ORIGINAL ARTICLE

Tribal medicine in tribes who have lost their identities: Medicinal plants of tea garden workers in Sreemangal, Maulvibazar district, Bangladesh


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ABSTRACT

The tea gardens of Sylhet Division in Bangladesh were established more than a century ago. From the very first, these garden owners have employed workers, who have been gathered from various tribes of the Indian sub-continent. Over time, most of their descendants have forgotten their tribal identities, and now comprise a mixed bunch of workers, who mention of themselves as ‘tea garden tribe’. It was of interest to conduct an ethnomedicinal survey among a medicinal practitioner who can no longer remember his tribe but who practices among these mixed indigenous community of workers. Interviews were conducted of this practitioner whose medicinal formulations mainly consisted of medicinal plants and amulets. A total of 22 plants distributed into 18 families were obtained from the practitioner. These plants were used to cure various ailments like jaundice, anemia, chest pain, coughs, constipation, blood poisoning, diarrhea, eye problems, diabetes, delayed delivery of baby, leg infections, throat pain, tuberculosis, stomach ache, abscess, shrinking of pupil in eyes, swelling of ear lobes, burning sensation during urination, and pain in leg. Taken together, the plants represent an interesting group of plants practiced by a tribal practitioner who has lost his tribal identity, and practicing among a community of people, who once belonged to various tribes but have totally forgotten their tribal and cultural identities.

Key words: Medicinal plants, tribal medicine, Sreemangal, Bangladesh

Introduction

Tea garden workers and particularly women and children form a disadvantaged, deprived, exploited and alienated group in Bangladesh society. Many ethnic groups work in the tea gardens of Sylhet Division. Some have totally lost their identity while some maintain their ethnic identity to a small extent, and still others maintain their separate ethnic identities and form distinct communities within the workers. Ethnic groups that have lost their identities also have lost their language and now speak Deshali, which is a mixture of Bengali (the language of the mainstream Bengali-speaking population) and Oriya (language of Orissa people in India).

In 1854, the first tea gardens were established by the British who then ruled India including present day Sylhet Division of Bangladesh. They brought in various tribal workers like the Santals, Oraons, and the Mundas from various parts of then undivided India like Assam, Bihar, madras, and Orissa with promise of lucrative pays and contracts. The workers were made to sign a contract for initially four years, but eventually became so dependent on the tea garden owners that their descendants are still continuing to work in the tea gardens even till the present day. The uprooting of the workers from their original place of habitat caused eventual erosion of their cultural identity and beginning of financial hardship, for the British owners treated them like slaves and made them work under poor conditions of pay and living. This has more or less continued till the present period. The workers depend totally on the mercy of the tea garden owners for their food, housing, and medical costs. Essentials have to be purchased at high prices from shops established within and around the tea gardens, which shops are owned by the Bengali-speaking mainstream population. They are treated as ‘untouchables’ by most Bengalis and not allowed to enter houses unless for domestic labor.

For medicinal purposes, the workers depend on both traditional medicine and allopathic medicine, the former being dispensed by folk medicinal practitioners who practice among them, and the latter being dispensed
by allopathic doctors who are employed by tea garden owners to treat the sick. However, modern clinics and hospital facilities are notably absent, and allopathic treatment is mostly rudimentary. Also because of the high cost of allopathic medicines, which the workers with their poor pay can ill afford, they visit traditional medicinal practitioners. Various types of superstitions are rampant among the workers like ‘evil eye’, possessed by ‘genies’, ‘evil wind’, and for treatment of these ‘sicknesses’, they are totally dependent on traditional medicinal practitioners, who dispense amulets (tabiz) or utter incantations to remove such ‘evils’. Amulets and incantations are also used by traditional medicinal practitioners for treatment of common diseases.

Towards documenting the traditional medicinal practices of Bangladesh, we had been conducting ethnomedicinal surveys among the Kavirajes and tribal medicinal practitioners of the country for a number of years (Nawaz et al., 2009; Rahmanullah et al., 2009a-c; Chowdhury et al., 2010; Hasan et al., 2010; Hassan et al., 2010; Mollik et al., 2010a,b; Rahmanullah et al., 2010a-g; Akber et al., 2011; Biswas et al., 2011a-c; Haque et al., 2011; Islam et al., 2011; Jahan et al., 2011; Rahmanullah et al., 2011a,b; Sarker et al., 2011; Shaheen et al., 2011; Das et al., 2012; Hasan et al., 2012; Hassan et al., 2012; Khan et al., 2012; Rahmanullah et al., 2012a-c; Sarker et al., 2012). A number of the tea garden workers, from the ethnomedicinal point of view, represent an interesting group because of the loss of their original tribal identities and because of the formation of a new heterogeneous group, who now claim them to be ‘tea garden tribe’. A practitioner was located among the tea garden workers who practiced among this ‘tea garden tribe’ residing in Fulbari, Hosnabad, and Bilash Chara of Sreemangal in Maulvibazar district, Sylhet Division, Bangladesh. It was the objective of the present study to document the medicinal plants used by this practitioner, who by his own account, has forgotten his tribal identity.

Materials and Methods

Informed consent was first obtained from the practitioner, named Dipankar Barman, by religion Hindu, treats with herbal medicines and amulets, and practices in Fulbari, Hosnabad, and Bilash Chara of Sreemangal Upazila (sub-district) in Maulvibazar district among a community of tea workers numbering about 50-60 households. The practitioner was apprised as to the nature of our visit and consent obtained to disseminate any information provided both nationally and internationally. Interviews were conducted in Bengali language. Actual interviews were conducted with the help of a semi-structured questionnaire and the guided field-walk method of Martin (1995) and Maundu (1995). In this method, the practitioner took the interviewers on field-trips through areas from where he collected his medicinal plants, pointed out the plants, and described their uses. On occasions, the process was reversed with the practitioner first naming the plant and describing the medicinal uses of the plant, and then taking the interviewers to spots where the plant grew and then pointed out the plant. Plant specimens as pointed out by the practitioner were photographed and collected on the spot, dried and pressed, and then brought back to Dhaka for complete identification by Mr. Manjur-Ul-Kadir Mia, ex-Curator and Principal Scientific Officer of the Bangladesh National Herbarium. Voucher specimens were deposited with the Medicinal Plant Collection Wing of the University of Development Alternative.

Results and Discussion

The practitioner was observed to use a total of 22 plants in his various formulations. These plant species were distributed into 18 families. These plants were used to cure various ailments like jaundice, anemia, chest pain, coughs, constipation, blood poisoning, diarrhea, eye problems, diabetes, delayed delivery of baby, leg infections, throat pain, tuberculosis, stomach ache, abscess, shrinking of pupil in eyes, swelling of ear lobes, burning sensation during urination, and pain in leg. The results are shown in Table 1.

With the exception of several plants, the use of other plants for treatment of the ailments described in Table 1 seems to be unique to this practitioner from the ethnomedicinal point of view. For instance, the practitioner used the plant Achyranthes aspera, for treatment of jaundice. This plant is used in Mayurbhanj district, Orissa, India by various tribes for treatment of sprain, dysentery, and constipation (Rout and Panda, 2010). The plant is used for treatment of burns, cold, coughs, and scorpion sting by the ethnic people of Medak district, Andhra Pradesh, India (Reddy et al., 2010). The Mullu kuruma tribe of Wayanad district, Kerala, India, uses the plant for treatment of piles and headache (Silja et al., 2008). The Mizos of Mizoram State, India use the plant for treatment of dysentery, colic diseases, boils, and cirrhosis (Rai and Lalrammghinghlova, 2011). The Kurichyas of Kannur district, Western Ghats, Kerala, India use the plant for treatment of snake bite and scorpion sting (Rajith and Ramachandran, 2010).

Calotropis procera was used by the practitioner for treatment of chest pain. Ethnomedicinal uses of the plant in Rajasthan desert of India include treatment of rheumatism, wounds, helminthiasis, piles, pain, eye problems, and skin problems (Kumar et al., 2005). The aerial parts of Calotropis procera also have reported analgesic effects (Mossa et al., 1991), which can be useful to alleviate pain.
The plant, *Ageratum conyzoides*, was used by the practitioner for treatment of coughs in children. The plant is used by tribes of Mayurbhanj district, Orissa, India for treatment of mouth ulcer (Rout and Panda, 2010). The Adi tribes of lower Dibang District of Arunachal Pradesh, India use the plant for treatment of wounds (Gibji et al., 2012). The plant is used for treatment of kidney stones by the ethnic people of Medak district, Andhra Pradesh, India (Reddy et al., 2010). The Mullu kuruma tribe of Wayanad district, Kerala, India, uses the plant for treatment of dyspepsia and anemia (Silja et al., 2008). The Mizos of Mizoram State, India use the plant for treatment of stomach cancer, diarrhea, and cuts and wounds to stop bleeding (Rai and Lalramnghinglova, 2011). The plant is used by the plain tribes of Assam, India to treat cuts and wounds (Purkayastha and Nath, 2006).

*Baccaurea ramiflora* was used by the practitioner for treatment of burning sensations in the body. The indigenous Mizo people of Mizoram State in northeast India use the plant as a purgative and for treatment of stomach ache, tooth ache, and helminthiasis (Rai and Lalramnghinglova, 2011). *Phyllanthus reticulatus* was used by the practitioner for treatment of diarrhea in infants. The tribal villages of Maha-Mtharam and Yamanpally in Karimnagar, East Forest Division of Andhra Pradesh, India use the plant for treatment of diarrhea. However, the plant is not used by itself, but in combination with two other plants, *Aegle marmelos* and *Feronia elephantum* (Murthy et al., 2008). The plant is used for treatment of dysentery by the ethnic people of Medak district, Andhra Pradesh, India (Reddy et al., 2010).

The practitioner used the plant *Adenanthera pavonina* for treatment of conjunctivitis and diabetes. In southwest Nigeria, Africa, the plant is used to treat hypertension (Lawal et al., 2010). *Mimosa pudica* was used by the practitioner for delayed childbirth problems. The Mullu kuruma tribe of Wayanad district, Kerala, India, uses the plant for treatment of psoriasis, wounds, asthma, and inflammations (Silja et al., 2008). The plant is used in West Rarrh region of West Bengal, India, for treatment of infertility (Ghosh, 2008). *Hydnocarpus kurzii* was used by the practitioner for treatment of leg infections; the plant is reportedly used by the Manipuri tribe of Sylhet, Bangladesh to treat leprosy (Rana et al., 2010).

*Litsea monopetala* was used by the practitioner to treat coughs in infants and throat pain. The plant is used in northern part of Nara Desert, Pakistan to treat pain, inflammation, and chronic phlegmatic fever (Qureshi et al., 2010). In Jalalpur Jattan of Gujrat district, Punjab, Pakistan, the plant is used traditionally for treatment of gastritis (Hussain et al., 2010). In Sialkot district, Pakistan, the plant is also used to treat gastritis (Arshad et al., 2011). The Tai Ahom tribe of Dibrugarh district, Assam, India, uses the plant for treatment of soursness of mouth, and paralysis (Kalita and Phukan, 2010). In traditional treatment of Pratapgarh district of Uttar Pradesh, India, the plant is used to treat pneumonia (Pandey et al., 2008). The Palliyar tribes of Sirumalai hills, Western Ghats, Tamil Nadu, India, use the plant for treatment of jaundice (Maruthupandian et al., 2011). The Kani tribals of Pechhipparai Hills, Southern Western Ghats of Tamil Nadu, India, use the plant for treatment of stomach ache, head ache, and coughs (Usha, 2012).

*Litsea monopetala* was used by the practitioner to treat jaundice with fever. The Mizos of Mizoram State, India use the plant for treatment of diarrhea, stomach ache, fructures, and as an astringent and stimulant (Rai and Lalramnghinglova, 2011). The Chorei tribes of Southern Assam, North Eastern India, use the plant to treat jaundice (Choudhury et al., 2012). The Meitei people of Manipur use the plant to treat diarrhea, rheumatic body pain, and bone fracture in animals (Khumbongmayum et al., 2005). *Streblus asper*, used by the practitioner to treat tuberculosis, is also considered a medicinal plant among villagers of Manas National Park, Assam, India (Das et al., 2009). The tribes of North Maharashtra use *Averrhoa carambola* for treatment of jaundice (Badgugar and Patil, 2008); the practitioner also used the plant to treat jaundice.

*Datura metel* was used by the practitioner to treat abscess, shrinking of pupils in eyes, and swelling of ear lobes; the plant is used by tribes of Mayurbhanj district, Orissa, India for treatment of ear pain and hair loss (Rout and Panda, 2010). The plant is used in West Rarrh region of West Bengal, India, for treatment of alopeicia (Ghosh, 2008). *Scoparia dulcis* was used by the practitioner to treat stomach ache in infants; the Kurichyas of Kannur district, Western Ghats, Kerala, India use the plant for treatment of stomach pain, urinary disorders, and kidney stone (Rajith and Ramachandran, 2010).

*Solanum torvum* was used by the practitioner to treat tuberculosis in women; The Kurichyas of Kannur district, Western Ghats, Kerala, India use the plant for treatment of cracked foot and coughs (Rajith and Ramachandran, 2010). The Tai-Khamyangs of Assam, India use the plant for treatment of melena (Sonowal and Barua, 2011). The Kani tribals of Pechhipparai Hills, Southern Western Ghats of Tamil Nadu, India, use the plant for treatment of skin infections, and peptic ulcer (Usha, 2012). The tribes of North Maharashtra use *Curcuma longa* for treatment of jaundice (Badgugar and Patil, 2008); the practitioner used it for treatment of conjunctivitis and diabetes. The plant is used to treat herpes in the ethnomedicine of Coastal Karnataka, India (Bhandary and Chandrahekhar, 2011), and for the treatment of menstrual disorders in Kerala, India (Rajith et al., 2012). *Zingiber purpurum* was used by the practitioner to treat leg pain; the plant is used by the plain tribes of Assam, India to treat paralysis, sprains, and inflammation (Purkayastha and Nath, 2006).

Consensus among different practitioners as to a particular use for any given plant species generally indicates that the plant is a promising source for possible new drugs to treat that ailment. On the other hand,
diversity of opinion among traditional practitioners may also point to multiple uses of the plant for treatment of diverse ailments. All plants contain a variety of phytochemicals with different pharmacological properties, which can be utilized as sources of new drugs. From that viewpoint, the plants used by the practitioner in the present survey merits further scientific studies.

**Table 1:** Medicinal plants and formulations of the practitioner of Sreemangal in Maulvibazar 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>Disease, Symptoms, Formulations, and Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Achyranthes aspera L.</td>
<td>Amaranthaceae</td>
<td>Uput lengra</td>
<td>Leaf</td>
<td>Jaundice. Leaves are put in an amulet, which is worn around the wrist.</td>
</tr>
<tr>
<td>2</td>
<td>Alocasia navicularis (K.Koch &amp; C. D. Bouché)</td>
<td>Araceae</td>
<td>Dudh kochu</td>
<td>Leaf, stem</td>
<td>Anemia. Leaves and stems are fried and eaten.</td>
</tr>
<tr>
<td>3</td>
<td>Calotropis procera (Ait.) Ait. f.</td>
<td>Asclepiadaceae</td>
<td>Akondo</td>
<td>Leaf</td>
<td>Chest pain. Leaves are rubbed with old ghee (clarified butter), warmed over a fire and massaged onto the chest.</td>
</tr>
<tr>
<td>4</td>
<td>Ageratum conyzoides L.</td>
<td>Asteraceae</td>
<td>Bon tulsi</td>
<td>Leaf</td>
<td>Coughs in infant. Juice obtained from crushed leaves is mixed with honey and orally administered.</td>
</tr>
<tr>
<td>5</td>
<td>Begonia bicolor S. Watson</td>
<td>Begoniaceae</td>
<td>Chukai</td>
<td>Young stem</td>
<td>Restless feeling. Young stems are chewed and eaten.</td>
</tr>
<tr>
<td>6</td>
<td>Terminalia bellirica (Gaertn.) Roxb.</td>
<td>Combretaceae</td>
<td>Bohera</td>
<td>Seed, bark</td>
<td>Blood purifier. Juice from crushed bark is orally taken; alternately, powdered seeds are orally taken.</td>
</tr>
<tr>
<td>7</td>
<td>Diplazium sp.</td>
<td>Dryopteridaceae</td>
<td>Dheki shak</td>
<td>Leaf</td>
<td>Constipation. Leaves are fried and eaten.</td>
</tr>
<tr>
<td>8</td>
<td>Baccaurea ramiflora Loor.</td>
<td>Euphorbiaceae</td>
<td>Lotkon</td>
<td>Fruit</td>
<td>Burning sensations in the body. Juice obtained from crushed fruit is mixed with water and taken in the form of sherbet.</td>
</tr>
<tr>
<td>9</td>
<td>Phyllanthus reticulatus Poir.</td>
<td>Euphorbiaceae</td>
<td>Kaichar</td>
<td>Leaf</td>
<td>Diarrhea in infants. Juice obtained from crushed leaves is fed orally to infants along with mother’s milk.</td>
</tr>
<tr>
<td>10</td>
<td>Adenanthera pavonina L.</td>
<td>Fabaceae</td>
<td>Rokto chondon</td>
<td>Whole plant</td>
<td>Conjunctivitis, watery eyes, ‘meho’ (diabetes), to whiten complexion. Crushed whole plants are applied around the eyes for eye disorders. Oil obtained from whole plant is orally taken with water for diabetes. Seeds of <em>Adenanthera pavonina</em> are made into a paste with rhizomes of <em>Curcuma longa</em> and cream of cow milk and applied to the body to whiten complexion.</td>
</tr>
<tr>
<td>11</td>
<td>Mimosa pudica L.</td>
<td>Fabaceae</td>
<td>Laal lojebot</td>
<td>Root</td>
<td>Problems during childbirth. If delivery of infant is delayed, roots are put in an amulet, which is worn around the leg. Following delivery, the amulet is taken off, or else according to the healer the intestines also come out.</td>
</tr>
<tr>
<td>12</td>
<td>Hydnocarpus kurzii (King.) Warb.</td>
<td>Flacourtiaecae</td>
<td>Chal murga</td>
<td>Leaf, seed</td>
<td>Leg infections or appearance of small pustules on the leg. Crushed leaves or seeds are applied to affected area.</td>
</tr>
<tr>
<td>13</td>
<td>Lencas aspera (Wild.) Link.</td>
<td>Lamiaecae</td>
<td>Dom kolosh</td>
<td>Leaf, flower</td>
<td>Coughs in infants, throat pain. Juice obtained from crushed flowers is orally fed to infants along with mother’s milk for coughs. Leaves are fried and taken orally for throat pain.</td>
</tr>
<tr>
<td>14</td>
<td>Litsea monopetala (Roxb.) Pers.</td>
<td>Lauraceae</td>
<td>Kalo mendra</td>
<td>Leaf</td>
<td>Jaundice with fever. Juice obtained from crushed leaves is taken orally.</td>
</tr>
<tr>
<td>15</td>
<td>Streblus asper Loor.</td>
<td>Moraceae</td>
<td>Sheora</td>
<td>Leaf</td>
<td>Tuberculosis. Leaves are boiled in water, followed by drinking the water.</td>
</tr>
<tr>
<td>16</td>
<td>Averrhoa carambola L.</td>
<td>Oxalidaceae</td>
<td>Kamaranga</td>
<td>Fruit</td>
<td>Jaundice. Dried fruits are powdered and taken orally with water.</td>
</tr>
<tr>
<td>17</td>
<td>Scoparia dulcis L.</td>
<td>Scrophulariaceae</td>
<td>Chini pata</td>
<td>Leaf</td>
<td>Stomach ache in infants. Juice obtained from crushed leaves is mixed with mother’s milk and fed orally to infants.</td>
</tr>
<tr>
<td>18</td>
<td>Datura metel L.</td>
<td>Solanaceae</td>
<td>Kalo dhubra</td>
<td>Leaf</td>
<td>Abscess, shrinking of pupils in the eyes, swelling of ear lobes. Leaves are rubbed with ghee and applied to abscess. Juice obtained from crushed leaves is applied around the eyes to enlarge pupils. Juice obtained from leaves is applied with ‘afing’ (opium) to base of ear to alleviate swelling of ear lobes.</td>
</tr>
<tr>
<td>No.</td>
<td>Plant Name</td>
<td>Family</td>
<td>Part Used</td>
<td>Description</td>
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</tr>
<tr>
<td>19</td>
<td><em>Solanum torvum</em> Sw.</td>
<td>Solanaceae</td>
<td>Goot baegoon</td>
<td>Fruit</td>
<td>Tuberculosis in women. Juice obtained from crushed fruit is orally taken.</td>
</tr>
<tr>
<td>20</td>
<td><em>Stemona tuberosa</em> Lour.</td>
<td>Stemonaceae</td>
<td>Shotomal</td>
<td>Leaf</td>
<td>Burning sensations during urination. Juice obtained from crushed leaves is mixed with water and orally taken.</td>
</tr>
<tr>
<td>21</td>
<td><em>Curcuma longa</em> L.</td>
<td>Zingiberaceae</td>
<td>Holud</td>
<td>Rhizome</td>
<td>See <em>Adenanthera pavonina</em>.</td>
</tr>
<tr>
<td>22</td>
<td><em>Zingiber purpureum</em> Roxb.</td>
<td>Zingiberaceae</td>
<td>Bon ada</td>
<td>Rhizome</td>
<td>Pain in leg. Juice obtained from crushed rhizome is mixed with mustard oil and massaged on the leg.</td>
</tr>
</tbody>
</table>

References


