Documentation of Local Health Traditions of Yadgir District, Karnataka

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ABSTRACT

Aim: The traditional medicinal practice in India includes different aspects of health such as prevention, promotion, and healing. Since there is need for documenting this traditional medicinal practice prevalent in different parts of the country for the preservation of the knowledge, the present study was undertaken to record the traditional knowledge of medicine from Yadgir district of Karnataka.

Materials and methods: A Medico-Ethno Botanical survey was undertaken in the Yadgir district of Karnataka between September and December 2017. Data were collected from traditional healers and locals by means of personal interviews using a prescribed format.

Results: A total of 20 folk claims used for the treatment of 16 different disease conditions were recorded. The remedies were mostly prepared in the form of decoction, paste, poultice, juice, etc. and were mainly taken orally. Eczema, paralysis, toothache, wound obesity, diabetes, fever, jaundice, fracture, cough, anemia etc. are some of the diseases usually treated by traditional practitioners. Only single ingredient was used in 16 documented claims whereas remaining 4 are compound preparations having more than one ingredient. It is observed that, most of the medicinal plants are used in fresh form, after collecting from their natural habitat whenever necessary.

Conclusion: Since the documentation of traditional knowledge on medicinal uses of plants is vital for the future generation, this study could serve an important role in fulfilling this purpose.

Clinical significance: The documented data can also serve as a base for the development of new medicines by scientific studies.

Keywords: Ayurveda, Folk claim, Local health traditions, Medicinal plants.

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INTRODUCTION

India is considered as a botanical garden of the world and a goldmine of well-recorded and traditionally well-practiced knowledge of herbal medicine.1 Traditional medicine played an important role on community healthcare since many centuries in the country. The practice of traditional medicine also has its own individuality from one place to another and between practitioners. These are habitat-specific practices, which include different aspects of healthcare such as prevention, cure, and promotion. This diverse knowledge is passed on from one generation to another by word of mouth through expert folk healers.

Plants are important source of traditional medicine for the treatment of various diseases.2 Therefore, traditional medicine used throughout the world is heavily dependent on locally available plant species and plant-based products.3 In India, there are about 8,000 plant species, more than 200 animal and mineral sources are being used by 4,639 ethnic communities.4 The ethnic people residing in different remote places of India are still dependent on medicinal plants available in their natural surroundings to treat various ailments.

This traditional knowledge developed over millennia by thousands of people is mostly unrecorded. Moreover, it is also facing a danger of becoming extinct due to the increasing rate of deforestation and concurrent loss of biodiversity. For the sake of public health, this information should be preserved and refined. There is a need for documenting this traditional medicinal practice prevalent in different parts of country for the preservation of the knowledge. Although different studies have been conducted to document the local health traditions in Karnataka,5,6 no work has been reported from the Yadgir district. Keeping this in mind, a survey of different villages of Yadgir district of Karnataka has been conducted to record the traditional knowledge of local population on medicinal uses of various plant species.

Study Area

Yadgir district lies in the northern plains of Karnataka (Fig. 1) and has semi-arid-type climate. As per the 2011 census, the population density was recorded as 223 inhabitants per square kilometer. Dry climate prevails for most part of the year. The soil types in the district are deep black, medium black soil, shallow soil, and lateritic soil. The deep and medium black soil covers practically the entire district’s area, except a small portion toward the northern
Table 1: Local health traditions documented from Yadgir District of Karnataka

| S. no. | Disease     | Ingredients                  | Accession number | GPS data          | Part used | Route | Mode of administration                                      |
|-------|-------------|------------------------------|------------------|-------------------|-----------|-------|-------------------------------------------------------------|
| 1     | Jaundice    | Acalypha indica L.          | RRCBI-19514      | 16° 17′ 92.05″N, 76° 22′ 80.70″E | Leaves    | External | About 2–3 drops of juice used as eye drops to both eyes for three subsequent Sundays |
| 2     | Wounds      | Boerhavia diffusa L.        | RRCBI-19937      | 16° 40′ 38.8″N, 76° 47′ 05.7″E | Leaves    | External | About 5 mL of leaf juice mixed with equal quantity of coconut oil is applied 2 times a day for 3–5 days |
| 3     | Edema       | Calotropis gigantea (L.) Dryand. | RRCBI-19976     | 16° 47′ 51.1″N, 77° 21′ 14.3″E | Root bark | Internal | Root bark of the plant should be collected during the month of March or April before opening of the fruit. Dried powder of root is given in the dose of 120–200 mg for 7 days with milk |
| 4     | Earache     | Caralluma adscendens (Roxb.) R.Br. | RRCBI-19500     | 16° 17′ 92.05″N, 76° 22′ 80.70″E | Stem      | External | Stem is heated on the fire and juice is extracted. About 5–6 drops of juice is added into the affected ear |
| 5     | Cough       | Senna auriculata L.         | RRCBI-19503      | 16° 17′ 92.05″N, 76° 22′ 80.70″E | Flowers   | Internal | About 5 g flowers are boiled in 100 mL of water and reduced to 50 mL to use as tea |
| 6     | Wounds      | Senna auriculata L.         | RRCBI-19503      | 16° 17′ 92.05″N, 76° 22′ 80.70″E | Flowers   | External | About 5 g of ash prepared from dried flowers is mixed with 5 mL of coconut oil and applied twice daily for 7 days |
| 7     | Eczema      | Cassia fistula L.           | RRCBI-19532      | 16° 27′ 05.81″N, 76° 32′ 53.12″E | Leaves    | External | Fresh leaves placed on the affected area, tied with cotton cloth and kept wet by adding clean water. Same procedure should be repeated once daily till desired effect |
| 8     | Anemia      | Cassytha filiformis L.      | RRCBI-19531      | 16° 27′ 05.81″N, 76° 32′ 53.12″E | Whole plant | Internal | About 2 g of powder is administered internally two times a day with milk |
| 9     | Eczema      | Lepidagathis cristata Willd. | RRCBI-19891      | 16° 34′ 46.6″N, 76° 41′ 59.8″E | Inflorescence | External | Ash obtained from dried inflorescence is mixed with coconut oil and applied over affected area |
| 10    | Rectal prolapse | Lepidagathis cristata Willd. | RRCBI-19891 | 16° 34′ 46.6″N, 76° 41′ 59.8″E | Inflorescence | External | Ash obtained from dried inflorescence is mixed with coconut oil and applied over affected area |
| 11    | Diarrhea    | Moringa oleifera Lam.       | RRCBI-19929      | 16° 27′ 40.3″N, 76° 37′ 38.4″E | Resin     | Internal | About 5 g of resin mixed with 200 mL of water is administered 2 times a day for 3 days |
| 12    | Diabetes    | Nelumbo nucifera Gaertn.    | RRCBI-19626      | 16° 41′ 43.20″N, 76° 49′ 42.59″E | Seeds     | Internal | 4–5 fresh seeds are taken daily with water |

Contd...
| S. no | Disease                    | Ingredients                               | Accession number | GPS data                        | Part used | Route   | Mode of administration                                                                 |
|-------|----------------------------|-------------------------------------------|------------------|--------------------------------|-----------|---------|----------------------------------------------------------------------------------------|
| 13    | Cough in children          | Pergularia daemia (Forsskal) Chiov.       | RRCBI-19680      | 16° 54' 05.46"N, 77° 11' 04.25"E | Leaves    | Internal | Leaf paste prepared with breast milk is given 2–3 times/day                              |
| 14    | Fracture                   | Peristrophe bicalyculata (Retz.) Nees     | RRCBI-19930      | 16° 40' 38.8"N, 76° 47' 05.7"E | Leaves    | Internal | About 20–30 g of leaf paste administered with milk for 7 days                           |
| 15    | Toothache                  | Solanum suratense Burm.f.                 | RRCBI-19910      | 16° 17' 08.6"N, 76° 25' 43.9"E | Fruit     | External | Fully ripe fruit is burnt by placing it on fire and fumigation (Dhoopana) is given on affected tooth |
| 16    | Tooth ache                 | Wrightia tinctoria R.Br.                  | RRCBI-19593      | 16° 31' 38.41"N, 76° 43' 52.95"E | Leaves    | Local   | One fresh leaf along with pinch of salt is kept on painful tooth for 3 days             |
| 17    | Burning sensation          | Prosopis cineraria (L.) Druce.           | RRCBI-19559      | 16° 27' 05.81"N                            | Tender leaves | Internal | About 5 g of paste prepared from both drugs is mixed with 5 mL of sugar and administered 2 times a day for 7 days |
|       |                            | Abrus precatorius L.                      | RRCBI-19525      | 76° 32' 53.12"E                            | Leaves    |         |                                                                                        |
| 18    | Paralysis                  | Wrightia tinctoria R.Br, Myristica fragrans Houtt. | RRCBI-19593 | 16° 31' 38.41"N | Leaves    | Internal | Powder is prepared by mixing about 50 shade dried leaves of Wrightia tinctoria (Roxb.) R.Br, 7 jatiphala (Myristica fragrans Houtt.) and 250 mg of kasturi. 1 teaspoon of the powder is given orally with cold water for 7 days. If the disease is more chronic, continue the same for 14 days |
|       |                            | Kasturi                                   | NA               | 76° 43' 52.95"E | Fruit     |         |                                                                                        |
| 19    | Obesity                    | Tinospora cordifolia (Willd.) Miers       | RRCBI-19975      | 16° 50' 40.0"N                            | Leaves    | Internal | Powder prepared from mixing equal quantity of all the ingredients is administered with water in the dose of 5 g twice daily for 30 days |
|       |                            | Syzygium aromaticum (L.) Merr. & L.M.Perry| NA               | 77° 23' 46.7"E | Flower bud |         |                                                                                        |
|       |                            | Piper nigrum L.                           | RRCBI-12885      | NA                                             | Fruit     |         |                                                                                        |
|       |                            | Elettaria cardamomum (L.) Maton           | NA               | NA                                             | Fruit     |         |                                                                                        |
|       |                            | Clerodendrum phlomidis L.f.               | RRCBI-14350      | NA                                             | Leaves    |         |                                                                                        |
| 20    | Fever                      | Prosopis cineraria (L.) Druce.           | RRCBI-19559      | 16° 27' 05.81"N | Tender leaves | Internal | 10 mL juice prepared from equal quantity of leaves given twice daily for 3– 7 days       |
|       |                            | Coccinia grandis (L.) Voigt.             | RRCBI-19610      | 16° 41' 43.20"N                                | Leaves    |         |                                                                                        |

part of the district. Lateritic soil occurs in small extent toward the northern part of the district. About 75% of the geographical area of the district is under cultivation and the forest cover is relatively less with about 33,000 Ha, of which most area is located in southern, central, and eastern parts of the district. The known flowering plants can be between 300 and 350 species of which 20–30% are trees. Relative humidity varies from 26% in summer to 62% in winter. The major rain-fed crops of the district are jowar, bajra, gram, tur, groundnut, and sunflower. The irrigated crops are rice, wheat, and sugarcane.
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Materials and Methods
Medico-Ethno Botanical survey was conducted in the Yadgir district of Karnataka State during August and December 2017. The data collection method involved documenting the preliminary data from the traditional practitioners. Initially, a list of traditional practitioners in the study area was prepared by making an effort to represent all parts of the district. Different local health traditions routinely practiced by them were documented in a prescribed format by the direct interview method. Details regarding the disease condition treated, plant/plants used in the treatment, part used, and method and route of administration were also...
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Results and Discussion

Different local health traditions practiced by traditional practitioners for various diseases and illnesses were documented along with their part used, route and method of administration in Table 1. The present study documented about 20 local health traditions claimed as effective treatment in 16 different disease conditions. Out of the 23 plant species that have been used in 16 single and 04 compound formulations, 19 are naturally available in the forests (Fig. 2: I–XIX) whereas 4 species are from cultivated sources. These disease conditions include eczema, paralysis, toothache, wound obesity, diabetes, fever, jaundice, fracture, cough, anemia etc. Among the 20 traditional claims documented, majority of the medicinal plant preparations involved the use of single plant species or a single plant part (16 in numbers) while 4 are compound preparations having more than one ingredient. Majority of these preparations i.e. 11 are being used internally and 9 are used as external applications.

It is also observed that traditional practitioners practicing in rural areas collect medicinal plants in sufficient quantity from their natural habitat. The traditional healers of the region usually utilize every part of the plant depending on nature of the plant and the need of the physician. Leaves, fruit, roots, and whole plants were frequently used plant parts in the preparation of herbal remedies. Most of them are used in fresh forms and sometimes these collected plant materials are processed, stored appropriately, and used whenever necessary. Various forms of medicine such as decoction,
paste, poultice, juice, etc., were used predominantly, which vary from case to case. During the interview, it was noted that no accurate standard of measurement or unit used was mentioned by the informants.

**Conclusion**

In the present paper different local health traditions practiced in the Yadgir district of Karnataka were documented and presented. Total 20 traditional claims used in the treatment of 16 human diseases, such as eczema, paralysis, toothache, wound obesity, diabetes, fever, jaundice, fracture, cough, anemia etc. were documented. This documented information about the use, preparation, and application of these medicinal plants is valuable and this could be preserved for future generation. Besides, the documentation of medicinal plants can serve as a basis for future investigation of new medicinal resources.

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हिंदी सारांश

यादगीर जिला, कर्नाटक की स्थानीय स्वास्थ्य परंपराओं का प्रलेखन

उद्देश्य: भारत में पारंपरिक चिकित्सा पद्धति में स्वास्थ्य के विभिन्न पहलू यथा निवारण, प्रचार-प्रसार और चिकित्सा शामिल हैं। चूंकि जान का संरक्षण करने हेतु देश के विभिन्न भागों में प्रासंगिक इन पारंपरिक चिकित्सा पद्धति के प्रलेखन की आवश्यकता है, अतः कर्नाटक के यादगीर जिला से चिकित्सा के पारंपरिक जान को संकलित करने हेतु वर्तमान अध्ययन किया गया।

सामग्री और विधियाँ: सितंबर से दिसंबर 2018 के बीच कर्नाटक के यादगीर जिला में चिकित्सा-प्रजाति वास्तविक सर्वशक्ति किया गया। निर्धारित प्रारूप का प्रयोग कर पारंपरिक चिकित्सकों और स्थानीय लोगों के व्यक्तिगत साक्षात्कार से आकड़े संकलित किए गए।

परिणाम: 16 विशिष्ट रोगावस्थाओं के उपचार हेतु कुल 20 पारंपरिक रेसिपियों को संकलित किया गया। उपचार हेतु ओषधियाँ यथा काढ़ा, लेप, उपनाह, जूस आदि के रूप में निर्मित की गईं और इन्हें मुख्यतः मांसहित रूप से दिया गया। कुछ रोग यथा एक्जिमा, प्लागाट, दांत में दर्द, वुंद, स्थूलत्व, मधुमेह, ज्वर, पीलिया, अस्थि भ्रगन, कास, रक्तालस्ता आदि का उपचार समान्यतया पारंपरिक चिकित्सकों द्वारा किया जाता है। 16 प्रलेखित दावों में केवल एक सामग्री का प्रयोग किया गया, जबकि शेष 4 एक से अधिक सामग्री के योग से निर्मित हैं। यह देखा गया कि जब भी आवश्यकता हुई बहुत से ओषधियों पादपों का प्राकृतिक निवास से ताजे रूप में संकलन करने के पश्चात प्रयोग किया गया।

निष्कर्ष: चूंकि भारी पीढ़ी हेतु पादपों के ओषधियों प्रयोग पर पारंपरिक जान का प्रलेखन महत्वपूर्ण है, यह अध्ययन इस उद्देश्य की पूर्ति करने में एक महत्वपूर्ण भूमिका निभा सकता है।

नैदानिक महत्व: प्रलेखित आकड़े वैज्ञानिक अध्ययनों के माध्यम से नई ओषधियों को विकसित करने के लिए भी एक आधार प्रदान कर सकते हैं।

मुख्य शब्द: आयुर्वेद, लोक दावा, स्थानीय स्वास्थ्य परंपरा, ओषधियों पादप