

Formulation of Herbal Shampoo to Treat Dandruff

Krishna Sailaja A*, Veena RE and Vishwanayani D

Department of pharmaceuticals, RBVRR women's college of pharmacy, Osmania university, India

*Corresponding author: Krishna Sailaja A, Department of pharmaceuticals, RBVRR women's college of pharmacy, Osmania university, India

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Abstract

The main objective of the present article is to avoid the adverse effects associated with the existing synthetic shampoo by formulating a herbal shampoo for the treatment of dandruff. *Malassezia furfur* is the fungus that is naturally seen on the skin surface of humans and is associated with seborrheic dermatitis, folliculitis and atopic dermatitis. Shampoos are used to remove the oil, dirt, skin particles, dandruff, and other contaminant particle that usually build up in hair which are responsible for dandruff. The major drawback of the presently available potent synthetic drugs lies in their toxicity and reappearance of symptoms after discontinuation. An herbal shampoo was prepared by using Rosemary oil which has anti-fungistatic activity and also a definite scalp stimulator and in combination with the thyme oil, hibiscus, tulasi, will reduce inflammation and promote the growth of hair by promoting soothing effect and supply nutrients to the hair follicle.

Keywords: *Malassezia Furfur*; Rosemary Oil; Thyme Oil; Hibiscus Flowers

Introduction

Dandruff involves flakes of skin (dead skin cells) which will combine with oil, dirt particles and form dandruff. It is also caused by the naturally occurring fungus like *Malassezia furfur* and is associated with seborrheic dermatitis (a skin condition that causes scaly patches and red skin mainly on scalp). [1] Dandruff is not contagious or serious condition but sometimes it may create problem to treat [2]. Normally each skin cells shed off at certain time period, in this case the shredded cells will combine to form the dandruff [3]. *Malassezia globosa* is a fungus that metabolizes triglycerides present in the sebum to oleic acid under the influence of lipase enzyme. During dandruff the levels of oleic acid increases where it penetrates to epidermis – stratum corneum and cause an inflammatory response and results in cleavage of stratum corneum cells. [3,4]

Signs and symptoms:

- Itchy scalp
- Flakiness
- Red and greasy patches of skin
- Tingly feeling on the skin [5].

Causes

According to one study, dandruff has been shown to be possibly the result of three factors [6]:

- Skin oil is referred to as sebum or sebaceous secretions
- The metabolic by-products of skin micro-organisms (mostly *malassezia* yeasts)
- Individual susceptibility and allergy sensitivity.

Micro-organisms also play a major role in the formation of dandruff like- propionobacterium, staphylococcus. Some of the side effects associated with the synthetic drugs present in the shampoos are

- Mild skin itching, dry skin, abnormal hair texture, scalp pustules, rash, headache, eye and skin irritation, hair follicle damage, hair loss.
- Synthetic fragrances may cause-dizziness, rash, hyper pigmentation, coughing, vomiting etc.
- And majorly relapsing occurs after the discontinuation of the medication.[7]

Table 1: Formulation.

S. No	Ingredients	Family	Uses
1	Arctiumlappa	Asteraceae	Promotes the hair growth and cure rapid hair fall [8,9].
2	Hibiscus sabdariffa	Malvaceae	Stimulates the hair growth, helps to thicken the hair, prevents the dryness, as it is rich in aminoacids that nourish the hair and strengthens the roots [8-10]
3	Rosmarinusofficinalis	Lamiaceae	Kill the bacteria and fungi, relieves the dryness, provides nourishment, treats the dandruff because it has antifungal properties [10].
4	Eucalyptus globulus	Myrtaceae	Stimulates hair growth, promotes hair growth, relieves itchy scalp, anti-microbial activity [10]
5	Acacia concinna	Fabaceae	Shikakaicleans the scalp gently and induces sebum secretion which helps to reverse the dryness of your scalp, shikakai generally reduces hair breakage and hair loss resulting from too many chemicals [9].
6	Sapindusmukorossi	Sapindaceae	It has the insecticidal properties which helps in removing lice from the scalp [9].
7	Ocimumtenuiflorum	Lamiaceae	Tulasi helps to improve the blood circulation and keeps the scalp cool by reducing itchiness and dandruff and promotes hair growth [10,11].
8	Thymus vulgaris	Lamiaceae	Delivers nutrients to hair follicle and improves blood circulation [11].

So in order to overcome such adverse effects herbal based preparations are gaining more access now-a-days because of its multiple uses associated with the single herb (Table 1).

Preparation Method

Herbal shampoo is prepared by using two cups of water and subjected to boil and now add the herbs then remove from the heat and cover with aluminium foil for 30 minutes. After 30 minutes strain the herbal extract in different proportions and add essential oils and mix well and add shampoo base of kunkudkai and shikakai and stored in the suitable container [12].

Conclusion

The herbs that are used in shampoo preparation are safer for the scalp to reduce the itchy effect and dandruff and are found to be effective than the synthetic shampoos. In case of herbal shampoo there is no deposition of the ingredients on the scalp whereas in case of the synthetic formulation there is deposition of chemicals which causes hair damage.

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