ISSN: 2231-6078

INTERNATIONAL JOURNAL OF DRUG DISCOVERY AND HERBAL RESEARCH (IJDDHR)
1(2): April-June: (2011), 58-60

Research Article

Folk lore uses of some medicinal plants in the treatment of UTI infections

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Abstract

The tribal and rural people of India have traditionally depended on folk medicinal healers for treatment of their ailments. These healers use medicinal plants as their primary source of medicinal formulations. Tribes are more dependent on traditional or folk medicinal healers for treatment of urinary tract infections (UTIs) for a number of reasons including lack of access to modern medical facilities, clinging to traditional approaches, and finally hesitancy to relate this form of illnesses in front of unknown doctors. Since the traditional healer usually resides in the same village or in an adjoining area, the patient is more comfortable in seeking them for treatment. The present work enumerates the traditional healers of various ethnic groups to obtain information on medicinal plants used to treat UTIs. Interviews were conducted in the local dialect or language about plant parts used and ailments treated

Keywords: Plants, Urinary Tract Infections (UTIs), Folk lore

Introduction

Urinary tract infections (UTIs) are a leading cause of morbidity and health care expenditures in persons of all ages. Sexually active young women are disproportionately affected, but several other populations, including elderly persons and those undergoing genitourinary instrumentation or catheterization, are also at risk. An estimated 40 percent of women report having had a UTI at some point in their lives. Urine located within the urinary tract, excluding the distal region of the urethra is considered sterile in healthy individuals, as indicated by the absence of cultivable bacterial cells. A urinary tract infection (UTIs) describes a condition in which there are micro organisms established and multiplying within the urinary tract. It is most often due to bacteria (95%), but may also include fungal and viral infection. Urinary tract infections viz., including leucorrhea, frequent or infrequent urination, cloudy urination and burning sensations during urination are prevalent throughout the world. Major contributing factors for high levels of urinary tract infections (UTIs) in predominantly rural India are poor sanitary conditions and lack of proper hygiene. One of the most common UTIs is leucorrhea among women, characterized by a whitish discharge from female genitalia. In one recent study, the most frequently discovered microorganisms found to cause leucorrhea included *Gardnerella vaginalis*, *Candida albicans*, *Chlamydia trachomatis* and *Trichomonas vaginalis*[1-3].

Most people especially in the tribal communities rely on traditional medicinal healers for treatment of their ailments. This is true for diseases like UTIs because of the social stigma associated with them. People, particularly women, either do not discuss their ailments or only discuss them preferentially with traditional healers, who are common in every village and city. Since these healers most often belong to their own community, people seek their treatment instead of visiting modern allopathic doctors. Two other causes of seeking out traditional healers are age-old customs and the cost of modern medicines. Moreover, the rural people of India lack access to modern medicinal facilities. The traditional healers use medicinal plants for treatment and are considered experts in their knowledge of plants and their preparation in disease-treating formulations. This knowledge is on the verge of disappearing because of loss of forest regions and consequent endangerment of medicinal plants. The practice of traditional healers keeping their knowledge confined to their immediate family may also contribute to this disappearance. Recent years have witnessed a gradual migration of traditional medicinal healers to other jobs, which has been more pronounced in their sons and daughters, who after receiving formal education are more inclined to give up traditional medicinal practices and migrate to jobs in the bigger cities[4-8]. The objective of the present study was to learn more about medicinal plants that have been utilized for hundreds of years and so have demonstrated their potential efficacies, even though such efficacies may not have been thus far validated through modern scientific methods. A further objective of the research was to compare the use of these plants in traditional medicine with scientific reports on the efficacy of these plants.

Methodology

During the course of present investigation following methods were adopted:

- The present investigation is based on extensive survey and fieldwork of remote places scattered over different district of the Madhya Pradesh state (Central India) during January 2008 to December 2008.
- The survey and methodology was adopted to study the vegetation and gather ethnomedicinl information's from the inhabitants as per method suggested[9].
- During the field trip author met with the villagers of various age group and interacted with them in detail following standard ethnomedicinl manual[10].
- As much information possible on the uses of plants was collected and recorded in field book.
- To the best of possibility the plants were identified in the field itself for their botanical name along with local name as spell by the inhabitants. However, for further confirmation, the herbarium specimens were collected and pressed as per method suggested[11].
- Confirmations of specimens were made with the help of floristic literatures[12-13].

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Results and discussion

The present work carries the results of '*Folk lore uses of some medicinal plants in the treatment of UTI infections*' indicates the utilization of plants for the treatment of ailments among the inhabitants. There is a rich enthnomedicinal heritage that is however disappearing due to modernization, technological developments, loss of natural habitats and over exploitation of natural resources. A total of 20 plants in 11 families were reported by the traditional healers of study area and tribes as used in remedies for UTIs (Table 1). UTIs remedies included leucorrhea, frequent or infrequent urination, cloudy urination and burning sensations during urination. Among all the species Fabaceae was the largest family with five species. Since both UTIs and STDs are common throughout the world, it was of interest to survey the scientific literature for validation of the uses reported by the informants in this research. It is hypothesized that plants possessing antimicrobial activity or diuretic effects may act towards direct remediation of ailments or relieving the diseased person of any secondary effects. It is therefore important to collate information from all parts of the world regarding medicinal plants that are used as treatments for these ailments. Thus these plants have a basis to be investigated by modern scientific methods for possible discovery of novel antimicrobial or other compounds.

Though the study is restricted its finding are to a great extent relevant to the herbal remedies among the natives of the neighboring areas. Hence, this study will be a contribution to the ethnomedicinal of the region as a whole. The tribal and rural people of the study area are mostly depending on herbal medicine to cure UTIs. Mostly medicinal plants are used fresh as they available in the locality. However, dried parts are also consumed to prepare the drug. The present work includes numerous valuable species of medicinal herbs to cure urinary tract infections.

Acknowledgement

Thanks are also due to the natives of the study area for lucid discussion and completing the questionnaire. One of the senior author (SND) wishes to express his sincere gratitude to University Grants Commission, for providing the financial assistance.

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Table 1: Some medicinal plants used against urinary tract infections (UTI)

S/No.	Botanical Name (Family)	Part Used	Disease
1.	*Abroma augusta* L.f. Malvaceae	Leaves, stems	Menstrual disorders, diseases of uterus
2.	*Acanthus ilicifolius* L. Acanthaceae	Roots	Cloudy urination in women
3.	*Acacia farnesiana* (L.) Fabaceae	Roots	Burning sensation during urination
4.	*Achyranthes aspera* L. Amaranthaceae	Roots	Menstrual pain, lower abdominal pain
5.	*Amaranthus spinosa* L. Amaranthaceae	Leaves	Menstrual problem
6.	*Acrostichum aureum* L. Adiantaceae	Leaves	Cloudy urination in women
7.	*Ageratum conyzoides* L. Asteraceae	Leaves, roots	Cloudy urination in women
8.	*Caesalpinia cristata* (L.) Fabaceae	Plant juice, roots, fruit	Burning sensation in urinary tract
9.	*Cassia sophera* L. Fabaceae	Roots	Leucorrhoea
10.	*Clitoria ternatea* L. Fabaceae	Leaves, roots	Burning sensation in urinary tract, lack of urination, frequent urination
11.	*Centella asiatica* L. Apiaceae	Whole plant	Itching in urination
12.	*Costus speciosus* (Koen.) Sm. Costaceae	Roots	Leucorrhoea, clearing of urine
13.	*Coccinia cordifolia* (L.) Cucurbitaceae	Roots	Leucorrhoea, menstruation problems
14.	*Eclipta alba* (L.) Hassk. Asteraceae	Whole plant	Burning sensation of urine
15.	*Emblica officinalis* Gaertn. Euphorbiaceae	Leaves, fruit	Leucorrhoea
16.	*Hygrophila spinosa* Acanthaceae	Whole plant	Leucorrhoea
17.	*Ipomoea paniculata* Burm.f. Convolvulaceae	Whole plant	Leucorrhoea, menstrual problems
18.	*Mimosa pudica* L. Fabaceae	Roots, bark, leaves	Frequent urination, burning sensations in the vaginal area, leucorrhoea
19.	*Spilanthes acmella* (L.) Murray Acanthaceae	Leaves, Flower	Leucorrhoea
20.	*Zizyphus oenoplia* (L.) Mill. Rhamnaceae	Roots	Burning sensations in urinary tract, less urination, frequent urination