TRADITIONALLY MEDICINAL PLANTS USE IN THE VILLAGE OF BANGLADESH

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SUMMARY
Anciently plants are used for several acute and chronic diseases. Plants contain more than thousands secondary metabolites those are exhibit several potential pharmacological activity and lead compounds. Future investigation would lead to identification, purification of lead compounds from those plants. This investigation indicate the use of plants in combination or individual for remedies of several diseases like as chicken pox, bone fracture, orchitis, snake bite, jaundice, fever, typhoid, ear infection, skin diseases, gastrointestinal disorders, cardiovascular disorders, diabetes, pain, poisonous insect bites, hepatitis B, whitish discharge from vagina, respiratory disorders, tooth infections, gonorrhea, passing of semen with urine, puerperal fever, cuts and wounds as well as uterine problems.

All the plants used anciently are interest for further scientific studies to determine their efficacy in treatment some formulations reported for the treatment of diabetes, hepatitis B, cardiovascular disorders and gonorrhea deserve special research either because of the development of drug-resistant bacterial strains (like as gonorrhea), diabetes, cardiovascular disorders and hepatitis B are becoming endemic throughout the world for various reasons and modern medicine has no effective treatment for these ailments. This study would more effective in future for isolation, purification and development of new molecules for several acute and chronic diseases.

KEYWORDS: Ethno-medicinal plants, Barisal, Bangladesh.
INTRODUCTION
Nature contains vast medicinal plants those exhibit potential biological activity. At least 10% of modern medicines isolated from plants among 12,000 compounds.\textsuperscript{[1,2]} All plants produce two types of metabolites one is primary metabolite and secondary metabolite. Primary metabolite consists of fat, sugar in whole plants and secondary metabolites also present in different part of the plants.\textsuperscript{[3]}

Almost 5,000 floral species are abundantly use in Bangladesh as herbal medicine during ancient era by folk medicine practitioner (Kaviraje). We know allopathic medicine is ‘modern’ and most superior from other types of medicine like as homeopathic. Most of the potential allopathic medicines are drive from plants and those were traditionally used in thousand centuries.\textsuperscript{[4,5]}

Recent investigation indicates use of herbal medicines as a complementary or alternative medicine for the treatment of various diseases directly or indirectly.\textsuperscript{[6]}

MATERIALS AND METHODS
The present survey was carried out at Khorki village in Barisal district. One Kaviraje was interviewed, namely Hakim Mohammad Edris Soudagor. Informed consent was initially obtained from the Hakim (Kaviraje) prior to any interviews. The Hakim was told in details about the purpose of our survey, specially the need to document their information so that they do not get forgotten as well as particular consent obtained to publish their names and information provided in national and international journals. The Hakim agreed to being interviewed; in fact, information and consent was provided readily. Interview was conducted in Bengali, the language being spoken by both interviewers and Hakim with the help of a semi-structured questionnaire develop by field-walk method \textsuperscript{[7,8]}. All plant species were collected from sport; field dried and sends to the Bangladesh National Herbarium for identification of those plants. Still lots of Bangladeshi floral species unknown and those may added in fresh discoveries of new floral species from various parts of the country are being made on a fairly regular basis.

RESULTS AND DISCUSSION
In this investigation we were observed that the Kaviraje used a total of 13 medicinal plants for treatment of a various variety of ailments. The rest 13 plants were distributed into 13 families. All Plant parts were mostly used for treatment versus whole plants and it was
observed that different plant parts from the same plant were used for treatment of various diseases. The plant parts used mostly included leaves, stems, barks, roots, tubers, flowers, fruits, seeds, rhizomes and exudates (sap) from a plant. The results are shown in Table 1. An interesting feature of the Kaviraje was that in most cases, the parts from the same plant or the same plant was used for treatment of a wide variety of diseases like as flatulency, low sperm count, sperm incapable of being fertilized, bitter, to increase flow of bile, astringent, biliary problems like bile turning the color of blood, gastrointestinal propulsion inhibitor (i.e. dysentery or during diarrhea), coughs, tuberculosis and fever. The bark of the same plant was used for treatment of leprosy and eczema, while the stems from the plant were used for the treatment of asthma. The dried or fresh aerial parts or leaves of the plant were used as prophylaxis and symptomatic treatment of upper respiratory infections such as (uncomplicated sinusitis, pharyngotonsillitis, common cold), lower acute diarrhea and urinary tract infections, while whole plants inclusive of roots were used for the treatment of bronchitis, bacillary dysentery, carbuncles, cough, colitis, dyspepsia, fever, hepatitis, sores, malaria, mouth ulcers, tuberculosis and venomous snake bites; the dried aerial parts of the same plant was used for treatment of colic, otitis media (middle ear infection), vaginitis (inflammation of the vagina), chickenpox, pelvic inflammatory disease, eczema and burns. It can be easily observed from Table 1 that taken together, the Kaviraje interviewed possessed considerable knowledge on the medicinal properties of not only the whole plant, but also separate plant parts as well. Some of the diseases treated, like diabetes or rheumatism do not have cures in allopathic medicine. As such, the plants used by the Kaviraje for treatment of these various diseases, merit scientific investigations towards discovery of possible new drugs to combat these diseases which also afflict millions of people throughout the world. The other plants used by the Kaviraje also deserve proper scientific studies. Any validation of their folk medicinal uses can not only result in possible discovery of cheaper, newer and more effective drugs as well as spur conservation efforts on these medicinal plants[22].
### Table 1: Medicinal plants use by the Kavirajes of Khorki villages in Barisal district of Bangladesh.

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Scientific name</th>
<th>Family name</th>
<th>Local name</th>
<th>Using part</th>
<th>Use</th>
<th>Contraindication</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><em>Mangifera indica</em></td>
<td>Anacardiaceae</td>
<td>Aam</td>
<td>Mango seeds</td>
<td>Dysentery, Frequent urine</td>
<td>The spinocerebellar ataxia type 2 (SCA-2) is a progressive neurodegenerative disorder without specific therapy identified, and it is related to the loss of function in the cerebellum, mitochondrial dysfunction, oxidative stress and neurotoxic processes.(^9)</td>
</tr>
<tr>
<td>2.</td>
<td><em>Abroma augusta</em></td>
<td>Sterculiaceae</td>
<td>Ulot-kombol</td>
<td>Leaf petiole</td>
<td>Insomnia, appetite, Meh, irascible, foot/leg/eye irritation</td>
<td>The aqueous extract of the fresh leaves of Abroma augusta L. (Family: Sterculiaceae, Bengali name: Ulatkambal, English name: Devil's cotton, DC) is viscous and used traditionally to treat diabetes mellitus.(^10)</td>
</tr>
<tr>
<td>3.</td>
<td><em>Centella asiatica</em> (L.) Urb.</td>
<td>Apiaceae</td>
<td>Thankuni or adamoni shak</td>
<td>Leaf</td>
<td>Diarrhea, Dysentery, Gastric</td>
<td>Some sources state that Centella may reduce fertility in animal studies, thins the blood, and may be hypoglycemic.(^11)</td>
</tr>
<tr>
<td>4.</td>
<td><em>Phyllanthus emblica</em></td>
<td>Phyllanthaceae</td>
<td>Amloki gach</td>
<td>Fruits</td>
<td>Digestion development</td>
<td>No negative side effects or studies reporting warnings were found, although it may be drying to skin and hair.(^12)</td>
</tr>
<tr>
<td>5.</td>
<td><em>Zingiber officinale</em></td>
<td>Zingiberaceae</td>
<td>Ada gach</td>
<td>Roots</td>
<td>Dry cough</td>
<td>Burning feeling in mouth/throat, abdominal pain, diarrhea.(^13)</td>
</tr>
<tr>
<td>6.</td>
<td><em>Allium cepa</em></td>
<td>Amaryllidaceae</td>
<td>Piyaj (white)</td>
<td>Juice</td>
<td>Hair growth &amp; hair fall Reducing.</td>
<td>Allergies to the plant. The level of safety of BulbusAlliiCepae is reflected by its worldwide use as a vegetable. Diabetes: Onion might lower blood sugar. If you have diabetes and use onion in medicinal</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Family</td>
<td>Part Used</td>
<td>Field Use</td>
<td>Notes</td>
<td></td>
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<tr>
<td>7.</td>
<td>Areca catechu</td>
<td>Arecales</td>
<td>Fruits</td>
<td>Remedy from Footrotten</td>
<td>Betel nut consumption has been linked to the incidence of metabolic syndrome. [14]</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Brassica rapa L</td>
<td>Brassicaceae</td>
<td>Seed oil</td>
<td>Reducing general body pain</td>
<td>Cruciferous vegetables can potentially be goitrogenic (inducing goiter formation). Brassica species may cause baby colic in breast-feeding. [15]</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Punica granatum</td>
<td>Lythraceae</td>
<td>Dalim</td>
<td>Dysentery</td>
<td>Discontinue if allergy occurs - Pregnancy Root-bark, stem-bark of P. granatum are highly toxic, so it must be use with extreme caution not to be used during pregnancy, lactation, and for children. [16]</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Musa sapientum</td>
<td>Musaceae</td>
<td>Bichi Kola</td>
<td>Fruits</td>
<td>Digestion development, Body relaxation (Drinking Juice of banana+ 250mg water) Patients with cardiovascular diseases and/or pulmonary diseases such as symptomatic unstable, steroid-dependent asthma, and/or those who are receiving cardiovascular drugs such as beta blockers, may be at higher risk for severe adverse reactions. [18]</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Aloe vera (L.) Burm.f.</td>
<td>Aloaceae</td>
<td>Ghrito kumara or muskani pata</td>
<td>Leaf</td>
<td>Hair fall, Cold head, Dysentery. Aloe gel is likely safe when applied to the skin and possible safe when taken by mouth in adults. Once in a while aloe gel might cause burning and itching of the skin. [19]</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Aegle marmelos (L.) Corr.</td>
<td>Rutaceae</td>
<td>Bel gach</td>
<td>Fruits</td>
<td>Dysentery, Digestion problem, Body tan The leaves are said to cause abortion and sterility in women. The bark is used as a fish poison in the Celebes. Tannin, ingested frequently and in quantity over a long period of time, is antinutrient and</td>
<td></td>
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</tbody>
</table>
CONCLUSIONS
Traditionally various spices are potentially use as folk medicine in Bangladesh. Some plants used as dietary supplementary, foods flavoring agent, coloring agent and preservative from thousands of years. Numerous ancient texts reveal significance of these spices, cultivations, their uses, therapeutic effects, economical aspects and so on. All these plants contain several phytochemical constituents to cure from several diseases like chicken pox, bone fracture, orchitis, snake bite, jaundice, fever, typhoid, ear infection, skin diseases, gastrointestinal disorders, cardiovascular disorders, diabetes, pain, poisonous insect bites, hepatitis B, whitish discharge from vagina, respiratory disorders, tooth infections, gonorrhea, passing of semen with urine, puerperal fever, cuts and wounds, as anti-inflammatory, antioxidant, hypolipidemic, anti diabetic, Chemopreventive, anti cancer, anti mutagenic, digestive stimulatory as well as uterine problems and so on. In the village people, they were used those plant by self or by folk medicine practitioner known as Hakim or Kaviraje. In this survey, all those plants were successfully used for the treatment of several acute and chronic diseases. Traditional studies elucidate that Bangladeshi plants represent vast resources for possible lead compound in drug development or as alternative medicine development. Future investigation will reveal more specific compounds, mechanism of action, isolation, purification of lead compounds.

REFERENCES


