IMPORTANCE OF EMBLICA OFFICINALIS: A REVIEW

Abstract

Plants play a major role in our lives. They are the living entities that have a significant impact on mankind. Directly or indirectly, plants are connected with our lives and we both are interdependent on each other. Plants help to maintain the ecosystem. There are many plants that are full of medicinal properties such plants are vital for improving our health. It is a truth that 25% of the medications we use come from plants, and 4/5 of the world's population relies on plants as their primary source of healthcare. This review article discusses the significance of the plant *Emblica officinal* Gaertn. (Indian gooseberry), a herb which is used to cure various health related ailments and diseases such as infertility, cholesterol, digestive issues, diabetes etc.

Keywords: Ailments, cholesterol, Infertility, *Emblica officinal*, Medicinal

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I. INTRODUCTION

Since time immemorial medicinal herbs have been discovered and used in traditional medicines. Plants and plant-basedantidote forms the cornerstone for most of the present-day drugs which we use for treating a number of diseases(1, 2). The multifariousness of these plants has been an area of interest because of their numerous benefits (3). These plants play a pivotal role in research and ethnomedicine(4). Indian gooseberry also known as amla is one of the essential herbs in Ayurveda(5). Every part of the plant is used for medication(6). This plant contains high amount of polyphenol and is also abundant with vitamin-c(also called ascorbic acid)which acts as anti-oxidant. It also contains other secondary metabolites such as tannin, flavonoids etc(7). It has also been reported to have anti-diabetic and anti-cholestrolphenomena(8).

II. CLASSIFICATION (9)

Kingdome: Plantae
Division: Angiospermae
Class: Dicotyledonae
Family: Euphorbiaceae
Genus: *Emblica*
Species: *officinal* Geartn.

III. GENERAL DESCRIPTION OF AMLA

The Emblica officinal is plant grows to a height of 8 to 18 metres, and its light grey, thin bark peels off in tiny, irregular flakes. The fruits are globose, fleshy, pale yellow, with six obscure vertical furrows enclosing six trigonous seeds in two-seeded three crustaceous cocci found throughout India, the seacoast districts, and on hill slopes up to 20 degrees (9). The flowers are greenish yellow, in auxiliary fascicles, unisexual, males numerous on short, slender pedicels, females few, sub sessile, and ovary 3-celled.

Various uses of Emblica officinal is

1. **Anti-diabetic Activity:** Amla has been found to reduce diabetes with the help of its antioxidant and free radical eating action. It also cures diabetic nerve damage(10).

2. **Anti-cholesterol Effect:** A lot of studies have shown that it significantly lowers the cholesterol (low density lipoprotein) amount and also halts the work of hydroxymethylglutaryl-coenzyme A reductase which acts as a culprit in deposition of cholesterol (11).

3. **Cure for Infertility:** Regular consumption of amla fruit keeps the menstrual cycle in check in menstruating female. It helps in conceiving and sustains the reproductive organs of male and female(12).

4. **Healthy Skin:** This plant has a lot of anti-oxidants which can improve our skin conditions. It has an important vitamin i.e., Vit-C which has anti-ageing phenomena and can also fight fine lines and wrinkles(13).

5. **Good for Hair:** Various studies have proved that this plant is a blessing for people who are suffering from hair problem. Its extract is used in making many products like herbal shampoo. Amla along with coconut oil make hair follicle strong and prevents hair fall (14).

6. **Improves Digestion:** Due to the fibre content in amla fruit, it helps in smooth bowel movements and prevents constipation (15).

7. **Benefits the Eyes:** Intake of amla has been found to improve the eyes and decrease the risk of development of cataract, glaucoma and conjunctivitis (16).

IV. CONCLUSION

The elegant benefit of the significant herb *Emblica officinal* discussed in this review article, along with how it is utilised to treat a variety of common disorders. The aforementioned results help us understand that the positive effects of the *Emblica* plant have a logical and scientific basis. The plant can be employed as a flexible agent, according to the information in this article. The therapeutic properties of this herb are compatible with all currently used illness preventive techniques. This plant's application is thoroughly explained thanks to the innovative and cutting-edge methodologies for studying medicinal plants. This review helps achieve the objective of excellent health and wellbeing and adds to health implementation.

REFERENCES

[1] Behera, K., Mandal, U., Panda, M., Mohapatra, M., Mallick, S. K., Routray, S., ... & Mahalik, G. (2021). Ethnobotany and folk medicines used by the local healers of Bhadrak, Odisha, India. Egyptian Journal of Botany, 61(2), 375-389.

[2] Mandal, U., Mallick, S. K., & Mahalik, G. (2020). Ethnomedicinal plants used for the treatment and healing of skin diseases in Odisha, India: A review. Shodh Sanchar Bull, 10, 100-108.

[3] Song, F., Deng, Y. F., Yan, H. F., Lin, Z. L., Delgado, A., Trinidad, H., ... & Ge, X. J. (2023). Flora diversity survey and establishment of a plant DNA barcode database of Lomas ecosystems in Peru. Scientific Data, 10(1), 294.

[4] Hao, D. C. (2019). Genomics and evolution of medicinal plants. HAO, DC Ranunculales Medicinal Plants: biodiversity, chemodiversity and pharmacotherapy, 1, 1-5.

[5] Baliga, M. S., Prabhu, A. N., Prabhu, D. A., Shivashankara, A. R., Abraham, A., &Palatty, P. L. (2013). Antidiabetic and Cardioprotective Effects of Amla (*Emblica* officinal is Gaertn) and its Phytochemicals: Preclinical Observations. In Bioactive Food as Dietary Interventions for Diabetes (pp. 583-600). Academic Press.

[6] Mirunalini, S., & Krishnaveni, M. (2010). Therapeutic potential of *Phyllanthus emblica* (amla): the ayurvedic wonder. Journal of basic and clinical physiology and pharmacology, 21(1), 93-105.

[7] Gul, M., Liu, Z. W., Rabail, R., Faheem, F., Walayat, N., Nawaz, A., ... & Aadil, R. M. (2022). Functional and Nutraceutical Significance of Amla (Phyllanthus Emblica L.): A Review. Antioxidants, 11(5), 816.

[8] Akhtar, M. S., Ramzan, A., Ali, A., & Ahmad, M. (2011). Effect of Amla fruit (*Emblica officinalis* Gaertn.) on blood glucose and lipid profile of normal subjects and type 2 diabetic patients. International journal of food sciences and nutrition, 62(6), 609-616.

[9] Saxena, H. O., &Brahmam, M. (1994). The flora of Orissa, vol. I-IV. Orissa Forest Development Corporation Ltd. Odisha, India.

[10] Kamtekar, S., & Keer, V. (2014). Management of diabetes: a review. Research Journal of Pharmacy and Technology, 7(9), 1065-1072.

[11] Gopa, B., Bhatt, J., & Hemavathi, K. G. (2012). A comparative clinical study of hypolipidemic efficacy of Amla (Emblica officinalis) with 3-hydroxy-3-methylglutaryl-coenzyme-A reductase inhibitor simvastatin. Indian journal of pharmacology, 44(2), 238.

[12] Jalpa, P., & Donga, S. B. (2013). Prevalence of Vandhaytva (Female Infertility) WSRto Anovulatory Factor In Sthula Shariraand Krusha Sharira Patients-A Cross Sectional Survey Study. World, 1.
[13] Chaikul, P., Kanlayavattanakul, M., Somkumnerd, J., &Lourith, N. (2021). *Phyllanthus emblica* L.(amla) branch: A safe and effective ingredient against skin aging. Journal of Traditional and Complementary Medicine, 11(5), 390-399
[14] Dasaroju, S., & Gottumukkala, K. M. (2014). Current trends in the research *of Emblica officinal* is (Amla): A pharmacological perspective. Int J Pharm Sci Rev Res, 24(2), 150-9.
[15] Singh, E., Sharma, S., Pareek, A., Dwivedi, J., Yadav, S., & Sharma, S. (2012). Phytochemistry, traditional uses and cancer chemopreventive activity of Amla (*Phyllanthus emblica*): The Sustainer. Journal of Applied Pharmaceutical Science, (Issue), 176-183.
[16] Hashem-Dabaghian, F., Ziaee, M., Ghaffari, S., Nabati, F., &Kianbakht, S. (2018). A systematic review on the cardiovascular pharmacology of *Emblica officinal* is Gaertn. Journal of cardiovascular and thoracic research, 10(3), 118.

