:** 'Swedajanana'
- The actions on particular system & organ where search with terms *Nidrakara*, *Nidrapradayini*, *Swapnakari*, 'Swapnakruccha', 'Tamasa', 'Madakara', 'Madakari', 'Madakarkama', 'Madani', 'Madi', 'Mohakrut', 'Madavaham'

'Pralapkruta', 'Budhhi hrut', 'Smruti-hrut', 'Yogavahi', 'Chetna-pradam'

The translation of Ayurvedic terminologies equivalent to contemporary science have been done by referring National Ayush Morbidity and Standardized Terminologies Electronic Portal (NAMASTE-PORTAL) designed, developed and maintained by CCRAS, Ministry of AYUSH, Government of India.

Terminologies translation

Sanskrit Term	Translation
Alpamutra	Scanty urine
Amavatdhaka	Increasing Ama (indigested food complex)
Amla-pitta kari	Hyperacidity
Apla Mala	Scanty faeces
Badhha varcha	Obstruction of stool
Badhhamutrachha	Retention of urine
Basti shodhana	Cleansing of urinary bladder
Bhedana	Drastic purgatives
Bhinnavarcha	Altered stools
Budhhi hrut	Loss of memory
Chetna-pradam	To gain consciousness
Durjarama,	Difficult for digestion
Garbhapatini	Abortifacient
Garbhashaya-vishodhana,	Cleansing of uterus
Grahi,	Absorptive
Guhyati mutram	Decrease urine quantity
Kandukari	Itching
Kaphapaha	Decrease Kapha
Klaibyakara	impotency
Krumikrut, Krimikara	Potency towards worm manifestation
Lala-stravi	Increase salivation
Madakara ,	Augmentation of insanity
Madakari ,	
Malabandhkruta	Causing constipation
Malabhedana, Mala bhedini	Stool lump breaking
Malanulomini	Evacuation of stool
Malaprabhutatam,	Increase stool formation
Bahumalakari	
Malashodhani	Eliminative process of Mala
Malavirodhi	Resistance of stool
Malavishodhaka	Cleansing of intestine
Mansavardhaka	Promote muscle tissue growth
Mohakrut	The medicine which create intoxication
Mutrakruchhakara	Dysuria and burning micturition
Mutrala, Mutrakara	Increase frequency or quantity of urine
Mutrpravahajanana,	Induced urination
Mutrardhaka	Retention of urine
Mutravirechaniya	Diuretic
Mutra-vivardhanama	Increase volume of urine
Nidrakara,	Sleep inducing
Nidrapradayini	
Param stambhana,	Arrest laxative effect
Pralapkruta	excessive and irrelevant talking

<i>Punsatwaghna</i> ,	Loss of libido
<i>Raktavardhaka</i> ,	Increase blood volume
<i>vrudhnikara</i> ,	
<i>Shonitavardhana</i>	
<i>Rudhira- rogakari</i> ,	Vitiation of blood and causes diseases
<i>Sangrahi</i> ,	Accumulation of stool but no evacuation
<i>Malagrahini</i>	
<i>Sara, Saraka</i>	Laxative
<i>Shrustamala</i>	Easy passage of stool,
<i>Shrustamutra</i>	Easy elimination of urine
<i>Smruti-hrut</i>	dementia
<i>Sthaulyakruta</i> ,	Increase obesity
<i>Stransana</i>	Mild laxative
<i>Swapnakari</i> ,	Sleep inducing
<i>Swapnakruccha</i> ,	
<i>Swedajanana</i>	Increase production of sweat
<i>Tridosha kara</i>	Increase <i>Tridosha</i>
<i>Udararogakara</i>	Induces abdominal disease
<i>Vamaka, Vamini</i>	Emesis inducing
<i>Vibandha mutra</i>	obstruction to passage of urine
<i>Vidahruta</i>	Tendency for burning sensation
<i>Yogavahi</i>	carrier of properties
<i>Yonirogadana</i>	Responsible for vaginal disease

Vatala, Vataprakopini, Vatakara, Vatakari, Vatakruda, Vatavardhaka, Vatavivardhana: Increasing Vata.

Pittada, Pittakara, Pittakarini, Pittavardhini, Pittabahutaram, Pitta-prakopam, Pittaprakopaka, Pittakruta: Increasing Pitta.

Shleshmala, Shleshmakarini, Shleshmakruta, Shleshmada, Shleshmakara, Shleshmapradama, Kaphada, Kaphaprada, Kaphavardhaka, Kaphakarama, Kaphakaraka, Kaphadama, Kaphakara: Increasing Kapha.

Raktastambhankaraka, Rudhiravrodhaka, Rudhire, Shonita, Raktastambhankaraka: Suppression of blood flow.

Shukrala, Shukravardhaka, Shukrakari, Shukrakrita, Shukravrudhnikara, Shukravardhaka: increase of semen qualitative and quantitative.

Stanyakara, Stanyakari, Stanyavardhini, Stanyavivardhanama, Stanyajanana: Increases lactation.

Vishtambhakara, Vishtambhakari, Vishtambhakruda, Vishtambhi Vishtambha-janani, Vishtambhi Vishtambhajanana, Vishtatambhakrut: Constipation due to flatulence.

Results

Priya Nighantu, have categorised drugs in twelve *Varga* (group of diet and medicine) namely *Haritakyadi* (Medicinal plants and trees) (115), *Pipalyadi* (spices etc)(38), *Shathpushapadi* (aromatic herbs etc)(114), *Sharadi* (Medicinal herbs & shrubs which grows in aquatic region) (78), *Kasturyadi* (minerals) (17), *Suvarnadi* (metals)(36), *Shaka* (54), *Phala* (Fruits)

(45), *Mamsa* (meat, sea-foods etc.) (6), *Kurtanna* (food preparations) (48), *Drava* (liquids) (22), *Dhanya* (30). Out of these *Varga*, description of diet, drinks, recipe were found in *Pippalyadi*, *Shathpushapadi*, *Shaka*, *Phala*, *Mamsa*, *Kurtanna*, *Drava*, *Dhanya*. Out of 772 medicines and diet mentioned by Priya Nighantu, the number of pharmaco-therapeutic vigilance about diet was observed for *Dosha* (89), *Dhatu* (28), *Mala* (77), central nervous system (19) & organs (40).



Fig 1: Diet & recipes aggravating Vata

a. *Cicer arietinum* L., b. *Zea maize* L., c. *Diospyros malabarica* (Desr.) Kostel., d. *Coix lacryma-jobi maxima*., e. *Paspalum scrobiculatum* var. *auriculatum* (J.Presl & C.Presl) Merr., f. *Echinochloa esculenta* (A.Braun) H.Scholz, g. *Pisum sativum* L., h. *Citrullus vulgaris* Schrad var., i. *Carthamus tictorius* L., j. *Lathyrus oraceus* Lam., k. *Setaria italia* (L.) Beauv., l. *Pyrus communis* L., m. *Sorghum vulgare* Pers., n. *Vigna aconitifolius* (Jacq.) M., o. Flour of *Cicer arietinum* L., p. boiled *Cicer arietinum* L.



Fig 2: Diet & recipes aggravating Pitta

a. *Garcinia pedunculata* Roxb., b. *Narthex assafoetida* Boiss., c. *Allium sativum* L., d. *Sinapis arvensis* L. oil, e. alcoholic preparations, f. *Cinnamomum zeylanicum* Breyn., g. *Trachyspermum amni* (Linn) Sprague, h. *Ocimum sanctum* L., i. *Cuminum cyminum* L., j. *Brassica oleracea* var. *botrytis*



Fig 3: Diet & recipes aggravating Kapha

a. *Allium cepa* L., b. *Lagenaria siceraria* (Molina) Standl., c. *Dolichos lablab* L., d. *Cyamopsis tetragonoloba* (L.) Taub., e. *Artocarpus integra* (Thunb.) Merrill, f. *Basella rubra* L., g. *Hibiscus esculenta* L., h. *Magifera indica* L., i. *Triticum aestivum* Lam., j. *Malus pumia* Mill., k. *Ananas comosus* L. Merr., l. *Nelumbo nucifera* Gaertn root, m. *Saccharum officinarum* L., n. milk pudding, o. p. ghee, q. deep-fried bread, r. flattened rice recipe, s. milk cream, t. sweet dishes, u. Idli, v. Ghevara, w. raw milk, x. Cooked rice

Action on Dosha

Diet and recipe showing aggravation of *Dosha* i.e. *Vata* (Figure 1), *Pitta* (Figure 2), *Kapha* (Figure 3), *Vata-Kapha*, *Vata-Pitta* (Figure 4), *Pitta-Kapha* & *Tridosha* (Figure 5).

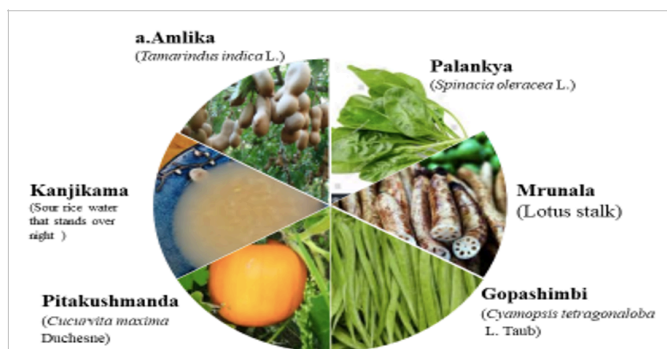


Fig 4: Diet & recipes aggravating *Vata - Kapha*



Fig 5: Diet & recipes aggravating *Pitta - Kapha*

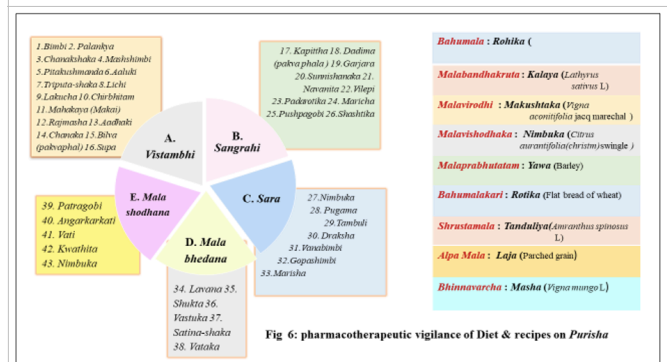


Fig 6: pharmacotherapeutic vigilance of Diet & recipes on *Purisha*

The diet increasing *Vata-Pitta* are *Vansha beej* (seeds of *Bambusa arundinacea* L.), *Rasama* (a south indian dish prepared from lentils, tamarind, lemon, jaggery etc.). Diet vitiating *Tridosha* are *Lakucha* (*Artocarpus lakoocha* Roxb.) and *Sarshapa* vegetable (*Brassica juncea* L.)

Action on Dhatu

Pharmaco-therapeutic action of diet on *Dhatu* was evaluated considering clinical application. It was found that certain diet needs vigilant application before prescribing to specific situation. The concerning actions on found *Rasa*, *Rakta*, *Mamsa* and *Shukra* are enlisted in table 1.

Action on Mala

Pharmaco-therapeutic vigilance about effect of diet on *Purisha*, *Mutra* are enlisted in figure 6,7, and 8 respectively. The recipes namely *Peya* (cooked rice water) and *Yusha* (Soup prepared from pulses) have *Swedajana* (hyperhydrosis) action.

Table 1: Pharmacotherapeutic action of diet on *Dhatu-Upadhatu*

Dhatu	Dravya	Latin name
Rasa - Stanyakara	1. Masha	<i>Vigna mungo</i> (L.)Hepper
	2. Masoor	<i>Lens culinaris</i> Medik.
	3. Godugdha	Cow's milk
Rakta dhatu		
Raktadoshahara	1. Vansha	<i>Bambusa arundinacea</i> willd
Rudhira- rogakari	2. Lavanakinama	Salty food
Mamsa		
Mansavardhaka	1. Panasa	<i>Artocarpus integra</i> (thumb.)Merrill
	1. Upodika	<i>Basella rubra</i> L.
	2. Kalambika	<i>Ipomoea aquatic</i> Forsk
	3. Alabu (lauki)	<i>Lagenaria siceracia</i> (Mol.)roxb
	4. Bhindika	<i>Hibiscus esculenta</i> L.
	5. Kasheruka	<i>Scirpus grossus</i> L. f.
	6. Amra (bal)	<i>Mangifera indica</i> L.
	7. Godhuma	<i>Triticum aestivum</i> L.
	8. Rajmasha	<i>Phaselous vulgaris</i> L.
	9. Angarkarkati	Regionally called as <i>Bati</i>
	10. Purika	A small round piece of bread that is deep-fried
	11. Kshirika	Called as Rice pudding
	12. Lapsika	Type if sweet made by wheat
	13. Kukkuta	Chicken meat
Shukravighatkara	1. Lakucha	<i>Artocarpus lakoocha</i> Roxb
Shukraghna	1. Yavnala (jwar)	<i>Sorghum vulgare</i> Pers
Shukrakshaya	1. Varta (kushumbha-beeja)	<i>Carthamus tinctorius</i> L
Shukravinishini	1. Atasi	<i>Linum usitatissimum</i> L.
Shukraharam	1. Rasama	Kind of soup
Pumstva-hara	1. Vajranna (bajara)	<i>Ennisetum glaucum</i> (L.) R.Br.
Pumstaghna	1. Chanaka	<i>Cicer arietinum</i> L

A. Vishtambhi: 1. *Coccinia indica* W.& A., 2. *Spinacia oleracea* L, 3. *Cicer arietinum*.L. 4. *Vigna unguiculata* (L) Walp, 5. *Cucurbita maxima* duchesne 6.*Colocasia esculenta* (L.)schott, 7. *Lathyrus sativus* L. 8 *Litchi chinensis* Gaertn, 9. *Artocarpus lakoocha* Roxb, 10. *Cucumis momordica* Roxb, 11. *Zea mays* L., 12. *Phaselous vulgaris* L. 13. *Cajanus cajan* (L.) Millsp 14. *Cicer arietinum*.L 15. *Aegle marmelos*.L, 16. Soup (soup preparation with boiled pulses),
B. Sangrahi: 17. *Feroni alimonia*. L.swingle, 18. *Punica granatum* L, 19. *Daucus carota* Var.sativa L, 20. *Marsilea minuta* L, 21. Butter, 22. Rice gruel with 4 parts of water and one part of rice, 23. *Paradrotika*, 24. *Piper nigrum* Linn, 25. *Brassica oleracea* var . botrytis. L., 26. rice
C. Sara: 27. *Ciytus aurantifolia* (cristm)swingle 28. *Areca catechu* L 29. *Piper betle* L. 30. *Vitis vinifera* L.,

31. *Coccinia indica* W.&A, 32. *Cyamopsis tetragonaloba* (L) taub, 33. *Amaranthus blitum* var. **D. Mala-Bhedana** : 34. Salt 35.Vinegar 36. *Chenopodium album* L., 37. *Pisum sativum*.L, 34. Fried patty of black gram.

E. Malashodhani : 39. *Brassica oleracea* var.capitata. L. 40., *Angarkarkati* 41. *Vati* 42. *Kwathita* 43. *Citrus aurantifolia(christm)* swingle.

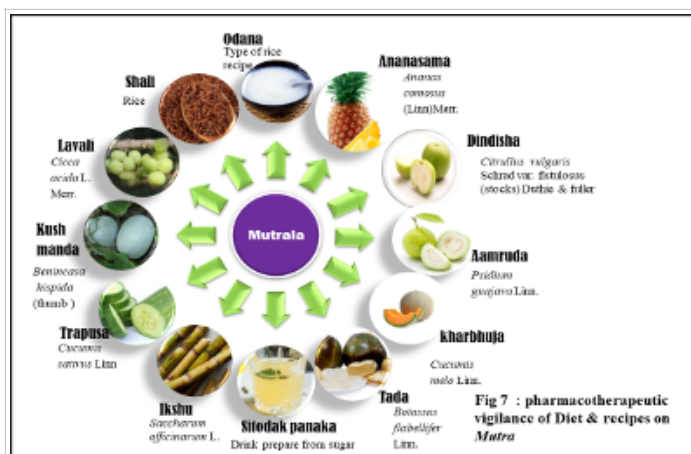


Fig 8 : pharmacotherapeutic vigilance of Diet & recipes on *Mutravaha Strotasa*

a. *Bambusa arundinacea*. Willd, b. *Musa paradisaca* L., c. *Cocos nucifera* L., d. rice water, e. *Piper cubeba* L., f. *Amranthus spinosus* Linn, g. *Syzygium cumini* (Linn)Skeels, h. Mixture made by sesame seed & jaggery, i. *Vigna radiata* L., j. Parched grain, k. *Sesamum indicum* Linn, l. Roasted grains

Action on CNS and various organs

There are certain dietary ingredients reported for having action on central nervous system (CNS). The various actions and diet on CNS are enlisted in figure 9. The long term administration of affects organs in specific way. The action of diet in organs namely

Garbhashaya (uterus & fetus), *Pakwashaya* (intestine), *Gala-Kantha* (Pharynx and larynx), *Jathara* (Stomach), *Annava* (Gastrontestinal tract), *Jivha* (Tongue), *Vrukka* (Kidney), *Vrushana* (Scrotum), and on lipids are figure 10.



Fig 9 : pharmacotherapeutic vigilance of Diet & recipes on CNS

a. *Cuminum cyminum* L., b. *Euryale ferox* Salisb, c. *Trapa natans* Linn.vas bispiosa (roxb)makino, d. *Hibiscus rosa-sinensis* L., e. *Magifera indica* L., f. *Aegle marmelos* L, g. *ficus racemose* L., h. *Fronia limonia* (L.) Swingle, i. Raw milk., j. thin pancake made with lentil rice & spices, k.*Dolichos biflorus* L, l. *Vigna aconitifolia* (Jacq.) Marechal., m. Jaggery, n. *Amorphoiphallus campanulatus* Blume, o. *Cassia absus* L., p. *Linum usitatissimum*.L., q. jaggery, r. salty food, s. *Zanthoxylum alatum* roxb.

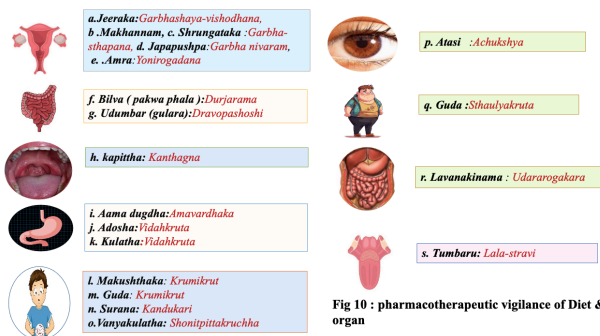


Fig 10 : pharmacotherapeutic vigilance of Diet & recipes on organ

Discussion

The pharmaco-therapeutic and pharmacovigilance concerns of herbal remedies, diets, recipes, and lifestyle changes have been expertly touched by Priya Nighantu. Vitiation or imbalance is understood in Ayurvedic diagnosis as either a rise (*Vruddhi*) or a decrease (*Kshaya*) of *Dosha*, *Dhatu*, or *Mala*. Pathogenesis might result from either a quantitative or qualitative rise or decrease in the vitiation. Therapeutic vigilance is advised for certain medications and diets even though they are useful for therapeutics. Generally speaking, drugs that boost *Vata* will eventually cause *Kapha* to decline, and drugs that

vitate Pitta will also vitiate *Rakta Dosha*. Long-term usage of a medication that raises a certain *Dosha* will result in a certain *Doshaprakopa*. Pathogenesis results from the vitiated *Dosha* vitiating *Dhatu* or *Mala*. Therefore, these diets need to be followed in a regular amount.

Vigilance of action on *Dosha*

Ayurveda have stated millets and peas in general aggravates *Vata*.

Chickpea and its recipes like *Satkava* (flour of chickpea), *Kulmasha* (boiled chickpea) contains phytic

acid, oligosaccharides, lectins, protease inhibitors which are heavy for digestion and produces gases.

Lectins are extremely resistant to digestive processes and don't undergo complete degradation in the gastrointestinal tract. Lectins binds with epithelial membrane glycoproteins and disturbs permeability of the intestinal membranes. (5) Peas contains raffinose family oligosaccharides(RFO) which lacks α -galactosidase to degrade RFO. They are neither absorbed nor degrade in stomach and gets accumulated in the large intestine; eventually, colonic bacteria ferments α -galactosidase resulting into formation of CO₂, hydrogen, methane. These gases are responsible for flatulence and expulsion of these may causes severe abdominal discomfort such as diarrhoea, borborygmi, cramps, and nausea. (6)

Milletts and peas contains phytic acid. It causes chelation of proteins and minerals thereby disturbs the digestion and absorption of essential nutrients and the food matrix stability. Milletts like *kodo* milletts, adlay millet, great millet; contains high resistant starch (RS) and slowly digestible starch, increases gastric volume and become heavy for digestion. Individual having weak *Agni* (digestive fire) suffer from bloating and digestive troubles.

Tinduka contains tannin responsible for formation of protein tannate complex by denaturing proteins. This makes coating over intestinal mucosa causing resistance and reduces secretion of electrolytes and thus patient suffers from constipation, (7) *Kodrava* is *Vikashi* (quick spreading action) in nature and highly aggravates *Vata*. Animal study reports *Kodo* milletts acts as depressant on hypothalamic heat regulation centre, induces hypothermia and causes tranquillization and tremors effect. (8) *Asafoetida*, stimulates activities of pancreatic lipase, pancreatic amylase and chymotrypsin, if used in large quantity then it increases *Pitta Dosha* i.e. vitiation of *Pitta*. (9) Borax is strongly alkaline thus irritates skin causing inflammation. (10) *Yawani* (*Trachyspermum ammi*) due to presence of high thymol causes nausea & headache. Being *Ushna* in nature, shall be avoided in *Pitta* dominant person. It is listed as an abortifacient in districts of Uttar Pradesh (India) in a survey study. It is not 100 % effective abortifacient and hence risk of causing congenital defects and fetotoxicity is associated. In-vivo studies has reported teratogenicity due to administration of *T. ammi* in rat fetuses. (11) (12) Alcoholic beverages strongly increase gastric acid secretion and the release of gastrin which leads to gastritis; (aggravation of *Pitta*) it also affect the inner mucosa of small intestinal villi because of the inflammation. (13) The primary component of garlic is allicin which causes upset stomach upset due to inflammation (aggravation of *Pitta*), hence shall be used with precautions in *Pitta* dominant individuals. (14) Mustard oil (*sasharpa taila*) is hot in potency, leads to skin irritation and rashes. It contains high percentage of eruric acid; one of the reported cause of myocardial fibrosis. (15)

Fruit vegetables like onion, bottle guard, okra; fruits like mango, jackfruits, legumes like cluster beans, lablab beans, increase *Kapha Dosha*. Increase *Kapha*

causes symptoms like laziness, over sleeping, heaviness in body, itching, increase in fatty component.

Onion contain cysteine sulfoxides which improves sleep quality evident through enhancing depth of NREM sleep by increasing delta power. (16) Bottle guard inhibit enzyme responsible for the biotransformation of pentobarbitone (increase sleeping time) could be through synergistic effect with pentobarbitone in C.N.S depression (sleepiness). (17) Okra contains sticky mucilaginous fluid which increase *Kapha*. Pectin is present in ripening, mangoes, and jack fruits. Pectin stimulate the production of MUC2 protein which helps form mucus. Unripe jackfruit contains higher levels of saturated fat compared to ripe ones. Regular consumption of butter raises LDL and saturated fat levels. (18)

Dessert recipes like varieties of sweets (*mishtanna*), *Ghrutapura* (*Ghewara*; a Rajasthan region dessert of disc-shaped sweet prepared from ghee, flour, sugar syrup), *Lapsika* (type of sweet made by wheat), sweets prepared by using sugar or jaggery & milk products increases *Kapha*. Jaggery is rich source of sucrose glucose (carbohydrate group of moieties) which ultimately increase *Kapha*. Buffalo milk contains high percentage of fats, responsible for increasing *Kapha* and *Meda*. *Santanika* (milk cream) contain fats which increase *Kapha*. Recipes namely *Indarika* (savory rice cake; traditionally called as *idli*), *Kshirika* (rice pudding), *Pruthuka* (flattened rice) *Ghrutama* (ghee), *Aama-dugdha* (raw milk), *Purika* (a small round piece of bread that is deep-fried) and *Ikshu* (sugarcane) increases *Kapha*.

Vigilance action of food ingredients on Mala

Ayurveda defines diseases due to Increase or decrease of *Mala* namely *Purisha* (faeces), *Mutra* (urine), and *Sweda* (sweat). It helps to detox body but when it vilifies them, they exhibit symptoms and contribute to the etiology of disease.

Vigilance action of food ingredients on Purisha (faeces)

Food ingredients having *Sangrahi*, *Grahi*, *Malasangrahi* action indicated for diarrhoea or dysentery whereas *Vitbhedhi* and *srushta-vit* are helpful to relieve constipation. *Vishtambhi* mainly related to gases distention, flatulence, responsible for constipation. Ingredients having *sara*, *Malanulomini*, *Malashodhini* properties mainly used for relieving constipation

The ripe fruit of the *Bilva* plant causes obstruction in passage of stool due to complex of tannin, pectin, mucilage, and amylase-resistant starch which becomes heavy for digestion. (19) Due to its anti-secretory effect; it inhibits enzymes useful for digestion. Leaves of *Kapitha* contains, bergapten which are responsible for anti-diarrheal activity. (20) Peel of ripe *Dadima* contain tannins, alkaloids, flavonoid which reduces mucosal secretion, inhibits prostaglandin release from intestinal mucosa. Regular intake of *Garjara* (carrots) causes constipation due to its papaverine content which reduces activities of non-

specific smooth muscles of ileum. (21) *Kodrava* acts on α -glucosidase inhibitors and α -amylase exploration which shows the adverse effect by causing discomfort in the abdomen, including bloating, flatulence. (22)

Hence, *Bilva*, *Kapittha*, *Dadima-twak*, *Garjara*, *Kodrava* shall not be prescribed in patients of constipation.

Piper nigrum contains specific alkaloids responsible for anti-motility and anti-secretory action. (23)

Palankya, *Pushpagobi* contains short-chain of dietary fibers and oligosaccharides which are soluble and quickly fermentable. They cause fast generation of gas and patients experiences flatulence, bloating, and discomfort in their abdomens. (24) *Chanaka* & *Mashashimbi* have a high fibres and oligosaccharides content like stachyose and raffinose responsible for gas, flatulence, and bloating. (25)

Aluki contains viscous mucilage fibres which causes constipation by reducing bolus motility. *Litchi* & *Mahakaya* are heavy to digest due to its high protein, crude fibres thus creates flatulence. (26), (27) *Lakucha* contains α -glucosidase inhibitors which further inhibit pancreatic α -amylase activity, thereby create flatulence, bloating due to fermentation of undigested carbohydrate. (28) Pigeon pea in some cases lead to gas formation due to high fibre content which becomes heavy for digestion and gets fermented. Food recipes like soup prepared from various pulses causes flatulence due to nil fibres.

Vastuka shaka, (29) *Satina shaka*, (30) barley possess *Mala-bhedana* action due to ample amount of fibres which aids for increase bowel movement frequency. Barley due to presence of gluten increase the bowel frequency, small bowel permeability. *Tanduliya* leaves reported for its cholinergic action hence exerts laxative effect. (31) *Vitis vinifera* due to presence of fibers and sorbitol acts as stool softener laxative. (32) Laxative potential of *Vanabimbi* is attributed to its fiber content.

Vigilance action of food ingredients on *Mutra* (urine)

Kharbuja, *Ikshu* and *Kushmanda* are stated as *Mutralla* (diuretic). In-vivo study confirms diuretic potential of these fruits with underlying mechanism of increasing glomerular filtration rate and decreasing tubular secretion which enhances urine output (33) (34). *Tada* fruit, *Tanduliya* vegetable increases urine output by excreting of Na^+ , K^+ , Cl^- . Na^+ . (35), (36), (37). This food ingredients shall be cautiously given in polyuria.

Trapusa contains alkaloids, saponins, glycoside and triterpenoids which play major role in diuretic activities. (38) *Narikela* and *Ananasama* possess diuretic activity by increasing electrolyte concentration in urine. (40) *Kankola* acts as nephro-protective by cleansing bladder content. It contains high amount of polyphenols that acts as free radical scavenger, reduces inflammation and thus cleans the bladder (i.e. *basti-vishodhana*). (41)

Vigilance action of food ingredients on *Sweda* (sweat)

Dietary foods like *Odana* (cooked rice) and *Peya* (gruel made by cooking rice in 14 times water) increases sweat production by stimulating carbohydrate metabolism and glucose production.

Vigilance over action on *Dhatu*

Diet having specific action on *Dhatu* which need to cautiously thought while advising are enlisted in table 1. Cow's milk, black gram, red lentils are galactagogue in nature. It shall be thought in conditions of gonadotropin insufficiency, lactational amenorrhoea etc. *Salt* is mainly alkaline in nature. It vitiates *Rakta Dhatu* and well known causative factor for hypertension. In Jackfruit, water-soluble pectin is present in greater amounts Fibres from pectin aid in muscular building which is accountable for *Mamsa Dhatu Vrudhhi*. (42) The diseases namely *Adhimamsa* (granuloma), *Arbuda* (myeloma), *Keela* (muscle overgrowth), *Galashundika* (tonsillitis), *Putimamsa* (sluffing of flesh), *Alaji* (boiles), *Gandamala* (cervical adenitis), *Upajivhika* (inflammation of epiglottis) etc. (43)

Aphrodisiac diet must be given vigilantly in patient who are over indulged in sexual activities and suffer because of it. It becomes helpful remedies in case of infertility. *Kalambika* improves spermatozoa motility and concentration due to high percentage of proteins; as reported through in-vivo studies (44) *Godhuma* has positive effect on sartoli cell i.e. on sperm production attributed to components namely vitamins E, C, folic acid, thiamin, niacin and B12. (45) *Amra* i.e. mango helps to improve sexual drive owing to presence of vitamin C, E and antioxidants. Animal experiment reports, mango leaves extract significantly increases serum testosterone, testicular GSH, sperm count and its motility, percentage of spermatozoa with the normal plasma membrane and also prevents degradation of testicular cell membrane. (46) *Bhindika* (*A. esculentus*) at lower doses reported to enhance sperm motility, morphology and vitality reproductive hormones. However, at higher doses and over long term consumption it could lead to decrease in testosterone levels, sperm count, sperm motility, impaired testicular tissues and spermatogenesis, abnormality in sperm morphology etc. It indicates, a caution should be exercised during longer consumption. *Kukkuta* (chicken) meat provides innate heat, improves blood flow to end organs and being rich in amino acids helps to improve sexual functions. *Kasheruka* being tonic in nature helps for spermatogenesis and lactation. (47) Food dishes like *Angarkarkati* (bati), *Purika* (fried wheat bread), *Lapsika* (sweet made from broken wheat), *Kshirika* (rice pudding) are quoted as *Shukrala*. There is no research data available for food recipes. *Yavanala*, *Atasi*, *Lakucha*, *Varata* are negatively quoted with functions of *Shukra*. Regular consumption of *Jowar* and *Bajra* negatively affects fertility probably due to anti-nutritional effect of phytic acid. Hence, stated as *Pumstva-hara*. *Varata beeja* reported to affect the sartoli cell and hamper sperm hamper sperm (i.e. *shukrakshaya*). (45) *Chanaka* also exhibit similar effect;

quotes as *Pumstvaghna*. Food recipe like *Rasama* is reported as *Shukrahara*. However, it lacks research evidences.

Vigilance action of food ingredients on CNS

Some dietary ingredients are shows side effect related to CNS like *Madakari* (intoxicant), *Nidrakara* (sleepiness), *Mohakrut* (delirium), *Pralapkruta* (excessive talking), *Budhhi-hrut* (memory impairment), *Smruti-hrut* (dementia), *Yogavahi* (the drug which enhance the action) etc. *Upodika* due to presence of triterpenoids show central nervous system (CNS) depressant action as evident through animal experimentation activity. (48) *Sarpagandha* contains reserpine, which exerts a tranquilizing and sedative effect by depleting the amino acids from brain storage. (49) Buffalo milk being enriched with high amount of tryptophan, synthesizes melatonin, which further suppress the action of the inhibitory neurotransmitter gamma-aminobutyric acid (GABA), thus; exerts sedative action. (50), (51) *Puga* contain arecoline; a psychoactive compound responsible for insanity. (52) *Dhattura*, *Yawani* contain hyoscyamine which acts as CNS depressant. (53) *Asafoetida* at lower doses is neuroprotective but in moderate to higher doses it could be neurotoxic. The neurotoxic effect is due to unwanted components like sulphites and galbanic acid which may cause neuronal death. (54) Overdose of *Dhatura* shows symptoms such as disorientation, hallucination, irrelevant talk (*Pralapkruta*). The sedation with *Ahiphena* or its component is due to presence of morphine.

Vigilance action of food ingredients on various organs

Elephant yam due to presence of high calcium oxalate crystals acts as skin irritant & causing itching. (55) Raw milk is heavy for digestion, hence causes indigestion. (56) It is always advised to consume warm milk. Being rich in sucrose, jaggery tends to cause intestinal worms infestation. (57) *Tumbaru* is used in speech as it increases salivation. (58)

Authors have tried to provide research based rationale for the data. However, there are still diet and activities needs exploration. No research data available on the recipes and its vigilant aspect, hence at present it needs to be accepted as told by classics. There is huge scope to study and validate pharmacovigilance concerns related dietetics.

Conclusion

Priya Nighantu is the latest lexicon which has commented on both therapeutic uses and cautions of dietary ingredients; available in present era. The lexicon offers insights on the cautious side of regular and excessive use of dietary products. If not used considering pharmacovigilance aspect, diet may become an etiological factor for pathogenesis. This article provides insights for vigilant application of diet for managing diseases which is need of the hour.

Acknowledgements

The authors acknowledge to management of Dr. D. Y. Patil College of Ayurved & Research Center, D.Y. Patil Vidyapeeth (Deemed to be university), Pimpri, Pune for constant support in research works.

Conflict of interest: Nil

Funding source: Nil

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