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Indigenous phytotherapy for genito-urinary diseases used by the Kandha tribe of Orissa, India

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Abstract

Studies on ethnomedicobotany of Kandha tribe of Orissa, India, are scanty. In view of this the original ethno-botanical information and plant specimens were collected from the Kandhamal district of Orissa by visiting the area several times. The paper reports 27 plant species belonging to 24 families used in the treatment of 17 diseases under the broad heading genito-urinary diseases by the Kandhas of Orissa. The use of these plants does not necessarily imply efficacy, but it does give a list of species that can be studied pharmacologically for its active principles and bioactive effect.

Keywords: Genito-urinary diseases; Kandha ethnomedicine; Phytotherapy; Traditional medicine

1. Introduction

The importance of traditional medicine that provides health service to 75–80% of world population has been realized recently (Marini-Bettolo, 1980). In India, the Ayurvedic system of medicine has been in use for over 3000 years. Nevertheless, the folk and ethnomedicinal uses in rural India have been playing a great role in treatment of diseases, which is now becoming less important. A major bulk of folk or ethnomedicines remained endemic to certain regions or communities in the country. Due to lack of communication of intermingling and breeding of ideas and varying way of life, many of these earlier remedies survived only by word of mouth from generation to generation.

Out of the 63 tribes inhabiting the state of Orissa, Kandha is one of the predominant tribe and represent the seventh highest population in India (Chaudhuri Rai et al., 1975). Kandhas are found in Rayagada, Kandhamal (Phulbani), Gajapati, Kalahandi and Ganjam districts of Orissa, India. However, they are mostly concentrated in the Kandhamal district. There are several sub-tribes of Kandha viz., Dongria kandha, Kutia kandha, Desia kandha, Malua kandha and Kandha.

Kandhamal (Phulbani) district (19°34′ and 20°34′ N, 83°30′ and 84°35′ E) with an area of 8021 km^2 in the state of Orissa comes under the hill ranges of the Eastern Ghats of India. Out of the total population of 648,201, tribal population constitutes 52% and majority (51%) of them inhabits the rural areas. The density of total population in the district is 81 persons per km^2 while density of the Kandha population is 42 persons per km^2. The district is mountainous and covered with dense sal (*Shorea robusta*) forest, which in recent times has reduced to a great extent. The climate is sub-tropical with average annual rainfall of 1597 mm.

The Kandhas residing in the remote villages in the district mostly depend on traditional medicine for the treatment of diseases they suffer from. Due to forest clearance and non-availability of medicinal plants, the use of ethnomedicine is reduced to some extent. But the ethnomedicinal knowledge is still available with the tribe and is to be collected and coded before the knowledge is lost forever.

Ethnobotanical studies in Orissa are in infancy. Some attempts have been made in the past to collect information

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on ethnomedicinal uses of plants by the Kandhas and other tribes of the state (Aminuddin and Girach, 1991; Banerjee and Pal, 1973; Brahmam and Saxena, 1990; Das and Misra, 1987; Das and Misra, 1988; Das and Kant, 1988; Dash and Misra, 1996; Girach and Aminuddin, 1987; Girach et al., 1998; Hemadri and Rao, 1989; Jain, 1971; Mudgal and Pal, 1980; Sahoo, 1986; Saxena and Dutta, 1975; Saxena et al., 1981; Tribedi et al., 1982). The medicinal plants available in this remote district has not been explored well, which warrants a thorough investigation, to evaluate their various levels of efficacy.

In this study, an attempt has been made to collect information on traditional uses of plants by the Kandha tribe of Kandhamal district of Orissa, India for the treatment of genito-urinary diseases they suffer from.

2. Methods and materials

For the present study, forest areas of Phulbani forest division of Kandhamal district, Orissa, India, were considered. The tribal population of this area under study was 36,376. More than 50% of the population depends on traditional medicines for the treatment of their diseases they suffer from. However, no study has been made to assess the exact number of population depend on this type of health care practice. The forest division was divided into several areas for convenience. Each area was visited several times during 2001–2002 to collect ethno-medicinal information. A total of 17 informants were interviewed extensively in this study.

There are four basic interview techniques that are used commonly by field ethnobotanists: open-ended and semi-structured interviews, which are used in qualitative data collection, and structured interviews and questionnaires, which may be used for quantitative analysis (Martin, 1995). In this study, questionnaires were used to collect information on the vernacular names of the plants, plant part(s) used for preparation of medicine, methods of preparation of the medicine, approximate doses prescribed for use by the patient and method of use (administrative route) relating to the treatment of different diseases particularly of genito-urinary diseases the tribal people suffer from. The duration of administration (period) was also collected for both primary and chronic stage of diseases.

In the study area, the native health practitioners constitute different category of Kandha medicine man known as “Dehuri” (persons performing various religious rites), the village headman, the “Kaviraj” (traditional herbal medical practitioner) and other experienced old informants of the area. The age of all the healers interviewed in the study ranged between 43 and 72 years. These healers generally pass on this information in oral form to their sons or near relations and this information is not documented. The people use the medicine with strong religio-spiritual belief.

As most of the informants – the native health practitioners – are illiterate, structural interviews were conducted using a series of predetermined questions. The data collected in this study is based on first hand information. Plant specimens were collected in the company of at least one key informant to make sure that the proper plant has been obtained.

Most of the medicines are prepared from fresh material collected from the wild. Some of the plant materials (annuals, flowers, fruits) are collected during periods of availability, sun dried and stored for use as and when necessary. The dried plant materials are mostly powdered and used for preparation of the medicines. The fresh materials are used as such or the juice is extracted and used.

For extraction of juice, the collected plant materials such as root, bark, leaf or whole plant are thoroughly washed, especially the roots, and are crushed manually using a cylindrical stone roller-pin locally called “Pua” and a flat rectangular stone base called “Sila”. If required, a small amount of water is sprinkled on the material to make it wet. The crushed material is then placed on a clean piece of cotton cloth and squeezed to collect the juice. The squeezed material is again crushed adding water, and the process repeated till all the juice is extracted.

Voucher specimens of the medicinal plants collected from the area were deposited in the Herbarium of the P.G. Department of Botany, Berhampur University (BOTB). The field numbers are of Behera. The specimens were identified with the help of the local flora (Saxena and Brahmam, 1994–1996). Plants with their correct nomenclature are arranged alphabetically with their family name (with in parenthesis), Kui name (K) (Kandha name), local name (L.N.), Oriya name (O.N.), locality of collection (Loc), and field number. A small description of the species followed with various uses of the species for genito-urinary diseases by the Kandhas are appended at the last. The name of the informant is mentioned (with in parenthesis) at the end of each use against each species. The details of the informants along with other data are given in Appendix A.

3. Results

The Kandha community mostly depends on the medicinal plants available in their environment for their health care. The Kandhamal district is rich in medicinal plants and ethnomedicinal knowledge. Twenty-seven plant species used by the Kandhas for the treatment of genito-urinary diseases is enumerated below under 23 heads. These plants belong to 24 families. Altogether 17 diseases are categorized under the broad heading genito-urinary diseases. It was noted that 18 plant species were used for spermatorrhea, whereas for leucorrhoea 16 plant species were used. Fifteen plants each were used for the treatment of metrorragia and impotency.

1. *Argemone mexicana* L. (Papaveraceae)
   Nirpania (K); O.N. Odasamari; Loc. Beheragaum; Behera 75.