



“AYURVEDIC DIET IN DIABETES MELLITUS AND ITS PRACTICAL APPROACH IN TODAY'S ERA”.

Ayurveda

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ABSTRACT

In Ayurveda the human is considered to be made and nourished by the Ahara. The Varna (body colour), Prasada (lusture), Sauswarya (proper speech), Pratibha (wisdom), Medha (memory and intellect), Tushti (feel of satisfaction) and Sukha (pleasure) all are present in ahara which reflects in human after its proper intake. This body nourishing intake of ahara is called as Patthyakara Ahara. Ayurveda has mentioned different types of ahara dravya and ahara kalpana for several diseases. It varies by the type and condition of disease. In this paper the scientific evaluation of ahara and its various annapana kalpana (Diet) mentioned by Ayurveda in Prameha (Diabetes mellitus) has been presented on the basis of Ayurveda and modern science.

KEYWORDS

Ahara, Ayurveda, Prameha, Patthya, Dravya, Diet

INTRODUCTION

Ayurveda is science of life which describes about the medicinal values and uses of plants for maintenance of health for the first time. According to Ayurveda these dravya are divided into two categories i.e. Ahara dravya and Aushadhi dravya. Ahara dravya are those which we take to maintain the natural status, physiology of body and the prevention and control of disease. These are considered as the dravya which works on the basis of its rasa, guna, virya vipaka and prabhava.

In Ayurveda the human is considered to be made and nourished by ahara. The Varna (body colour), Prasada (lusture), Sauswarya (proper speech), Pratibha (wisdom), Medha (memory and intellect), Tushti (feel of satisfaction) and Sukha (pleasure) all are present in ahara which reflects in human after its proper intake. Hence it can be said each component of body is made of ahara indirectly. Acharya kashyapa has explained the importance of ahara by saying that ahara is Mahabheshaja. It means that bhesaja (medicine) performs their therapeutic action in that body which is mainly constricted on the basis of ahara. The ahara which keeps the body channels healthy in natural status is called as patthyakara ahara.^[1]

Ayurveda has mentioned several pathya-apathyakara ahara (Diet) to practice in order to fight against Prameha (Diabetes mellitus) in diseased condition. Enjoying sedentary life and the pleasure of sleep excessively, too much use of yogurt and its preparation, meat soup of domestic, aquatic and swampy animals, milk and its preparation, newly harvested cereals, new/fresh wines, preparation of jaggery (cane sugar preparations) and all other kapha-aggravating factors are the causes of diabetes syndrome.^[2] Diabetes mellitus is a clinical syndrome characterized by hyperglycaemia due to absolute or relative deficiency of insulin or both (i.e. defect in insulin action, insulin action or both). People with diabetes should receive individualized dietary advice as needed to achieve treatment goals. It involves allocation of the calories in a proper proportion to carbohydrate, protein and fat.

MATERIAL & METHODS

AYURVEDIC DIET IN DIABETES:-

Ayurveda has mentioned several annapana (diet) in diabetes mellitus and it has also refers some ahara dravya which on regular intake prevents the occurrence of prameha, shvitra and kaphaja kushtha.^[3] Ayurveda stated that in the condition of prameha the ahara dravya which pacifies the vata dosha, minimize the kapha dosha and meda dhatu should be used. Ayurveda described ahara dravya and its kalpana in charaka samhita, ashtanga sangraha, bhaishhajya ratnavali and many other classical textbooks of ayurveda for the eradication of prameha.

Ayurveda explained ahara dravya and its different kalpana diabetes i.e. shuka dhannya like purana dhannya (old cereals), eating old rice

with tikta rasatmaka vegetables, yava anna (Barley), godhuma (wheat), shali shashtic (rice which crops within 60 days), laja. Trunadhannya likes shyamaka (barnyard millet), kodrava (kodo millet), uddal, kanguni (foxtail millet) etc. Shimbidhannya like Adhaki (red gram), kulattha (horse gram), Mudga (green gram), Chanak (split chickpeas) which should be taken with bitter and astringent leafy vegetables. Bitter vegetables like tanduleyaka (chawali), methica (methi), patol (Pointed guard), karvellak (bitter guard), rasona (garlic), bimbi etc. Fruits like jambu, amalaki, udumbara, kalinga, kadali phala (unripped) and kapittha. Oils like atasi taila, tila taila, sarshapa taila. Madhu (honey), tila (Sesame),^[4,5,6,7] Saindhava, meat soup of wild animals also indicated in diabetes.

Modern science explained the allocation of calories in a proper proportion to carbohydrate, protein and fat i.e. carbohydrate 50-65%, protein 10-20% and total fat 25-30%. The carbohydrates should be taken in the form of starches and other complex sugars. Rapidly absorbed simple sugars like glucose and even sucrose should generally avoid. High fibre diet is beneficial in diabetes patient.^[8] When you have diabetes you should take meal with right mix of carbohydrates, proteins and fats to keep your blood sugar as normal as possible throughout the day. According to modern science zero glycemic foods or low glycemic foods are indicated in diabetes patients. The Glycemic index is a rating system that measures how much a carbohydrate containing foods raises your blood-sugar levels. The lower the glycemic index of food, the lower the effect on your blood sugar. Low glycemic foods also can reduce your risk for depression. The standardized Glycemic Index ranges from 0 to 100. Zero-glycemic foods-those without carbohydrates-include items like egg, meat, fish, oils and nuts. Low glycemic foods have a glycemic load of 55 or lower and include most fruits and vegetables, beans, dairy, and some grains. Food such as bananas, raisins, and sweet potatoes are considered to be medium glycemic foods and are ranked between 56 to 69. High glycemic foods are ranked at 70 and above and include table sugar, ice cream, and other heavily processed foods that are high in calories and fat.^[9]

DISCUSSION

AHARA DRAVYAIN DIABETES-

1.SHUKADHANNYAANDTRUNADHANNYAVARGA:-

1. Purana shali (Oryza sativa Linn.-Rice)
2. Shashtik Shali (Rice which crops within 60 days)
3. Godhuma (Triticum aestivum Linn.-Wheat)
4. Yava (Hordeum vulgare Linn.-Barley)
5. Shyamaka (Echinochloa frumentacea Linn.-Barnyard millet)

6. *Kodrava* (*Paspalum scrobiculatum* Linn-Kodo millet)
7. *Kangu* (*Setaria italic* Linn.Foxtail millet, Italian millet)

Purana shali (One year old rice) is *laghu* and *kapha shamak*. *Shashtic shali* is also *laghu* and *tridoshaghna*.^[10] Therefore these *dravya* are indicated in diabetes. If rice is roasted in fire it called as *dhaan* and if *dhaan* is roasted in fire is called as *laaja* which is *laghu*, *ruksha* and *kapha shamaka*. Brown rice is indicated in diabetes because it is packed with fiber an important component for diabetes management. Because fiber is not digested by the body it does not affect blood sugar level. Another way to add fiber to your diet is with beans and legumes. If beans and rice eaten together do not cause as drastic blood sugar spike as rice alone. *Acharya Charaka* already mentioned about it i.e. eating rice with *tikta rasa* vegetables in diabetes.

Yava is commonly known as Barley. The flour made of *yava* is highly recommended in several disease conditions. Its *saktuk* (powder of dry roasted *yava*) is highly recommended in obesity and diabetes. The diet proponet with *yava* is used in *prameha* (diabetes). It is clearly mentioned by *Acharya Charaka* that person who takes regular diet having roasted *Yava* and its roti will never suffer from *prameha* (diabetes).^[11] It is said to have *madhura-kashaya rasa* and *ruksha*, slight *guru* with *sheeta veerya* and *lekhaniya*. It aggregates *vata*, pacifies *kapha*, having stool increasing and strengthening property.^[12] *Yava saktuk* with honey, *Roti* of *Yava* flour, *vattya manda* is indicated in *prameha*. Glycemic index of barley is low.

Godhuma means Wheat which contain maximum amount of starch. If *godhuma* flour is mixed with *yava* flour it act as *apatarpana* and *kapha shaamaka*.^[13] *Purana Godhuma* is *laghu* and *kapha shamaka*.

Shyamaka is known as Indian barnyard millet, sawa millet. Most popularly called "Sava ka chawal" in hindi and "Vari cha Tandul" in Marathi as the seeds of this grass is used to prepare various dishes and consumed during festival fasting days. The *Shyamaka* has *shoshan* (*kapha* and water absorbing) and *Ruksha* properties and *madhura-kashaya* hence increases *vata* and pacifies the *shleshma* and *pitta*.^[14] In india, kodo millet is ground into flour and used to make pudding. It is known as *Kodrava* and *Koradusha* in *ayurvedic* texts. It is considered as *grahi* having *sheeta veerya*, *shoshana*, *kashaya madhura* and pacifies *kapha* and *pitta dosha*.^[15] Kodo millet provide good amount of fibers whereas rice and wheat could not provide so. *Kangu* which is commonly known as foxtail millet or Italian millet. *Kangu* is *ruksha*, *guru*, *vata vardhaka* and *kapha nashaka*.^[16] *Roti* of *kangu* flour is used in diabetic patient. These all above cereals are indicated in diabetes. These are low glycemic food items and it contains maximum amount of fibers.

SHIMBI DHANNYA VARGA:-

1. *Mudga* (*Vigna radiata* Linn.-Green gram)
2. *Aadhaki* (*Cajanus cajan* Linn.-Red gram)
3. *Masura* (*Lens culinaris* Medic.-Lentil)
4. *Chanaka* (*Cicer arietinum* Linn.-Bengal gram)
5. *Kulattha* (*Dolicus biflorus* Linn)

The above mentioned *dravya* has *Laghu*, *Ruksha guna*, *Madhura-kashaya Rasa*, *kapha* and *pitta shamak* properties.^[17,18,19,20] *Kulattha* has *katu kashaya rasa*, *laghu guna*, *ushna veerya*, and *kapha shamaka* properties.^[21] Because of these properties this *dravya* are indicated in *prameha*. *Mudga* *Yusha*, *Masura* *Yusha*, *kulattha* *pancha* *Yusha*, *Adhaki* *Yusha*, *Chanaka* *Yusha*, *Kulattha* *Yusha* are indicated in *prameha* (diabetes). These all are low glycemic food items therefore they are indicated in diabetes.

SHAKA VARGA:-

1. *Tanduliya* (*Amaranthus spinosus* Linn.-Chawali)
2. *Patol* (*Trichosanthes dioica* Roxb.-Parawal)
3. *Karwellaka* (*Momordica charantia* Linn.-Bitter guard)
4. *Methica* (*Trigonella foenum* Linn.-Fenugreek)

5. *Nimba* (*Azadirachta indica* Linn.)
6. *Rasona* (*Allium sativum* Linn.-Garlic)
7. *Udumbara* (*Ficus racemosa* Linn.)

According to *Ayurveda* classics the *Tikta* and *kashaya rasatmaka* vegetables are indicated as *patthyakara ahara dravya* in *prameha*. *Tikta* and *kashaya rasa* are *kapha* and *meda shamaka*. *Patol* *yush* or soup of vegetables are *patthyakara* in diabetes. *Acharya Charaka* mentioned that the rice should be eat with *tikta shaka dravya* in *prameha* patients. Vegetables contains maximum amount of fibers. Soluble dietary fibers which increases the viscosity of meal bolus. Once it has reached the small intestine, where the absorption of nutrients occurs; this high viscosity delays the absorption which prevents sudden fluctuation of blood sugars. The glycemic index of vegetables is also low therefore these vegetables are indicated in diabetes.

PHALAVARGA (FRUITS):-

1. *Amalaki* (*Embllica officinalis* Linn.-Indian gooseberry)
2. *Jambu* (*Syzygium cumini* Linn.-Jambul)
3. *Bilva* (*Aegle marmelos*)
4. *Kapittha* (*Limonia acidissima*-Elephant apple)
5. *Apakva kadali phala* (Banana unripe)
6. *Kalinga* (water melon)

Above mentioned *dravya* are indicated as *patthyakar* fruits in diabetes patients. A persons having most vitamin C in their body had the lowest incidence of diabetes mellitus. These fruits included in low glycemic food items.

OTHER AHARA DRAVYA:-

Meat soup of wild animals is indicated in *prameha* because meat of wild animals has *laghu*, *ruksha guna* and *madhura kashaya rasa*.^[22] sesame seeds means *tila* is also indicated in *prameha*. *Tila tail*, *sarshapa taila*, *atashi taila* should be used in *ahara* of diabetic patients. *Madha* means honey it has *madhura kashaya rasa*, *ruksha guna*, *kapha shamaka* properties. Therefore honey is indicated in *prameha*.^[23] Honey is included in low glycemic food items.

CONCLUSION

Ayurvedic texts have mentioned hundreds of *pathyapathya ahara dravya* and its various *kalpana* according to need and condition of the patient and diseases. *Shuka dhannya* like *purana dhannya* (old cereals), eating old rice with *tikta rasatmaka* vegetables, *yava anna* (Barley), *godhuma* (wheat), *shali shashtic* (rice which crops within 60 days), *laja*. *Trunadannya* likes *shyamaka* (barnyard millet), *kodrava* (kodo millet), *uddal*, *kanguni* (foxtail millet) etc. *Shimbidhannya* like *Adhaki* (red gram), *kulattha* (horse gram), *Mudga* (green gram), *Chanak* (split chickpeas) which should be taken with bitter and astringent leafy vegetables. Bitter vegetables like *tanduleyaka* (chawali), *methica* (methi), *patol*, *karvellak* (bitter guard), *rasona* (garlic), *nimbi* etc. Fruits like *jambu*, *amalaki*, *udumbara*, *kalinga*, *kadali phala* (unripe) and *kapittha*. Oils like *atashi taila*, *tila taila*, *sarshapa taila*. *Madhu* (honey), *tila*, *Saindhava*, meat soup of wild animals also indicated in diabetes. These *ahara dravya* has *laghu*, *ruksha guna*, *madhura-kashaya rasa*, *kapha-pitta shamaka* properties. Because of these properties these *ahara dravya* are *patthyakar* in *prameha* (diabetes).

Here we reviewed the *ahara dravya* and its *kalpana* ascribed for benefits in diabetes by *ayurveda*. Life style modification with adopting proper food habits have very important role in the management of diabetes mellitus. The dietary management is highly effective in early detected cases of diabetes i.e. pre-diabetes patients. Dietary management can be used as supportive/accessory treatment in chronic diabetes patients. Disease specific dietary measures are unique concept of *ayurveda*.

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