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## Some phyto-home remedies used in Kaoraid village of Gazipur district, Bangladesh

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### Abstract

A number of phyto-remedies are used as home remedies by the people of Bangladesh. It is not certain how such home remedies came into existence, but possibly trials and error in households led to establishment of a particular remedy. This would explain why home remedies vary quite widely from area to area in Bangladesh. As home remedies by themselves can be good primary sources for further scientific studies, it is of interest to document such remedies towards further scientific research. The present study documents the use of 21 plants distributed into 16 families in the village of Kaoraid in Gazipur district of Bangladesh. The plants were used to treat various common and relatively simple ailments like respiratory tract disorders, tooth infections, gastrointestinal disorders, pain, fever, skin disorders, and hoarseness of voice. Of more interest are the home remedies that were used for treatment of epilepsy, kidney stones, hypertension, hypercholesterolemia, and liver disorders. It is also to be noted that most of the plants had multiple uses indicating that the common people had a fairly good knowledge of the therapeutic properties of plants. Taken together, the plants add to the growing repertoire of documented home remedies of Bangladesh.

**Keywords:** Phyto-home remedies, plants, Kaoraid, Gazipur, Bangladesh

### Introduction

From ancient times and possibly since the advent of human beings, people have suffered from diverse ailments and have tried to treat diseases with what was the most commonly available natural resource, namely plants. Later on, even with the advancement of civilization and the development of more systematic forms of treatment through trained medicinal practitioners, people in different parts of the globe have still retained memories of ancient treatment methods and use them in households to treat mostly common diseases. Together, this form of treatment is known as home remedies. In Bangladesh, plant-based or phyto-home remedies are quite common and in general are known as 'totka chikitsa'. Home remedies are also known in other countries of the world and even recognized by the World Health Organization or WHO [1-5].

It has always been our notion that home remedies should not be discarded or disdained. On the contrary, they can complement other systems of traditional medicinal knowledge and as such, can serve as the basis for further research leading to potential drug discoveries. Acting from that view point, we had been documenting home remedies along with folk and tribal medicinal remedies for a number of years [6-25]. The objective of the present study was to document some home remedies of Kaoraid village people in Gazipur district, Bangladesh.

### Materials and Methods

Information was collected from various household informants (both sexes) and particularly Bhudeb Lal Sharma, male, village Kaoraid, Gazipur district. Informed Consent was obtained followed by interviews conducted in Bengali. Plant names in Bengali were obtained from the informants. Since these were common plants (but with some novel uses), the plants were easily identified by the authors on the basis of their Bengali names. However, in case of doubt, the informants took the authors to spots from where they usually collected the plants. The plants were photographed, and voucher specimens collected, dried and identified by a competent botanist. Plant specimens were deposited with the Medicinal Plant Collection Wing of the University of Development Alternative.

### Results and Discussion

The present study documents the use of 21 plants distributed into 16 families the data was collected from informants in the village of Kaoraid in Gazipur district of Bangladesh.

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The plants were used to treat various common and relatively simple ailments like respiratory tract disorders, tooth infections, gastrointestinal disorders, pain, fever, skin disorders, and hoarseness of voice. Besides the relatively common disorders, the home remedies that were used for treatment of complicated disorders like epilepsy, kidney

stones, hypertension, hypercholesterolemia, and liver disorders. It is also to be noted that most of the plants had multiple uses indicating that the common people had a fairly good knowledge of the therapeutic properties of plants. The results are shown in Table 1.

**Table 1:** Some home remedies used in Kaoraid village, Gazipur district, Bangladesh

Serial Number	Scientific Name	Family Name	Local Name	Parts used	Ailments and mode of medicinal use
1	<i>Allium cepa</i> L.	Amaryllidaceae	Peyaj	Bulb	Coughs with mucus. Juice obtained from crushed bulb is taken orally with honey. Tooth infections, foul odor in mouth. Bulb is chewed and taken raw. To improve blood circulation. Bulb is eaten raw.
2	<i>Allium sativum</i> L.	Amaryllidaceae	Roshun	Clove	Diarrhea, intestinal disorders. Cloves are taken orally on an empty stomach. Headache, coughs, asthma. Cloves are eaten raw.
3	<i>Centella asiatica</i> (L.) Urb.	Apiaceae	Thankuni	Root, stem, leaf, whole plant	Fever. One spoon juice obtained from crushed whole plant is orally taken. Gastric problems. 125g of leaf juice is mixed with 250g mishri (crystalline sugar) and 500g milk and taken orally every morning. To increase digestion. Leaves are cooked and eaten for 1 month. Stomach pain, dysentery. Leaf paste is taken orally with warm rice for stomach pain. 5-10 leaves are chewed and taken orally in the morning for 7 days. Increase memory. 2-3 tolas leaf juice (80 tola = 1 ser approximating 1 kg) is mixed with 1 spoon honey and half cup milk and taken orally.
4	<i>Aloe vera</i> (L.) Burm.f.	Asphodelaceae	Ghritokumari	Leaf	Constipation, diarrhea, to improve intestinal function. Leaf juice is regularly taken orally. Fatigue, blood purification, immune stimulant. Leaf juice is taken occasionally. Smoothness of skin, leucoderma. Leaf juice is applied topically. Dandruff. Leaf juice is applied to scalp.
5	<i>Carica papaya</i> L.	Caricaceae	Pepe	Fruit	Digestive aid, constipation, rheumatic pain, immunostimulant. Fruits are eaten.
6	<i>Cuscuta reflexa</i> Roxb.	Convolvulaceae	Shorno lota	Whole plant	Weakness, coughs, biliary disorders, stomach disorders. Whole plant paste is taken orally.
7	<i>Kalanchoe pinnata</i> (Lam.) Pers.	Crassulaceae	Pathorkuchi	Leaf	Kidney stones. Leaves are chewed or leaf juice is taken orally twice daily. Epilepsy. Leaf juice is taken orally during epileptic fits. Stomach pain in children. Leaf juice is orally taken. Long-term coughs and mucus. Half cup leaf juice is warmed and orally taken.
8	<i>Acacia nilotica</i> (L.) Willd.	Fabaceae	Babla	Fruit	Constipation, asthma, blood purification, hypercholesterolemia, immunostimulant. Fruits are taken orally.
9	<i>Swertia chirayita</i> L.	Gentianaceae	Chirata	Fruit, stem, leaf	Immunostimulant. Leaves and stems are soaked in water overnight followed by drinking the water. Hypertension, typhoid fever, helminthiasis. Fruit juice is taken orally.
10	<i>Mentha spicata</i> L.	Lamiaceae	Pudina	Leaf	Acne. Leaf juice is applied topically. Coughs, cold, asthma. Leaf juice is taken orally. Head lice. Leaf juice is applied to scalp.
11	<i>Ocimum sanctum</i> L.	Lamiaceae	Tulsi	Leaf, seed	Coughs, mucus, fever. Leaf juice is orally taken. Prevention and cure of malarial and dengue fever. For prevention, young leaves are boiled with tea and taken orally. For cure, leaves are boiled in water and the water taken with powdered seeds of <i>Elettaria cardamomum</i> , sugar and milk. Asthma, coughs, cold. Leaf juice is mixed with honey and sliced rhizome of <i>Zingiber officinale</i> and orally taken. Oral lesions. Leaves are chewed. Eczema, itches, headache. Leaf paste is topically applied. Blood purification, to reduce cholesterol, diarrhea. Leaves are orally taken. To stimulate appetite. Leaves are chewed and taken in the morning on an empty stomach. To remove foul odor from mouth. Leaves are chewed. To remove skin spots caused by pox. Leaf juice is topically applied. Burning sensations during urination. Seeds are soaked in water followed by drinking the water with sugar.
12	<i>Abelmoschus esculentus</i> (L.) Moench	Malvaceae	Dherosh	Fruit	Constipation, gastric inflammation, bone strengthening, immunostimulant. Fruits are eaten in the cooked form.
13	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Neem	Leaf	See <i>Curcuma longa</i> .

14	<i>Musa paradisiaca</i> L.	Musaceae	Kach kola	Fruit	Diarrhea, hypertension, to aid digestion, to reduce weight. Boiled unripe fruits are mashed and taken orally.
15	<i>Syzygium aromaticum</i> (L.) Merr. Et L.M. Perry	Myrtaceae	Labanga	Fruit (clove), clove oil	Toothache. Several cloves are crushed and the powder applied to the painful place. To remove foul odor from mouth. Inner portion of mouth is anointed with clove oil. Vomiting tendency. One clove is kept inside the mouth. Cold, asthma. Clove is put in hot tea and the tea taken orally.
16	<i>Olea europaea</i> L.	Oleaceae	Jolpai	Fruit	Hypertension, vitamin E deficiency, to maintain heart in good condition. Fruits are eaten. To keep skin smooth. Olive oil is applied topically.
17	<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	Bael	Fruit	Constipation, dysentery, jaundice, appetite stimulant. Ripe fruits are eaten directly or mixed with water and taken in the form of a sherbet.
18	<i>Citrus grandis</i> (L.) Osbeck	Rutaceae	Jambura	Fruit	Hypercholesterolemia, nutritive, appetite stimulant, immunostimulant. Fruits are taken orally.
19	<i>Curcuma longa</i> L.	Zingiberaceae	Holud	Rhizome	Liver disorders. One spoonful of rhizome juice is taken orally with honey. Blood purification. In the morning a rhizome slice is taken orally with jaggery. Acne. Rhizome slice is taken orally with leaves of <i>Azadirachta indica</i> . Breaking (hoarseness) of voice. Sherbet of powdered rhizome is taken orally. Inflammation. Powdered rhizome is taken orally with cow milk.
20	<i>Elettaria cardamomum</i> (L.) Maton	Zingiberaceae	Elach	Seed	See <i>Ocimum sanctum</i> .
21	<i>Zingiber officinale</i> Roscoe	Zingiberaceae	Ada	Rhizome	Indigestion, stomach rumblings. Rhizome juice is taken orally. Mucus. Rhizome is sliced into small pieces and inhaled. Sliced rhizome is also taken orally with tea. Headache. Sliced rhizome is boiled with tea and taken orally. Vomiting tendency during travelling. A piece of rhizome is kept inside the mouth. See <i>Ocimum sanctum</i> .

Whether home remedies can be scientifically validated in their therapeutic uses or are merely products of imaginative minds (an opinion more expressed by educated people of Bangladesh) is always an interesting point for discussion. Towards solving this question, it may be worthwhile to examine the scientific reports on at least a few plants to determine the scientific validity of their home remedial uses. *Allium cepa* bulbs (onion) have been described in a recent review to be able to reduce pain, anti-inflammatory, as well as active against Gram-positive and Gram-negative bacteria [26]. The analgesic, anti-inflammatory and anti-bacterial properties can prove useful in tooth and gum infections as well as coughs with mucus. The *Allium* genus with species like *Allium cepa* and *Allium sativum* is rich in organ sulfur compounds, quercetin and flavonoids, which compounds are useful in preventing cardiovascular and heart diseases [27]. Cloves of *Allium sativum* (garlic) have also been reviewed to be effective against colic pain, traveler's diarrhea, and asthma [28]. Thus home remedies using both the plant parts are readily validated scientifically through published reports.

To take other examples, *Centella asiatica* reportedly is active against enteric pathogens [29]. Pulp of *Aloe vera* leaves is effective against constipation [30]. Ethanol extract of *Centella asiatica* leaves has been shown to enhance memory performance in rats [31]. Notably, the first plant was used as a home remedy in Kaoraid village against dysentery and to increase memory, while the second plant, *Aloe vera* was used against constipation. *Centella asiatica* was also used as a home remedy to treat gastric problems and to treat fever. The plant is listed in the Indian Pharmacopoeia as remedy for fever; ethanol extract of the plant has been shown to protect rats from gastric lesions induced by ethanol administration [32]. *Aloe vera* leaf pulp is also a proven remedy to lessen the appearance of wrinkles and for various skin disorders [33]; thus its home remedial use for smoothness of skin is also scientifically validated.

Taken together, even just a brief discussion on four of the twenty one medicinal plants used as home remedies in Kaoraid village shows that the remedial uses are scientifically validated on the basis of the phytochemical constituents and pharmacological properties reported of the plants. This opens up the possibilities of discovering new lead compounds from the plants, which can prove effective against other diseases besides their home remedial uses. For instance, two of the triterpenes of *Centella asiatica*, asiaticoside and made cassoside have been reported to stimulate collagen synthesis, protect rat brain against age-related oxidative damage, and also possibly have anti-cancer effects [34]. This is not surprising considering that home remedies are probably in use for hundreds of years and would not have been used this long if not proven effective.

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