

ETHNOMEDICINAL PLANTS USED IN BLOOD PRESSURE AND DIABETES BY BHIL AND BHILALAS TRIBES OF ALIRAJPUR DISTRICT, MADHYA PRADESH, INDIA

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ABSTRACT

An extensive survey of Alirajpur district of M.P. was made to document the traditional knowledge of ethnomedicinal plants used by tribal communities. Tribals like Bhil, Bhilala, Barela, Patliya and Naik are residing in the area. These people and their medicine men have valuable information about properties of medicinal uses of plants. They successfully treat diabetes and hypertension using plant based medicine. The present survey recorded the use of 20 medicinal plants belonging to 15 families.

Figure : 01

References : 12

Table : 00

KEY WORDS : Bhil, Bhilalas, Blood pressure, Diabetes, Ethnomedicinal plants, Tribes,

Introduction

Changes in human behavior and lifestyle over the last century have resulted in a dramatic increase in the incidence of blood pressure and diabetes worldwide⁶. High blood pressure (BP) is a major public health problem in India and its prevalence is rapidly increasing among both urban and rural populations^{2,3}. The prevalence of hypertension ranges from 20-40% in urban adults and 12-17% among rural adults. The number of people with hypertension is projected to increase from 118 million in 2000 to 214 million in 2025, with nearly equal numbers of men and women⁷.

Diabetes mellitus is the common endocrine disorder that affects more than 100 million people worldwide. The number of people with diabetes

has risen from 108 million in 1980 to 422 million¹² in year 2014. It is caused by the deficiency of ineffective production of insulin by pancreas, which result in increase or decrease in concentration of glucose. It is found to damage many of the body system particularly the blood vessels and nerves. For the therapy along with synthetic drugs many agents of the plant origin are also in use for treatment and non insulin diabetes mellitus (NIDDM).

Study area and ethnic people

The name Alirajpur was coined by king Anand for All-forest of the region. It is divided into 3 tehsils (1) Alirajpur (2) Bhabra and (3) Jobat. The region has 6 development blocks and 551 villages. The total population to the district is 728677 with

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population density 229 per sq. km. It has 87% ST, 4% SC, and 9% other population. The forest covers of the district are 131.7 hac. The district is bounded by Baroda district of Gujarat state from west, Dhulia district of Maharashtra and Barwani district from south, Dhar district from east and Jhabua from north.

METHODOLOGY

Extensive ethnobotanical surveys were conducted for collecting the plant species and data during May 2010 to April 2014. First hand informations about the medicinal uses of plants were collected from the traditional healers. The local physician called 'Badwas', elder persons, head of some communities *etc.* were contacted and taken to the field for collecting informations about ethnomedicinal plants, local name, parts used, methods of drug preparation and dosage of administration. Herbarium have been deposited in Botany department of Holkar science college Indore (M.P.). Herbarium species were identified^{4,5,8,9,10,11}. All the recorded plants have been given scientific name, local name, useful parts and mode of administration. Alirajpur is inhabited mainly by Bhils, Bhilala, Barela, Patliya, Tadvi and Naik.

ENUMAERTION

The plant species belonging to blood pressure and diabetes are enumerated alphabetically with their botanical name, family in parenthesis, local and folk name and uses.

1. ***Aegle marmelos***, Family: Rutaceae, Local/Folk : Bel, Belpatra Bilwa
Medicinal uses: Leaves with boiled tea are used thrice in a day to cure diabetic patient.
2. ***Allium sativum***, Family: Liliaceae, Local/Folk : Lasun Kali, Lahsun
Medicinal uses: Garlic buds taken orally before sleeping to control blood pressure.
3. ***Antigonon leptopus***, Family: Polygonaceae, Local/Folk: **Anantalata** **Medicinal uses:** Leaf extract used in early morning with empty stomach for controlling blood pressure and also used as a heart tonic.
4. ***Apium graveolen***, Family: Apiaceae, Local/Folk: Ajmod, Boudi
Medicinal uses: Whole plant dried and crushed and used as powder twice in day to treat blood pressure.

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5. ***Argemone maxicana***, Family: Papaveraceae, Local/Folk : Peela Kantasla, Satyanashi, Ghamoya
Medicinal uses: Leaf crushed with black pepper is used twice in day for treatment of diabetes. (Sour material is prohibited)
6. ***Bryophyllum pinnatum***, Family: Crassulaceae, Local/Folk: Parnabiji, Jakhamehayat
Medicinal uses: Leaf extract is used once in a day for one week cure blood pressure.
7. ***Butea monosperma***, Family: Fabaceae, Local/Folk: Khakhra Palash, Dhak, Tesu
Medicinal uses: Leaf juice is filtered and given in early morning for 15 days to treat diabetes.
8. ***Capparis decidua Edgew;***Linn., Family: Capparidaceae, Local/Folk: Karil
Medicinal uses: Crushed Flower is used as tablet with milk in treatment of diabetes.
9. ***Cassia fistula***, Family: Caesalpinaceae, Local/Folk: Girwal, Garmala, Amalataash
Medicinal uses: Fruit pericarp and fruit pulp is given once in a day for one month to treat diabetes.
10. ***Catharanthus roseus***, Family: Apocynaceae, Local/Folk: Baramasi, Sadabahar
Medicinal uses: Root and leaf paste is used for blood pressure. Whole plant is dried, powdered and mixed with cow's milk and taken orally to treat diabetes.
11. ***Centella asiatica***, Family: Apiaceae, Local/Folk: Brahmi
Medicinal uses: The leaves with (coriander) *coriondrum sativum* are used as juice before sleeping to treat blood pressure.
12. ***Chlorophytum tubrosum***, Family: Liliaceae, Local/Folk: Safed musli, dhawali musli.
Medicinal uses: Root powder is useful in blood disorders and diabetes mellitus.
13. ***Evolvulus alsinoides***, Family: Convolvulaceae, Local/Folk: Sankhapushpi, Sankhamalini
Medicinal uses: Plant juice with jaggery used thrice in day in treatment of blood pressure.
14. ***Foeniculum vulgare***, Family: Apiaceae,

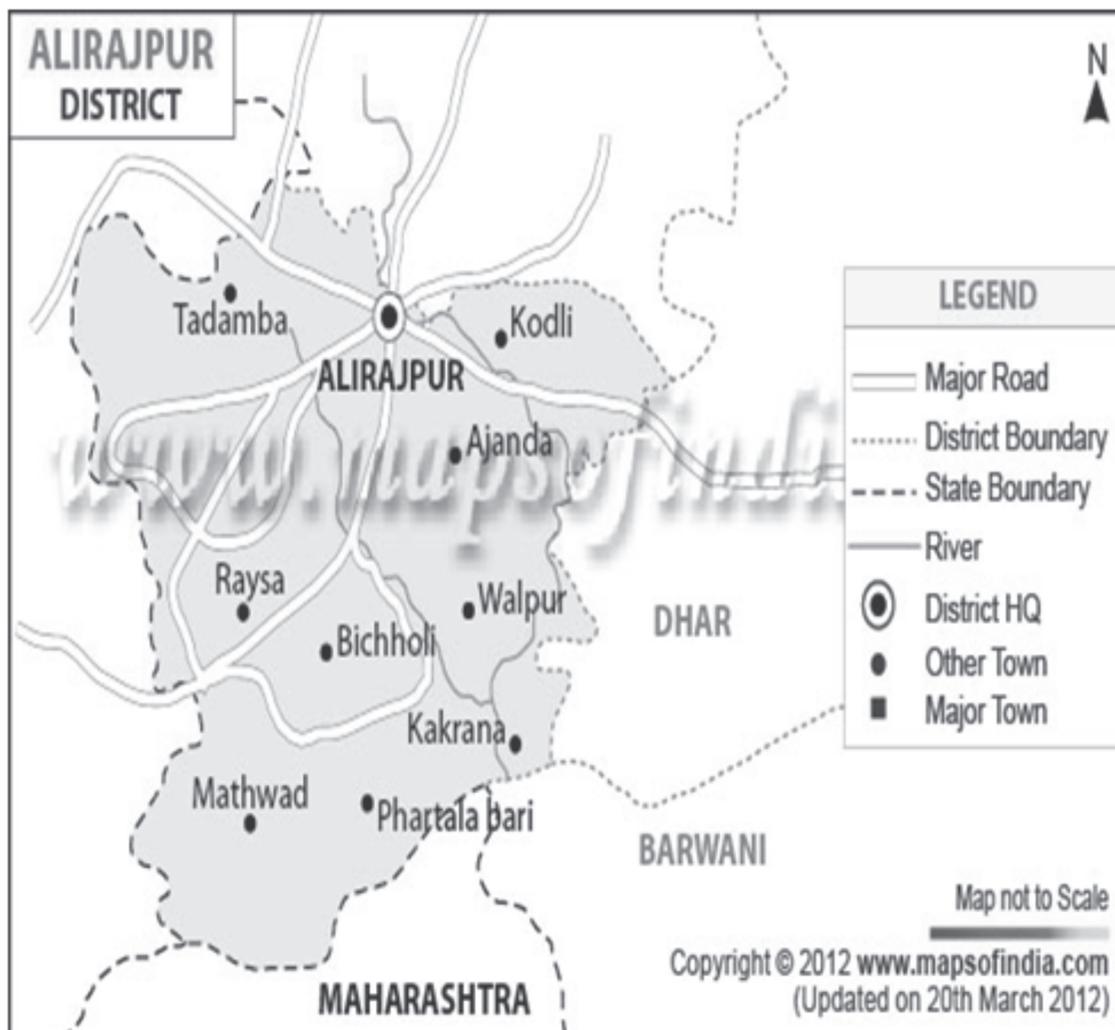


Fig.1 : Map of working area (Alirajpur district)

- Local/Folk: Sounf
Medicinal uses: flowers are used for diabetes treatment.
15. ***Mangifera indica***, Family: Anacardiaceae, Local/Folk: Aam, carry
Medicinal uses: Leaf extract are used in treatment of diabetes.
16. ***Momordica charantia***, Family: cucurbitaceae, Local/Folk: Karela
Medicinal uses: Yellow ripe fruit with asafetida is used in treatment of blood sugar.
17. Fruit juice is used in treatment of diabetes.
Phyllanthus amarus, Family: Euphorbiaceae, Local/Folk: Jar amla, Bhui amla
Medicinal uses: Dried leaf powder is used thrice a day for two weeks in treatment of diabetes.
18. ***Senna tora***, Family: caesalpiniaceae, Local/Folk: Puvad, Pawad, Charota
Medicinal uses: Boiled seeds are used for two weeks for diabetes treatment.

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19. *Trigonella foenum graecum*, Family: Fabaceae, Local/Folk: Methi

Medicinal uses: Seeds are used twice in day for 15 days to treat diabetes and to control blood sugar.

20. *Ziziphus nummularia*, Family: Rhamnaceae, Local/Folk: Chinya Bor, Jharbari, Jharbar.

Medicinal uses: Fruit, flower and leaves are used to control blood pressure.

Result and Discussion

It is estimated that more than 800 species exhibit hypoglycemic properties, including many common plants such as bitter guard, jamun, karela, neem etc. To date hundred of herbs and traditional medicine formula have been reported to have been used for treatment of diabetes and blood pressure.

The present paper provides 20 ethnomedicinal plants used in the treatment of diabetes and blood pressure. Of their 11 plants are used for diabetes and 7 for blood pressure and 9 plants for both disorders. These plants are used by various ethnic groups and rural people of Alirajpur district.

These ethnomedicinal data provide a base to start the research for new compound related to phytochemistry, pharmacology and pharmacognosy. These studies of traditional plants indicate the need to discover new drugs for the welfare of mankind.

The present study reveals that the forests of Alirajpur district are very rich in having high ethnobotanical diversity. It has been observed that tribes of Alirajpur region widely utilize many plants as medicament due to effectiveness, cheapness, easy availability and access with no side effect.

The Alirajpur district has dense forest area and great potential for ethnobotanical work but still remain neglected. The native medicine still plays a significance role among the tribals; therefore this work was undertaken. Due to advent of modern civilization the traditional knowledge is fast eroding. Depletion of medically important plants around the dwelling places of the tribals and the lack of interest in the folk medicine among the younger generation are some of the factors for the declining in the folk medicinal practices. Proper encouragement to these folk practices in curing ailments is required to preserve the valuable system.

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