

An overview of plants used as Anthelmintic in Manipur

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Abstract

Manipur is a land bestowed with diversified flora and fauna. Since pre-historic period the use of herbs and vegetables as folk medicine by Maibas (practitioner of folk medicine or witch doctors) and common people were well known and evident for healing sickness. Rate of infections caused by several helminth parasites have been dynamically changing over the past few decades from that of a largely symptomatic infection to an acute enteric disease of human and animals. The present review is an attempt to reflect the contributions made by the Manipuri society especially the local witch and the common people towards the use of some medicinal plants which are known to possess anti-helminthic properties and were used in the treatment of intestinal worms found in human as well as cattle. A total of 42 plant species belonging to 29 different families has been recorded and the descriptive list of the plant parts used in the treatment has been discussed.

Keywords: Anthelmintics, intestinal worms, medicinal plants, treatment and Manipur

Introduction

In Manipur, traditional medicines serve as an alternative to the high-cost modern medicine and lower the incidence of life-threatening side-effects. Though the traditional approach of using medicinal plants is likely to continue, the need of the hour is to highlight on the production of these plants which were in used since time immemorial. The people of Manipur can utilize the rich potentials of opportunities the traditional medicines offer for healthcare. A fair population of the world particularly in developing countries depend on medicinal plant products for their healthcare system. There is need to ensure standard quality of drugs, compatible and reliable manufacturing processes in order to

achieve the goal for Health for all. There are also reports of W.H.O that more than 80-90% of the world's population depends on traditional medicines for their primary healthcare.

Materials and methods

To achieve this purpose of the study 60 local witches (locally known as Maibas) under Imphal east and west districts were considered as subjects. 30 witches each from the two districts were paid regular visits and preliminary data were collected from them.

Photographs of the plants were also taken using a digital camera and information collected from them has been put in a

systematic order for convenience in the study.

Results and discussion

Medicinal plants have played an important role in the treatment of different helminthic diseases. Altogether, 42 plant varieties (2 species of plants common for both human and cattle) has been recorded for treating intestinal worms in human as well as cattle, amongst these plants 37 are used for treatment in human while 7 plant species are used in case of animals suffering from helminthic diseases. They are easily available, cost-effective and have less harmful side-effects. However, these medicines are unscientifically exploited or improperly used. With the recent advances in modern medical knowledge, there has been tremendous decrease in the use of traditional medicines in most part of the state. The mankind's need for healthy living has met to a great extent through direct contribution from medical sciences. The present day human life is mostly based on allopathic system of treatment. Over the past few decades vast strides have been made in the production of different types of medicines. In the quest for meeting the human needs, the greatest challenges are faced by scientist and doctors because they are alarmed with the side effects commonly reported with modern drugs. Following is the descriptive list of plant species that are traditionally used in the treatment of intestinal worms in human-

1. ***Alpinia zerumbet*** Burtt and R.M. Smith
A rhizomatous herb of the family Zingiberaceae
Local name- Kanghoo; Part of the plant used - whole plant
2. ***Andrographis paniculata*** Wall.ex Nees
An erect annual herb of the family Acanthaceae
Local name- Vubati; Part of the plant used - whole plant

3. ***Annona reticulata*** Linn.
A small tree of the family Annonaceae
Local name- Sitaphal ; Part of the plant used - Unripe fruit
4. ***Areca catechu*** Linn.
A slender tall palm of the family Arecaceae
Local name- Kwa; Part of the plant used - Seeds
5. ***Aphanamixis polystachya*** (Wall.) Parker
A middle sized evergreen tree of the family Meliaceae
Local name- Heirangkhoi; Part of the plant used - Seeds
6. ***Asclepias curassavica*** Linn.
A shrub of the family Asclepiadaceae
Local name- Krishnachura; Part of the plant used - whole plant
7. ***Azadiracta indica*** A. Juss
A large to middle sized tree of the family Meliaceae
Local name- Neem; Part of the plant used - Leaves
8. ***Bambusa arundinacea*** Willd.
A densely tufted bamboo of the family Gramineae; Poaceae
Local name- Saneibi; Part of the plant used - whole plant
9. ***Bauhinia variegata*** Linn.
A moderate sized tree of the family Caesalpiniaceae
Local name- Chingthrao-angouba; Part of the plant used - Bark
10. ***Benincasa hispida*** (Thunb.) Cogn.
A large climber with hispid stem of the family Cucurbitaceae
Local name- Torobot; Part of the plant used - Seeds
11. ***Carica papaya*** Linn.
A small tree with large palmate lobed leaves of the family Caricaceae
Local name- Awathabi; Part of the plant used - Latex of raw fruit
12. ***Chenopodium album*** Linn.
An annual herb of the family Chenopodiaceae

Local name- Monshaobi; Part of the plant used - whole plant

13. *Chenopodium ambrosioides* Linn.

An erect, perennial herb with strong smell of the family Chenopodiaceae

Local name- Monshaobi manbi; Part of the plant used – Essential oil of seeds is used against many forms of intestinal parasites including roundworm and hookworm.

14. *Cinnamomum camphora* (Linn.) Nees and Ebern

A small tree of the family Lauraceae

Local name- Karpura; Part of the plant used - whole plant

15. *Costus speciosus* (Keoning) Sm.

A perennial herb up to 2m high of the family Zingiberaceae

Local name- Khongban – takhelei; Part of the plant used – Roots.

16. *Cucurbita pepo* Linn.

An annual herb with long stem of the family Cucurbitaceae

Local name- Mairel; Part of the plant used – Seeds

17. *Cuscuta reflexa* Roxb.

A leafless twinning parasite with long stem of the family Cuscutaceae

Local name- Urisanamachu; Part of the plant used – Seeds

18. *Cyperus rotundus* Linn.

A perennial grass of the family Cyperaceae

Local name- Shembang – kouthum; Part of the plant used – Tuber

19. *Entada phaseoloides* Merrill.

A large climber of the family Mimosaceae

Local name- Kangkhil; Part of the plant used – Seeds

20. *Euphorbia thymifolia* Linn.

A much branched annual plant of the family Euphorbiaceae

Local name- Tengnou; Part of the plant used – Leaves and Seeds

21. *Lagenaria siceraria* (Mol.) Standl.

A climber of the family Cucurbitaceae

Local name- Khongdrum; Part of the plant used – Fruit juice

22. *Ludwigia octovalvis* var. sessiliflora (Mich.) Sinners

An erect under shrub of the family Onagraceae

Local name- Tebo; Part of the plant used - whole plant

23. *Mallotus philippensis* Muell. Arg.

A small evergreen tree of the family Euphorbiaceae

Local name- Ureirom-laba; Part of the plant used – Fruits

24. *Melia azedarach* Linn.

A middle sized tree of the family Meliaceae

Local name- Seizrak; Part of the plant used – Leaf- juice

25. *Melothria purpusilla* (Blume) Cogn

A tendril climber of the family Cucurbitaceae

Local name- Lamthabi; Part of the plant used – Fruits

26. *Mentha arvensis* Linn.

A strongly aromatic perennial herb of the family Labiateae; Lamiaceae

Local name- Nungshihidak; Part of the plant used – Fresh juice of shoots

27. *Nyctanthes arbor-tristis* Linn.

A small tree of the family Oleaceae

Local name- Siggarie; Part of the plant used – leaf- juice

28. *Nymphoides hydrophyllum* (Lour.) O. Kuntze

An aquatic herb with rooting in mud of the family Gentianaceae

Local name- Tharo-macha; Part of the plant used – Seeds

29. *Ocimum sanctum basilicum* Linn.

A herb of the family Labiateae; Lamiaceae

Local name- Tulsi; Part of the plant used – Whole plant

30. *Punica granatum* Linn.

A shrub of the family Punicaceae

Local name- Kaphoi; Part of the plant used – Bark, roots and stem

31. *Sesbania sesban* Merr.
A fast growing shrub of the family Fabaceae
Local name- Chuchurangmei; Part of the plant used – leaves
32. *Solanum indicum* Linn.
An armed shrub of the family Solanaceae
Local name- Leipungkhangga; Part of the plant used – roots
33. *Stellaria media* (Linn.) Vill.
An erect herb of the family Caryophyllaceae
Local name- Yerum-keirum; Part of the plant used – Whole plant
34. *Trichosanthes anguina* Linn.
An annual climber with lobed rich green leaves of the family Cucurbitaceae
Local name- Shebot-linmanbi; Part of the plant used – Seeds
35. *Vernonia cinerea* Less
A herb or under shrub of the family Compositae; Asteraceae
Local name- Khongjainappi; Part of the plant used – Seeds
36. *Vitex negundo* Linn.
A shrub of the family Verbernaceae
Local name- Urikshibi; Part of the plant used – Leaves and roots
37. *Xylosoma longifolia* Clos
A tree of the family Flacouritiaceae
Local name- Nongleisang; Part of the plant used – Bark
- Descriptive list of plants used in the treatment of gastro-intestinal helminths of cattle are as mentioned under-
1. *Artemisia nilagirica* (C. B. Clarke) Pamp.
An aromatic under shrub of the family Asteraceae
Local name- Leibakngou; Part of the plant used - Leaves
2. *Arundo donax* Linn.
A perennial shrub with an erect culm and creeping rhizome of the family Poaceae
Local name- Yenthou; Part of the plant used – Leaf-juice

3. *Asclepias curassavica* Linn.
A shrub of the family Asclepiadaceae
Local name- Krishnachura; Part of the plant used – Flowers and Leaves
4. *Dicrocephala latifolia* D.C.
An annual herb of the family Asteraceae
Local name- Lalukok; Part of the plant used – Whole plant
5. *Melia azedarach* Linn.
A middle sized tree of the family Meliaceae
Local name- Seizrak; Part of the plant used - Leaves
6. *Sesbania sesban* Merr.
A fast growing shrub of the family Fabaceae
Local name- Chuchurangmei; Leaves and fruits
7. *Tinospora cordifolia* (Willd.) Miers ex. Hook.f and Thoms
A large succulent deciduous climber of the family Menispermaceae
Local name- Ningthoukhongli; Part of the plant used - Bark of plant

Conclusion

Many of these plants may not be scientifically tested but there has been widespread interest in their curative power. It is of utmost importance to ensure the use of appropriate doses of these traditional plant remedies by using modern techniques, applying suitable standards and skilful manufacturing practices. The enquiry into the unknown starts and it is the search and research which keeps adding new drugs for the welfare of mankind.

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