"An introduction to wild edible medicinal plant: Leea macrophylla Roxb. Ex Hornem. Commonly known as Hathikana."

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Abstract

Forest are home to a diverse population of medicinal plants and indigenous people rely on the forest resources for their traditional medicines. Worldwide various systems of medicines make use of drugs from plant, animal, and mineral origin. The majority of medicines utilized globally are from plant origin. Traditionally used plants and their products have been widely evaluated for pharmacological properties have been increased throughout the world now a days. Hence, it is essential to study the uses of plants and other associated knowledge should develop for researchers to introduce new phytoproducts as well as the mechanisms in understanding the traditional knowledge for scientific validation. It is believed that the drug of natural origin play a vital role in healthcare without any side effects. Medicinal plants typically contain mixtures of different chemical compounds that may act individually, additively or in synergy to improve health.

Introduction

A wild edible medicinal herbaceous shrub Leea macrophylla Roxb. Ex Hornem. Belonging to genus Leea family Vitaceae, is a indigenous to North- Eastern India, Central and Eastern Nepal, Northern- Eastern Australia, Bhutan, China, Myanmar, Thailand, Bangladesh, parts of Africa, etc. The tropical plant genus Leea, named after the 18th century English nurseryman James Lee, is the closet relative to the botanical family of the grapes, Vitaceae. It was originally described by Van Royen, but was formally published by Linnaeus in 1767. the leaves of plant looks like an Elephant's ear. Hence, it is traditionally named as 'Hathikana', 'Hathikanda', or 'Hasthikarnapalasa' by the local tribal people. This traditional name of this plant might be come from the morphological structures of leaf which looks like an Elephant's ear. It has been ascribed with abundant therapeutic claims for its ethnomedicinal and economical uses. Due to its therapeutic potential it has been used since the pre- historic era for the number of ailments by the traditional healers or the tribal people.

Materials and methods

Collection and details of plant material:

The whole plant were collected in the month of June 2022 from ICAR- RCER, Research Centre, Tata Road, Namkum, Palandu, Ranchi, Jharkhand. The plant was authenticated by Professor Dr. Kunul Kandir, Dean of Science and Head of Taxonomy Department, and University Department of Botany, Ranchi University, Ranchi, Jharkhand. During my ethnobotanical survey studies I highlight about various economic and pharmacological uses of this wild edible plant. The aim of the article is bird's eye view of the plant regarding all reported ethnomedicinal information and research works on Leea macrophylla. Information of ethnomedicinal uses of the plant was collected from January 2022 until June 2022, from knowledgeable people, elderly people, available books related on medicinal plants, ethnobotany and research articles. Leea *macrophylla* is a wild edible plant with enormous ethnomedicinal importance. The plant mainly grows in moist deciduous and evergreen forests.

Discussion

During the survey studies discussion has been done with many Vaidya's, elderly people, tribal people, the knowledge about the medicinal uses of this wild edible plant was gained. This plant plays a vital role in the progression of several degenerative diseases such as aging related diseases, cancer, cardiovascular diseases, diabetes mellitus, and many neurodegenerative disease, etc. Tribal people used the plant parts in cold, cough, headache, body pain, and a number of ailments. Tribal people also use the leaves as vegetable in their food menu. Traditional practitioners used leaves, seeds and in ayurvedic preparations since ancient times in the preparation of seasonal tonic known as "Modaka" preparation.





Fig. showing: Leea macrophylla Roxb. ex Hornem.



Fig. showing: Growing stage of *Leea macrophylla* Roxb. ex Hornem.

Results

Literature reviews have revealed that the plant has great medicinal values, including antimicrobial, antioxidant, analgesic, antiinflammatory, anti- diabetic, anti- cancer, activities. In this investigation the selected medicinal plant has anti- bacterial activities against certain bacteria. The extract and purified metabolites of the plant contains bioactive phytochemical that may lead to discovery of new antibiotic and drug development which can used to control many phytopathogenic bacteria. On the basis of these traditional uses, a number of scientific studies were performed and they all revealed potential activities of the plant species like antioxidant, anticancer, antidiabetic, antimicrobials, neuropharmacological, etc. This review will be helpful for further studies on this plant. More research is required for the beneficial for commerce and trade of the drug Leea *macrophylla* Roxb. Ex Hornem.





Fig. Leea macrophylla Roxb. ex Hornem.



Discussion about the plant was done with:

- Silas Hembrom Vaidya, Ranchi.
- Reena Tirkey worker of ICAR, Ranchi.

Conclusion

It is of prime importance to exhibit the use of drug *Leea macrophylla* in front of the society. The review compress the updated knowledge related to the potential pharmacological activities, ethnobotanical uses and scientific information for many diseases and disorders of a traditionally used wild edible plant *Leea macrophylla* Roxb. Ex Hornem., which belongs to the botanical family of Vitaceae. Traditionally the plant parts are used to cure a number of ailments for example cough, common cold, rheumatism, lipoma, arthritis, tetanus, bone facture, headache, cancer, diabetes, skin diseases, cardiovascular, snake bites, neuroprotective, and wound healing, etc. a growing body of evidence suggested that this plant also contain several phytochemical constituents like phenolics, saponin, tannins, alkaloids, flavonoids, proteins, glucose, resins, carbohydrate, etc.

References

- Singh NP, Vohra JN, Hajra PK and Singh DK (2000) Flora of India. Botanical Survey of India Kolkata Fifth Volume.
- Ridley HN (1922) The Flora of the Malay Peninsula. London L. Reeve & Co. Ltd., First Edition.
- Ridsdale CE (1974) A revision of the family Leeaceae. Blumea 22 57-100.
- Ridsdale CE (1976) Flora Malesiana. Noord Hoff International Publishing, Leyden. The Netherlands Series 7.
- H. H. Haines (2008) Flora of The Botany of Bihar And Orrisa part (1-2).