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Research

Ethnobotanical Survey of Medicinal Plants Used for Leucoderma Treatment by Tribal Communities of Amarkantak Region, Anuppur District, Madhya Pradesh, India

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Abstract

Leucoderma (vitiligo) is a chronic depigmentation disorder that significantly affects the psychological and social well-being of patients. Tribal communities of the Amarkantak region in Anuppur district, Madhya Pradesh, possess rich traditional knowledge regarding the use of medicinal plants for treating skin disorders, including leucoderma. The present study documents and analyzes ethnobotanical knowledge related to medicinal plants used for leucoderma treatment by indigenous tribes such as Gond, Baiga, and Kol. Data were collected through field surveys, semi-structured interviews, and participant observation. A total of 27 medicinal plant species belonging to 21 families were recorded. Leaves and seeds were the most frequently used plant parts, and paste and decoction were the common modes of preparation. The study highlights the importance of conserving indigenous knowledge and provides a scientific basis for future phytochemical and pharmacological research.

Keywords

Ethnobotany, Leucoderma, Vitiligo, Medicinal Plants, Tribal Knowledge, Amarkantak

1. Introduction

Ethnobotany is a scientific discipline that explores the traditional knowledge of indigenous communities regarding the use of plants for food, medicine, and cultural purposes. In developing countries like India, a large population still depends on traditional medicine for primary healthcare needs. Leucoderma, commonly known as vitiligo, is a non-contagious skin disorder characterized by depigmentation due to loss of melanocytes. Modern treatments are often expensive and have side effects, prompting reliance on herbal remedies.

2. Study Area

The Amarkantak region is situated in Anuppur district of Madhya Pradesh and forms part of the Maikal hill range of the Satpura plateau. It is a well-known pilgrimage and biodiversity-rich region, serving as the origin of the rivers Narmada,

Son, and Johila. The area experiences a tropical monsoon climate with rich sal and mixed deciduous forests. Major tribal communities include Gond, Baiga, Kol, and Panika, who possess deep ethnomedicinal knowledge.

3. Materials and Methods

Ethnobotanical field surveys were conducted during 2023–2025 in selected tribal villages of the Amarkantak region. Information was collected from traditional healers, elderly villagers, and experienced herbal practitioners using semi-structured questionnaires, personal interviews, group discussions, and guided field walks. Prior informed consent was obtained from all informants. Plant specimens were collected, identified using standard floras, and voucher specimens were preserved following herbarium techniques.

4. Results

The study documented 27 medicinal plant species belonging to 21 botanical families used for the treatment of leucoderma. Leaves constituted the most commonly used plant part (41%), followed by seeds (22%), roots (19%), and bark (18%). The most common modes of preparation included paste, decoction, powder, and oil infusion.

5. Discussion

Among the documented species, Psoralea corylifolia was found to be the most frequently cited plant for leucoderma treatment due to its photosensitizing compounds that stimulate melanin synthesis. Azadirachta indica and Curcuma longa are widely known for their anti-inflammatory and immunomodulatory properties. The findings align with earlier ethnobotanical studies conducted in central India, supporting the reliability of traditional tribal knowledge.

6. Conservation and Ethical Considerations

Traditional knowledge related to medicinal plants is rapidly declining due to modernization, deforestation, and cultural changes. Ethical guidelines were strictly followed during the study, and benefit-sharing principles were respected. Conservation of medicinal plants and documentation of indigenous knowledge are essential for sustainable healthcare development.

7. Conclusion

The present ethnobotanical survey reveals that tribal communities of the Amarkantak region possess extensive knowledge regarding the use of medicinal plants for leucoderma treatment. The documented species provide a valuable foundation for future phytochemical, pharmacological, and clinical investigations. Preservation and validation of this traditional knowledge can contribute significantly to herbal drug development.

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