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Research

Ethnobotanical Plants Used in the Traditional Treatment of Psoriasis in Amarkantak–Anuppur Region of Madhya Pradesh, India

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Abstract

Psoriasis is a chronic, immune-mediated inflammatory skin disorder characterized by hyperproliferation of keratinocytes and recurrent lesions. Despite advances in modern medicine, long-term management of psoriasis remains challenging due to side effects and high cost of synthetic drugs. Indigenous communities in India rely extensively on traditional medicinal plants for the treatment of chronic skin diseases. The present study documents ethnobotanical plants traditionally used for the management of psoriasis by tribal communities inhabiting the Amarkantak–Anuppur region of Madhya Pradesh. Field surveys were conducted through semi-structured interviews with traditional healers, elderly informants, and herbal practitioners. Data regarding plant species, local names, plant parts used, preparation methods, and modes of administration were recorded. A total of XX medicinal plant species belonging to XX families were documented as being used for psoriasis and psoriasis-like skin conditions. Leaves were the most frequently used plant part, followed by roots and bark. Quantitative ethnobotanical indices such as Use Value (UV) and Fidelity Level (FL) were applied to assess the cultural importance of recorded species. The study highlights the richness of traditional knowledge in the region and emphasizes the need for pharmacological validation and conservation of medicinal plant resources.

1. Introduction

Psoriasis is a chronic inflammatory skin disorder affecting approximately 2–3% of the global population. It is characterized by erythematous plaques, scaling, itching, and recurrent exacerbations. Conventional therapies such as corticosteroids, immuno

suppressants, and biologics provide symptomatic relief but are often associated with adverse effects and high economic burden during long-term use.

Ethnobotany plays a crucial role in documenting traditional knowledge related to the use of plants for healthcare. Indigenous communities have developed effective herbal remedies through centuries of observation and practice. India, being one of the world's mega-biodiversity regions, harbors a vast repository of medicinal plants used in folk and traditional systems of medicine.

The Amarkantak–Anuppur region of Madhya Pradesh, located within the Achanakmar–Amarkantak Biosphere Reserve, is inhabited by several tribal communities who possess extensive knowledge of medicinal plants. However, systematic documentation of plants specifically used for psoriasis and chronic inflammatory skin disorders in this region is limited. Therefore, the present study aims to record and analyze ethnobotanical plants traditionally used for psoriasis management and to preserve this valuable indigenous knowledge.

2. Study Area

The study was conducted in the Amarkantak–Anuppur region of Madhya Pradesh, India. Amarkantak is situated at the junction of the Vindhya and Satpura ranges and is recognized for its rich floral diversity. The region experiences a tropical climate with moderate rainfall and dense forest cover. Tribal communities such as Baiga and other forest-dependent groups inhabit this area and rely heavily on plant-based traditional medicine for primary healthcare.

3. Objectives of the Study

To document medicinal plants used traditionally for the treatment of psoriasis and related skin disorders.

To record ethnomedicinal information including local names, plant parts used, preparation methods, and dosage.

To evaluate the relative cultural importance of recorded species using quantitative ethnobotanical indices.

To identify potential plant species for further phytochemical and pharmacological investigation.

4. Materials and Methods

4.1 Ethnobotanical Survey

Field surveys were carried out in selected villages of the Amarkantak–Anuppur region. Information was collected through semi-structured interviews, group discussions, and direct observations. Informants included traditional healers, elderly villagers, and local herbal practitioners aged between 35 and 80 years.

4.2 Data Collection

- Ethnobotanical data included:
- Local and botanical names of plants
- Plant parts used
- Method of preparation (paste, decoction, powder, oil)
- Mode of administration (topical/oral)
- Duration of treatment

4.3 Plant Identification

Collected plant specimens were photographed, pressed, and identified using standard floras. Voucher specimens were prepared for future reference.

4.4 Quantitative Ethnobotanical Analysis

Use Value (UV): Used to determine the relative importance of each plant species.

Fidelity Level (FL): Used to assess the specificity of plant use for psoriasis.

5. Results

5.1 Diversity of Medicinal Plants

The study documented XX medicinal plant species belonging to XX families traditionally used for psoriasis and chronic skin ailments. The most represented families included Asteraceae, Fabaceae, Lamiaceae, and Zingiberaceae.

5.2 Plant Parts Used

Leaves were the most commonly used plant part (XX%), followed by roots (XX%), bark (XX%), rhizomes (XX%), and whole plant (XX%).

5.3 Mode of Preparation and Administration

Most remedies were prepared as fresh pastes or decoctions and applied topically. Some plants were also administered orally to purify blood and reduce inflammation.

5.4 Important Medicinal Plants

Plants such as Curcuma longa, Eclipta alba, Lawsonia inermis, Azadirachta indica, and Phyla nodiflora showed high Use Value and Fidelity Level, indicating their strong cultural significance in psoriasis treatment.

6. Discussion

The findings reveal that tribal communities in the Amarkantak–Anuppur region possess extensive knowledge of medicinal plants for managing psoriasis. Many of the documented species are known to possess anti-inflammatory, antioxidant, and immunomodulatory properties, which are relevant to the pathophysiology of psoriasis. The preference for topical application suggests a targeted approach to managing skin lesions. Quantitative analysis further supports the reliability of traditional knowledge.

7. Conservation and Future Prospects

Increasing anthropogenic pressure, deforestation, and unregulated harvesting threaten medicinal plant resources. Conservation strategies, community awareness, and scientific validation are essential to ensure sustainable utilization. Plants with high ethnobotanical indices should be prioritized for phytochemical and pharmacological studies.

8. Conclusion

The present ethnobotanical study documents valuable traditional knowledge related to the treatment of

psoriasis in the Amarkantak–Anuppur region. The recorded medicinal plants offer promising leads for the development of safe and effective herbal therapies. Preservation of indigenous knowledge and biodiversity is crucial for future drug discovery and sustainable healthcare.

Acknowledgements

References

(Sample – You will expand in thesis)

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