

A Detailed Review on Plant Material used in Hair Growth or in Alopecia

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Abstract

Alopecia areata is a condition that causes hair to fall out in tiny patches, which may be unnoticeable. These patches will however, bind and then become noticeable. The disease develops when the immune system attacks the hair follicles, which results in hair loss. In the form of solitary or multiple patches of alopecia, the most prominent site affected is the scalp. Alopecia areata occurs in males and females of all ages, but in infancy there is always an onset. At some stage in their lives, over 147 million people worldwide have, had or may develop alopecia areata. Some important classes of Alopecia were involved by Alopecia areata, Moderate Transient AA, Transient AA, Alopecia Totalis, Ophiasis AA, Alopecia Universalis. Genetic predisposition, autoimmunity, and environmental factors play a major role in the etiopathogenesis of AA. Corticosteroids are the most popular drugs for the treatment of this disease. Marrigolds (*Calendula officinalis*) contain triterpenoid esters, flavoxanthin and auroxanthin carotenoids. Most leaves contain lutein (80

Index terms— alopecia areata, hair care formulation, percentage yield, medicinal plants.

Introduction lopecia is a condition in which patchy, confluent or diffuse sample hair loss happens from special regions of the frame, usually from the scalp. 1 In 1 -2% of cases, the condition may additionally unfold to the complete scalp or epidermis known as either alopecia total is or alopecia universal is, respectively. occurrence of alopecia is approximately zero.1-zero.2% with entire life chance of men and women similarly. 2 some sufferer loss all the hair from their heads (Alopecia total is) 3 or all frame hairs (Alopecia universal is). 4 AA is a non-scarring kind of Alopecia. 5 It's miles one of the maximum common place shape of hair loss visible through dermatologists and debts for 25% of all the alopecia case. 6 It turned into first described with the aid of Cornelius Celsus, and the term AA become coined by Sauvagein1760. 7 It accounts for 2-3% of the new dermatology instances in United Kingdom and Americas, three.eights% in China, and 0.7% in India. 7,8 In popular population, the prevalence become anticipated at 0.1-zero.2% with a lifetime threat of 1.7%.8It is able to arise at any age. The youngest become four-monthsantique, and the oldest turned into in late seventies. 9 Twenty percent of cases have been kids, and 60% of AA patients had their first patch earlier than twenty years of age. 10 Highest incidence changed into between 30-fifty nine yrs of age. 1 family contributors are affected in eight.7-20% of instance. 7,9 ? Part Used- Flowers It is a family of Asteraceae of herbaceous annual and perennial plants, sometimes referred to as marigold. 12,13 it is used because of its nematocide, cosmetic and pharmaceutical properties. Antioxidants are present in the essential oil of the flower. 14 Calendula is used topically to treat acne, minimize inflammation, control bleeding, and soothe irritated tissue in suspension or in tincture. 15 Some bacteria provide growth-promoting substances to plants and play an important role in phosphate solubilization. 32 It is also commonly planted in the Salonaceae or nightshade family as winter cherry. 16,17 It aids in the fight against free radicals in the scalp and hair follicles, promoting healthy hair development. Multiple other species are morphologically similar in the genus withania. 17 It is commonly used in the treatment of various illnesses, such as asthma, bronchitis, inflammatory disorders, ulcers, issues with the stomach. 18 Several studies have shown that ashwagandha is a very effective solution to treating neurological conditions such as Parkinson's and Alzheimer's. 19 It is one of the

most commonly used herbs in Indian homes and indigenous medicine texts. In traditional medicine, Emblica is used to stimulate hair growth. The fruits contain tannins as well as antioxidants Emblicanin A and B, and when hydrolyzed, one yields gallic acid, ellagic acid, and glucose, while the other yields only ellagic acid and glucose. Emblica is said to help with iron metabolism. It is necessary for normal hair growth and good hair care. Commercially, Acacia concinna is grown in India and Far East Asia. Spinasterol, acacic acid, lactone, and the natural sugars glucose, arabinose, and rhamnose are all produced when the shikakai plant is hydrolyzed. Shikakai can reinforce your hair strands and reduce hair fall if you use it on a daily basis. It is high in Vitamin C, as well as Vitamins A, D, E, K, and other antioxidants, all of which are essential for healthy and rapid hair growth. 23,24 (Polygonaceae)

? Part Used-Roots It is a well-known traditional Chinese herbal medicine that is widely spread in northeast Asia. It is also used to prevent kidney and liver ageing, nourish the blood, strengthen and stabilise the lower back and knees, and fortify the muscles, tendons, and bones. 25,26 P. multiflorum roots have also been shown to have hair growth activity in traditional medicine, and several studies have shown that they have a significant impact on hair growth and colour. 27 Centella asiatica is a fragrant, small plant native to India. Asiatic and brahmic acids are found in Brahmi booty. It is also widely used in the treatment of alopecia. It serves as a make a sign for hair growth. It is extremely important for strengthening hair follicles and nourishing the scalp. Centella asiatica leaves are used to treat bacterial, viral, and parasitic infections like urinary tract infection, leprosy, cholera, dysentery, syphilis, the common cold, influenza, and tuberculosis. It is widely disseminated in Europe and Southeast Asia. Its fruits are edible, and various sections have medicinal properties such as antifertility, analgesic, and diabetes prevention. 29,30 The essential oil of Zizyphus jujuba also has a hair-growth-promoting effect. Z. jujuba seeds have been used to treat anti-insomnia and anxiety. 31

1 Conclusion

Alopecia areata has a major effect on the appearance and mental health of those who are affected. The current project focuses on various plants that people use to treat dermatological conditions and hair care. Ashwagandha helps to encourage healthy hair growth by stimulating the development of DHEA, a natural hormone in your body that is an ultimate antioxidant. Amla's phytonutrients, vitamins, and minerals help to boost scalp circulation and promote healthy hair growth. Ayurvedic medicine uses Brahmi, a creeping herb. It contains alkaloids that are thought to activate hair-growth proteins. The essential oil of jujuba has a hair-growth-promoting effect.



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Figure 1: Figure 1 :



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Figure 2: Figure 3 :



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Figure 3: Figure 4 :



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Figure 4: Figure 5 :



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Figure 5: Figure 6



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Figure 6: Figure 7 :

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Figure 7: 28

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Figure 8: Figure 8 :



Figure 9: Figure

- [John and Frank ()] , H John , D Frank . *Verwilderte Cotoneaster-Arten in Halle (Saale) und Umgebung. Mitt. Florist. Kart. Sachsen-Anhalt* 2008. 13 p. .
- [Pharmacognosy Magazine (2014)] , *Pharmacognosy Magazine* 2014 Oct. 10 (40) p. 415.
- [Mediseti et al. (2016)] , V Mediseti , G R Battu , S Ravindra , R S Sandhya , R V Subbarao , Antibacterial , Anthelmintic , Of , Extract , Acacia , Linn . *Indo American Journal of Pharmaceutical Sciences* 2016 Jun 1. 3 (6) p. .
- [Jain et al. ()] ‘A review on medicinal importance of Emblica officinalis’. R Jain , R Pandey , R N Mahant , D S Tayhore . *International journal of pharmaceutical sciences and research* 2015. 6 (1) p. .
- [Narinderpal et al. (2013)] ‘A review on pharmacological profile of Withaniasomnifera (Ashwagandha)’. K Narinderpal , N Junaid , B Raman . *Res Reviews J Bot Sci* 2013 Oct. 2 p. .
- [Rebora ()] ‘Acute diffuse and total alopecia of the female scalp: a new subtype of diffuse alopecia areata that has a favorable prognosis-a reply’. A Rebora . *Dermatology* 2003. 207 (3) p. 339.
- [Wasserman et al. (2007)] *Alopecia areata. International journal of dermatology*, D Wasserman , D A Guzman-Sanchez , K Scott , A Mcmichael . 2007 Feb. 46 p. .
- [Muller and Winkelmann (1963)] *Alopecia areata: an evaluation of 736 patients. Archives of Dermatology*, S A Muller , R K Winkelmann . 1963 Sep 1. 88 p. .
- [Kalish and Gilhar (2003)] ‘Alopecia areata: autoimmunity-the evidence is compelling’. R S Kalish , A Gilhar . *Journal of Investigative Dermatology Symposium Proceedings*, 2003 Oct 1. Elsevier. 8 p. .
- [Mcmichael et al. (2007)] ‘Alopecia in the United States: outpatient utilization and common prescribing patterns’. A J Mcmichael , D J Pearce , D Wasserman , F T Camacho , A B Fleischer , S R Feldman , R Balkrishnan . *Journal of the American Academy of Dermatology* 2007 Aug 1. 57 (2) p. .
- [Singh et al. ()] ‘An overview on ashwagandha: a Rasayana (rejuvenator) of Ayurveda’. N Singh , M Bhalla , P De Jager , M Gilca . *African Journal of Traditional, Complementary and Alternative Medicines* 2011. 8 (5S) .
- [Gutierrez et al. (2006)] ‘Antioxidant activity of Tagetes erecta essential oil’. Pérez Gutierrez , RO , Hernández Luna , H , Hernández Garrido , S . *Journal of the Chilean Chemical Society* 2006 Jun. 51 (2) p. .
- [Liang et al.] *Application of microscopy technique and high performance liquid chromatography for quality assessment of Polygonum multiflorumThunb*, L Liang , Z Zhao , T Kang .
- [Ashwagandha Drugs.com.2November2020. Retrieved2 (2021)] ‘Ashwagandha’. <https://www.drugs.com/npp/ash-wagandha.html> Drugs.com.2November2020. Retrieved2, February 2021.
- [Eccher and Suarez ()] ‘Cerebral Edema and Intracranial Dynamics’. M Eccher , J I Suarez . *Critical care neurology and neurosurgery*, (Totowa, NJ) 2004. Humana Press. p. .
- [Tan et al. (2002)] *Chin Giam Y. The pattern and profile of alopecia areata in Singapore-a study of 219 Asians. International journal of dermatology*, E Tan , Y K Tay , C L Goh . 2002 Nov. 41 p. .
- [Koochi-Hosseiniabadi et al. (2015)] ‘Comparison of the therapeutic effects of the dietary and topical forms of Zizyphus jujuba extract on oral mucositis induced by 5-fluorouracil: a golden hamster model’. O Koochi-Hosseiniabadi , A Andisheh-Tadbir , P Bahadori , M Sepehrimanesh , M Mardani , N Tanideh . *Journal of clinical and experimental dentistry* 2015 Apr. 7 (2) p. e304.
- [Sawant et al. (2010)] ‘Determination of gallic acid in Phyllanthus emblica Linn. dried fruit powder by HPTLC’. L Sawant , N Pandita , B Prabhakar . *Journal of Pharmacy and Bioallied Sciences* 2010 Apr. 2 (2) p. 105.
- [Lee et al. (2013)] ‘Ethanol extract of the seed of zizyphus jujuba var. spinosa ameliorates cognitive impairment induced by cholinergic blockade in mice’. H E Lee , S Y Lee , J S Kim , S J Park , J M Kim , Y W Lee , J M Jung , D H Kim , B Y Shin , D S Jang , S S Kang . *Biomolecules & therapeutics* 2013 Jul 30. 21 (4) p. 299.
- [Huang et al. (2014)] *Germplasm preservation in vitro of Polygonum multiflorumThunb. Pharmacognosy magazine*, H P Huang , J Wang , L Q Huang , S L Gao , P Huang , D L Wang . 2014 Apr. 10 p. 179.
- [Yoon et al.] *Hair growth promoting effect of Zizyphus jujuba essential oil*, J I Yoon , S M Al-Reza , S C Kang .
- [Bhadra] *In silico Analysis of the Ashwagandha as Targeted Therapy for Oral Cancer*, P Bhadra .
- [Bhagat ()] ‘Indian gooseberry (Emblica officinalis): Pharmacognosy review’. M Bhagat . *Utilis Management Medicine Plants* 2014. 2 p. .
- [Norwood (1975)] *Male pattern baldness: classification and incidence. Southern medical journal*, O T Norwood . 1975 Nov 1. 68 p. .
- [Gohil et al. (2010)] *Pharmacological review on Centella asiatica: a potential herbal cureall. Indian journal of pharmaceutical sciences*, K J Gohil , J A Patel , A K Gajjar . 2010 Sep. 72 p. 546.
- [Pommier et al. (2004)] ‘Phase III randomized trial of Calendula officinalis compared with trolamine for the prevention of acute dermatitis during irradiation for breast cancer’. P Pommier , F Gomez , M P Sunyach , D ’hombres , A Carrie , C Montbarbon , X . *Journal of clinical oncology* 2004 Apr 15. 22 (8) p. .

- [Sharma et al. (1996)] *Profile of alopecia areata in Northern India. International journal of dermatology*, V K Sharma , G Dawn , B Kumar . 1996 Jan. 35 p. .
- [Sun et al. (2013)] ‘Promotion effect of constituents from the root of Polygonum multiflorum on hair growth’. Y N Sun , L Cui , W Li , X T Yan , S Y Yang , J I Kang , H K Kang , Y H Kim . *Bioorganic & medicinal chemistry letters* 2013 Sep 1. 23 (17) p. .
- [Garnacho-Saucedo et al. (2012)] *Renbökphenomenon in a patient with alopecia areata universalis. Archives of dermatology*, G M Garnacho-Saucedo , R Salido-Vallejo , M Á Álvarez-López , E C De La Asunción , J Ruano-Ruiz , A V García-Nieto , R Jiménez-Puya , J C Moreno-Giménez . 2012 Aug 1. 148 p. .
- [Todkar et al. ()] ‘Screening of secondary metabolites and antibacterial activity of Acacia concinna’. S S Todkar , V V Chavan , A S Kulkarni . *Research journal of microbiology* 2010. 5 (10) p. .
- [Stace (2010)] C Stace . *New flora of the British Isles*, 2010 Apr 1. Cambridge University Press.
- [Sunset Western garden book ()] *Sunset Western garden book*, 1995. Sunset Publishing Company. (Sunset Books)