Journal of Medicinal Plants Studies
www.PlantsJournal.com

ISSN (E): 2320-3862
ISSN (P): 2394-0530
NAAS Rating: 3.53
JMPS 2018; 6(4): 104-106

Received: 16-05-2018
Accepted: 17-06-2018

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Some plant-based home remedies used in Narayanganj district, Bangladesh

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Abstract
Home remedies are perhaps the most elementary and frequently used means to treat illnesses. It is quite possible that treatment of human illnesses since the advent of humans started with home remedies, progressed to folk medicine and ended up in codified forms of traditional medicinal systems. The objective of this study was to document some home remedies used in Narayanganj city of Narayanganj district, Bangladesh. Eight plant species belonging to eight families are described, which were found to be used as remedies against bleeding from cuts and wounds, diabetes, pain, jaundice, diarrhea and dysentery. Scientific validation of such remedies can lead to low-cost treatment of the above-mentioned disorders.

Keywords: Home remedies, plants, Narayanganj, Bangladesh

Introduction
Home remedies are perhaps the most elementary and frequently used means to treat illnesses. It is quite possible that treatment of human illnesses since the advent of humans started with home (or communal) remedies, progressed to folk medicine and ended up in codified forms of traditional medicinal systems based on regions, countries or civilizations. The importance of home remedies has been recognized even by the World Health Organization (WHO) [1]. Now-a-days, even with increased migrations of people from their home country to an alien land, efforts are made by the migrants to use old home remedies or substitute new home remedies because of non-availability of earlier used ingredients [2]. In medieval Persia, natural remedies have been described for various forms of impotency [3]. The treatment of peptic ulcer through various home remedies has been described [4]. In short, there is possibly not a single disease in the world where home remedies have not been used.

Although home remedies may seem primitive and not worth investigating as to their therapeutic potential, this assumption may not be correct. Home remedies usually have taken root following experiences of countless generations. Thus they can form an excellent source of gathering knowledge about new medicinal plants and novel therapeutic uses. We had been collecting traditional phytotherapeutic information for over ten years from mainstream folk medicinal practitioners (FMPs) and tribal medicinal practitioners (TMPs) as our primary informants but also collecting information on home remedies [5-22]. The objective of the present study was to document some home remedies of Narayanganj district, Bangladesh.

Materials and Methods
Information was collected from Rasheda (female, aged around 50 years, did not want to disclose full name or house address). Informed Consent was obtained from her to publish or disseminate the obtained information through other means. Interviews were conducted in Bengali, a language spoken both by her and the interviewers. Plant names in Bengali were obtained from her. 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 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

The informant mentioned that she used eight plant species. These species belonged to eight families and were used as remedies against bleeding from cuts and wounds, diabetes, pain, jaundice, diarrhea and dysentery. The results are shown in Table 1. Some formulations used a single plant species while others used two. A 'shil pata' was occasionally used for crushing purposes. The shil pata is a common kitchen utensil in Bangladesh, being composed of a flat rectangular slab of stone along with another piece of stone (Fig 1). The two stones function like a mortar and pestle.

For cuts and wounds, the informant used *Cynodon dactylon* as well as *Eclipta prostrata*. Interestingly, *Cynodon dactylon* along with *Colocasia esculenta* were also used to treat jaundice. *Cynodon dactylon* is possibly the most common grass species in Bangladesh and *Colocasia esculenta* among the most common edible tuberous plant in the country. The wound healing activity of *Cynodon dactylon* has been scientifically validated [23]. The hepatoprotective activity of ethanol extract of aerial parts of *Cynodon dactylon* against carbon tetrachloride-induced hepatotoxicity in rats has also been shown [24]. The anti-hepatotoxic activity of leaf juice of *Colocasia esculenta* has been shown against paracetamol and CCl_4-induced hepatotoxicity [25].

Leaf extract of *Azadirachta indica* has been shown to give hypoglycemic effect in normal and alloxan diabetic rabbits [26]. *Nigella sativa* seeds are also known to ameliorate diabetes and diabetes-related complications [27]. Thus the use of both plant parts (as done in the home remedy) can be a powerful tool in controlling blood glucose in diabetic patients. Aqueous extract of *Moringa oleifera* has been shown to give analgesic effects in rats in tail flick tests [28]. The plant is known to contain quercetin and kaempferol derivatives along with β-sitosterol [29]. The analgesic and anti-inflammatory activities of β-sitosterol isolated from *Oxalis corniculata* has been described [30]. *Scoparia dulcis* is used in traditional medicinal system of Orissa, India, to treat diarrhea; various constituents of the plant like scopadulciol, scopadulcic acid B and diacetylscopadiol may be responsible for mitigating some enteric disorders [31]. *Physalis minima* is reportedly used in Kenya for diarrhea treatment [32].

It can be concluded that the home remedies used not only have scientific validations for their uses but some of the plants are also used in other countries for the same purpose, suggesting that the remedies can form useful source of new drugs or lead compounds. The plants therefore merit scientific attention for further research.

Table 1: Some home remedies practiced in Narayanganj district, Bangladesh.

Serial Number	Scientific Name	Family Name	Local Name	Parts used	Ailments and mode of medicinal use
1	*Colocasia esculenta* (L.) Schott.	Araceae	Kela kochu	Leaf	See *Cynodon dactylon*.
2	*Eclipta prostrata* (L.) L.	Asteraceae	Kala korta	Leaf	Bleeding from cuts and wounds. Leaves are crushed by hand and the crushed leaves are then applied topically on the cut place. A cloth is then tied around as a bandage to keep the crushed leaves in place. The bandage is kept for three days.
3	*Azadirachta indica* A. Juss.	Meliaceae	Neem	Leaf	Diabetes. Pills are made from paste of leaves and dried in the sun and then orally taken in the morning on an empty stomach. This is followed by oral taking of seeds of *Nigella sativa*.
4	*Moringa oleifera* Lam.	Moringaceae	Sajna	Bark	Pain. Bark is crushed in a 'shil pata' and the extracted juice is topically applied to painful areas.
5	*Cynodon dactylon* (L.) Pers.	Poaceae	Durba ghash	Leaf	Jaundice. Juice extracted from crushed leaves of *Cynodon dactylon* and *Colocasia esculenta* are mixed and taken orally. Bleeding from cuts and wounds. Leaves are crushed by hand and the crushed leaves are then applied topically on the cut place. A cloth is then tied around as a bandage to keep the crushed leaves in place. The bandage is kept for three days.
6	*Nigella sativa* L.	Ranunculaceae	Kali jira	Seed	See *Azadirachta indica*.
7	*Scoparia dulcis* L.	Scrophulariaceae	Chini gura	Leaf	Diarrhea, dysentery in adults or children. Leaves of *Scoparia dulcis* and *Physalis minima* are slightly crushed and the resultant juice is orally taken.
8	*Physalis minima* L.	Solanaceae	Teka pata	Leaf	See *Scoparia dulcis*.

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