Short Communication

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Traditional herbal remedies for Jaundice in Bellary district, Karnataka, India

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ABSTRACT

An ethnobotanical survey of Bellary district, comprising seven *taluks* was conducted during March 2011 to May 2012. The indigenous knowledge of local traditional healers and the native plants used for the treatment of jaundice were collected through questionnaire and personal interviews. Twenty four species of folk drug plants belonging to 23 genera and 19 families were found to be used as a remedy for jaundice by the tribal and rural people in the district. The scientific name, family and local names of these plants along with their parts used and method of preparation is provided. **[Medicinal Plants 2012; 4(4) : 240-243]**

Keywords : Traditional Knowledge, Medicinal plants, Jaundice, Bellary, Karnataka

Man dependent on medicinal plants for the treatment of various ailments since thousands of years. Even after the induction of 200 years of modern system of medicine, about 90% people in rural India take the help of local health practitioners for the treatment of various diseases (Yadav and Patil, 2000). At present about 65% of the Indian population is dependent on the traditional system of medicine (Badgujar and Patil, 2008). Jaundice is characterized by yellowness of the eyes, skin and urine and by indigestion and loss of appetite. Jaundice can indicate liver or gall bladder disorders (Annalakshmi *et al.,* 2012).

Bellary, one of the districts in Karnataka state comprises seven *taluks* viz. Bellary, Hospet, Sandur, Siruguppa, Kudligi, Hadagali and Hagaribommnahalli. It is situated between 14° 30' and 15° 50' North latitude and 75° 40' and 77° 11' East longitude. It is surrounded by Raichur district to the north, Chitradurga and Davanagere districts to the south, Koppal district to the west and Ananthapur district of Andhra Pradesh to the east. The district is situated in the south zone. It is having partly sandy and black cotton with red loamy soil suitable for the cultivation of agricultural crops. The western part of the district is red loamy with hilly area having rich minerals like iron (65%) and manganese (40-48%). As per the 2011 census, the population in the district is 25.32 lakhs. Bellary district has a geographical area of 8.13 lakhs hectares, out of which the forest area covers an extent of 1.057 lakhs hectares i.e. 13% of the total geographic area. The maximum temperature recorded was 45 °C and the minimum was 11 °C. The average elevation is 478 m above sea level and the annual rainfall is 639 mm. People in the district exhibit a vast diversity in their culture and living system. Tribal people living in the study area are *Medara*, *Lambani, Korava*, *Budabudike* and *Adavichencharu*. The climatic conditions prevailing in the region provides an ideal habitat for the natural growth of variety of plants which provide raw materials for herbal drugs.

Information on the plants of folklore origin used for jaundice was obtained during the ethnobotanical survey of Bellary district. The surveys were conducted during March 2011 to May 2012 using ethnobotanical and Participatory Rural Appraisal (PRA) methods. For this purpose frequent field trips were made to different villages belonging to all 7 *taluks* of the district. Twenty five herbal healers (21 men and 04 women) of age

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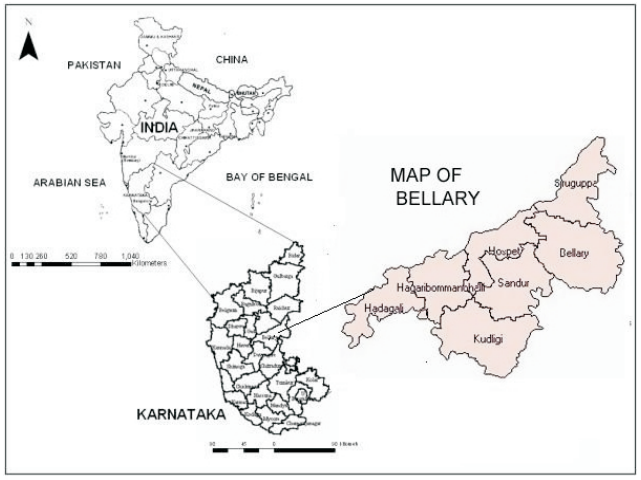

Fig. 1. Map of the study area

group between 45 and 86 years belonging to various communities such as *Swamijis*, *Pandits*, *Kurubas* and tribes like *Medara*, *Korava*, *Lambani* were interviewed and recorded the information in a prescribed questionnaire. (Minoo Prabia and Reddy, 2002) Data on the local name of the folk drug plants, parts used, method of preparation and dosage were noted. All the medicinal plants were photographed, collected and identified by referring to the Flora of Gulbarga district (Seetharam *et al.,* 2000) and 3 volumes of the Flora of Presidency of Madras (Gamble and Fischer, 1957). Voucher specimens were authenticated and deposited at the Herbarium centre, Department of Post Graduate Studies and Research in Botany, Gulbarga University, Gulbarga.

During the present ethnobotanical survey 24 plant species belonging to 23 genera and 19 families were reported by the informants for the treatment jaundice. These plants are arranged in alphabetical order of their

Table 1. Medicinal Plants used to treat Jaundice by the tribal and rural people of Bellary distinct

S.No.	Scientific name	Family	Local name	Part used	Preparation
1.	*Abrus precatorius* L.	Fabaceae	*Gulaganji*	Root	Juice
2.	*Achyranthes aspera* L.	Amaranthaceae	*Uttarani*	Leaves	Juice
3.	*Aegle marmelos* (L.) Corr.	Rutaceae	*Bilvapatri*	Leaves	Paste
4.	*Allium sativum* L.	Liliaceae	*Bellulli*	Bulb	Paste
5.	*Amaranthus tricolor* L.	Amaranthaceae	*Harvesoppu*	Leaves	Juice
6.	*Andrographis paniculata* (Burm.f) wall.	Acanthaceae	*Nelabevu*	Leaves	Juice
7.	*Azadirachta indica* A. Juss.	Meliaceae	*Bevu*	Leaves	Juice
8.	*Balanites roxburghii* planch.	Balanitaceae	*Ingala*	Fruit	Paste
9.	*Boerhaavia diffusa* L.	Nyctaginaceae	*Sanadika*	Whole plant	Powder
10.	*Calotropis procera* (L.) R.Br.	Asclepiadaceae	*Ekka*	Leaves	Paste
11.	*Centella asiatica* (L.) Urbon	Apiaceae	*Ondelaga*	Leaves	Juice
12.	*Curcuma longa* L.	Zingiberaceae	*Harishina*	Rhizome	Paste
13.	*Gymnema sylvestre* (Retz.) R.Br.	Asclepiadaceae	*Sihidwamsini*	Leaves	Juice
14.	*Lawsonia inermis* L.	Lythraceae	*Goranti*	Leaves	Juice
15.	*Leucas aspera* (Willd.) Spreng.	Lamiaceae	*Thumbe*	Leaves	Juice
16.	*Mangifera indica* L.	Anacardiaceae	*Mavu*	Leaves	Juice
17.	*Momordica charantia* L.	Cucurbitaceae	*Hagala balli*	Leaves	Juice
18.	*Ocimum sanctum* L	Lamiaceae	*Thulasi*	Leaves	Juice
19.	*Phyllanthus amarus* Schumach & Thonn	Euphorbiaceae	*Nelanelli*	Whole Plant	Powder
20.	*Phyllanthus emblica* L.	Euphorbiaceae	*Bettadnelli*	Fruit	Juice
21.	*Plumbago zeylanica* L.	Plumbaginaceae	*Chitramula*	Roots	Paste
22.	*Ricinus communis* L.	Euphorbiaceae	*Oudala*	Leaves	Juice
23.	*Saccharum officinarum* L.	Poaceae	*Kabbu*	Stem	Juice
24.	*Tinospora cordifolia* (willd) Miers	Menispermaceae	*Amruta balli*	Leaves	Juice

scientific name along with family followed by local name, part used and mode of preparation (Table 1).

The collected data was compared with the available literature and found that many of the usages are not recorded earlier. Among the plants identified few plants such as *Andrographis paniculata* (Burm f.) Wall., *Momordica charantia* L, *Azadirachta indica* A. Juss. and *Lawsonia inermis* L. in North Maharastra (Badgujar and Patil, 2008) and *Phyllanthus niruri* L. & *Zizyphus jujuba* Lam. non Mill. in Pakistan(Gul Jan *et al.,* 2009) were recorded as remedy for jaundice. Similarly some of the plants listed were used to cure other human ailments. Species like, *Azadirachta indica* A. Juss. in north Karnataka (Bankar *et al.,* 2007), *Andrographis paniculata* (Burm f.) Wall. and *Gymnema sylvestre* (Retz.) R. Br. in Tamil Nadu (Chellaiah Muthu *et al.,* 2006) were used to treat diabetes. *Tinospora cordifolia* Miers. used for Malaria and *Achyranthes aspera* L. for stomachache in Shimoga distict of Karnataka (Rajkumar and Shivanna, 2010). Fresh Leaves of *Aegle marmelos* (L.) Corr. were used for asthma in Andhra Pradesh (Reddy *et al* 2006). Seeds of *Abrus precatorius* L. for snake bite and leaves of *Andrographis paniculata* (Burm.f) wall. were used for malarial fever in Arunachal Pradesh (Das and Hui Tag, 2006).

It is found that different plant parts were used to cure jaundice. Among these leaves were highly used followed by whole plant, root, fruit, rhizome, bulb and aerial stem. The dominating families were Euphorbiaceae with 3 species followed by Amaranthaceae, Asclepiadaceae and Lamiaceae with 2 species each. *Leucas aspera* (Willd.) Spreng, *Phyllanthus amarus* Schumach & Thonn and *Ricinus communis* L. were the most effective species against jaundice as prescribed by many traditional healers. In Karnataka ethno-botanical studies on medicinal plants were conducted in Kodagu (Kalyana Sundaram Indira, 1998), Uttar Kannada (Harsha *et al*., 2003), Chikmagalur (Gopakumar *et al*., 1991), South Canara (Iyngar Bhat *et al.,* 1986), Tumkur (Yoganarasimhan *et al.,* 1991), Bidar (Vidyasagar and Prashantkumar, 2007), Shimoga (Parinitha *et al.,* 2004), Chitradurga (Hiremath and Taranath, 2010) and Gulbarga districts (Ghatapanadi *et al.,* 2011). However in Bellary district no detailed study on ethnobotany has been reported. Hence, the present study represents a contribution to the existing knowledge of folk remedies that are in current practice for the treatment of jaundice.

The present study revealed that the local healers are possessing good knowledge of herbal drugs. Now a day, conservation of traditional knowledge is greatly menaced by a lot of factors related to modernization of the region and lack of interest in traditional healers in transferring it to the next generation. It is therefore essential to document the traditional knowledge of medicinally useful plants. Such studies may provide some valuable information to phytochemists and pharmacologists in screening of individual plant species and assessing active substances against jaundice.

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