



Review Article
**International Journal of Pharmacy and
Natural Medicines**

www.pharmaresearchlibrary.com/ijpnm



**Indigenous Herbal Remedies for Diabetes Mellitus in
Bhabar Region of Garhwal**

Pooja Juyal^{*1} and J.C.Ghildiyal²

¹Department of Botany, Uttarakhand Open University, Haldwani-263139, India

²Principal, Government Degree College, Chakrota, Dehradun, India

Received: 30 April 2014, Accepted: 6 June 2014, Published Online: 15 June 2014

Abstract: This paper deals with 18 indigenous medicinal plant for the treatment and control of diabetes among the villages of Bhabar tract. The botanical name, vernacular name, family, plant parts used and mode of application are provided.

Keywords: Indigenous uses, Herbal remedies, Diabetes mellitus, Bhabar region, Garhwal

Contents

1. Introduction	131
2. Experimental	132
3. Conclusion	133
4. Acknowledgement.	133
5. References	133

***Corresponding author**

Pooja Juyal

Department of Botany, Uttarakhand Open
University, Haldwani-263139, India

E-mail: pjuyal@uou.ac.in

Manuscript ID: IJPNM1924



PAPER-QR CODE

Copyright © 2013, IJPNM All Rights Reserved

1. Introduction

Diabetes defined as the secretion of an inordinate quantity of sweet tasting, urine with a peculiar smell, accompanied with great thirst dryness of skin, extreme debility and general emaciation. Diabetes mellitus (Madhumeha) is the most common disorder in human beings and is caused by inherited or acquired deficiency in production of insulin by the pancreas, which results in an increased concentration of sugar in blood. The symptoms of the disease is well marked which include excessive secretion of urine, Thirst, weight loss and feeling of lassitude. The herbal drugs being compatible and easily metabolized in human systems can play a vital lead role in Diabetic problem. The disease was most often treated with diet control, herbs. In India from ancient times, the herbalists treated the disease with indigenous herbs which were free from side effects. The present survey was undertaken in the Bhabar tract of Garhwal. In Garhwal region, Bhabar extends from 78° 22'E longitude to 78° 32'E longitude and 29° 43' to 29° 48'N latitude, occupying 4320.403 hectare area in tarai region. Extending from Northwest to Southeast, the whole tract is about 132 km in length having the minimum and maximum width of 0.5 km and 6.0 km

respectively, it is occupied by 48 villages. Being located between the 'Siwaliks' and the 'Tarai' zones, the Bhabar tract has its own history. In fact, this narrow tract of bhabar remained afforested until recently and most part of its past history is still untold. In Uttarakhand state (Fig.1), Bhabar tract comes under Garhwal region (Fig.2). Some of the important references on the use of medicinal plants in the treatment of diabetes are by Kirtikar and Basu, (1935), Chopra *et.al* (1956), Mukherjee (1957), Chaudhary and Vohra (1970), Karnick (1972), Chaturvedi and Shastri. (1980), Singh and Maheshwari (1983) and Ghildiyal *et.al* (2009).

2. Materials and Methods

The ethnobotanical surveys were conducted among the local peoples of Bhabar to gather information on plant species used for general health care including information on antidiabetic plants as practiced by them. Such plant species were collected, identified. Information from local inhabitants on 18 plant species which are used in diabetes is recorded.



Fig.1-India Map showing Uttarakhand State



Fig.2- Uttarakhand Map showing Garhwal region

Results and Discussion: The observation made during the field survey has been given in the following enumerations. The medicinal plant species have been described along with their families, local name and their various uses in Diabetes. This investigation throws light on the popularity of our indigenous system of medicine among the common people. 18 Plant species and their uses in Diabetes are enumerated as under:

In the treatment of Diabetes:

1-*Dioscorea bulbifera* Linn., Genti, Dioscoreaceae.

The juice of Genti is given orally.

2-*Syzygium cumini* (Linn.) Skeels, Jamun, Myrtaceae.

a) The leaf juice is given orally.

b) The powder of Jamun stone is given orally with water.

3-*Ficus benghalensis* L., Bar, Moraceae.

The decoction of bark with honey is given orally.

4-*Catharanthus roseus* (Linn.) G. Don., Sadabahar, Apocynaceae.

a) Chew the leaf with empty stomach and drink water after it.

b) The juice of white flower is given orally.

c) The mixture of powder of root and immature leaves is given orally with milk.

5-*Aegle marmelos* (L.) Correa., Bel, Rutaceae and *Piper nigrum* Linn., Kalimirch, Piperaceae.

a) The leaf powder of Bel with Kalimirch powder is given orally.

b) The leaf juice of Bel is given orally in small quantity twice a day.

6-*Psidium guajava* Linn., Amrood, Myrtaceae.

The decoction of fruit pieces is given orally after filter in the thirst.

7-*Cinnamomum tamala* (Buch.-Ham.) Nees and Eberm., Tejpata, Lauraceae.

The powder of leaf is given orally with milk or water thrice a day.

8-*Mimordica charantia* Linn., Karela, Cucurbitaceae.

The juice of Karela is given orally.

9-*Triticum aestivum* Linn., Gheun, Poaceae.

The husk soaked in water for a night and then this water is given orally.

10-*Aegle marmelos* (L.)Correa.,Bel, Rutaceae, *Azadirachta indica* A.Juss., Neem, Meliaceae,*Ocimum basilicum* Linn., Shyama tulsi, Lamiaceae.

The mixture of juice of 10-15 Bel leaves, 4-5 Neem leaves and 4-5 Shyama tulsi is given orally.

11-*Tagetes erecta* Linn., Genda, Asteraceae.

The juice of 10-12 fresh leaves of Genda with honey is given orally in the morning.

12-*Bombax ceiba* Linn., Semal, Bombaceae.

The root powder with water is given orally thrice a day.

13-*Gymnema sylvestre* (Retz.)R.Br.ex.Schult.,Gudmar, Asclepiadaceae and *Ocimum tenuiflorum* Linn.,Tulsi,Lamiaceae.

The mixture of powder of Gudmar leaves and Tulsi leaves is given orally with water in the morning.

14-*Daucus carota* Linn.,Gajar, Apiaceae and *Phyllanthus embelica* Linn.,Amla, Euphorbiaceae.

The mixture of juice of Gajar and Amla is given orally thrice a day.

15-*Azadirachta indica* A.Juss.,Neem, Meliaceae.

The leaves juice is given orally.

16-*Gymnema sylvestre* (R.)Br., Gurmar Buti, Asclepiadaceae.

The powder of leaves is given orally.

17-*Trigonella foenum- graecum* Linn., Methi, Fabaceae.

24 hours soaked seeds are given to chew.

18-*Olea ferruginea* Royle, Jaitun, Oleaceae.

The leaves juice is given orally

3. Conclusion

The present study has brought out to light traditional and indigenous knowledge on 18 ethnomedicinal plants as practiced by local inhabitants for treating and controlling the diabetes. The rural population of India are mostly dependent on the medicinal plant for their health.

4. Acknowledgement

The authors wish to thank the many informants who collaborated in all aspects of this study.

5. References

1. G.N. Chaturvedi, K.N. Shastri. *Commentary on Charak Samhita* . 1980, IX Ed. Chowkhamba Vidyabhawan, Varanasi.
2. R.N.Chopra, S.L.Nayar, I.C. Chopra. *Glossary of Indian Medicinal Plants*, 1956,CSIR, New Delhi, India.
3. R.R. Chaudhary, S.B.Vohra . Plants with possible hypoglycaemic activity. In (Udapa K.N. *et al.* (ed.) 1970, *Advances in research in Indian medicine*, Varanasi.
4. J.C.Ghildiyal, Geeta Sadana, Pooja juyal. Ethno- medicinal Uses of the Plants by Bhoksa Tribe of Bhabar Tract in the Foothills of Garhwal Himalaya. *Journal of Mountain Research* , 2009,4: 186-193.
5. C.R. Karnick, Some aspects of crude Indian Drug plants used in Ayurvedic systems of medicine for Madhumeya (diabetes). *Acta Phytother. Amst. M.*, 1972, (8): 141-149.
6. K.R. Kirtikar, B.D.Basu. *Indian Medicinal Plants*, 1935, Vol. 1 & 2. Reprinted by Bishen Singh Mahendra Pal Singh, Dehra Dun.
7. B. Mukherjee, Indigenous Indian Drugs used in the treatment of diabetes. *J. Sci. Industr. Res.*, 1957, 16 A : 1-18.
8. K.K. Singh, J.K.Maheshwari. Traditional Phytotherapy amongst the tribals of Varanasi district, Uttar Pradesh. *J. Econ. Taxon. Bot.*,1983, 4(3): 829- 838.