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## “ROLE OF PEARL MILLET IN DIET FOR MANAGEMENT OF STHOULYA (OBESITY) AYURVEDIC VIEW.”

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**ABSTRACT:**

Sthoulya (obesity) has become a troublesome condition and cause of many lifestyle diseases. Treatment strategies for obesity and its prevention mainly depends on improvements in lifestyle and dietary control. Dietary interventions play important role in obesity. Daily intake of millet-based foods is found to be useful in obesity. Mainly used grain is Pearl millet. Though its intake is confined to lower income segments of society, it is highly nutritious grain. It provides better source of calories, protein, vitamins, and minerals than other large cereals. Pearl millet can be used to prepare a variety of delicious food products useful in obesity. Therefore, the current review addresses the role of Pearl millet in managing obesity.

**KEYWORDS:** Sthoulya (obesity), Pearl millet, lifestyle, Diet.**Corresponding Author:****Vd. Khandaliker Sandeep**

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**INTRODUCTION:**

Obesity in Ayurved is described as Sthoulya Roga, Medoroga, Santarpana Janya Vyadhi, Dhatvagni Mandhyajanya Vyadhi etc. Acharya Charaka has described Sthoulya among the 'Ashtaninditiya Purusha'. [1] Obesity is one of the major causes of Hypertension, Diabetes mellitus, Osteoarthritis, infertility, Stress, depression etc. Acharya Sushruth also told that Madhyam sharira is the best. [2] Atisthula and Atikrisha are always affected with some complaints. [3] The sedentary lifestyles, stress and dietary habits are primary predisposing factors for Sthoulya. Consuming high fatty food, fried items, etc., along with sedentary life-style leads to excess accumulation of body fat which gets deposited in the numerous body channels. It is observed that when the food is right, there's no need for medicine and when the food is wrong, no medicine works. Dietary treatments are a simple and economical way to deliver preventive benefits and enhance quality of life. So, looking upon the importance of this disorder an attempt is made to review the role of commonly used Pearl millet in the diet for management of Sthoulya (obesity).

**Sthoulya (Obesity):** The meda and mansa dhatu gets vitiated and gets lodged in nitamba, stana and udara region. Therefore, these body parts move during any activity done by person. Improper growth nitamba, stana and udara is seen and the patient remains lethargic. This condition is said to be sthoulya. The **nidana** (factors) which lead to obesity are Atisampuranada (unhealthy food), Guru, madhur, atisnigdha dravya (to eat fatty foods), Avyayam (lack of exercise), Avyavaya (lack of coitus), Diwaswapa (sleep during daytime), Harshanitya (to remain happy carelessly). Beeja swabhavat (hereditary obesity, when the obesity comes through maternal or paternal genes).

**Samprapti Ghatak of Sthoulya**

**Dosha** - Kapha- Kledaka, Pitta -Pachaka,

Vata- Samana

**Dushya-** Rasa, Meda

**Agni** - Jatharagni, Medodhatvagni

**Srotas-** Medovaha

**Udbhava-** Amashaya

**Prasara-** Sarva Deha

**Adhishtana-** Vrukka and Vapavahana

**Vyakta Sthana-** Sarvanga specially Sphik, Sthana, Udara, Gala

**Roga Marga** - Bahya and Abhyantara

**Vyadhi Prakara** - Chirakari

**Sadhya Asadhyata-** Kruchrasadhya. [4]

Sthoulya is included under eight undesirable conditions (Ashtau Nindita), Shleshma Nanatmaja, Samtarpana Nimittaja, Atinindita, Ati Brihmana Nimittaja and Bahu Dosha Janita [5] Vikara. The patient of Sthoulya exhibits very strange phenomenon. Their appetite is excessive and whatever they eat is quickly digested, which indicates hyperfunctioning of the Jatharaagni. Besides this, the patient suffers from laziness, may be due to under supply of energy, which may be due to hypofunctioning of Bhutaagni. Dhatvaagni also seems to be disturbed, as in Sthoulya patient mainly Medo-Dhatu is formed and there is deficiency of another Dhatu. [6] It is a santarpana janya roga and it results due to derangement in metabolism thereby only meda dhatu increases and restricts the formation of other dhatus. [7] Pruthvi and Jala mahabhoota are associated with the heavy, dense, slow, and cold qualities and are antagonistic to strong metabolic fire, which is sharp, light, and hot, thus contributing to slow metabolism and obesity. [8] Symptoms of Sthoulya are Increased hunger (Atikshudha), Increased thirst (Atipipasa), Perspiration (Atisweda), Breathlessness (Atiswasa), Sleepiness (Atinidra), Difficulty to perform heavy work (Aayas Ashamata), Sluggishness (Jadata), Short lifespan (Alpaaayu), Decreased body strength (Alpabala), Bad body odour (Dougandhya),

Unclear voice (Gadgada) In context of body. [9] Acharya Charaka has mentioned eight Dosha of Sthoola Purush. Aayu Shaya (decreased life expectancy), Java Uprodha (laziness), Kricha Vyavaya (difficulty in sex), Dourbalya (weakness), Dourgandhya (smelly body), Sveda Abadha (perspiration), Ati Shudha (increased appetite), Ati Pipasa (increased thirst) [10] In modern view Sthoulya is correlated with obesity. Obesity may be defined as an abnormal growth of the adipose tissue due to an enlargement of fat cell size or an increase in fat cell number or a combination of both. The measurement of obesity is done by Body Mass Index (BMI). BMI = Weight is calculated in kilograms / height in meters square.

BMI 18.5 – 24.9 = Normal weight, BMI 25.0 – 29.9 = Overweight, BMI 30.0 – 34.9 = obesity Class 1, BMI 35.0 – 39.9 = Obesity Class 2, BMI >\_40 Obesity Class 3.

#### **Gun karma of Pearl Millet (Bajari)**

Pearl millet (*Pennisstum glaucum*) is a multifunctional cereal crop which belongs to the Poaceae family. It is generally referred to in various local Indian languages as bajra, bajri, sajje, kambu, kamban, sajjalu, etc. It is widely used for food and forages [11]. Pearl millet has many nutritional benefits as a result of its rich structure of minerals and proteins. It has high protein content, and it comprises several significant minerals such as magnesium, phosphorus, zinc, etc. It also provides vital amino acids and vitamins that add to a variety of human treatments [12]. Pearl millet is widely recommended for people with elevated cholesterol levels. It comprises a phytochemical known as phytic acid that is estimated to influence the metabolism of cholesterol and balance the cholesterol in the body [13]. It has gained importance in diet, as it is economical, nutritional and also gluten free. Nali is said to possess Madhura rasa (Sweet in taste), is Ruksha (Dry) and Laghu (Light), Ushna veerya

(Hot in potency, Catabolic in nature), Katu Vinaka (Post digestive Pungentness) and is said to vitiate Vata and Pitta as per Madanapala nighantu [14] and Priya nighantu [15]. It also acts as Shleshmahara (Pacifies Kapha dosha). The other properties and actions ascribed to Nali are Balya (Strength promoting), Durjara (Difficult for digestion) Pumstvahara (Antaphrodisiac), Vilekhana (Scarifying), Baddhanisyanda (Dries up and accumulates the fluid tissues of the body) [16]. Nighantu rathnakara opines differently from the above authors. Nalika has Katu and Tikta rasa (pungent and bitter in taste), along with Madhura. The potency of Bajra is said to be Sheetoshna and it possesses Teekshna guna. Bajra pacifies Vata and Pitta according to Nighantu rathnakara [16] which is the contrary of the view mentioned in Priya nighantu [6]. The diseases which are said to be alleviated by Bajra are Raktapitta (Bleeding disorders), krumi (Worm infestation), Visha (Poisoning), Shula (GI ulcers), Ashmari (Calculi), Mutrakrucchra (Dysuria), Raktadosha (haematological disturbances), Trusha (Dyspepsia), Kandu (Pruritis), Jvara (Fever), Vrana (Wounds and ulcers) and Durnama (Haemorrhoids). [16]

#### **DISCUSSION:**

Treatment protocols of Sthoulya include Guru Aptarpana Aahar, Ruksha-Ushna-Tikshan-Chedaniya Aushad, purifactory measures like Vaman, Virechan, Rakta Mokshana and incorporating physical and mental activities in daily schedule of an obese person. The gun karma of pearl millet is opposite of the the dosh and dushtas involved in Sthoulya. Medo-hara, Kapha-hara actions of the pearl millet are useful in Sthoulya. Ruksha (Dry), Laghu (Light), Ushna veerya (Hot in potency, Catabolic in nature), Katu vipaka (Post digestive Pungentness) act effectively on kapha dosh meda dhatu. The

greatest obstacle facing people who wish to lose weight is to regulate their consumption of calories. Pearl millet will support the weight loss process because its fibre content is high. It takes longer for the grain to travel from the stomach to the intestines, due to the fibre content. This means the pearl millet satiates hunger for a long time and therefore helps to limit the total intake of food [17]. Pearl millet is safe to use in the diets of babies, lactating women, the elderly, and the convalescent.[18] Therefore it can be used in diet for obesity of babies, lactating women, the elderly, and the convalescent. Obesity is an inflammatory disorder, Inflammation results in free radical production. Antioxidants from foods play a crucial role in scavenging the free radicals and reducing inflammation [19] It is Durjara (Difficult for digestion), The fiber content in Pearl Millet provides a feeling of fullness, aiding in weight management by reducing overeating and snacking. Its high fiber content not only promotes satiety but also regulates blood sugar levels. This helps prevent sudden spikes and crashes in energy, reducing cravings for unhealthy snacks and therefore very useful in obesity. It is Balya (Strength promoting) so useful to overcome AayasAshamata (Difficulty to perform heavy work), Sluggishness (Jadata), Decreased body strength (Alpabala). It is Tikshna, lekhaneya so useful to reduce excess fat.

### CONCLUSION:

A variety of bioactive compounds present in pearl millet possess numerous health benefits such as antimicrobial, antioxidant, antidiabetic, and hypocholesterolemic effects, as well as hypoglycaemic activity and guarding against diet-related diseases. Lifestyle modification is the key to sustainable weight loss. Healthy eating is one of the lifestyle modifications for weight loss. Thus, one of the multimodal integrated

interventions for management of obesity is to include Pearl millet in a regular diet.

### REFERENCES:

1. Vd Yadavji Trikamaji Acharya, Agnivesha, Charaka Samhita, with Ayurveda Dipika Commentary by Chakrapani, Sutra sthana, 21th chapter, verse no.3, Chaukhamba Publication New Delhi.Reprint 2020, Page number-116.
2. Sushrut, Sushruta Samhita, with Nibandhasangraha of Dalhanachrya & Nyachandrika Panjika of Gayadasachrya edited by Vaidya Yadavji Trikamaji Acharya. Sutra sthana, 15th chapter, verse no.34 Chaukhamba Surbharati Prakashan Varanasi 2019, Page number-75
3. Vd Yadavji Trikamaji Acharya, Agnivesha, Charaka Samhita, with Ayurveda Dipika Commentary by Chakrapani, Sutra sthana, 21th chapter, verse no. 16, Chaukhamba Publication New Delhi.Reprint 2020, Page number-117.
4. <https://jaims.in/jaims/article/view/1632/1726>
5. Shastri Rajeshvardatta., editor. 3. 1/21. Varanasi: Chaukhambha Bharati Academy; 2005. Agnivesha, Charaka, Dridhabala, Charaka Samhita, Sutrasthana, Astauninditiya Adhyaya; p. 407. [Google Scholar]
6. Ibidem, Charaka Samhita, Astauninditiya Adhyaya. 1/21(4):409. [Google Scholar]
7. Yadavji Trikamaji Acharya, editor. Charaka Samhita by Agnivesha with Ayurveda Dipika commentary. Varanasi: Chaukhambha Prakashan; 2010. Sutra sthana 21/18. Pg.117.
8. Lad V. Textbook of Ayurveda, vol. 3: A Complete Guide to Clinical Assessment. Albuquerque, NM: Ayurvedic Press, 2006. [Google Scholar]
9. Harishchandra Kushwaha. Charak Samhita Chakrapani 'Aayushi Teeka' Part-1. Varanasi; Chaukhambha Orientalia; Revised Edition 2016; 309

10. Banwari Lal Goud. Ashtang Hridya Samvartika commentary. Varanasi; Varanasi, Chaukhamba Orientalia; 1st edition 2007; 244.
11. Arora P.D., Fan L., Sodek J., Kapus A., McCulloch C.A. Differential Binding to Dorsal and Ventral Cell Surfaces of Fibroblasts: Effect on Collagen Phagocytosis. *Exp. Cell Res.* 2003; 286:366–380. doi: 10.1016/S0014-4827(03)00096-X. [PubMed] [CrossRef] [Google Scholar]
12. Krishnan R., Meera M.S. Pearl Millet Minerals: Effect of Processing on Bioaccessibility. *J. Food Sci. Technol.* 2018; 55:3362–3372. doi: 10.1007/s13197-018-3305-9. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
13. Hassan Z.M., Sebola N.A., Mabelebele M. The Nutritional Use of Millet Grain for Food and Feed: A Review. *Agric. Food Secur.* 2021; 10:16. doi: 10.1186/s40066-020-00282-6. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
14. Madanapala Nrupa, Madanapala Nighantu, Published by Ganga Vishnu Sri Krishnadas, Bombay, 1867., Tpg-296.
15. Sharma Priyavrat, Priya nighantu, 2nd ed, Varanasi: Choukamba surabharati prakashana; 1995, Tpg-275.
16. Nighantu rathnakara, edited by Bhashagvarya navra Krishnashastri, Published by Jawaji Vasudev, Bombay 1936, Tpg 808
17. Benton D., Young H.A. Reducing Calorie Intake May Not Help You Lose Body Weight. *Perspect. Psychol. Sci.* 2017; 12:703–714. doi: 10.1177/1745691617690878. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
18. Nambiar V.S., Sareen N., Shahu T., Desai R., Dhaduk J.J., Nambiar S. Potential Functional Implications of Pearl Millet (*Pennisetum glaucum*) in Health and Disease. *J. Appl. Pharm. Sci.* 2011; 1:62–67. [Google Scholar]
19. Chandrasekara A, Shahidi F (2010) Content of Insoluble Bound Phenolics in Millets and Their Contribution to Antioxidant Capacity. *J. Agri. Food Chem* 58:6706-6714.

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