Medicinal Plants Used by Herbal Healers in Narasipura and Manchale Villages of Sagara Taluk, Karnataka, India

Poornima G1*, Manasa M1, Rudrappa D1, Prashith Kekuda TR2

1 Department of Botany, SRNMMN College of Applied Sciences, Balraj Urs Road, Shivamogga-577201, Karnataka, India
2 Department of Microbiology, SRNMMN College of Applied Sciences, Balraj Urs Road, Shivamogga-577201, Karnataka, India

Abstract

The present study was designed to study the Medicinal plants used by herbal healers in Narasipura and Manchale villages of Sagara Taluk, Karnataka, India. The people, particularly from rural places, depend on herbs for primary health care where ethnomedicinal use of plants has been practiced since time immemorial. Sagara taluk is located in the midst of the Western Ghats region of Shivamogga District, Karnataka State, India. Ethnobotanical field surveys were conducted from January to March 2012 to document the uses of medicinal plants by herbal healers in villages Narasipura and Manchale of Sagaratalk, Karnataka state, India. A total of 21 plants in Narasipura and 14 plants in Manchale were documented. The information about local name, partsused, type of formulation and disorders for which they were used are documented.

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*Corresponding Author
Poornima G
E-mail: poo.an30@gmail.com

INTRODUCTION

India’s traditional system of medicine is related to richness of plant and cultural diversity. The indigenous knowledge on medicinal plant utilization not exceeding the resilience of surrounding environment is regarded as an important measure of plant biodiversity conservation. Apart from modern systems of medicines, even today people rely on herbal plants for primary healthcare. This dependency is even more in rural areas where ethnobotanical use of plants has been known since time immemorial. This is because of lack of primary healthcare centers, besides, medicinal plants are easily available natural products, easily formulatable and cost-effective with no side-effects. Tribal people depend on forest for their survival and are aware of the medicinal uses of plants in their surroundings. The traditional folk medicine is mostly unscripted, has been handed down orally from generation to generation (Kingston et al., 2009; Gupta et al., 2010; Rajakumar and Shivanna, 2010).

Sagara taluk is located in the midst of the Western Ghats region (one of the ‘hot-spots of biodiversity’ in India) of Shivamogga District, Karnataka State, India. The taluk is situated between 13°51' and 14°20'N latitude and between 74°37' and 75°17'E longitude in about the mid-south western part of Karnataka State, India at an altitude of 595m above the mean sea level. The areas selected in this study are the villages Manchale and Narasipura of Sagara Taluk, Karnataka, India. The study area has evergreen, semi-evergreen, moist and dry deciduous forests and is rich in diversity of plants with medicinal value. The area receives an average rainfall of 950 to 2130mm. Agriculture is the main occupation in this area and areca, banana, cotton, ginger, maize, paddy, pepper and sugarcane are the main crops (Rajakumar and Shivanna, 2010). In this study, an ethnobotanical field survey was conducted to document the uses of medicinal plants by herbal healers in villages Narasipura and Manchale.
MATERIALS AND METHODS

Regular field visits to the study areas were made for observation and documentation of herbs for a period of three months from first week of January 2012 till last week of March 2012. The places of collection and observation are shown in Figure 1.

During field trips, ethnomedicinal information about the plants was recorded through interaction and discussion with herbal healers of study area along with field observation. Medicinal plants were documented and detailed field notes were taken along with voucher number, locality, habit, floral characteristics, nature of the fruit, colour of the ripe fruit, local name, local medicinal uses, etc. The identification of plants was made by referring flora (Gamble, 1995; Ramaswamy et al., 2001). Herbaria were prepared for selected plants.

RESULTS AND DISCUSSION

Plants Documented in Narasipura

In the study area Narasipura, a total of 21 plant species belonging to 18 genera and 15 families were documented and these plants were being used to treat 21 human ailments (Table 1).
Table 1: Plants used by herbal healer in Narasipura.

| Plant name               | Family             | Local Name | Part Used | Preparation   | Medicinal Uses                        |
|--------------------------|--------------------|------------|-----------|---------------|---------------------------------------|
| Achyranthus aspera Linn. | Amaranthaceae      | Uttrani    | Leaves    | Paste         | Brain disorders                      |
| Plumbago zylanica Linn.  | Plumbaginaceae     | Bili Chitramoola | Root | Paste     | Jaundice, Hepatitis B, Hepatitis C |
| Plumbago indica Linn.    | Plumbaginaceae     | Kempu Chitramoola | Root | Paste     | Hepatitis A                          |
| Dipteracanthus prostrates| Acanthaceae        | Kalighavani | Leaves    | Decoction    | Ear diseases and cancer              |
| Rauwolfia serpentina Benth. | Apocyanaceae      | Sarpaghandi | Root      | Paste or decoction | Very effective to control high Blood Pressure |
| Zinziber officinalis Rosc. | Zinziberaceae      | Shunti     | Rhizome   | Decoction with tea | Analgesic                            |
| Bacopa monniera Pennel.  | Scrophulariaceae   | Neeru brahmi | Leaves   | Juice       | Bronchitis and diarrhoea in children |
| Sauropus andragynus      | Euphorbiaceae      | Chakramuni | Leaves    | Decoction    | Vitamin deficiency                  |
| Croton roxburghii        | Euphorbiaceae      | Somare     | Root      | Paste with Myristica fragrans fruit | Tumors                                |
| Aristolochia indica Linn.| Aristolochiaceae  | Eshwari balli | Root | Root extract with pepper | Applied on spot of snake bite and also taken to cure high fever |
| Ficus racemosa Linn.     | Moraceae           | Atti mara  | Root      | Paste with water | Diabetes mellitus                   |
| Ficus krishnae           | Moraceae           | Krishna aala | Root | Paste | Liver disorders                      |
| Dodonaea viscosa N. jaeq. | Sapindaceae       | Angaraka   | Bark      | Strong decoction | To balance Hb count in women        |
| Mangifera indica Linn.   | Anacardiaceae      | Maavu      | Bark      | Powdered and boiled with water | To treat mental diseases             |
| Sapindus Laurifolia Vahl.| Sapindaceae       | Antavaala  | Raw Fruit | Extract of it | Lungs blockage                       |
| Ocimum kilmandscharicum  | Lamiaceae          | Karpura tulasi | Leaves   | Paste and juice | Paste for acne treatment and juice for cough |
| Ocimum tenuiflorum       | Lamiaceae          | Shri tualsi | Leaves    | Powder with ghee or decoction | To relieve stress and also to cure respiratory disorders |
| Tectona grandis Linn.    | Verbenaceae        | Sagvani    | Leaves    | Paste         | Dermatitis                           |
| Nerium indicum Mill.     | Apocyanaceae       | Kanagale   | Bark and root | Paste with Calatrops leaves. | Cancer tumors of stomach            |
| Tinospora cardifolia Miers. | Menispermaceae    | Amrutha balli | Leaves | Paste | Diabetes mellitus & heart weakness |
| Tylophora indica W&A.    | Asclepiadceae      | Aada muttada soppu | Leaves, bark and roots | Paste or powder | Asthma and lung inflammation          |

Maximum plant species documented were from the families Plumbaginaceae, Apocyanaceae, Euphorbiaceae, Moraceae, etc. The number of plants from each family is shown in Figure 2. Various plant parts were used, among which leaves and roots were more commonly used followed by bark and stem (Figure 3). The most preferred type of drug formulation in Narasipura is paste and decoction followed by powder, latex and juice (Figure 4).
Plants Documented in Manchale

In the study area Manchale, a total of 15 plants belonging to 12 families were used to treat 18 human ailments (Table 2).

Maximum plant species used were from the families Apocynaceae and Verbenaceae. Number of plants used from each family is shown in Figure 5. The frequently used plant parts were leaves followed by root, bark and stem (Figure 6). Decoction formulation was more commonly used than paste, powder and juice (Figure 7).

Most of the plants documented were herbs followed by shrubs, trees and climbers. The plants were given as herbal medicines to cure various kinds of ailments ranging from skin to brain disorders. Majority of the plants in Narasipura were used for treating diabetes, liver and lung disorders and in Manchale menstrual disorders and arthritis. In both Narasipura and Manchale, the healers preferred use of a single plant for a particular disease rather than preparing medicines by combination of plants.

Some plants are widely distributed throughout the state and same plants are used to treat different ailments by different herbal healers. Rauwolfia serpentina is best known for its medicinal properties. In Narasipura, the decoction of root is used for controlling high blood pressure, whereas same is used as paste for snake bites in region of Bhadra Wild Life Scantuary (Parinitha et al., 2004). In coastal Karnataka, the root paste of the plant is used by a herbal healer to treat herpes and this has proven to be very effective (Bhandary and Chandrashekar, 2011).
Table 2: Plants used by herbal healer in Manchale.

| Plant name                      | Family         | Local Name   | Part Used | Preparation | Medicinal Uses                             |
|---------------------------------|----------------|--------------|-----------|-------------|---------------------------------------------|
| Mimosa pudica Linn.             | Mimosae        | Nachike mullu| Root      | Paste       | Menorrhagia control and control of high BP   |
| Plumbago auriculata             | Plumbaginaceae | Neeli chitramoola | Root    | Paste with water | Piles                                     |
| Tabernaemontana divaricata      | Apocynaceae    | Nandi batlu  | Bark      | Decoction   | For Healthy pregnancy                        |
| Vitex negundo Linn.             | Verbenaceae    | Kari lakki   | Leaves    | Powder in water | Curing of arthritis                        |
| Lawsonia inermis                | Lythraceae     | Madrangi     | Leaves    | Fresh leaves are directly taken              | Amenorrhea and dysmenorrhea, balance of Hb count, ulcers. |
| Pomenta officinalis             | Myrtaceae      | All-spice    | Leaves    | Decoction   | As a stimulant                              |
| Polyalthia longifolia           | Annonaceae     | -            | Bark      | -           | To prevent abortion in pregnant women       |
| Gymnema sylvestre Retz.         | Asclepiadaceae | Madhunashini | Leaves    | Extract as tonic                             | Diabetes and also to lose weight             |
| Diospyros montana Roxb.         | Ebenaceae      | Jagalaganti mara | Bark    | Decoction   | Liver disorders, Jaundice, Kidney stones & Hepatitis B. |
| Asparagus racemosa Wild.        | Liliaceae      | Shatavari    | Fasciculated roots | Decoction or paste with water | Dysentery, Diarrhea and menstrual problems. |
| Areca catechu Linn.             | Arecaceae      | Adike        | Root      | Boiled with water                           | Insect bites and skin allergies             |
| Canscora decurrens              | Gentianaceae   | Shanka pushpa | Leaves  | Decoction or tonic                          | Urinary tract infections                    |
| Gmelina arborea                 | Verbenaceae    | Shivane      | Leaves    | Paste mixed with dosa batter                | Arthritis                                  |
| Ervatamia heyneana Stapf.       | Apocyanaceae   | Maddarasa    | Stem      | Latex is used                               | Applied to throat to treat tonsils          |

Figure 5: Number of plants from each family.

*Tinospora cardifolia* is another such well known medicinal plant which is popularly called as ‘Amrutha Balli’. In our study, the leaf paste is used to treat diabetes and heart weakness in Narasipura, while the ground stem of the climber is taken orally for 5 days to cure malaria in Kargal
In our study, *Vitex negundo* leaf powder was used in Manchale to treat arthritis, whereas leaf paste with lime juice was applied externally to treat ring worm in Bhadra Sanctuary area (Parinitha et al., 2004) and leaf juice is used to treat poisonous bites in cattle in Uttar Kannada district by a herbal healer (Harsha et al., 2005).

*Ervatamia heyniana* stem latex was applied to throat to treat tonsils in Manchale, crushed bark with water was used for treating dysentery and diarrhea in Uttar Kannada (Harsha et al., 2005). *Lawsonia inermis* leaves are used in treatment of all kinds of menstrual disorders in Manchale, whereas same is used in treatment of acne in Bhadra Sanctuary (Parinitha et al., 2004).

**CONCLUSIONS**

The ethnomedicinal knowledge about plants is vital in primary healthcare system. High costs coupled with side effects of synthetic drugs are driving people towards herbal medicines. These plants are to be scientifically evaluated and conserved for well being of mankind. These herbal formulations need further pharmacological investigations to prove their efficacy and for their use as effective drugs in treatment of many human diseases.

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