



Formulation, Evaluation and Finding out the Efficacy of the Herbal Hair Oil over Coconut Oil.

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Abstract

Many people including both men and women at all ages develop of hair loss, which is the most common cause of hair loss worldwide. Generally in men, it's called male pattern hair loss. Women get female pattern hair loss. Irrespective of whether it develops in a man or women, the medical term is androgenic alopecia. This study is formulated a herbal hair oil and made a clinical trial over selected person under the research and development unit at Lefems Herbal Company. To see the efficacy of the experimental oil made up of *Nigella sativa*, *Cocos nucifera*, *semecarpus anacardium*, *Embllica officinalis*, *Lawsonia alba*, *Cynodon dactylon*, *Trigonella foenum-graecum* in different concentration over the simple Coconut Oil (purified). Total 90 volunteers man and women were selected for 90 days and arranged in 3 groups, one for experimental oil recipient, one for control group another for the simple Coconut Oil (purified) recipient. And it is found that hair fall reduced to 82%, 76%, 71%, 63%, 35%, 0% on 15days, 30 days, 45 days, 60 days, 75 days, and 90 days by using of this experimental herbal hair oil. Aims of the study: A Formulation and Clinical Study on the Efficacy of the Herbal Hair Oil over Simple Purified Coconut Oil.

Keywords: Purified Coconut oil, Hairfall Reduction, Clinical Study, Herbal Hair Oil, Combined Assay.

Introduction

Hair fall is not any longer a condition barred by age! 15 or 50, when most folks walk out of the shower, the drain is clogging and once we brush, we loss an enormous chunks and we don't know what to do about it. Hair fall was within the earlier days attributed as a sign of aging and was a cause for a great deal of embarrassment.

But today, we not count by age but rather count by so very many other reasons. Regardless of what the cause, the embarrassment associated doesn't reduce even by a fraction. We search for a solution with great intensity. Diffuse hair shedding is that the result of a disruption of one phase of the hair cycle^{1, 2} i.e., anagen (active hair growth), catagen (involution) or telogen (resting). The anagen phase can last 2-8 years.³ he catagen phase lasts 4-6 weeks, and therefore the telogen phase lasts 2-3 months. The exogen phase (the release of dead hair) coincides with the top of the telogen phase. Most of the people have about 100,000 scalp hairs; normally 10-15% of those are in the telogen phase⁴. Shedding of 80-140 telogen hairs per day is normal³.

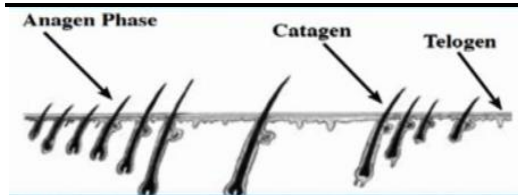


FIGURE 1: THE THREE PHASES ARE THE ANAGEN PHASE, THE CATAGEN PHASE, AND THE TELOGEN PHASE

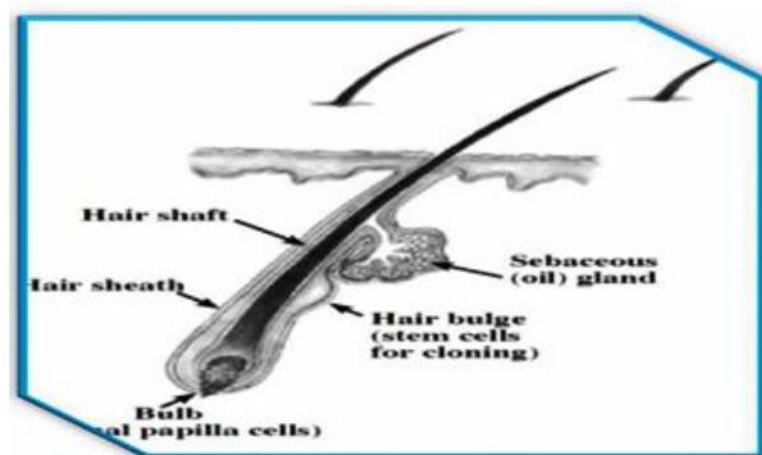


FIGURE 2: SCALP HAIR FOLLICLES TEND TO HAVE A LONGER GROWTH PHASE THAN EYELASH HAIR FOLLICLES

Various factors contribute to hair fall in people. Genetic predisposition and hormonal factors predominantly contribute to the hairfall. Diseases state like typhoid, malaria, jaundice etc., also cause hair fall. The utilization of chemotherapeutic agents also causes hair fall⁵. Management of hair fall is extremely complex. Hormone therapy use of α -reductase inhibitors, vasodilators like minoxidil are widely wont to reduce the hair fall⁶. The utilization of some of the herbal oils is also reported to reduce the hair fall⁷.

MATERIALS AND METHOD:

Equipment: Pulverizer, Mixer, Gas cylinder, Iron & Steel vessels, Spoon, Oven, etc.

Raw Materials: Design for each 2.5 liters

TABLE 1: RAW MATERIALS REQUIRED FOR THIS EXPERIMENTAL HAIR TONIC OIL.

S.No.	Raw material/scientific name	Used part	Quantity
1	<i>Nigella sativa</i>	Oil	250 g
2	<i>Cocos nucifera</i>	Oil	2.5 litres
3	<i>semecarpus anacardium</i>	Oil	2.5 litres
4	<i>Emblica officinalis</i>	Fruit	2.5g
5	<i>Lawsonia alba</i>	Leaf	62.5 g
6	<i>Cynodon dactylon</i>	Whole plant	62.5 g
7	<i>Trigonella foenum-graecum</i>	Seed	62.5 g

Method for preparation of Hair Tonic oil: All the raw materials except *Cocos nucifera* oil should be dried in sun for 1-2 hours and then grinded in a mixer to make a powder and soaked in 3 liters of water for 10 hours in an iron pan. Boil the content for 30 minutes. Filter the contents with the help of fine cotton. Keep the filtrate. Repeat this process three times with the materials left after filtration on the fabric. All the filtrate materials mixed well and boiled to reduce the volume to 2.5 liters. Then, by taking 2.5 liters of hair tonic as prepared above without preservative. It is heated to 100°C along with 2.5 liters of coconut oil. Heat these contents continuously until the water gets evaporated. This can be checked by dipping raw cotton in the liquid and burning the cotton on a flame.

If the cotton burns without clerking sound, it means water is completely evaporated. Two grams each of Methyl-p-hydroxybenzoate and Methyl-4-hydroxybenzoate added to the final solution as preservative. The preservative is water based only. Finally it is packed in bottles.

Use of Hair Tonic oil: The oil is applied to hair using cotton, on hair and left for a maximum of 24 hours, then washed with water.

Volunteer selection: Male/female subjects between 17-40 years of age group complaint with hair fall for near about three months duration was selected for this study. Subjects who are affected with recent malaria, typhoid, and jaundice excluded from the study. As same as, pregnant women, lactating mother, those who are on hormone or chemo therapy were also excluded from the study.

STUDY DESIGN: After completing the clinical compliance of each and every subject, the objective and other detail of the study were explained to them clearly. All volunteers were divided into three separate groups of 20 members each group to test the efficacy of the trial herbal hair oil versus ordinary coconut oil (control group) separately. Two hundred milliliters (200ml) of the trial herbal hair oil was given to each of the volunteer and instructed them how to apply in every alternate day on their scalp (5ml/application). They are also instructed to massage the oil on the scalp smoothly for 10-15 minutes. The volunteers were instructed to use this hair oil twice a day, in the morning after hair wash they are also advised to use this hair oil after bath. The total duration period of the study designed was 90 days. The volunteers were also guided not to use any shampoo wash at least 5 days prior to review by the clinical trial team. Each volunteer was regularly reviewed by the clinical trial team. Once in Every 15 days during the whole trial period (90 days).

EVALUATION METHOD: The hair of all volunteers was smoothly combed by using comb (10 times) in down word direction all over the entire scalp on the starting day. All the volunteers, hair collected in the comb were counted individually and examined under a microscope with the root of falling hair and, next all the hair of the volunteers were accumulated and calculated the total number of the fallen hair with root and percentage was arrived in a figure for both groups. The same procedure was repeated on the day 15, 30, 45, 60, 75 and 90 days after using the trial hair oil.

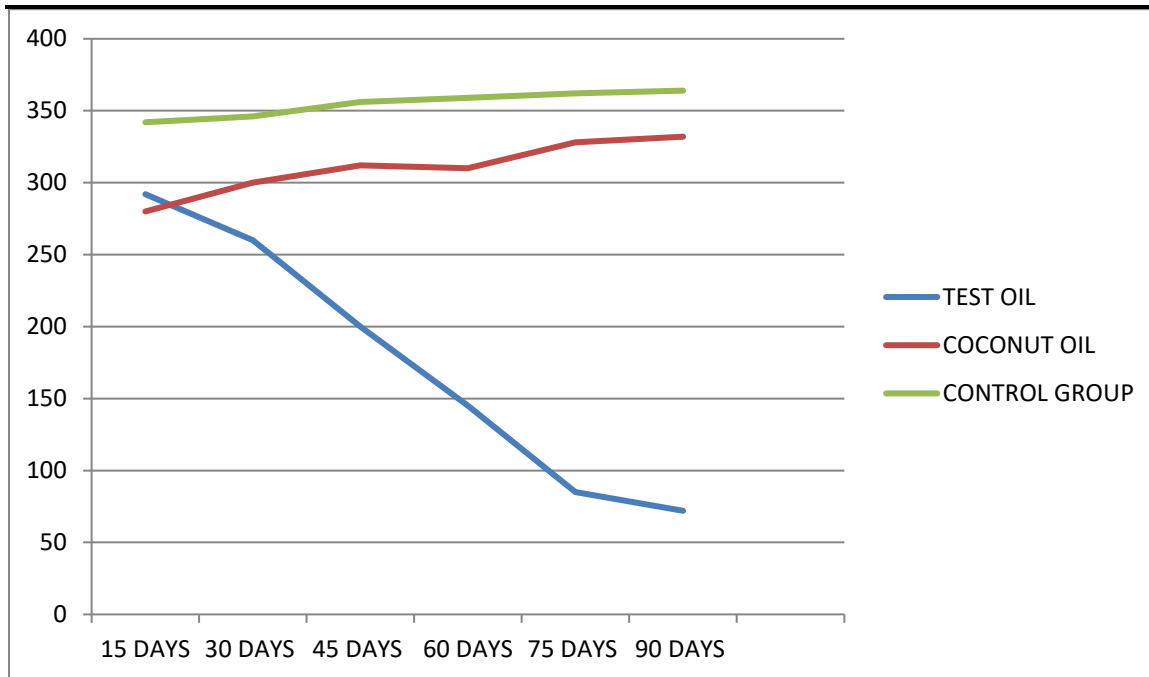
RESULTS AND DISCUSSION:

Combing Assay Through combing assay, we have obtained a total of 380 (mean=13), 365 (mean=13) and 340 (mean=13) from is group of volunteers designated for the trial oil and ordinary coconut oil respectively from the starting day. All the volunteers participated in this study reported that they use the comb about 2- 3 times in day obtaining similar number of hair during each combing the number of hairs collected by the volunteers who were using the trial oil had reduced to 292, 260, 200, 145, 85, 72 effectively on 15, 30, 45, 60, 75, 90 days respectively. On the other hand ordinary coconut oil users found their hair fall increased and that was 280, 300, 312, 322, 327, 332 drastically on 15, 30, 45, 60, 75 and 90 days respectively. Simply controlled users found their hair fall increased and that was 342, 346, 356, 359, 362, 364 drastically on 15, 30, 45, 60, 75, and 90 days, that shown in the Table 2.

TABLE 2 : HAIR FALL REDUCTION IN VOLUNTEERS AFTER USE OF THE TEST OR COCONUT OIL BY COMBING ASSAY

S.No.	Name of the sample	Number of the volunteers	Number of hair root out after using the oil						
			Days						
			Before use						
			15	30	45	60	75	90	
1	Test oil	30	380	292	260	200	145	85	72
2	Coconut oil	30	365	280	300	312	310	328	332
3	Control group	30	340	342	346	356	359	362	364

The % reduction in hair falls after using of the trial versus ordinary coconut oil. The % reduction in hair fall with hair root in volunteers after using of the trial versus ordinary coconut oil is shown in graph 1.



GRAPH 1: % HAIR WITH ROOT OBTAINED FROM VOLUNTEERS AFTER USE OF THE OILS BY COMBING ASSAY.

No. of Hairs with root out of total hair obtained after use of oils by Combing Assay.

Clinicians often assess the ferritin level to rule out iron deficiency (particularly in menstruating women, vegetarians, and women with a history of anemia⁸⁻¹⁰) and the Thyrotropin level to rule out thyroid dysfunction in women with diffuse hair losses, although the yield of such universal testing has not been proved. If the ferritin level is less than 70 mg per milliliter, iron supplementation is recommended¹⁰. Nevertheless, its effects on hair loss and re growth have not been rigorously evaluated in controlled trials; data suggestive of efficacy are limited to case series indicating cessation of hair loss and new hair growth with iron supplementation in women with low ferritin levels,¹¹ and not all case series have shown a benefit of iron supplementation¹².

Out of this, the present study can give a tremendous solution in the field of hair fall it can be said that hair fall is stopped.

CONCLUSION: Hair fall is very common, we indented and dedicated to find some permanent solution and by the grass of Ayurveda finally we found remarkable result causing no side effect.

ACKNOWLEDGEMENT

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CONFLICTS OF INTEREST

There are no conflicts to declare.

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