



A Review on Polyherbal Hair Oil

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ABSTRACT:

Human personality greatly depends on hair, and we use many cosmetic products to take care of it. The goal of this study was to review the significance of polyherbal hair oil for the treatment of common hair issues such as dandruff and hair loss as well as baldness, alopecia, hair fall, grey hair, and dryness.

Both developed and developing nations have considerable concerns about the dandruff issue. In the scalp region, dandruff appears as numerous white to silvery powdery scales, frequently accompanied by moderate to severe itching. Most dandruff sufferers also experience frequent hair loss. A yeast-like lipophilic basidiomyceteous fungus known as *Pityrosporum ovale* is thought to be the primary cause of dandruff.

Clinical studies have shown that herbal remedies and herbs promote hair growth. Both men and women are quite concerned about the problem of hair loss, and the primary issues related to it include dandruff, hair falling out, and hair fading. There are many synthetic medications available for treating hair loss, but they come with serious side effects and do not work long-term. The primary goal of this work is to create a herbal hair oil formulation that can address the issue of hair fall and other hair problems.

Because they have fewer and no adverse effects than synthetic medications, herbal formulations have long drawn significant attention. As old as humanity and civilization it is the concept of beauty and cosmetics. In this work, several characteristics including viscosity, saponification value, pH, acid value, grittiness, skin irritation, sensitivity test, moisture content, and specific gravity are presented for the synthesized herbal oils of various concentrations that were assessed for proximate analysis.

Keywords: Hair oil, herbs, cosmetics, Antidandruff.

Introduction

Hair:-

The three fundamental components of hair are the bulb (which arises at the base and comes from the dermis), root, and shaft (which is the hair above the skin surface) [1]. A dermatological condition, hair loss is on the rise as more natural products with potential to encourage hair growth are found. The three cyclic phases of each hair's growth are anagen (growth), catagen (involution), and telogen (rest). [1].

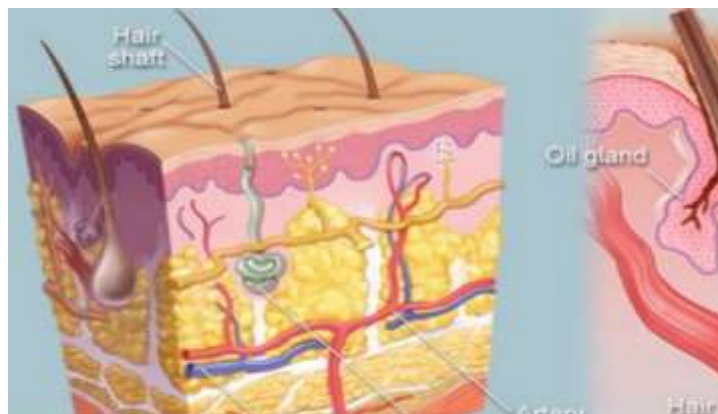


Fig.1 Structure of Hair

The shortest amount of time needed to begin growing hair on albino wister rats' shaved or denuded skin was observed and recorded, as well as the shortest amount of time needed for all of the hair to grow in and completely cover the shaved or denuded skin. By removing 25 hairs from the shaved area or area

where herbal hair oil formulation was applied, the mean hair length was determined. Administered after 10, 20, and 30 days, and properly measured using a vernier calliper or scale. [6]

Hair Damage & Affecting Factors:-

An rising number of men and women are dealing with the painful issue of hair loss. Therefore, the development of innovative medicines for the treatment of hair loss is crucial. It is a dermatologic condition, and research into natural items that may encourage hair development is ongoing^{1, 2}. Alopecia, or hair loss, is a common patient complaint and a major source of emotional and physical distress³. In addition to a number of other factors, androgens are thought to be one of the most significant causes of alopecia. ⁴. There are natural products on the market in the form of herbal formulations that are used as hair tonics, hair growth promoters, hair conditioners, hair cleaners, anti-dandruff agents, as well as for the treatment of alopecia, dandruff, and lice infestation⁵. A number of herbal products have been acclaimed with hair growth-promotingActivity⁶ [6]

Types of hair loss

Androgenetic or androgenic alopecia (baldness)

It is sometimes referred to as genetic baldness and is the most typical cause of hair loss in men. ¹¹ Hair follicle size is decreased, anagen time is shortened, and the proportion of telogen hair follicles is increased in androgenetic alopecia. [1]

Alopecia areata

Hair loss from the scalp (alopecia areata totalis) or the entire body occurs in alopecia areata (alopecia areata universalis) [1]

Telogen effluvium.

A huge number of hairs entering the telogen phase at once at an early stage is what defines telogen effluvium. [1]

Chemotherapy-induced alopeci

This particular type of hair loss is brought on by the adverse consequences of cancer treatment. [1] As much as 50% of the world's population experiences dandruff at some point in their lives, making it one of the most frequent complaints. The ailment is typically identified by flakes on the scalp and in the hair. The degree of the scaling can range from minor to severe, and the symptoms can be different. In young men and children, both its prevalence and severity are highest. Older people have dry scalp and dandruff less frequently. 521 (65.1%) of the 800 males have dandruff, compared to 279 (34.9%), and those in the age range of 21 to 40 have the worst dandruff problems overall. [8]



Fig. 2 Dandruff

Both developed and developing nations have considerable concerns about the dandruff issue. In the scalp region, dandruff appears as numerous white to silvery powdery scales, frequently accompanied by moderate to severe itching. Most dandruff sufferers also experience frequent hair loss [1]. A yeast-like lipophilic basidiomyceteous fungus known as *Pityrosporum ovale* is thought to be the cause of danovf. [7] Dandruff can be caused by a variety of

things, including dietary deficiencies, hormonal imbalances, cold, dry weather, poor hygiene practices, chronic stress, long-term anxiety, and inadequate shampooing and rinsing of the scalp and hair. [8]

The most common hair issues include dandruff, hair shedding, and issues with pigmentation (fading). The three cyclical phases of each hair's growth are anagen (growth), catagen (involution), and telogen (rest). Anagen might last anywhere from two to six years. The hair transitions to the next phase during the catagen phase, which lasts for two to three weeks. The hair enters a resting phase during the telogen phase, which lasts for two to three months. Alopecia, or shedding of more than 100 hairs per day, is considered to be a condition. On average, 50 to 100 hairs are known to fall out per day. [3].

ROLE OF HAIR OIL

A. Removes Hair Lice

Hair oil is the most effective treatment for head lice. All the debris and lice in your hair will go after applying the hair oil.

B. Helps in Hair Growth

Apply hair oil to your scalp. It has been said that doing this promotes hair growth.

C. Smoothness Frizzy Hair

Hair oil works on the scalp to improve hair smoothness.

D. Control The Split Ends

The hair splits are incredibly irritating and make the hair look unhealthy. Split ends can be prevented with the aid of hair oil. [9]

Hair Care Products & Oil:-

Both the fact that herbal products are used as cosmetics for body care and the fact that phytochemicals enhance biological functions of the human body naturally result in healthy skin and hair are signified by the presence of various phytochemicals and botanicals in these goods. [1] The term "herbal extracts" simply refers to the extracts of various herbs. Its origins were found in the sacred Vedas and in the writings of the Unani religion, making it an old approach. As it was realized, chemical medications do not always function as miracle cures and may have negative effects. The usage of natural products and herbalism are currently popular trends. The richest source of herbs utilized in the cosmetic industry is from India. [5]

Common topical treatments for dandruff include fluconazole, zinc-pyrithione, ketoconazole, coal tar, and selenium sulphide. [5] Different formulations, such as shampoos, creams, lotions, emulsions, hair oils, and other cosmetic formulations, are used to administer both synthetic and natural medications. [8] Natural ingredients are suggested for the control of dandruff over synthetic treatments. [8]

The products used for hair care fall into two groups. They serve as hair grooming tools and tonics. Hair oils that include Hair tonics are herbal medications. Herbal extracts in an oil basis are used to make these. Hair oils are hair care products used to address conditions like baldness, hair greying, hair loss, and dryness of the hair. [5]

Ingredients:-

I: Amla:

Scientific name: Phyllanthus emblica

Biological source: Dried fruits of Phyllanthus emblica

Family: Phyllanthaceae



Fig: 3. Amla

Part used: Fruit

Use:

1. Hair conditioner, treats scalp ailments, Hair growth.
2. Strengthen the scalp and hair.
3. Reduce premature pigment loss from hair, or greying.
4. Stimulate hair growth.
5. Reduce hair loss.
6. Prevent or treat dandruff and dry scalp.
7. Prevent or treat parasitic hair and scalp infections, like lice infections.

Emblica exhibits strong antioxidant activity. It is one of the most important plants in the traditional Ayurvedic medical system as well as in other Traditional health systems for immunomodulatory, Antiulcer, anti-inflammatory, hepatoprotective and Anticancer actions. However, there is very limited Clinical evidence to support the use of emblica for any indication.

2. Curry Leaves:

Scientific name: *Murraya koenigii*

Biological source: Dried leaves of *Murraya koenigii*

Family: Rutaceae

**Fig: 4. Curry leaves**

Part used: Leaves

Use:

1. Prevents hair fall and premature greying of hair.
2. Help fight hair thinning or hair loss.
3. A protective effect on oxidative stress.

The bark and the roots are used as a Stimulant by the physicians. They are also used externally To cure eruptions and the bites of poisonous animals. The Green leaves are stated to be eaten raw for curing dysentery, and the infusion of the washed leaves stops vomiting.

Kidney pain can be cured by using juice of root of *Murrayakoenigii*. It can be used in preventing premature Greying of hair

3. Coconut oil:

Scientific name: *Cocos nucifera* (L.)

Biological source: Oil derived from dried fruits of *Cocos Nucifera*.

Family: Arecaceae



Fig: 5. Coconut oi

Part used: Kernal.

Use:

1. Moisturiser, vehicle, stimulates hair growth by Unclogging pores.
2. Raw material for hair oil and hair tonic.

Coconuts have been used in traditional medicine around the world to treat numerous ailments, ranging from sore throat, colds, and earaches to tuberculosis, tumors and ulcers. Recent medicinal studies have found that coconut can have antibacterial, antifungal, antihelminthic and Antiviral properties, among other health benefits.

4. *Nem:*

Scientific name: *Azadirachta indica*

Biological source: Dried leaves of *A. Indicap*

Family: Meliaceae



Fig. 6: Neem

Part used: Leaves

Use:

1. Leaves Antimicrobial, antiseptic, antidandruff
2. Antimicrobial, Antiseptic, Antidandruff these flowers

Are also used in many Indian festivals like Ugadi. Neem products are believed by siddha and Ayurvedic practitioners to be antihelmentic, antifungal, antidiabetic, antibacterial, antiviral, contraceptive and sedative. Neem oil is also used for healthy hair, to improve liver function, detoxify the blood and balance blood sugar levels.

5. *Bhringraj*:

Scientific name: Eclipta prostrata

Biological source: Eclipta prostrata

Family: Asteraceae, Alba

**Fig: 7. Bhringraj**

Part used: whole plant

Use: Hair growth and alopecia

Promoting hair growth, hair nourishment

As per studies, bhringraj oil increases blood circulation to the scalp and roots, which promotes hair growth. This oil activates the hair follicles, which enhances hair growth. Massage this oil for 10 minutes in a circular motion for better results

6. *Brahmi*:

Scientific name: Waterhyssop

Biological source: Bacopa monnieri

Family: Plantaginaceae



Fig: 8. Brahmi

Part used: leaves

Uses: Nervine tonic, enhance portion kinase activity and also used for treatment for Dementia

7. Henna:

Scientific name: Lawsonia inermis

Biological source: Dried leaves of Lawsonia inermis

Family:-Lythraceae



Fig: 9. Henna

Part Used: Leaves

Use:

1. Hair colorant helps in hair growth.
2. Henna improves hair growth.
3. It reduces hair fall.
4. How to Apply Henna on Hair for Deep Conditioning.
5. Mehendi prevents dandruff.
6. Henna controls scalp itchiness.
7. It is a natural hair dye.

8. It repairs splits ends.

8. *Hibiscus*:

Scientific name: Hibiscus

Biological source: rosa-sinensis

Family: Malvaceae



Fig: 10. Hibiscus.

Part used: Flower paste

Uses:

1. Stop hair loss.
2. Your hair look healthy and lustrous.
3. Prevent premature graying.
4. Thicken hair and add volume.
5. Treat dandruff.
6. \Condition against frizz, dryness, and breakage.
7. Prevent split ends.

9. *Mustard oil*:

Scientific name: Brassica nigra

Biological name: Brassica nigra

Family: Brassicaceae



Fig: 11. Mustard oil

Part used: seeds

Uses: Stimulate hair growth

May block microbial growth.

May promote skin and hair health.

May alleviate pain.

May slow cancer cell growth.

May support heart health.

Reduces inflammation.

May help treat cold symptoms.

Physicochemical evaluation of poly herbal hair Oil.

Studies on the Physicochemical and Phytochemical characteristics of the formed oil formulations were conducted. A variety of qualitative and quantitative factors, including pH, acid value, saponification value, viscosity, specific gravity, and organoleptic property, were assessed for the formulation herbal oil. It is crucial to determine these criteria in order to guarantee the formulation's quality, safety, and effectiveness [1].

Sensitivity test

The prepared herbal hair oil was applied On 1 cm skin of hand and exposed to sunlight for 4-5 Min .[10]

Specific Gravity

Take the specific gravity bottle, rinse it with distilled water. Dry it in oven for 15 min, cool, close it with cap and weigh It (a). Now, fill the same specific gravity bottle with the Sample and close it with cap and again weigh it (b). Determine the weight of sample per milliliter by subtracting The weight (b-a) [5]

Acid value

Preparation of 0.1molar solution weighted 0.56g Of KOH pellets and dissolved water and stirred continuously. The prepared 0.1 molar KOH Solution .Was filled in the burette. Preparation of Sample: measured 10ml oil and dissolved in 25ml Of ether mixture and shocked. Added 1ml of Phenolphthalein solution and titrate against with 0.1molar KOH solution. The acid value of the prepared oil was calculated by using formula

$$\text{Acid value} = 5.61n/w$$

Where, n= number of ml 0.1 molar KOH, w= Weight of oil. [1]

Saponification value

2g of oil was accurately weighed and transferred Into a 250ml iodine flask. 25ml of 0.5m alcoholic Potassium hydroxide was added and boiled under Reflux on a water bath for 30 mins. Phenolphthalein was added as indicator and Titrated against 0.5m HCl (a). Similarly blank was Performed (b) without the sample. The Saponification value of the prepared oil was calculated by using formula

$$\text{Saponifation value} = 28.05 (b-a)/w$$

Where, W= weight in gram of the solution. [2]

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