Rural home remedies: Medicinal plants used in a village of Tangail district, Bangladesh

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Abstract

Only a tiny fraction of the 250,000 or more plant species of the world has been explored for their therapeutic properties. It is quite possible that the solutions to the treatment of many complex diseases may lie in plants that are very commonly seen. The objective of this study was to document the phyotherapeutic practices of a folk medicinal practitioner (FMP) of Lakshmipur district, Bangladesh who used commonly available plants to treat complex diseases. The FMP claimed to cure diseases of heart, kidney and liver with fruits of Citrullus lanatus (watermelon). Breast cancer and liver disorders were treated by him with black grapes (Vitis vinifera black variety). Plant parts from Zingiber officinale (ginger) and Artocarpus heterophyllus (jackfruit) were used by the FMP for treatment of obesity and heart attacks, respectively. Scientific validations of the folk medicinal practices of the FMP can lead to important drug discoveries.

Keywords: Home remedies, Tangail district, Bangladesh, medicinal plants

Introduction

Before allopathic medicine there were traditional medicines, which did not disappear with the advent of allopathic medicines but still persists in modern times. And possibly before traditional medicines took a systematic form (like in Ayurveda, Unani or traditional Chinese medicine), there were home remedies. In fact a study in Africa suggest that traditional remedies may start from home and pass on progressively to family members, next to neighbors, then village elders, and finally to traditional healers [1]. Home remedies are present in practically all countries of the world. For instance, home remedies for treatment of hair and scalp have been reported from West Bank-Palestine [2].

In Bangladesh, home remedies and folk medicine play a vital role in the maintenance of health-care in both rural and urban households. Practically every family has their own repertoire of home remedies. In villages, elderly women can be found who has practically built up their own collection of home remedies. They can be found rising up early in the morning, collecting herbs and plant parts for 2-3 hours and then bringing back the collected materials, which are dried and stored in various jars and containers. The herbs and plant parts are then dispensed as per requirements to sick persons. It is also the cultural heritage of ethnic women to collect medicinal plants for therapeutic purposes [3].

Although Bangladesh is a small country without any accurate estimates of its floral species, it has been estimated that there may be more than 5000 floral species within its borders. This huge number of angiosperms, since plants have medicinal properties, has formed the backbone of a number of traditional medicinal systems including folk medicine, tribal medicine, and home remedies, which systems essentially rely on phyotherapy for treatment. But at the same time, adequate studies are yet to be done to document the huge diversity of medicinal plant usage. To compensate for this inadequacy, we had been documenting the phyotherapeutic practices of folk and tribal medicinal practitioners along with home remedies for almost a decade [4-35]. However, we estimate that we have not even documented even 5% of traditional phyotherapeutic practices. Many more surveys need to be done for adequate documentation, which besides being of use in discovery of new drugs will also help plant conservation and establishing intellectual property rights. The objective of the present survey was to document the folk remedies of a rural housewife in Nolin bazaar village of Tangail district, Bangladesh.

Methodology

The rural housewife chosen at random was Sefali Begum, residing in Nolin bazaar village of Tangail district, Bangladesh (Figure 1).
Informed consent was first obtained from her as to disseminate the information obtained from her as well as her name in national and international journals. The home remedy informant (HRI) took the authors to various places within the village to show the plants, which she used in her remedies and described their uses. Local names of the plants were obtained from the HRI. Plants were photographed. Plant parts were also collected, dried and pressed and brought to Dhaka for identification by a competent botanist at the University of Development Alternative. Plant specimens were deposited with the Medicinal Plant Collection Wing of the University of Development Alternative.

![Map of Tangail district](image)

**Fig 1:** Map of Tangail district (inset: map of Bangladesh showing Tangail district in yellow).

**Table 1:** Home remedies of the HRI in Tangail district, Bangladesh

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Scientific Name</th>
<th>Family Name</th>
<th>Local Name</th>
<th>Parts used</th>
<th>Ailments treated</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Amaranthus spinosus</em> L.</td>
<td>Amaranthaceae</td>
<td>Kantanotey</td>
<td>Root</td>
<td>Dysentery. Root is made into a paste with water in which rice (uncooked) has been washed. The paste is taken orally with a few drops of honey and some sugar.</td>
</tr>
<tr>
<td>2</td>
<td><em>Cocos nucifera</em> L.</td>
<td>Arecaceae</td>
<td>Narkel</td>
<td>Oil from fruit pulp</td>
<td>Skin infections. Oil from fruit pulp is mixed with sulfur and topically applied.</td>
</tr>
<tr>
<td>3</td>
<td><em>Heliotropium indicum</em> L.</td>
<td>Boraginaceae</td>
<td>Hatishura</td>
<td>Leaf</td>
<td>Conjunctivitis. 1-2 drops of leaf juice are applied to the eyes.</td>
</tr>
<tr>
<td>4</td>
<td><em>Momordica charantia</em> L.</td>
<td>Cucurbitaceae</td>
<td>Korolla</td>
<td>Leaf</td>
<td>Small pox, chicken pox. Leaves of <em>Momordica charantia</em> and <em>Azadirachta indica</em> are fried or boiled together and taken orally.</td>
</tr>
<tr>
<td>5</td>
<td><em>Mucuna pruriens</em> (L.) DC.</td>
<td>Fabaceae</td>
<td>Alkushi</td>
<td>Leaf</td>
<td>Ear infections. Leaf juice is lightly warmed and 1-2 drops applied inside the ear.</td>
</tr>
<tr>
<td>6</td>
<td><em>Tamarindus indica</em> L.</td>
<td>Fabaceae</td>
<td>Tetul</td>
<td>Young leaf</td>
<td>Gastrointestinal problems. Young leaves are boiled thoroughly in water followed by drinking the water.</td>
</tr>
<tr>
<td>7</td>
<td><em>Centratherum</em></td>
<td>Malvaceae</td>
<td>Somraji, Leaf, seed</td>
<td>Helminthiasis. One-half tola (local measure, 80 tolas approximate 1 kg) leaf</td>
<td></td>
</tr>
</tbody>
</table>

~ 12 ~
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Family</th>
<th>HRI Part Used</th>
<th>Medicinal Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 Hibiscus rosa-sinensis L.</td>
<td>Malvaceae</td>
<td>Joba Leaf</td>
<td>Mehro (Ayurveda term for endocrinological disorders including menstrual disorders). 8-10 leaves from a red-flowered plant is crushed in one chatak (local measure, 16 chataks approximate 1 kg) water till a saliva-like fluid oozes from the leaves. The water is strained, mixed with a little sugar and taken daily orally in the morning on an empty stomach. See Monordica charantia.</td>
</tr>
<tr>
<td>9 Azadirachta indica A. Juss.</td>
<td>Meliaceae</td>
<td>Neem Leaf</td>
<td>Indigestion, loss of appetite, diarrhea. Crushed leaves are mixed with rice flour. Small lumps of the mixture are fried and taken orally. Chronic dysentery. Leaf juice is taken orally.</td>
</tr>
</tbody>
</table>

Results and Discussion

The HRI was found to use a total of 10 plants distributed into 8 families in her plant-based remedies. The plants were used to treat gastrointestinal disorders, skin infections, eye and ear infections, pox, helminthiasis, and endocrinological disorders. The results are shown in Table 1.

A number of the remedies used by the HRI were quite novel, and to our knowledge, previously unreported. For instance, the use of *Monordica charantia* leaves for treatment of chicken pox and smallpox (the latter when it used to occur but not presently) has not been reported before. However, an anti-viral protein active against influenza A has been described to be present in the plant [36]. On the other hand, it is not certain that the protein in question would maintain activity following frying or boiling, as being done by the HRI and also show activity against the viruses causing chicken and smallpox. Similarly, to our knowledge, the use of *Mucuna pruriens* to treat ear infections is also a novel home remedy.

*Amaranthus spinosus* is used for treatment of diarrhea in Thailand and in some parts of India [37]. *Heliotropium indicum*, among other uses, has folk medicinal use in Bangladesh to clear blurred vision [38]. Sulfur and coconut oil along with other components has been shown to be an effective ointment for skin problems [39]. Leaves of *Tamarindus indica* are used to treat diarrhoea in East Africa [40]. So overall it can be said that the home remedies of the HRI contained both novel remedial measures against some diseases along with use of other plants or plant parts, which has been reported to have similar phytotherapeutic uses in other parts of the world.

Acknowledgement

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References


