

## Role of *Siridhanya* (positive millets) in prevention and management of dyslipidemia with special reference to *Medovrudhi* – a conceptual study

Samiksha Chandore<sup>(1)</sup>, Vinod Choudhari<sup>(2)</sup>

1. Assistant Professor, Department of Rachana Sharir, Government Ayurved College, Nagpur, Maharashtra, India.
2. Professor & HOD, Department of Rachana Sharir, Shri Ayurved Mahavidyalaya, Nagpur, Maharashtra, India

\*Corresponding author: [samikshachandore495@gmail.com](mailto:samikshachandore495@gmail.com)

### ABSTRACT-

Dyslipidemia is a metabolic disorder characterized by elevated total cholesterol, low-density lipoprotein (LDL), triglycerides, and reduced high-density lipoprotein (HDL). It is a major risk factor for cardiovascular diseases and other lifestyle disorders. In *Ayurveda*, dyslipidemia can be correlated with *Medovridhi* and *Medovaha Srotodushti*. Dietary modification plays an important role in its prevention and management. *Siridhanya* (positive millets) are traditional grains described in Ayurvedic literature and are known for their high nutritional and therapeutic value.

**Objective:** To study the role of *Siridhanya* (positive millets) in the prevention and management of dyslipidemia with special reference to *Medovridhi*.

**Materials and Methods:** This conceptual study was conducted through a review of

classical *Ayurvedic* texts and modern scientific literature related to millets and dyslipidemia. The nutritional and therapeutic properties of foxtail millet, kodo millet, little millet, barnyard millet, and browntop millet were analysed.

**Results:** *Siridhanya* millets contain high dietary fiber, essential minerals, proteins, and phytochemicals. Their low carbohydrate-to-fiber ratio helps regulate metabolism and lipid profile. Studies indicate that millet consumption may reduce total cholesterol, LDL, triglycerides and body mass index while increasing HDL levels.

**Conclusion:** Regular consumption of *Siridhanya* millets may help manage dyslipidemia and reduce *Medovridhi*, thereby contributing to the prevention of lifestyle disorders.

Keywords: Siridhanya, Positive millets, Dyslipidemia, Medovridhi, Lifestyle disorders.

## **INTRODUCTION -**

Dyslipidemia is defined as the presence of hypercholesteremia, high levels of low-density lipoprotein(LDL) cholesterol & /or low concentration of high-density lipoprotein (HDL), present alone or in combination . Dyslipidemia is one of the commonest presentation with rising prevalence & major cause for various lifestyle disorders like cardiovascular diseases, type II diabetes, pancreatitis, fatty liver & many other diseases. In *ayurvedic* view dyslipidemia can be considered similar to aggravated *dushta meda dhatu* in the body. <sup>(1)</sup> The mention of millets in Indian Sanskrit text *Yajurveda's & Ayurved Samhita-* of foxtail millet (*priyanga*), barnyard millet (*shyaamaka*)<sup>(9,10)</sup>, indicated that millets culture & consumption was very common ,dating to Indian bronze age (1,500BC). The Indian scriptures, the *Puranas*, also mention the names of various wild and cultivated millets used for rituals and as food and fodder. <sup>(11)</sup> Lifestyle factors, including diet, play a crucial role in the development and management of dyslipidemia; millets as traditional grains rich in fibers, minerals and photochemicals, offer promising nutritional benefits & unique therapeutic properties that may impact positively on dyslipidemia & reduce risk of various lifestyle disorders.

## **AIM & OBJECTIVE-**

To study the role of siridhanya (positive millets) in prevention & management of dyslipidemia with special reference to *medovrudhi*.

## **MATERIAL & METHODS-**

- Grains can be categorized as positive ,neutral & negative grains. Out of these, first two categories of grains i.e. positive & neutral grains are called millets.
- Positive millets have high fiber (8 to 12.5%) & are considered highly nutritious and beneficial for health so called as positive millets; whereas neutral millet grains have less fiber (2-4%) than positive millets, but still more than rice & wheat i.e. negative grains.

### ❖ SIRIDHANYA MILLETS

Positive millets grains are also called 'siridhanya millets' & here is the list of positive grains along with approx. fiber it contains-

1. Foxtail millet (*kangi*) - 8% fiber
2. Kodo millet (*kodra*)- 9% fiber
3. Little millet (*kutki*)- 9.8% fiber
4. Barnyard millet (*sanwa/ shyaamaka*)-10% fiber
5. Browntop millet (*hari kangni*)-12.5 % fiber

### ❖ NUTRITIONAL VALUE OF MILLETS-

- The fiber content in siridhanya millets is 8 to 12.5%, high fiber allows these foods to release glucose slowly over 6 to 9 hrs duration; slow & steady release in small quantities into our blood stream is the key as this keeps you charged/energized all the day.
- These millets also contain good amount of protein, minerals, calcium, phosphorus & fatty acids as well as vit. E
- These millets have low carb to fiber ratio than some other staple grains i.e.

*Siridhanya* has less carbohydrate & more fibers.

- Positive millets have 5.5% to 8.8% carb to fiber ratio; grains with carb to fiber ratio below 10 are digested slowly & are considered to have medicinal properties.
- Millet grains were found promising for nutritive value and potential health benefits compared to major cereals such as wheat, rice and maize. <sup>(14)</sup>

- ❖ **Siridhanya (millets) benefits :** Millets are known as '*Sri Anna*' across the country. '*Sri Anna*' means the best among all the food grains. <sup>(13)</sup> Being rich sources of magnesium, millets help in reducing blood pressure and risk of heart strokes especially in atherosclerosis. Also, the potassium present in millets helps in keeping blood pressure low by acting as a vasodilator and help to reduce cardiovascular risk. Also, the plant lignans present in millets have the ability to convert into animal lignans in presence of microflora in digestive system and protect against certain cancers and heart disease. The high fiber present in millets plays a major role in cholesterol lowering eliminating LDL from the system and increasing the effects of HDL. <sup>(15)</sup>

#### **Foxtail millets (*Kangirala*):**

- Foxtail millet contains a good source of amino acids including lecithin and methionine which play a crucial level in decreasing cholesterol by reducing excess fat in the liver.
- The presence of threonine prevents fatty liver, further decreasing the levels of bad cholesterol.

#### **Browntop Millets (*Hari kangni*):**

- Alkaline in nature, easy to digest, hydrates the body & acts as prebiotic feeding microflora.
- Magnesium in these millets reduces the effect of heart attacks by preventing hyperlipidemia.

#### **Little Millets (*Kutki/sava*):**

- Rich source of B-vitamins, minerals like calcium, iron, zinc, and potassium.
- Helps in weight loss.

#### **Kodo Millets (*Kodara*):**

- Easy to digest, rich in phyto-chemicals and antioxidants.
- It helps in purifying blood.

#### **Barnyard Millets (*sanva/ shamul/ bhagar*):**

- Ideal for weight loss, fiber rich & helps in reducing hyperlipidemia.
- Rich source of calcium and phosphorus.
- Good for liver, kidney & endocrinal glands function.

### **HYPERLIPIDEMIA WITH SPECIAL REFERENCE TO *MEDOVRUDHI*:**

- The main causative factors for *Medovaha Srotodusti* are excessive food intake/ over-saturation, food having Guru (heavy), Madhura (sweet), Shita (cold) and Snigdha (fatty) Guna, lack of exercise, day sleep, genetic defect (CS.Su.21/4). <sup>(1)</sup>
- Besides these, hyperlipidaemia is a type of lifestyle disorder; according to modern science too, intake of excessive junk food and sedentary lifestyle are the causative factors of the disease. <sup>(1)</sup>
- It can be controlled by adopting certain lifestyle changes like regular physical

exercise, reducing body weight and low carbohydrate and fat diet.<sup>(1)</sup>

- There is no accurate term for hyperlipidaemia in the ayurvedic classics. Yet various scholars have tried to use distinct nomenclature for hyperlipidaemia such as Rasa Raktagata Sneha Vriddhi, *Medovriddhi*.<sup>(1)</sup>
- After reviewing various literature and detailed study, we concluded that hyperlipidaemia reveals its similarity to

*Medovrudhi & Medovaha Srotodusti Vikara* with regard to the causative factor, clinical features and pathophysiology.<sup>(1)</sup>

- The consumption of millets can reduce total cholesterol, triacylglycerols (commonly known as triglycerides) and BMI according to a new study that analyzed the data of 19 studies with nearly 900 people.<sup>(2)</sup>



### **RESULT :**

- Including *Siridhanya* millets in your diet will not only offer you a multitude of benefits but also help to restore your health from various lifestyle disorders
- Studies have reported that millet consumption can lead to improvements

in lipid parameters such as reduced total cholesterol, low-density lipoprotein cholesterol (LDL-C), and triglyceride levels, while increasing high-density lipoprotein cholesterol (HDL-C) levels. These lipid profile improvements are beneficial in managing dyslipidemia.<sup>(3,4)</sup>

- Millets, with their high fiber content and lower energy density compared to refined grains, can contribute to weight management & weight loss i.e. medovrudhi <sup>(5,6)</sup>
- Positive millets contain essential fats, which provide our bodies with natural fat.
- Higher fiber content of millets increases the transit time of food in intestine and ensures higher binding to bile acids. This further helps in controlling glucose excursions and preventing hyperlipidaemia. <sup>(12)</sup>
- It also helps excess fat from being deposited over our muscle which then effectively lowers the medovruddhi & our risk of dyslipidemia.

### **CONCLUSION:**

- Regular consumption of millets helps reduce blood TC, triacylglycerol and LDL-C levels, while increasing HDL-C, thereby managing hyperlipidemia.
- *Siridhanya* (positive millets) offers a promising dietary approach in the prevention & management of dyslipidemia & reducing the aggravated *dushta medo dhatu* effectively & thus will help to prevent various lifestyle disorders occurring due to dyslipidemia.

### **REFERENCES**

1. Ayurvedic Approach to Etiopathogenesis, Management and Prevention of Hyperlipidaemia.
2. Anitha S. Can Millet Consumption Help Manage Hyperlipidemia and Obesity?: A Systematic Review and Meta-Analysis. *Frontiers in Nutrition*. 2021.
3. Anusha B, Hymavathi TV, Vijayalakshmi V, Reddy P, Robert TP. Lipid-lowering effects of foxtail millet (*Setaria italica*) and quinoa (*Chenopodium quinoa*) in pre-diabetics. *Journal of Pharmaceutical Research International*. 2018 Dec 21;24(5):1-7.
4. Ugare R, Chimmad B, Naik R, Bharati P, Itagi S. Glycemic index and significance of barnyard millet (*Echinochloa frumentacea*) in type II diabetics. *Journal of food science and technology*. 2014 Feb;51:392-5.
5. Rebello CJ, Liu AG, Greenway FL, Dhurandhar NV. Dietary strategies to increase satiety. *Advances in food and nutrition research*. 2013 Jan 1;69:105-82.
6. Halford JC, Harrold JA. Satiety-enhancing products for appetite control: science and regulation of functional foods for weight management. *Proceedings of the Nutrition Society*. 2012 May;71(2):350-62.
7. Acharya Charaka. *Sutrasthana, Anapanavidhi Adhyaya*. In: Vaidya Jadavaji Trikamji Acharya (ed.) *Charaka Samhitha*. Delhi: Chaukhamba Prakashan; 2011. p. 154.
8. Acharya Kaiyadeva. *Dhanya varga*. In: Priya Vrat Sharma, Guru Prasada Sharma (eds.) 8.
9. Kaiyadeva Nighantu (*Pathyaapthya vibhodika*). Varanasi: Choukhamba Orientalia; 2009. p. 301
10. Bhavamishra. *Dhanya varga*. In: Srikantha Murthy, K.R (ed.) *Bhavaprakasha*. Varanasi: Chowkhamba Krishna Das Academy; 2011. p. 374.
11. Devi Chand MA. *Atharva veda sanskrit text with english translation*. New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd; (2007).

12. Kumar S, Kotwal N. Millets (Shrianna) and lifestyle diseases: A healing touch. *Med J Armed Forces India*. 2023 May-Jun;79(3):249-252. doi: 10.1016/j.mjafi.2023.04.001. Epub 2023 Apr 15. PMID: 37193512; PMCID: PMC10182399.
13. .Sri Anna: PM Modi discloses reason behind naming millets as “Sri Anna” - The Economic Times [Internet]. [cited 2023 Mar 20]. Available from: <https://economictimes.indiatimes.com/news/india/pm-modi-discloses-reason-behind-naming-millets-as-sri-anna/articleshow/97660090.cms>.
14. Ratnavathi, C.V., Tonapi, V.A. (2022). Nutritional Properties of Millets: Nutricereals with Health Benefits to Reduce Lifestyle Diseases and Malnutrition. In: Anandharamakrishnan, C., Rawson, A., Sunil, C.K. (eds) *Handbook of Millets - Processing, Quality, and Nutrition Status*. Springer, Singapore. [https://doi.org/10.1007/978-981-16-7224-8\\_7](https://doi.org/10.1007/978-981-16-7224-8_7)
15. Dayakar Rao B, Bhaskarachary K, Arlene Christina GD, Sudha Devi G, Vilas AT, Tonapi A. Nutritional and health benefits of millets. *ICAR\_Indian Institute of Millets Research (IIMR) Rajendranagar, Hyderabad*. 2017;2:38-57.

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