

Phytotherapy Practices of Asclepidaceae Members

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Abstract

India has one of world's richest medicinal plant heritages. The wealth is not only in terms of the number of unique species documented, but also in terms of the tremendous depth of traditional knowledge for the use of human & livestock health and also for agriculture. The medicinal plant species are used by various ethnic communalities for human and veterinary health care, across the various ecosystems in India. Chitradurga district of Karnataka state at its extreme limits is situated between longitudinal parallels of 76° 01' and 77° 01' east of Greenwich and latitudinal parallels of 13° 34' and 15° 02' north of equator in the leeward side of the Western Ghats. The topographical and climate diversity of the region has resulted in dry deciduous to thorn scrub forest. The plant diversity of the region is facing a severe depletion due to the continuous loss of forest land, uncontrolled grazing, forest fire, landslides and anthropogenic activities. The medicinal properties shown by different plants are due to the phytochemicals present in them which are the most vital sources for the treatment of destructive diseases by enhancing the immune system by producing specific physiological action on the human body. Flavonoids, tannin, phenolic compounds and alkaloids are the most important bioactive components of plants. At this juncture, conservation and protection of ethno medicinal plants of the region needs top priority. The present investigation is an attempt to survey of Asclepidaceae members for their ethno-medicinal uses to cure various ailments by the ethnic groups which may leads to the discovery of biochemical/biopharmaceutical compounds.

The local health healers/tribes are routine use of 08 medicinal plants belonging to Asclepidaceae for the treatment of diseases, which includes Snake bite, Diabetes mellitus, Asthma, Cough, Urinary infection, Jaundice, Piles, Rheumatism and Veneral diseases. The study reveals that leaves and roots were most frequently used (07 spp), followed by stem (02 spp), Latex (02 spp), fruits/seeds, bark and flowers one species each. The plant species used in the treatment are *Calotropis procera*, *Hemidesmus indicus*, *Gymnema sylvestre*, *Leptodenia reticulata*, *Tylophora asthmatica*, *Sarcostemma secamone*, *Wattakaka volubilis*, and *Pergularia daemia*. The study showed that many people of Chitradurga district still depend traditionally on medicinal plants for primary health care. Therefore, the present study is an attempt to explore ethno-medicinal plants of Asclepidaceae in the said region.

Conclusion

It is apparent that the Chitradurga district is rich in ethno medicinal knowledge and this knowledge is transferred from generation to generation. Most of the medicinal plant species are threatened with extinction due to unsustainable harvesting. Some important medicinal plants needs immediate conservation and their cultivation should be encouraged through which their extinction can be prevented and local village people may also get low-cost cure and treatment of livestock diseases. Hence there is an urgent need to assess the biodiversity of the local forest, the medicinal plants and their associated traditional

knowledge by proper documentation and conservation strategies. In this context plant tissue culture play important role in conserving these medicinal plant wealth because of many scientific, economic and ecological advantages. It is nowadays considered as important strategy for invitro production of bioactive compounds for drug industries.

It can be concluded that the source of secondary metabolites like flavonoids, carbohydrates, glycosides, alkaloids, phenols and phytosterols are present in the selected medicinal plants which are used in Chitradurga. Because of the presence of these secondary metabolites the selected medicinal plants have high healing potential. These phytochemicals render the medicinal values of the studied plants.

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