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## Some home remedies used in Kalindi village of Dhaka district, Bangladesh

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### Abstract

Home remedies offer a cheap, quick and efficient mean for treatment of common illnesses, which does not usually necessitate going to a qualified medical practitioner or hospital. At the same time, quite occasionally home remedies are used for treatment of complicated diseases like diabetes or cardiovascular disorders. As such, documentation of home remedies is important for such remedies can provide insights into the therapeutic properties of the items used for treatment. The objective of the present study was to document some home remedies used in Kalindi village in Dhaka district, Bangladesh. Essentially, the information was obtained from one housewife of the village, who was particularly knowledgeable in home remedies. The informant gave treatment information on 12 plants distributed into 9 families. Although all her formulations contained plants, one formulation also used Himalayan rock salt along with plant. The various formulations were used for treatment of fever, helminthiasis, respiratory tract infections, jaundice, ear infections and heart disorders, gastrointestinal tract disorders, bleeding from gums, toothache, and skin disorders. One plant was used as a galactagogue that is to increase milk production in lactating mothers. The plants can form a useful source of information for further scientific studies, especially plants used to treat heart disorders, jaundice, and skin disorders.

**Keywords:** Home remedies, plants, Kalindi, Dhaka, Bangladesh

### Introduction

As a remedial measure against diseases, home remedies possibly form the most cost-effective method of treatment. Home remedies are typically what the name implies, that is therapeutic measures for diverse diseases, but which are not present as such in approved and recognized medical treatment and which have been derived from hearsay or trial and error methods by household member(s). Most home remedies are simple and are plant-based, although a few may use other materials like animal part(s) or minerals by themselves or in combination with plants<sup>[1, 2]</sup>.

Home remedies are present in practically every country and even communities although their usage may be limited to a few households or even one family<sup>[3]</sup>. Polyphenol-rich foods like blueberries or dark chocolate have been described as good home remedies for peptic ulcer<sup>[4]</sup>. The treatment of hair and scalp by various home remedies in the West Bank-Palestine region has been reported<sup>[5]</sup>. In fact, the World Health Organization (WHO) has also recognized the importance of home remedies<sup>[6]</sup>.

In countries with substantial number of population having below poverty level incomes or countries where modern medical facilities are absent, traditional medicines, if present along with home remedies can offer both cure and hope to people suffering from diseases. As such, we had been documenting home remedies along with folk and tribal medicinal remedies for a number of years<sup>[7-26]</sup>. The objective of the present study was to document some home remedies of Kalindi village people in Dhaka district, Bangladesh.

### Materials and Methods

Information was collected mainly from Nazma Begum, a housewife in Kalindi village, Dhaka district, Bangladesh. Kalindi village is located on the outskirts of Dhaka city, the capital of Bangladesh with an estimated population of over 15 million. Informed Consent as to dissemination of any information provided including mentioning her name was obtained followed by interviews conducted in Bengali.

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Plant names in Bengali were obtained from the informant. The plants were easily identified by the authors on the basis of their Bengali names. However, in case of doubt, the informant took the authors to spots from where she 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

A total of 12 plant names along with plant parts used and

mode of partaking or application were obtained from the informant. The plants were distributed into 9 families. Most of the plants had multiple therapeutic applications. The various formulations were used for treatment of fever, helminthiasis, respiratory tract infections, jaundice, ear infection(s), cardiac disorders and gastrointestinal (GI) tract disorder(s), bleeding from gums, toothache, and skin disorders. One plant was used as a galactagogue that is to increase milk production in lactating mothers. The results are shown in Table 1.

**Table 1:** Some home remedies used in Kalindi village, Dhaka district, Bangladesh.

Serial Number	Scientific Name	Family Name	Local Name	Parts used	Ailments and mode of medicinal use
1	<i>Andrographis paniculata</i> (Burm.f.) Wall. ex Nees	Acanthaceae	Kalomegh	Leaf	Fever, helminthiasis. Leaf juice is orally taken.
2	<i>Justicia adhatoda</i> L.	Acanthaceae	Bashok	Leaf	Mucus, coughs. Leaf juice is taken orally.
3	<i>Achyranthes aspera</i> L.	Amaranthaceae	Ofof lengra	Root	Jaundice. Root juice is orally taken.
4	<i>Aganosma dichotoma</i> (Roth) K. Schum.	Apocynaceae	Malati	Flower	“Kan paka” (most common form is otitis media or middle ear infection, usually occurs in children). Flower juice is applied internally within the ears.
5	<i>Terminalia arjuna</i> (Roxb.) W. & A.	Combretaceae	Arjun	Bark, fruit	Heart disorder, heart fluttering. Paste of bark is mixed with cow milk and sugar and taken orally every morning. Asthma. Fruits are sliced and smoked like tobacco. Blood dysentery. About 5g amount of bark paste is taken orally with cold water. To stimulate digestion. Water in which bark has been soaked is taken orally on a regular basis. Bleeding from gums. Bark paste is applied to gums.
6	<i>Terminalia bellerica</i> Roxb.	Combretaceae	Bohera	Fruit, seed, bark	Coughs. Half spoon of dried fruit powder is warmed with ghee (clarified butter) and taken orally. Dysentery. Dried fruit powder is mixed with water and taken orally. Leucoderma (white spots on skin). Oil obtained from seed pulp is regularly applied topically to affected areas. Swelling. Bark paste is topically applied to swellings. <i>See Emblica officinalis.</i>
7	<i>Terminalia chebula</i> Retz.	Combretaceae	Hortoki	Fruit	<i>See Emblica officinalis.</i>
8	<i>Ipomoea aquatica</i> Forsk.	Convolvulaceae	Kolmi	Leaf with stem	Used as galactagogue. Leaves with stems are cooked and eaten as vegetable.
9	<i>Sida cordifolia</i> L.	Malvaceae	Swet berela	Sap	Dysentery. An incision is made in the plant. Sap flowing out from the incision is collected and orally taken.
10	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Neem	Leaf, root bark, stem	Helminthiasis. Paste of root bark is taken with “Saindhava lavana” (Himalayan rock salt, available from mines of Punjab) for 7 consecutive days on an empty stomach. For small children, leaf juice is orally taken. Scabies, skin infections. Leaves are boiled in water followed by bathing in the water when cold. Leaf paste is also applied topically to affected areas of skin. Leaves are also fried in ghee (clarified butter) and topically applied. Tooth problems. Teeth are brushed with young stem to strengthen teeth and avoid or cure tooth disorders like pain and infection. Severe coughs accompanied with chest pain. Leaf juice (half cup) is taken orally 2-3 times daily with warm water. Hypertension, blood purification. Leaf juice is taken orally. Poisonous insect bite. Leaf paste is topically applied to alleviate pain. Rheumatism. Leaf oil is massaged on affected areas to alleviate pain. Stomach disorders (diarrhea). Thirty drops of leaf juice is mixed with ¼ cup of water and taken orally on an empty stomach in the morning and evening.

11	<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	Shefali	Leaf	Fever, helminthiasis. Leaf juice is orally taken.
12	<i>Emblica officinalis</i> Gaertn.	Phyllanthaceae	Amlaki	Fruit	Hair loss, maintain healthy teeth, appetite stimulant, coughs, mucus, to increase memory, gastric ulcer. One fruit is eaten daily. Constipation, to keep head cool, to reduce LDL-cholesterol concentrations. Dried powdered fruits of <i>Emblica officinalis</i> , <i>Terminalia bellerica</i> and <i>Terminalia chebula</i> are mixed in equal ratio (w/w), which is known as Triphala. Triphala (1-2 teaspoons) is soaked overnight in water followed by drinking the water the following morning on an empty stomach.

Although all her formulations contained plants, one formulation used Himalayan rock salt along with plant. The use of the rock salt (*Saindhava lavana*) along with root bark of *Azadirachta indica* to treat helminthiasis is an interesting finding, and to our knowledge, previously unreported. Consumption of the rock salt along with lemon juice can get rid of intestinal worms<sup>[27]</sup>; it is possible that some such action like that of lemon juice is also provided by root bark of *Azadirachta indica*. Interestingly, home remedial uses of various parts of the plant, *Azadirachta indica* as reported by the informant included skin infections, tooth problems (like infections or pain or both, severe coughs with chest pain, hypertension, poisonous insect bites, rheumatism and diarrhea. A recent review mentions that the beneficial properties of the plant include anti-inflammatory and antioxidant activities (beneficial for rheumatism and poisonous insect bites), antibacterial activity (beneficial for skin disorders, tooth infection, diarrhea, and severe coughs), and ant nephrotoxicity activity (may prove beneficial for hypertension)<sup>[28]</sup>. Leaf extract of *Azadirachta indica* has been shown to give hypotensive effect in spontaneously hypertensive rats<sup>[29]</sup>. Crude extract of the plant reportedly has vasodilatory effect, mediated through calcium channel blockade and nitric oxide-dependent atropine-sensitive pathways along with cardiac depressant activity thus possibly accounting for its blood pressure lowering effect<sup>[30]</sup>.

*Andrographis paniculata* is a bitter tasting plant; in fact in English it is known as King of Bitters. One of its principal constituents, andrographolide, is reportedly antipyretic<sup>[31]</sup>. The leaves of the plant were also used against helminthiasis. Available anthelmintic drugs have a number of adverse effects<sup>[32]</sup>; as such, the plant can prove to be a useful remedy for treatment of helminthiasis. Interestingly, bitter plants are considered to be good for helminthiasis treatment in Bangladesh; for instance the bitter leaves of *Ananas comosus* are used for treating helminthiasis<sup>[33]</sup>. Leaves of *Justicia adhatoda* were used for coughs and mucus. The plant has been reported to have antitussive action<sup>[34]</sup>. *Achyranthes aspera* roots were used for jaundice. Hepatoprotective action of roots of the plant has been noted in carbon tetrachloride-induced hepatotoxicity in rats<sup>[35]</sup>. Thus this plant also appears to be scientifically validated in its home remedial therapeutic use.

*Aganosma dichotoma* flowers were used for ear infections like otitis media; to our knowledge, this is the first report on home remedial use of the plant for ear infections. *Terminalia arjuna* bark was used for gum bleeds. Twigs of the tree have been recommended in Ayurveda to be used as chewing sticks for good oral care<sup>[36]</sup>. The use of *Ipomoea aquatica* as a galactagogue also seems to be a novel use of the plant.

Although not every plant has been discussed as to their possible and reported therapeutic properties, it is quite evident that the novel uses of a number of plants merit further scientific studies to realize the full potential of those plants.

Other plants appear to be scientifically validated in their home remedial uses, which suggests that at the very least the plants can form an alternative and possibly more affordable form of treatment.

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