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Methidana A Great Indian Spice According to Ayurveda - A Review



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Manorma Rajput¹, Vedantam Giridhar^{*2}, Suheba Belwadi³

1. MD Scholar Department Of Dravyaguna, KLE Shri BMK Ayurveda Mahavidyalya, Belagavi, India.

2. Reader, Department Of Dravyaguna, KLE Shri BMK Ayurveda Mahavidyalya, Belagavi, India.

3. MD Scholar Department Of Dravyaguna, KLE Shri BMK Ayurveda Mahavidyalya, Belagavi, India.

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ABSTRACT

Methidana which is an often used herbal plant is also known as Fenugreek which is used in Ayurvedic medicines too in many diseases like Diabetes, bronchitis, RA, wounds or any unhealed wound on extremities and in digestive disorder's. In modern food it is used as a spice in world to enhance the sensory quality of foods too. It has its medicinal merits such as antidiabetic, anticarcinogenic, hypocholesterolemic, antioxidant, and immunological activities. Because of its constituent like gum, protein and fiber it is also used as food stabilizer, adhesive and emulsifying agent. It has calcium, iron and other vitamins too which makes it as a good dietary agent. The present paper reviews about medicinal and other properties of fenugreek (Methidana) which makes it a boon in Indian spice.



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INTRODUCTION

Methidana (*Trigonella foenum graecum*) is a yearly plant from Family Leguminosae. It is the famous Indian kitchen spices in food among the whole world. If we see its parts used seeds and green leaves of this methidana are used in kitchen as ingredient in food as well as it has medicinal properties for external application for hair fall and in some wound healing too. It enhances flavour, colour and also modify the texture of food materials. Methidana help in decreasing cholesterol, increase milk production during lactation, antibacterial, gastric stimulant, for anorexia, antidiabetic agent, galactagogue, hepatoprotective effect and anticancer. These beneficial physiological effects including the antidiabetic and hypocholesterolemic effects of methidana attributable to the intrinsic dietary fibre constituent which help in cleansing intestine too. It is well known for its fibre, gum, and other chemical constituents which are volatile in nature. Looking towards its dietary fibres, it helps in stabilizing the food, adhesive in nature and act as emulsifying agent due to valuable content in them. Fenugreek (Methidana) or methidana found to be more soluble at alkaline pH. Fenugreek (Methidana) is having helpful power on digestion and also has the aptitude to adapt the foodstuff.^[1]

One by one we are talking about the leaves and seeds

LEAVES

Methidana leaves are shinny and beautiful in looks, looking toward its contents saponins, known as graecunins. Main component of methi leaves are diosgenin. Leaves contain about 86.1% moisture, 4.4% protein, 0.9% fat, 1.5% minerals, 1.1% fiber, and 6% carbohydrates according to one study. It is used in India in the form of paratha during winter season. The mineral and vitamins present in leaves include thiamine, niacin, carotene, iron, phosphorous, calcium riboflavin, zinc, and vitamin C found that fresh leaves of methi were found in Methi. Fresh leaves are used as medicine in wound if applied externally. In kitchen leaves of methi we should store in refrigeration conditions, or dried in oven, or blanched and can be boil and put in roti for making delicious dishes. Looking towards the medicinal and other properties we can freely use it in every kitchen.^[2]

SEEDS

Methidana is known for its sweet, slight bitter taste. These seeds are available in any form either whole or ground form mostly used in curry powders, pasta toppings etc. its seed have

a central hard and yellow embryo which is bounded by a coypus and moderately big coating of white and semi-transparent endosperm. Its endosperm had the highest saponin and main important content i.e. protein. saponins acts as **decreasing blood lipids, lower cancer risks, and lower blood glucose response**. Another amazing fact about it is, high saponin diet can be used in the reserve of dental caries and platelet aggregation, in the treatment of hypercalciuria in our system and they act as antidote against acute lead poisoning too. As against this, husk contains higher total polyphenols. It has free-radical scavenging action which help in antiageing action too. The seeds of fenugreek (Methidana)enclose about 0.1–0.9% of diosgenin and are extract of it act as medicine in homeopathy system too. in one research it is found that its tissue culture of seeds when full-grown under most favourable conditions have been establish to create as much as 2% diosgenin with smaller amounts of trigogenin and gitongenin. Seeds also contain the saponin. Fenugreek (Methidana) seeds have been found to contain several coumarin components and number of alkaloids. The bulky quantity of trigonelline is tainted to nicotinic acid and connected pyridines throughout .A study was conducted on sweat of human after fenugreek (Methidana) ingestion and completed that compounds accountable for the strong maple-syrup odour there in sweat after fenugreek (Methidana) ingestion are due to the following components including the following: pinene; 3-octen-2-one, 2,5-dimethylpyrazine, β -; camphor; terpinen-4-ol; 4-isopropyl-benzaldehyde; neryl acetate and β -caryophyllene but it was experiential that 2,5-dimethylpyrazine to be a main part responsible for sweat odour causative compound.[³⁻⁵]

DISCUSSION

Along with its parts discussion we can also see its medicinal property in enhancing the action of immunity too.

Meghwal and Goswami, 2012 studied and concluded that an agent that intensifies or diminishes the immune responses is known as immunomodulator and such effect is called as immunomodulatory effect. A research work on the effect of fenugreek (Methidana) on stimulatory immunity, and work on quantitative hemolysis assay, phagocytosis, cellularity of lymphoid organs of body, late type of hypersensitivity reply, plaque forming cell assay, a lymph proliferation and boost in phagocytic index and phagocytic ability of macrophages significantly) of aqueous extract of fenugreek(Methidana) at three doses (50, 100 and 200 mg per kg) of body weight for ten days on the immune system of Swiss albino mice were deliberate.[⁶]

On account of its property we can draw a table which connect us in its medicinal action.

| | |
|------------------|---|
| Seeds | Hypoglycemic effect (Roberts, 2011) |
| Seeds | Hypocholesterolemic effect (Zia et al., 2001, Srivastava et al., 2012) |
| Seed, leaves | Antioxidant (Bukhari et al., 2008, Bhatia et al., 2006, Naidu et al., 2010) |
| Seed | Lactation aid (Snehlata and Payal, 2012, Al-Shaikh et al., 1999) |
| Seed | Immunomodulatory effect (Meghwal and Goswami, 2012) |
| Seed | Digestive effect (Platel and Srinivasan, 2000) |
| Seeds and leaves | Decreases blood pressure (Sowmya and Rajyalakshmi, 1999) |
| Seeds and leaves | Wounds and sore muscles treatment (Mathern et al., 2009) |

Hypoglycemic effect

Dietary fibre from fenugreek (Methidana) blunt sugar after a meal. The mechanism for effects have not been fully elucidate. Fenugreek seeds contain 45.4% dietary fiber (32% insoluble and 13.3% soluble), and the gum is composed of galactose and mannose. The compound are connected which reduced glycemic effect. The hypoglycemic effect of fenugreek has been particularly documented in humans and animals with type 1 and type 2 diabetes mellitus (Roberts, 2011).^[7-14]as we can see and discussed the part and its medicinal usage.

CONCLUSION

Methidana known with its famous name called as Fenugreek have antimicrobial, anticancer, antifertility, antidiabetic, antiparasitic, it increases milk and act as hypocholesterolemic effects has been discussed in this review article. Fenugreek (methidana) has been established components too. From this review article it was observed that methidana can be used as food stabilizer, food adhesive, food emulsifier and even as gum property too. It is a part of our daily diet and have medicinal as well as nutritional value which needs to be highlighted in present scenario of covid -19 Hence we can conclude our review by the same.

REFERENCES

1. K. Srinivasan, Fenugreek (*Trigonella foenum-graecum*): A review of health beneficial physiological effects Food Rev. Int., 22 (2) (2006), pp. 203-224.
2. Srivastava et al., 2012 D. Srivastava, J. Rajiv, Mahadevamma M.M. Naidu, J. Puranaik, P. Srinivas Effect of fenugreek seed husk on the rheology and quality characteristics of muffins Food Nutr. Sci., 3 (2012), pp. 1473-1479.
3. A.V. Rao Herbal Cure for Common Diseases Fusion Books, New Delhi (2003).
4. S. Yadav, S. Sehgal "Effect of home processing and storage on ascorbic acid and β -carotene content of bathua (*Chenopodium album*) and fenugreek (*Trigonella foenum graecum*) leaves Plant Food Hum. Nutr., 50 (1997).
5. R.I. Betty The many healing virtues of fenugreek Spice India, 1 (2008).
6. M.M. Naidu, B.N. Shyamala, P.J. Naik, G. Sulochanamma, P. Srinivas Chemical composition and antioxidant activity of the husk and endosperm of fenugreek seeds Food Sci. Technol., 44 (2010).
7. K.T. Roberts The potential of fenugreek (*Trigonella foenum-graecum*) as a functional food and nutraceutical and its effects on glycemia and lipidemia J. Med. Food, 14.
8. T. Zia, S.N. Hasnain, S.K. Hasan Evaluation of the oral hypoglycaemic effect of *Trigonella foenum-graecum* L. (methi) in normal mice J. Ethnopharmacol., 75.
9. S.B. Bukhari, I.B. Muhammad, M. Shahabuddin Antioxidant activity from the extract of fenugreek seeds Pak. J. Anal. Environ. Chem., 9.
10. P. Sowmya, P. Rajyalakshmi Hypocholesterolemic effect of germinated fenugreek seeds in human subjects Plant Food Hum. Nutr., 53.
11. D. Puri, K.M. Prabhu, P.S. Murthy Mechanism of action of a hypoglycemic principle isolated from fenugreek seeds Indian J. Physiol. Pharmacol., 46.
12. Kumari, S., Sinha, M., 2012. Hypoglycemic Effect of Fenugreek Incorporated Therapeutic Food on Selected Diabetic Subjects, Department of Food and Nutrition, College of Home Science, Rajendra Agricultural University, Pusa, Samastipur, Bihar 848 125.
13. W.L. Xue, X.S. Li, J. Zhang, Y.H. Liu, Z.L. Wang, R.J. Zhang Effect of *Trigonella foenum-graecum* (fenugreek) extract on blood glucose, blood lipid and hemorheological properties in streptozotocin-induced diabetic rats Asia Pac. J. Clin. Nutr., 1 (2007), pp. 422-426.
14. Roberts, 2011, K.T. Roberts et al The potential of fenugreek (*Trigonella foenum-graecum*) as a functional food and nutraceutical and its effects on glycemia and lipidemia J. Med. Food, 14 (12) (2011), pp. 1485-1488.