AN ANALYTICAL STUDY ON PATHYA-APATHYA IN MEDOROGA WITH SPECIAL REFERENCE TO HYPERLIPIDEMIA

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ABSTRACT

In lifestyle diseases like hyperlipidemia wholesome diet and modification of lifestyle are key factors in the management. The wholesome regimen which does not impair the body system and which is pleasing to the mind is called Pathya. That which is not pleasing is the unwholesome regimen or Apathya. Ahara Vidhi Visesayatanas like Prakriti, Karana, Samyoga, Rashi, Desha, Kala, Upayogasamstha, Upabhokta should be given importance while advising Pathya Ahara.

The adoption of Pathya and refrainment of Apathya Ahara and Vihara is the apt answer for management of Hyperlipidemia. The diet with Laghu, Ruksha, Kaphamedohara and Srotoshodhana property should be ingested while avoiding Guru, Snigdha, Kaphamedokara and Abhishyandhi foods. Using healthy diet rich in complex carbohydrates, vegetables, and fruits seasoned with adequate quantity of spices with minimum amount of oils and fats are ideal for management and prevention of Hyperlipidemia or Medoroga. The regimen like exercises, Yogic practices help to reduce Meda as well as psychological stress factors that are causative factors for hyperlipidemia.

KEYWORDS: Medoroga, Hyperlipidemia, Pathya-Apathya, Ahara Vidhi Vishesayatanas.

INTRODUCTION

Aarogyam bhojnadhinam¹, health is dependent on food. According to Acharya Charaka food is one among the Trayopstambha. Intake of food at proper time and with special condition (Ashana Vichara and Ashta Ahara Vidhi Vishesayatanas) are prerequisite for

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maintenance of positive health. Coming to prevention and management aspect of the hyperlipidemia. Ayurveda advocates conducts of daily routine as Dinacharya, among which some are specific in prevention of hyperlipidemia. Udavartana is also mentioned in Dinacharya for Medogha-Twakprasadana action by Ruksha guna and Katu-Tikta-Kashaya Rasa dravya like Musta, Triphala as they are kaphahara. Ayurveda also prescribe Ratricharya (Night regimen like food consumed in the first Prahara of night, taken in lesser quantity than afternoon, then one should walk hundred steps & lie down on bed by left side) for prevention of hyperlipidemia. For management of hyperlipidemia or Medo Roga Guru apatarpana, Vata Sleshma Medohara the Anna Pana and even Aushada are advocated. Nidana parivarjana stands as prime step in treatment and Vyayama acts as both Sleshma and Medohara. Further it is mentioned that a disease can be cured without medicine but without proper Pathya hundreds of medicines also go in vain.[2] In lifestyle diseases like hyperlipidemia whole some diet and modification of lifestyle are key factors in the management.

Factors to be considered while advising Pathya – Apathya in Hyperlipidemia
The wholesome regimen which does not impair the body system and which is pleasing to the mind is called Pathya. That which is not pleasing is the unwholesome regimen or Apathya. Ahara Vidhi Visesayatanani means the causative factors which are responsible for the wholesome and unwholesome effect of the food or of the method for the diet intake.[3] These are the special factors in the science of diet and dietetics. These different factors give rise to Hitakara (wholesome) and Ahitakara (unwholesome) effects and are helpful to one another.

These eight factors in context to hyperlipidemia can be described as follows
Prakriti: Prakriti indicates the nature of the substance, i.e. inherent attributes of diets and drugs. All the classical Ayurvedic texts recommend the administration of Guru Apatarpana as dietary therapy for Medoroga.[4] Rasona is Guru Snigdha in nature. Guru refers to foods that are heavy in quality and take a long time to digest, and Apatarpana means foods that are comparatively less nourishing and catabolic properties. Further non-nourishing food will not produce Medo Vridhi (growth or increase in adipose tissue). Food having bitter (Tikta), pungent (Katu), astringent (Kashaya) tastes, dry (Ruksha), rough (Khar), subtle (Sukshma), sharp (Tikshna guna), hot (Ushna veerya), and pungent (Katu Vipaka) properties are used to treat Medo Roga. For Ex. Yava (barley), Priyangu (Seteria italica), Patola (Trichosanthus Doica), Amalaki (Indian gooseberries), Kodrava (Paspalum scrobiculatum), Mudga (green gram) etc.
**Karana:** Karana means the processing of the substances.\[^5\] Processing results in the transformation of the inherent attributes of substances. Fast foods are usually prepared out of trans fats (typically hydrogenated or partially hydrogenated vegetable oils) to enhance the expiry period processed food. The trans fats are saturated due to the hydrogenation and hence are atherogenic. The ingestion of deep-fried food substance elevates oxidative stress. Thus, food should be prepared in way that it must be low in fat and salt content.

Too much of simple/refined carbohydrates like maida, corn, cola etc. carbonated drinks are manufactured by such method that breaks down the complexity of their natural chains. Hence they are digested fast leading to increase in serum blood glucose levels and gradually fat deposition thus refined carbohydrate should not be used.

Further, intake of *Laja* (puffed rice), *Yava saktu* (fried barley flour), Popcorn etc. should advocated as they are heavy and devoid of fat.

**Samyoga:** Samyoga is the combination of two or more substances. This results in the exhibition of specific qualities, that are not be shown by individual substances. For Ex. sweets also are prepared out of fructose and Fructose is a monosaccharide found in large quantities in most of the added sugars. Fructose has been shown to raise de novo lipogenesis in the liver, hepatic triglyceride synthesis, and secretion of very low-density lipoproteins. Fructose also appears to decrease the peripheral clearance of lipids Excess sugar in the blood and causes which in turn results in oxidative stress, leading cause of atherosclerosis. Therefore diet form containing various ingredients rich in carbohydrates or fat should be avoided. Use of spices and condiments like fenugreek, pepper, turmeric, garlic, onion, ginger, garlic, coriander, cumin, cloves, and cinnamon in combination with food items prevents many complications and help to enhance Dhatvagni. The spices are basically Laghu (light), Snigdha (unctuous), Kaphavatahara and Medohara property may contribute towards above said benefits.

**Rashi:** Rashi is the quantum of total (Sarvagraha) or individual substances (Parigraha) that governs the results of their administration adequate and inadequate dosages. The amount of food taken in its totality is “Sarvagraha” and the amount of individual ingredients is “Parigraha”. The stomach should be divided in to three portions, one portion should be filled up with solids, the second portion with liquids and the third portion should be left empty for movement of *Vata, Pitta,* and *Kapha.*\[^6\] In the calorie restricted diet, fat accumulation in body decrease additionally stored fat and gradually burn out.\[^7\]
**Deshā:** Desha denotes the habitat. The quality of food substances differs depending upon geographic location, based on variety of soil. Thus should be used and acclimatized according to a particular region. Agni varies according to Desha hence in food conducive to same Desha of man’s origin is indicated. Thus in Indian continent fast foods or others western food should be avoided.

**Kala:** Time factor is twofold; one relates with diurnal and seasonal variations, whereas second factor is condition of individuals like age and disease. Ahara should be always according to Kala so that it can digest properly and not lead to fat accumulation.

**Upayokta:** It means the person who takes food.

**Upayoga Samstha:** It consists of dietetic rules. These are the dietetic rules which are to be followed while taking the food. The food should be consumed in adequate quantity. Food should have following qualities.

1. **Ushna, Snigdha, Matravat** consumed after the digestion of previously ingested food (Adhyashana does not allow the Insulin level in plasma go down, which in turn inhibit secretion of FFA from stored fat. Constant raise insulin leads to only fat deposition and gradually leads to Medo Roga so next diet should be consume only when previous one is digested completely.

2. **Virya Aviruddha Ahara** diet should be provided with Sarvopakarana

3. The food should not be taken very fast or very slowly.

4. The food should be taken without talking and laughing, with the concentration of the mind, and after paying due regard to oneself or own self.

**Specific Pathya-Apathya in Hyperlipidemia**

- Bhaisajya Ratnavali advocates measures and eatables helpful in curing the problem of Medo Roga. Sorrow, labour, night awakening, sex, powder massage, Langhana(fasting), exposure to sun, riding elephant and horse, travelling, Apatarpana, old bamboo rice, Kodrava, Shyamaka, Nivara, Priyangu, Yava (barley), Kulattha (Horse Gram), Chanaka (Bengal gram), Masura (lentil), Mudga (green gram), pigeon peas, honey, poppy of paddy, edibles and juice a having bitter taste, buttermilk, liquor, cingata variety of fishes, fried brinjal, Triphala, Guggulu, Lauha Bhasma, Trikatu, mustard oil, cardamom, all dry materials, sesame oil, leafy vegetables, poultice of Agaru, warm water, Shilajatu, drinking water before meals.[8]
The following measures and diets are considered to be harmful in Medo Roga: Bathing with cold water, Brimhana Rasayana tonics, fresh Shali type of rice, wheat, such activities as lying or resting on luxury cushions, products of milk, products of sugarcane-jaggery etc., fried nuggets prepared out of the Urad beans, taking huge amount of meals (stomach full), Snehana karma (massage),eating fish and meat, sleeping during day time, sporting garlands and perfumed oil and sandalwood, eating sweet products , drinking lot of water after taking meals and Vamana therapy.

### Aharaja Pathya-Apathya

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Ahara Varga</th>
<th>Pathya</th>
<th>Apathya</th>
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<tbody>
<tr>
<td>1.</td>
<td>Suka Dhanya (Cereal Grain)</td>
<td>Puran Shali, Yavanala , Yavak Kodrava (Kodomillet), Shyamaka (Japanese barnyard millet, Echinochloa frumentacea), Yava (barley), Priyangu (Italianmillet, Panicum italicum), Laja (puffed rice), Nivara (wild rice), Koradushaka, Jurna (jowar), Prashatika/Kanguni</td>
<td>Godhum (wheat), Naveen Dhanya Shali (newly harvested rice)</td>
</tr>
<tr>
<td>2.</td>
<td>Shami Dhanya (Pulses)</td>
<td>Mudga (green gram), Rajamasha (Cow Pea), Kulaath (horse gram), Chanaka (Bengal gram) Masur (lentil), Adhaki (red gram), Makusthaka (Moth Bean)</td>
<td>Masha, Til</td>
</tr>
<tr>
<td>3.</td>
<td>Shaka Varga (Vegetables)</td>
<td>Patol (snake gourd), Patrashaka (leafy vegetable), Shigru (drum stick), Vruntaka (brinjal), Vastuka (Bathua), Trapusha Vartaka, Ervaruka (cucumber), Adraka (ginger), Mulaka (radish), Surasa (basil)</td>
<td>Kanda Shaka Madhura Rasatmaka</td>
</tr>
<tr>
<td>4.</td>
<td>Phala Varga (Fruits)</td>
<td>Kapitha, Jambu (jamun), Amalaki (goose berries), Ela (cardmum), Bibhitaki, Haritaki, Maricha (pepper), Pippali (piper longum), Eranda Karkati (papaya), Ankola, Naranga (orange), Bilvaphala (bael)</td>
<td>Madhura Phala (sweet fruits)</td>
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<tr>
<td>5.</td>
<td>Drava Varga</td>
<td>Honey, Takra (butter milk), Ushnajala (hot water), Tila &amp; Sarshapa Taila (sesame and mustard oil),</td>
<td>Dugdha (milk), Dhadhi (curd) Sarpi (ghee) Ikshuvikara (sugar products)</td>
</tr>
<tr>
<td>6.</td>
<td>Mamsa Varga</td>
<td>Rohit Matsya</td>
<td>Aanupa (marshy), Audaka (aquatic), Gramya Mamsa Sevana (flesh)</td>
</tr>
</tbody>
</table>

### Pathya – Apathya Vihara (Physical Regimen)

<table>
<thead>
<tr>
<th>Pathya</th>
<th>Apathya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shrama (physical work)</td>
<td>Sheetala Jala Sevana (Intake of cold water)</td>
</tr>
<tr>
<td>Jagarana (night awkening)</td>
<td>Divaswapna (Day sleep)</td>
</tr>
<tr>
<td>Nitya Bhramana (Regular walk)</td>
<td>Ayyavaya (sexual abstinence)</td>
</tr>
<tr>
<td>Ashwa Rohana (horse riding)</td>
<td>Ayyavam (no physical exercise)</td>
</tr>
<tr>
<td>Hastya Rohana (elephant riding)</td>
<td>Ati Ashana (excessive eating)</td>
</tr>
<tr>
<td>Vyavaya (exercise)</td>
<td>Sukha Shaiya (comfortably resting)</td>
</tr>
<tr>
<td>Ushnodaka (hot water)</td>
<td></td>
</tr>
<tr>
<td>Upavasa (hot water)</td>
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DISCUSSION

Globalized world stress brings about defective metabolism and hyperlipidemia, therefore all kinds of mental stress should be avoided. Defective dietary habits and lifestyle are main cause of hyperlipidemia. The spices such as Fenegreek, Garlic, Ginger, pepper, Turmeric etc were found to be effective as hypocholesterolemic agents (Srinivasanl, 2005a). The coronary artery disease can be prevented by moderate levels of homocysteine present in garlic. It also has ability to reduce blood cholesterol, high blood-pressure-along with antioxidant properties. Garlic suppresses calcium mobilization and thus prevents platelet aggregation, hence beneficial in CAD (Richard Rivlin in Journal of Nutrition).[^9] The researches show that spices like coriander and cumin have marked inhibitory effect on platelet aggregation. On administration of Fenugreek an inhibition of fat accumulation and up regulation of LDLR was observed. Hence it can be used in the management of dyslipidemia and its associated metabolic disorders.[^10] An inhibition of lipid peroxidation in mitochondrial preparations from rat liver was observed when administered with aqueous extract of fenugreek seeds. The study also revealed significant antioxidant activity in germinated fenugreek seeds; this may be due partly to the presence of flavonoids and polyphenols.[^11] The plant extracts of Cratoxylum formosum, Syzygium gratum, and Limnophila aromatica have potential roles in protection of vascular dysfunction by preventing loss of blood reduced glutathione and suppressed formation of plasma malondialdehyde, plasma NO metabolites and blood superoxide anion.[^12] Curcumin (diferuloylmethane) has been shown to regulate numerous transcription factors, cytokines, protein kinases, adhesion molecules, redox status and enzymes that have been linked to inflammation. Most of the chronic illnesses, including neurodegenerative, cardiovascular, pulmonary, metabolic, autoimmune and neoplastic diseases can be prevented by prevention of the inflammation.[^13] Laghu (light), Snigdha (unctuous), Kaphavatahara and Medohara property may contribute towards above said benefits.[^14]

CONCLUSION

Defective dietary habits, lifestyle and stress bring about defective metabolism and hyperlipidemia. The adoption of Pathya and refrainment of Apathya Ahara and Vihara is the

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<table>
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<tbody>
<tr>
<td>Shoka (sorrow)</td>
<td>Nitya Harsha (pleasure)</td>
</tr>
<tr>
<td>Chinta (worries)</td>
<td>Achintana (no worries)</td>
</tr>
<tr>
<td>Krodha (anger)</td>
<td>MansoNivrutti (mental relaxation/detachment)</td>
</tr>
</tbody>
</table>

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