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SYNERGETIC EFFECT OF HERBAL OIL AGAINST DANDRUFF CAUSING MICROBES

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ABSTRACT

Dandruff is a condition of the scalp characterized by the presence of abundant flakes that break off and accumulate in the hair. To avoid dandruff problems, herbs are widely used as remedial agents as they are easily available at low cost and also safe. In order to control the efficacy of fungal infections, an herbal preparation was made. This herbal oil was applied to 20 volunteers and better results were noted in controlling the dandruff pathogens.

KEYWORDS: Dandruff, Medicinal plants and fungal infection.

INTRODUCTION

In human societies, hair plays an important role in appearance and sexual signaling to which the original functional roles of protection and heat conservation are secondary, and changes in the appearance of skin and hair affect self – esteem and confidence in social settings. The scalp is unique among skin areas in humans, with high follicular density and a high rate of sebum production. The dark and warm environment of scalp surface is favourable for the superficial mycotic infections that play a role in dandruff (Ramon Grimalt, 2007).

Dandruff is a condition of the scalp and other hairy areas of the body characterized by the presence of abundant flakes that break off and accumulate in the hair. It manifest as profuse white to silvery powdery scales in the scalp region often with moderate to severe itching (Suresh Kumar *et al*., 2010).

Nowadays, many chemical substances are used for treating dandruff by controlling the abundance of fungi on the scalp. Shampoos are toxic and have side effects like dryness of the scalp and hair, oiliness of the scalp and hair, irritation of the scalp, skin and mucus membrane of the eyes, discolouration of hair, loss of hair and variation in the individual

response due to the natural differences and due to chemicals used in different preparations (Mohamed Halith *et al.,* 2009).

In India, Ayurveda is still in high practice, in which herbs are used as an integral part of health care systems. To avoid dandruff problems, herbs are widely used as remedial agents as they are easily available at low cost and also safe (Anitha *et al*., 2013). In Ayurvedic medicine, herbs are used as an integral part of health care systems. Besides health care it is also used for beautification of the body and for preparation of various cosmetics and colours. So, the present study was carried out to control the efficiency of dandruff pathogens with herbal preparation oil.

MATERIALS AND METHODS

Sample collection

The scrapings of the scalp that possess dandruff with severe itching were collected from 20 volunteers (females) between the age group of 18 – 25 years.

Isolation of dandruff fungi

The collected samples were inoculated into Potato dextrose agar and Sabourards Dextrose agar and incubated at 28°C for 5 – 7 days.

Collection of plant materials

Fresh plant parts of *Ocimum sanctum, Azdiracta indica, Eucalyptus globulus, Emblica officinalis, Hibiscus rosasinensis, Acacia concinna* were collected from Nagercoil region.

Preparation of herbal oil

Inorder to control the efficacy of fungal infections, an herbal preparation was made. Fresh coconut oil was prepared. Equal volumes of *Ocimum sanctum, Azdiracta indica, Eucalyptus globulus, Emblica officinalis, Hibiscus rosasinensis, Acacia concinna*, were taken. All the contents were crushed and fresh juice was prepared. The juice was then poured into the coconut oil and heated in medium flame for 10 minutes with shaking. This herbally prepared oil can be used for controlling dandruff.

Potency of herbal oil in suppressing dandruff pathogens

The prepared herbal oil was applied everyday in the scalp of the volunteers, 30 minutes before bathing. All the volunteers were advised not to use commercial oils, shampoos etc., while using this herbal preparation. After 10 to 15 days of applying this oil, the volunteers were examined. The scrapings of the scalp was inoculated in Sabourards Dextrose agar plates and incubated at 28°C for 1 week and the result was noted.

RESULTS AND DISCUSSION

20 volunteers were examined for the presence of microorganisms with reference to dandruff and it was surprisingly noted that all the volunteers exhibited the growth of the predominant fungal species *Malassezia furfur, Malassesia globosa* and *Trichophyton mentagrophytes.*

The range of the colonies was very low when compared before the treatment. This work was supported by Mohamed Halith *et al*. in 2009, that he prepared and evaluated an antidandruff shampoo powder by using the natural ingredients with *Ocimum sanctum* and *Azadiracta indica*. They reported that the powder contain all the good characters of an ideal shampoo and it was found to be harmless, more effective, economic, and alsohighly active against Gram positive and Gram negative organisms and fungus such as *Candida albicans*. Also Sachin Dubey *et al*. in 2004, prepared an herbal shampoo powder and reported that as an useful herbal powder in controlling dandruffs. The herbal drugs prove to be an alternative for synthetic drugs which have the shortcomings of poor efficacy and recurrence (Suresh Kumar et al., 2010).

CONCLUSION

As this herbal oil has significant potency to control the pathogens causing dandruff, this oil can be used continuously for complete relief of dandruff. Further studies have to be done to find out the concentration and activity of the compounds present in the herbs.

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