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Plants known as antidiabetics from Aurangabad district- Maharashtra

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ABSTRACT

Diabetes mellitus has become a global problem to public health system. Despite considerable progress made in the management of this disease by conventional synthetic drugs, the search for natural plant products for controlling diabetes is going on. Many hypoglycemic plants are known through various means like folklore, tribal medicine etc. But their introduction into the modern therapy awaits clinical study. Aurangabad district was explored for its traditional ethnic knowledge during 2001-2003. Various plant species were found to be prescribed in the treatment of diabetes.

Key words : Diabetes mellitus, Plant products, Hypoglycemic

INTRODUCTION

Diabetes mellitus (sweet urine) is a most common non communicable disease. 3% of world population is suffering from it. Incidence is increasingly (40%) in the past decade and expected more in future. Due to diabetes morbidity and mortality increases, it shortens life span by 15 years. It also leads to cause blindness, kidney disorders and obesity. Diabetes mellitus is due to absolute/relative deficiency of insulin which characterized by hyperglycemia that results in disorder of metabolism. During ethnobotanical studies it is observed that this disease is very common everywhere, peoples from rural and urban localities are suffering from it.

Now a days it has become necessary for human being to move for morning walk. The juice/extracts of organs of various plant species are available on the road side for diabetic patients. It is observed that the juice/extract are not only used by rural peoples but also become popular amongst urban societies.

In earlier communication, the plants used in the treatment of animals as well as human teeth care were presented (Naser, 2002a; Naser and Vaikos, 2002 b; 2004; 2005). Naik (1998) has also recorded some plants useful for treatment of sugar diabetes in this region.

The present studies performed on the basis of diabetic conditions of adult, child and female, belongs to rural and urban area. This is an attempt to provide information for treatment of diabetes through herbs.

MATERIALS AND METHODS

For ethnobotanical surveys, tours were conducted in different tribal and non tribal localities. Voucher specimens and ethnomedical information were collected from the field. Knowledgeable persons were interviewed, while noting ethnomedical information, every care was taken to record the local names of the plants, parts of the plants used, method of drug preparation and dosage. The plants have been arranged alphabetically.

RESULTS AND DISCUSSION

The findings of the present study are summarized below:

Presentation of data :

The study revealed the uses of 31 plants. Plant part-wise analysis indicates the use of almost all parts of the plants, with the dominance of leaf as a source of drug. The type of crude drug, preparations, decoction, the fresh juice, fresh leaves, powder, seeds and fruits are the most preferred forms. Cooking and herbal mixtures are also commonly utilized in the treatment.

Fresh juice :

- *Adhatoda vasica* Nees. Adulsa. (Acanthaceae).
Leaves -chewed daily 2-3 times.

- *Allium cepa* L. Kanda. (Liliaceae).
Juice of onion -one spoon daily.
- *Andrographis paniculata* (Burm.f.) Wall. Ex. Nees. Kalmegh. (Acanthaceae).
Fresh leaves juice is used.
- *Azadirachta indica* A.Juss. Neem (Meliaceae.)
Fresh leaf juice is very useful.
- *Catharanthus roseus* (L.) G. Don. Sadaphulli, Sadabahar. (Apocynaceae).
Juice of fresh leaves can be taken daily morning.
- *Ficus benghalensis* L. Banyan Tree (Moraceae)
Leaves (4-5) freshly chewed in daily morning.
Young stem with honey can be used daily.
Latex (10-15 drops) can be taken with 1 spoon honey.
- *Momordica charantia* L. Karle (Cucurbitaceae)
Juice of fruit one cup daily.
- *Psidium guajava* L. Jamb. (Myrtaceae).
Dry leaves decoction can be drunk in morning and evening.

Fresh leaves:

- *Dodonaea viscosa* Auct. Jakhmi.(Sapindaceae)
Fresh leaves with water can be taken twice a day.
- *Enicostema littorale* Bl.in.Bijdr. Nai, Mamijwa. (Gentianaceae).
Fresh leaves (4-5) chewed in morning.
- *Solanum nigrum* L. Kamuni. (Solanaceae)
Fresh aerial leaves or plant parts can be used.

Powder :

- *Gymnema sylvestre* (Retz.) R.Br.ex Schult. Aphu Mari, Gudmar. (Asclepiadaceae)
Leaf powder is used against diabetes.
One teaspoon in morning and one in evening.
- *Momordica charantia* L. Karle.(Cucurbitaceae).
Dry fruits (Shadow), powder can be prepared and used two times daily.
- *Melia azedarach* L. Bakan. (Meliaceae).
Remove the bark of the dry fruits and take the fruits for one month daily.
- *Ocimum sanctum* L. Tulasi
- *Ocimum basilicum*. L.Sp.Pl. Sabza. (Lamiaceae).
Dry the leaves (shadow), prepare the powder.
This powder can be utilized twice a day.

Seeds :

- *Cajanus cajan* (L.) Millsp. Tur. (Fabaceae).

Seeds can be used as vegetable.

- *Trigonella foenum-graecum* L. Methi (Fabaceae)
25g seeds with water daily after meals for 21 days.
- *Vigna mungo* (L.) Hepper. Mung. (Fabaceae).
Seeds can be used as vegetable.

Fruits:

- *Syzygium cumini* L. Skeels Jambul. (Myrtaceae).
Fresh fruits can be eaten daily.

Bread:

Mixture of flour of the following seeds can be taken together in equal proportion. Bread can be prepared and eaten daily with cow cheese.

Cicer arietinum L.(Harbara)+*Avena sativa* L.sp.pi.(Jav)+*Oryza sativa* L.(Rice) +*Triticum durum* Desf.(Wheat)+*Zea mays* L. (Maka-Yellow)+*Daucus carota* L.(Dry (Carrot).

Cooked vegetables:

- *Cajanus cajan* (L.) Millsp. (Tur.)-Cooked curry of seeds.
- *Allium sativum* L.(Lasun)-Cooked or uncooked.
- *Solanum nigrum* L. (Kamuni)-Fresh aerial parts.

Herbal mixture:

Dry powder of seeds of following plants can be prepared in equal quantity (25g) and can be taken one spoon in morning and one spoon in evening with water before meals.

Mixture :

Syzygium cumini L. (Jambul) +*Momordica charantia* L. (Karle.) +*Cyperus rotundus* L. (Motha) Root tubers+*Rosa indica* L. (Desi gulab.) petals.

Mixture:

Trigonella foenum -graecum L.(Methi) +*Fumaria indica* Hausskn.(Paepada)

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REFERENCES

Naik V. N. (1998). *Marathwadyatil Samanya Vanashadi*, Amrut prakashan, Aurangabad.

Naser Rafiuddin (2002a). Forest wealth and utility of plants in Aurangabad District, Ph.D. Thesis, Dr. Babasaheb Ambedkar Marathwad University, Aurangabad.

Naser Rafiuddin and Vaikos, N.P. (2002 b). Plants used in ethnoveterinary practices in Aurangabad District, Maharashtra-I, In : *Plant Resource Development eds.* A.M. Mungikar, Saraswathi Press, Aurangabad. pp.202-211.

Naser Rafiuddin and Vaikos, N.P.(2004). Plants used in ethnoveterinary practices in Aurangabad District, Maharashtra-II, In : *Focus on Sacred Groves and Ethnobotany eds.* Vinaya Ghate Hema Sane and S.S. Ranade, Prism Publications, Mumbai.. pp.223-227.

Naser Rafiuddin and Vaikos, N.P. (2005). Plants used in teeth-care in rural areas of Aurangabad district. *J. Sci.*, **33** (c) : 82-84. Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. Pp.82-84.

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