Commonly Used Medicinal Plants in Bangladesh to treat Different Infections

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Abstract

Background: Plants and herbs have been the mainstay of treatment in many rural and tribal areas of Bangladesh for the immense availability of medicinal plants in this region. Nature and natural remedies are widely accepted by people around the world from ancient times. Barks, root, stem, flower, seed various parts of plants were used against ailments or infections caused by microbes even before the discovery of various microorganisms. So it is rational to believe that these herbs and plants possess immense medicinal potential with definite pharmacological action.

Methods and findings: Secondary data have been collected from different reputed international and recognized journals and websites.

Conclusion: This review enlists the medicinal plants used against infectious diseases in Bangladesh.

Keywords: Infections, Medicinal Plants, Traditional

Introduction

Discovery of medicines began through serendipity and man’s quest for drug in nature. Since plants existed on earth from the very beginning of human evolution, the use of plants in the daily lives and in alleviating human sufferings is as old as human civilization on earth. In many countries traditional medicines or herbs are considered primary treatment option [1]. Indo-Aryans noted down the use of medicinal plants in Rig-veda at around 4500-1600 BC [2]. Bangladesh being a country of this Indian sub-continent also possess a great diversity in plants. Around two thousands medicinal plants in this sub-continent and 449 medicinal plants are enlisted in Bangladesh [3]. Though the exact number of used plants is unknown there are some common medicinal plants which are in use by kavirajes, traditional medicines for a long time. The existence of various tribes like Chakma, Marma, Rakhain, Tipra, Garo, Khashia with cultural diversity has also enriched the use of medicinal plants. This traditional attempt to treatment has survived the enormous take-over of modern medicine systems because of the belief of people in mother-nature. As a consequence the knowledge behind the use of medicinal plants have passed down from ancestors to predecessors. Some definite preparations and validation protocols for the use of some medicinal plants have been determined. Still the rural, tribal and folklore society admire the traditional use of plant extract or simple preparations like infusion, decoction, powder from plants due to the great availability of the plants. One of the major use of medicinal plants is in infectious diseases to treat them or to reduce the symptoms. Infectious diseases are diseases caused by pathogenic microorganisms like bacteria, virus, fungi. Pneumonia, meningitis, food borne infection, ear infection, urinary tract infection, STD like gonorrhea, syphilis are being treated by various plants. The most common use is still in treating common cold, sinus infection and skin infections. Besides, with the advancement of science people have come to know that the plants at our reach contain magically bioactive components like alkaloids, glycosides, flavonoids, tannins, terpenes, resins, gums, mucilages, antioxidants at small dose. People still rely on these remedies generally in conditions which are not generally regarded as life threatening.

Methods

Secondary data have been collected from different reputed international and recognized journals and websites.

Discussion

Medicinal plants are the most traditional and widely used sources of treatment of any diseases. The role of commonly used medicinal plants in Bangladesh is as follows-

Abutilon indicum L.

Abutilon indicum L. is form Malvaceae family and commonly known as monkey bush, country mallow and mandii. Potari is its...
local or Bengali name. Stem bark, leaf paste, infusion of leaves, cooked leaves, root and seeds are the main parts that are used to treat infections. Ethanolic extract of *Abutilon indicum* L. shows greater efficacy compared to albendazole. It is found to possess *in vitro* anthelmintic activity. The leaf is used for treating bladder infections. The leaf extract is used for gonorrheal, vaginal infections. Further the plant possesses antinflammatory, antifungal activity and antidiarrheal activity. *Abutilon indicum* L. shows activity against malarial vectors. Ethanolic extract of *Abutilon indicum* L. leaf extracts can be used against vector mosquitoes viz., *Aedes aegypti, Anopheles stephensi* and *Culex quinquefasciatus* [4-12]. It shows activity against *Bacillus cereus*, *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Candida albicans* [13]. It is active against various skin infections, dysentery and vaginal infections.

**Adina sessilifolia** L.

*Adina sessilifolia* L. is from *Rubiaceae* family. It is known as Kom in Bangladesh. It is commonly known as Kam gass by Chakma tribe. Leaf paste is generally used in treatment of various infectious diseases [14]. Impetigo, folliculitis, minor cellulitis, fungal infections are some common skin infections treated by this. Leaf paste is applied on the affected surface of skin.

**Bridelia retusa** L.

*Bridelia retusa* L. belongs to family *Euphorbiaceae*. It is known in various Bengali names like Kamkui, kantakui, kantakhasi, kantakosio. It is known as Shukuja ghas among Chakma, bobipui among khumi tribe. Ripe fruits, leaf paste, bark obtained from the plant are used in skin infections like impetigo, erysipelas, folliculitis, minor cellulitis, fungal infections are treated by *Bridelia retusa* L. [15]. Leaf paste is applied on the affected surface of skin generally.

**Caesalpinia bonduc** L.

*Caesalpinia bonduc* L. belongs to *Fabaceae* family. Nata, natai, touri, lalkanta, jhangragota, kokoi, dahara are the Bengali names used for it. It is commonly known as Kamului ludi (chakma), pepper is used as a strong antifungal, antidiarrhoeal activity and antidiarrhoeal activity. *Caesalpinia bonduc* L. shows greater activity when compared to albendazole. It is found to possess *in vitro* anthelmintic activity. The leaf is used for skin infections, dysentery and vaginal infections.

**Ixora nigricans** L.

*Ixora nigricans* L. belongs to *Rubiaceae* family. It is renowned among local people as Rongon. It is also called as Dikrang chuillya (chakma and Tripura), rongma, farareka (marma). Root and leaves extract, pastes are used. *Bacillus subtilis* is susceptible to the extract of this plant. So food poisoning is treated by this. Root and bark paste is used for otitis media or ear infections. Root extract is used by Chakmas in diarrhea and leaf extract is used by Tanchangyas for dysentery [16-18].
people. It is also commonly known as Myrtle. Flower, root are used against various diseases like skin infection, and leprosy. Kavirajes include whole plant, leaves, stems, roots, barks, flowers, fruits, seeds, tubers, and gum [24].

**Holarrhena antidysenterica**

*Holarrhena antidysenterica* L. belongs to *Apocynaceae* family. Bengali name for this plant is Kurchi. It is commonly known as Bitter oleander. Flower, bark, seed are used widely by khadia and Assamese. As the name suggests it is widely used in dysentery by local people. It is used in helminthiasis and skin infection [25,26].

**Phyllanthus niruri**

*Phyllanthus niruri* L. belongs to the *Phyllanthaceae* family. In Bengali it is known as Bhui amla or Bhui amloki. It is also known as Tamalaki. Extract of roots and leaves or crushed powder of dried leaves and root are used along with fenugreek, cumin seeds or milk. It possess anti-malarial activity, antiviral activity against hepatitis B virus. It is also potent antibacterial, antifungal, antifilarial (*Culex quinquefasciatus*) [26-28].

**Conclusion**

Presence of various bioactive components have made the traditionally used plants highly effective against various infectious diseases. As these are in use for a long time these are considered safe by native people. People attempt to stick to the indigenous plants for prophylactic use, cure or prevention of infectious diseases. As the discovery of various antibiotics and their irrational use has contributed to the emergence of resistance and various side effects, concern has developed among people. Herbal medicines can be considered safe alternative to modern medicines in some infectious diseases in which the use has been established from time immemorial.

**References**


