A SAFE BODY THROUGH MOOLAKA –RAPHANUS SATIVUS LINN

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INTRODUCTION

Jihva (tongue) is one among the Njanendriya1 (sense organs) and the Rasa (taste) is the Indriyartha (objects of sense organ) for Jihva. The main karma of jihva is the perception of taste. When a Dravya (food) is consumed or when it comes in contact with Jihva, its Rasa can be perceived. There are six individual Rasa. Among them the Katu rasa (pungent taste), being very pungent and due to its various Guna (properties) act on excess Kapha, do functions such as SnehaKledaSoshana (drying the lubrications and moisture contents ), BhinnathiShonitaSamghata (removing obstructions in srotas), Deepana (stimulate digestion) Pachana (does digestive function), Leghana (scratches), Shodhana (purifies) etc: Katu rasa also play a major role in Stoulya (obesity) by acting on factors such as Medas (Lipids), one of the main reason behind many pathologies. Medovridhi (high lipids) and Sthoulya (obesity) are used as synonyms in various contexts. Any increases in these Sneha substances or substances that provide oiliness and unctuousness, is a serious warning of health issues. So an AharaDravya (food) which is having Katu rasa predominantly can be selected and we can analyse its action on various parts of our body. For this purpose Moolaka (Radish), which comes under Katurasaskanda is selected and it has Rooksha (making dry), Ushna (hot potency), Laghu (lightness) etc: Guna. With all these properties it is thought to be act on Medohativridhi (increased lipids) and keep the Shareera (body), Dosha and Dhatu in a healthy normal state.

Key words: KaturasaPradhanaAhara, Moolaka, Guna, Medas.

ABSTRACT

When a Dravya (food) is consumed or when it comes in contact with Jihva, (tongue), its Rasa (taste) can be perceived. There are six individual Rasa. Among them the Katu rasa (pungent taste), being very pungent and due to its various Guna (properties) act on excess Kapha, do functions such as SnehaKledaSoshana (drying the lubrications and moisture contents), BhinnathiShonitaSamghata (removing obstructions in srotas), Deepana (stimulate digestion) Pachana (does digestive function), Leghana (scratches), Shodhana (purifies) etc: Katu rasa also play a major role in Stoulya (obesity) by acting on factors such as Medas (Lipids), one of the main reason behind many pathologies. Medovridhi (high lipids) and Sthoulya (obesity) are used as synonyms in various contexts. Any increases in these Sneha substances or substances that provide oiliness and unctuousness, is a serious warning of health issues. So an AharaDravya (food) which is having Katu rasa predominantly can be selected and we can analyse its action on various parts of our body. For this purpose Moolaka (Radish), which comes under Katurasaskanda is selected and it has Rooksha (making dry), Ushna (hot potency), Laghu (lightness) etc: Guna. With all these properties it is thought to be act on Medohativridhi (increased lipids) and keep the Shareera (body), Dosha and Dhatu in a healthy normal state.

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sas well as on other Dhatus, a drug which is mentioned under the Katurasaskanda (group of drugs having the pungent taste) is selected. Moolaka (Radish), a Katu-rasaPradhanaAhara, has Rooksha (making dry), Ushna (hot potency), Laghu (lightness) etc: Guna (properties) and easily available among all other drugs in the group. With all these properties it is thought to be act on Medodhatuvridhi (increased lipids) and keep the Shareera (body), Doshaand Dhatu in a healthy normal state.

Aim: The main aim of this article is to provide a review on the drug Moolaka (Radish), which is having predominant Katu rasa and various Guna with which it acts in our body.

The drug Moolakaor Radish (RaphanussativusLinn) belongs to Brassicaceous family. It is called by different names in different states. Such as Mullangi, Moolika, Mooli etc: In Nighantus (dictionary), there are references about its synonyms such as Hariparnam, Bhoomikakhaaram, Neelakandom, Mahakandam, Ruchishya, Hastidanta, Sankhaprabha, Deerkhamaoola, Supushpya, SimbibejajainSodhal Nighantu and as per Bhavaprakasha Nighantu for Laghumoolaka (tender Radish) Mooli, Shaalaamarkataka, Visra, Shaleeya, Maru

sambhava, Chanakya-moolaka, Tekshna, Moolakapotika are the synonyms, for BruhatMoolaka (mature Radish): Nepalamoolaka is the synonym. It belong to SaakaVarga (vegetables), KaraveeradiVarga, KatuGana, MoolakaadiVarga and KatuSkanda.

Distribution and Habitat of Mulaka

The plant is thought to have originated in the main lands of China. But today cultivated as popular vegetable throughout the world, they are annual or biennial herbs. Its root is fleshy, swollen tap-roots, variable in size, colour and form. Smaller types and longer types Radish are available. The smaller types have few leaves about 13cm long with round roots up to 2.5cm diameter and long roots up to 7cm long. Daikon or Mooli or Winter Radishes grows up to 60cm long. The drug is eaten raw as salad as well as cooked as vegetable. Leaves are also used for cooking purposes. Among different varieties, Pink Radish is rich in Ascorbic acid and vitamins and is quite useful. They have numerous varieties. They grown as Companion plants and suffer from few pests and diseases. They germinate quickly and grow rapidly. Some Radishes are grown for their seeds, some for oil production, and some for sprouting.

Roots: - Tap roots, variable in colour, shape and size. Spherical, Olive-spindle, tapering from top to bottom, 2cm to 1cm long, 60cm in diameter

Leaves: - basal leaves are long, pinnate, coarsely toothed and cauline leaves are simple and linear.

Flowers: - white or Lilac with purple viens and are in long terminal racemes or inflorescences up to 90cm tall.

Fruits: - is inflated 25-90mm long, with a long tapering beak and filled inside with white pith between the seeds, which are
globose, yellow or brown and 2-8 in number

**Parts Used:** Roots, Leaves, flowers, Pods and Seeds

**Chemical composition/phyto chemistry**

The plant contains the following chemical constituents: Glucosinolates, Isothiocyanates, Anthocyanins, Phenolics, Ethanol, Ascorbic acid (Vit-C), Folic acid, Trace elements such as Aluminium, Barium, Lithium, Magnesium, Silicon, Iron, Fluorine, Potassium etc.

Seeds contain Sulforaphene, Beta-Sitosterol, Stearic acid, Sinapine, Castasterone, Brassinolide. Leaves contain P-coumaric, ferulic, Caffeic acids.

**Properties and Medicinal uses**

Its main properties are Katu rasa, Laghu, Pachana, Rooksha, Ushna, Guru, Vidahi, Teekshna, Stambhi, Ushna,Veerya and katu Vipaka. MainkarmaTridoshahara (keeps Doshas under control) by Laghumoolaka or Baalamoolaka and Tridoshakara (aggravates the Doshas) by Bruhatmoolaka. Other karmas are Deepana, Pachana, Vatanulomana, Bhedana and Rochana. Its medicinal uses are Kaphanishsaaraka, Yakrututtejaka, Kantya, SarvaAsmari, Aghna, Adhmana, Atisara, Kamala, Tvagvika, Kasa-swasa, Khsaya, Svarakantavikara, Yakrutvikara, Udaavarta, Soola, Guhma, Jwara, Kushta, Nasaroga, Netraroga, Karnaroga, Sodha. In these cases Moolakais given either in the form of Swarasa (juice) or in the form of Taila (oil), Yusha (soup), or Kshara (ash). For example, in Arasas, Bastirogasetc: Moolaka is given in the form of Swarasa. In Svayadhu, in the form of Taila.

**Kinds and varieties**

Mulaka is chiefly of two kinds on the basis of classical consideration, and they are Baalamoolaka or Laghumoolaka (chanakya) and Mahatmoolaka or Nepalamoolaka. As per Nighantu three kinds are there, Chanakayamoolaka, Pindamoolaka, Baalamoolaka. Baalamoolaka has more medicinal value. Botanists categorised Radish in to many types on the basis of seasons they are grown in and on the basis of shapes, length, colour, size such as Summer or Radish, Winter Radish, Red, Purple, Pink, white, grey-black or Red radish with round or elongated roots that can grow longer than a parsnip. Pink-skinned Radish and White skinned are commonly found where Pink–skinned is richer in Ascorbic acid and other vitamins than white–skinned.

**Other uses/Benefits**

Radish or Moolaka is used in several stomach and intestinal disorders, Digestive disorders caused by bile duct problems, loss of appetite, pain and swelling of mouth, throat, Inflammations of respiratory tract, cold cough and Fever etc. It act against bacteria and other microbes. It contains a chemical named Goitrogens that has a tendency to cause Goitre, so its consumption should be avoided by those who are having Thyroid dysfunctions. In Gallstones also it is avoided because large dosage causes irri-
tations in the mucous membrane of the whole GIT.

In Yakrit (Liver): Radishes are beneficial for the normal functioning of Yakritand Pittasaya (gallbladder) functions. As it is a Yakritt.tejaka, it is extremely useful in treating kamala (jaundice). Due to its Detoxificative action or Leghana and Sodhana Guna, it can keep the Bilirubin level normal and keeps the production of Bile at a stable level. It has Sodhana property, so that it can purifies the blood and eliminates the toxins and other waste materials. It can also regulate the production and flow of bile and bilirubin, acids, and enzymes, reduces the destruction of Red blood cells in jaundice by increasing the supply of fresh oxygen to the blood. So the regular consumption of radishes protects our Yakrit as well as Pittasaya from various infections and ulcers.

In Arsas (piles): The Swarasa (juice) as well as the Kshara (ash) of the drug is mentioned in the ArsaChikitsaAdhyaya, so it should be effective in the treatment of Piles or Arsan. As it is a good detoxifier, it helps to heal the symptoms of piles very quickly. It is able to soothe the excretory system, facilitate water retention and remove constipation.

In Basti and Vrukka (Urinary bladder and Kidney): Radishes are diuretic in nature, so they increase the production of urine. MoolakaSwarasa is found to be effective in curing the inflammations and burning feelings during urination. As it has Sodhana and Bhedanaguna, it cleanses the kidneys or Vrukka and helps to protect the whole urinary system from infections.

In Hrudaya (Cardiovascular Conditions): Due to the various Guna such as Lekhana, Sodhanae etc; Moolaka can remove all the obstacles in the Dhamanies (blood vessels) ie. Bhinnatisonitasngatha and protects the Hrudaya as well as its Dhamanies.

Studies proved that Radish is a great source of anthocyanins, which are a type of flavonoids, that give colour to radishes and also provide numerous health benefits. Anthocyanin reduces the occurrence of cardiovascular disease and also displayed anti-cancerous and anti-inflammatory properties. Vitamin-C present in Radish boost our immune system, regulate metabolism, contributes in the creation of collagen, which is an essential protein that strengthens blood vessel walls and reduces the chances of artherosclerosis and various other heart diseases.12

In Sthoulya (Obesity): Radishes are low calory root vegetable. It is low in digestible carbohydrates, high in roughage and the presence of lot of water, makes radish a good dietary option for those who are determined to lose weight. They have high fiber content and low Glycemic index, which means that they increase regular bowel movements, which helps in weight loss, and increases the efficiency of the metabolism for all bodily processes. Vit-C also contributes to reduce the weight. Due to their Rechana, Deepana, Pachana, laghuGuna, they are easily digested in the body and can acts on the abnormal Medas.

In Arbuda (Cancer): Moolaka due to its Kapha –Medoharaguna act as good detoxifiers and are rich in vitamin-C, folic and Anthocyanins, So they can be used for treating many types of cancer, particularly colon, kidney, intestinal, stomach and oral cancer. The Isthiocyanates found in radishes have a major impact on the genetic pathways of cancerous cells. They alter the pathways so much, in fact, that they can cause apoptosis, cell death, thereby eliminating cancerous cells from reproducing.10
On Twak (skin disorders): The detoxifying and anti-carcinogenic actions of Radish, helps in the management of Switra (Leucoderma). Its seeds are commonly used for the purpose. As a home remedy, its seeds can be powdered and soaked in vinegar, ginger juice, or cow’s urine and then applied on the white patches. Radishes as a whole can also be taken to aid the treatment of Leucoderma. So Moolaka is an excellent Kushta-Kanduhara (skin disorders, itching) medicine because of its various Guna. Vitamin-C, phosphorus, zinc and some members of vitamin-B complex that are present in radishes are good for the skin. The water in radishes also helps in maintaining healthy moisture levels in the skin. Smashed raw radish is a good cleanser and serves as an efficient face pack. Due to its disinfectant properties, radishes also help clear up skin disorders like dry skin, rashes, and cracks.

In Malabandha (Constipation): Radishes are very high in fiber, so helps in bowel movements, promotes regular excretory patterns, relieve symptoms of constipation, helps to firm up loose bowels and get rid of loose stool or diarrhea, promote the production of bile which is one of the most important parts of good digestion.

In SwasanaPadha (Respiratory Disorders): The Kaphanishkarana karma (expectorant) of Moolaka, which may be due to itsushmanagaunaetc: helps in curing the KaphajaKasa and other kaphadosha associated disorders or infections such as Bronchitis, Asthma etc: Radishes have anti-congestive action, so decreases the congestion of the respiratory system due to the irritations of nose, throat, wind-pipe and lungs from colds, infections, allergies and other causes. It can eliminates excess mucus from the throat.

In Raktachapa (Blood Pressure): Moolaka, being a KaturasaPradhanaAhara, has BhinnatiSonitasaghatakarma, so helps to normalise the Blood pressure by removing all obstacles throughout its pathway. The presence of Pottasium in Radish helps it to perform such function which also contributes to a large list of health benefits. The Potassium interacts with the arterial supply of vascular beds, relaxes the blood vessels and therefore increases the blood flow and reduces the blood pressure.

In Prameha (Diabetes): The various Guna of Moolaka also has impact on body sugar levels. Radishhas a low glycemic index, so does not impact blood sugar levels. It regulate the absorption of sugars into the bloodstream and the diabetics don’t have to worry about the sudden drops of sugar level while eating, or being away from food for a certain amount of time.

Against Visha (poisons): Its Śrōtosadhana, Pachana, LaghuGuna provides an anti-Pruritic action against many insect and Bee bites to some extent. Swarasa is found to be effective in reducing pain and swelling and soothes the affected area.

DISCUSSION

All varieties of Radish have medicinal value. But the concentration of Ascorbic acid, Anthocyanin, Isothiocyanates are found to be more in Pink coloured and then in White coloured Radish. The tender forms of such varieties have more medicinal value as they have more percentage of this chemical composition. The tender varieties are called by the name Moolaka Potika, which can mitigate all the Dosha. While the bigger variety aggravates all the Dosha. So in studies usually tender varieties are preferred. Among the different forms of preparations or Kalpanas, Swarasakalpana will be the best as it is more potent, easily prepared and palatable than
any other forms. As Anupana (liquids to be taken along with the medicine) is not mentioned with most of the Yogas, we can prescribe as per our Yukti (logic). If it is prescribed for the purpose of Medohara, Madhu (honey) or Ushnodaka (warm water) can also be prescribed along with the Swarasa. Takra (butter milk), in case of Arsas with the SwarasaorYushaof Moolaka The Katurasa and Ushnaveerya provide various Guna to Moolaka, which act in different way with its AnupananaandKalpana. It can act as a good appetizer due to its RochanaGuna, mouth and breathe freshener due to its SodhanaGuna, laxative due to its BhedanaGuna, and a metabolism regulator due to LaghuGuna. It can act as a good appetizer due to its RochanaGuna, mouth and breathe freshener due to its SodhanaGuna, laxative due to its BhedanaGuna, and a metabolism regulator due to LaghuGuna.

**CONCLUSION**

Thus the drug Moolakacan is used as a good medicine in the treatment of various disorders. It tries to keep our body safe, away from different kinds of diseases. As one Chinese proverb says – “Eating Pun- gent Radish and drinking hot tea, let the starved doctor beg on their knee.”

**Recommended Dosage of Moolakain various forms:**
- Moolaka Swaras-10-20ml
- Moolaka Kashaya- 50-90ml
- Moolakayusha- 25-50ml

**Vishishta yoga mentioned in classics:**
- Moolakayusha (ch.chi.19)
- Moolakadayataila (ch.chi.28)
- Moolaka yoga (ibid-18-19)
- Moolakakshaaram(Arbudam, Arsas)
- Sushkamoolakadyataila (bahiayasvayadhu)
- SushkamoolakadyaGruta
- Moolakabeejadilepa.

**Related On-going Research Work on Moolaka**

1. “Experimental study on the action of KatuRasaPradhanaAhara on Lipid profile”-Dr. Sreelekshmi G, RUHGS

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