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Folk medicinal practices in Khutmura village, Narsinghdi district, Bangladesh

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Abstract

Folk medicinal practitioners (FMPs) form the primary tier of medicinal practitioners in Bangladesh. They are still quite numerous and can be seen mostly in rural areas. Their mode of obtaining knowledge about their medicinal practices is not well known or has been studied in depth. Interestingly, FMPs use mostly medicinal plants in their treatment, but their selection of plants for treatment of the same disease varies widely from practitioner to practitioner. It is therefore important to document such practices to get a comprehensive picture of medicinal plants and their uses within the country. The objective of this study was to document the practices of a FMP in Khutmura village in Bangladesh. The FMP was observed to use a total of 7 plants distributed into 7 families in his treatment. The plants were used to treat weakness, leukemia, fatigue, asthma, gastrointestinal disorders, diabetes, hair loss, respiratory tract disorders, fungal infections, helminthiasis, erectile dysfunction, acne, fever, and pain. Various parts of a plant or the plant itself were used to treat different disorders, suggesting that the FMP had quite good working knowledge on the therapeutic properties of plants and plant parts.

Keywords: folk medicine, medicinal plants, Khutmura, Bangladesh

Introduction

Human beings have possibly used natural products as medicines since prehistoric times ^[1]. According to fossil records, human beings started to use plants as medicines from as early as 60,000 years ago ^[2, 3]. Any type of medicine or medicinal system(s) prior to or even following the advent of allopathic medicine is known as traditional, complementary or alternative medicine. During the course of many thousands of years, some of these traditional medicinal systems became codified with their own medical philosophy on the causes of diseases and their treatments. The Indian sub-continent countries are particularly rich in a number of traditional medicinal systems like Ayurveda, Unani and Siddha.

Besides the above-mentioned systems of traditional medicine, there is another more ubiquitous treatment system known as folk medicine, defined mostly as the use of herbal and other remedies based on folk beliefs. The Merriam Webster dictionary defines folk medicine as “traditional medicine as practiced nonprofessionally especially by people isolated from modern medical services and usually involving the use of plant-derived remedies on an empirical basis”. The point to be noted is that folk medicine is not based on any system but rather on beliefs, which may vary widely from person to person, and may change at any time depending on the person’s (practitioner) experiences, practical or otherwise (dreams, religious interpretations, or even idiosyncrasies). Since a folk medicinal practitioner (FMP) does not need any formal training or registration, any person can start practicing at any time with thorough, minimal, or even no knowledge (just guesswork) of the therapeutic properties of natural products.

In Bangladesh, FMPs form the primary tier of medical treatment and possibly are the largest group of medicinal practitioners among the various systems of medicine. Surprisingly, FMPs or at least most FMPs possess quite extensive knowledge on the therapeutic properties of plants despite having no formal education. However, our previous experiences suggest that FMPs can be highly unique in their use of plants along with animal parts or minerals for treatment of any given ailment ^[4-24]. Thus it is necessary to document the practices of as many FMPs as possible to obtain an ethnomedicinal overview of a country’s plant, animal and mineral therapeutic resources. The objective of the present study was to document the phytotherapeutic practices of a FMP in Khutumara village in Narsinghdi district, Bangladesh.

Although the FMP was not able to give details on the therapeutic uses of a large number of plants, still it was felt worthwhile to document his practices since some of the uses were quite novel.

Materials and Methods

Information was collected from Suruj Ali, a male FMP practicing in Khutumara village, Narsinghdi district, Bangladesh. Interviews were conducted with the help of a semi-structured questionnaire and the guided field-walk method as described by Martin ^[25] and Maundu ^[26]. In this

method, the FMP took the interviewers to locations from where he collected his medicinal plants, pointed out the plants, and described their uses along with providing the local names. Plant specimens were collected, pressed and dried in the field and later identified at the Bangladesh National Herbarium in Dhaka. Informed Consent as to dissemination of any information provided by the FMP including mentioning the FMP's name was obtained followed by interviews conducted in Bengali. Plant specimens were deposited with the Medicinal Plant Collection Wing of the University of Development Alternative.

Table 1: Medicinal plants and their therapeutic uses by the FMP from Khutmura village, Narsinghdi district, Bangladesh.

Serial Number	Scientific Name	Family Name	Local Name	Parts used	Ailments treated
1	<i>Centella asiatica</i> (L.) Urb.	Apiaceae	Manik pata, Thankuni	Leaf	Weakness, leukemia, dysentery, ulcer, fatigue, asthma.
2	<i>Coccinia grandis</i> Wight & Arn.	Cucurbitaceae	Telakucha	Leaf	Diabetes. Leaf juice is orally taken.
3	<i>Cuscuta reflexa</i> Roxb.	Cuscutaceae	Shorno lota	Stem	Hair loss. Stem juice is rubbed on hair and scalp.
4	<i>Leucas aspera</i> (Willd.) Linn.	Lamiaceae	Dol kolosh	Leaf, seed, root, fruit, bark	Coughs, fungal infections, helminthiasis.
5	<i>Sida cordifolia</i> L.	Malvaceae	Berela	Seed, root	Fatigue, erectile dysfunction, asthma, bronchitis, flu, cold.
6	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Neem	Leaf	Helminthiasis, allergy, acne.
7	<i>Scoparia dulcis</i> L.	Plantaginaceae	Chini chokkor	Flower, fruit, leaf	Dysentery in children, gastric disorders, pain, fever. Juice from a combination of flowers, fruits and leaves is taken orally.

Results and Discussion

The FMP was observed to use a total of 7 (seven) plants distributed into 7 families in his formulations. The results are shown in Table 1. The plants were used to treat weakness, leukemia, fatigue, asthma, gastrointestinal disorders, diabetes, hair loss, respiratory tract disorders, fungal infections, helminthiasis, erectile dysfunction, acne, fever, and pain. One plant was used to treat diabetes, namely *Coccinia grandis*. The anti-diabetic potential of *Coccinia grandis* has been reviewed; the plant has antihyperglycemic, beta-cell regenerative, antihyperlipidemic and antioxidant properties ^[27].

On a similar note, although *Centella asiatica* has reported anti-ulcer activity ^[28], any ethnomedicinal reports of the plant's use for the treatment of leukemia are unknown to the best of our knowledge. However, antioxidant and cytotoxic activities of the plant have been shown, the latter activity against three cancer cell lines, namely mouse melanoma (B₁₆F₁), human breast cancer (MDA MB-231) and rat glioma (C₆) cell lines ^[29]. To conclude, our survey results suggest that folk medicinal practitioners and their uses of medicinal plants cannot be dismissed easily as quackery. Rather, the phytotherapeutic practices of the FMPs need to be studied carefully scientifically to provide new drugs to patients in a more affordable manner.

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