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Prevention of hair fall and whitening of hair by valuable medicinal plants in selected areas of Madurai district, Tamil Nadu, India

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Abstract

An ethnobotanical study was investigated in Madurai District which is mainly focused on prevention of hair fall and whitening hair by medicinal plants. The ancestral traditional knowledge of people who have been using the native plants for the preparation of drugs and methods of their administration along with doses were recorded, Collected through the questionnaire as well as informal personal interviews during field trips. The practical knowledge of people in herbal medicines reveals that they are capable of curing Hair related problems.

Keywords: Hair fall and whitening of hair ancestral traditional knowledge Madurai district

Introduction

Hair loss, also known as alopecia or baldness, refers to a loss of Hair from part of the head or body. Typically at least the head is involved. The severity of hair loss can vary from a small area to the entire body. Typically inflammation or Scaring is not present. Hair loss in some people causes Psychological distress.

Common types include Male pattern hair loss, Female pattern hair loss alopecia and a thinning of hair known as telogen effluvium. The cause of male-pattern hair loss is a combination of genetics and male hormones, the cause of female pattern hair loss is unclear, the cause of alopecia areata is autoimmune, and the cause of telogen effluvium is typically a physically or psychologically stressful event. Telogen effluvium is very common following pregnancy. Less common causes of hair loss without inflammation or scaring include the pulling out of hair, Certain medications including Chemotherapy, HIV/AIDS, Hypothyroidism, and Malnutrition including iron deficiency.

Grey or white is the result of the process of changes in hair that make hair to turn white. This change in hair coloring is done progressively as we age. It usually affects the Temples first, then to the back of the head and, eventually, it reaches all hair. Women are more prone to men to this process it affects 65% of women who are close to forty while it usually affects only half men. The natural plants which are utilized in hair-care details can be arranged in the accompanying gatherings :(I) Plants utilized as hair chemical (ii) Plants utilized as hair coloring operator (sick) (III) Plants utilized as hostile to dandruff and (Iv) Plants utilized as hair tonic/hair health advancement of development.

Experimental Methods

Geographical data

In current research work, a total of 4 village's viz. Arittapatti, A. Vellalapatti, Kidaripatti, and Mangalam which are located at the foot hills of Azhagar hills in Madurai district of Tamil Nadu, were selected. The altitude of the study sites is about 350-430 M above mean sea level (MSL). The longitude and latitude of the investigated location were given below.

Arittapatti: 78° 16 42 E Longitude-10° 02 11 N Latitude

Vellalapatti: 78° 17 11 E Longitude -10° 03 38 N Latitude

Kidaripatti: 78° 15 27 E Longitude-10°03 52 N Latitude

Mangalam: 78° 16 24 E Longitude-10° 03 11 N Latitude

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Temperature and rainfall

As all the study sites selected for this present investigation were located within the distance of 10 km in total, there are no any fluctuations in temperature and rainfall of the study sites.

The temperature of the study area ranges from 20^oc during winter and about 39^oc during summer. The study areas receiving a fairly good rainfall from North-East monsoon secession from October to November every year. The average rainfall reaches 700 mm.

Vegetation

As the investigated sites were located at the foot hills of Azhagar hills, the vegetation of the same is mostly occupied

by thorny forest and scrub jungles. In some places, it has open exposed rocks with grass lands.

Soil texture

The larger part of the study site is enclosed by the agricultural lands. The study sites have black soil sand in manor, and clay loam, Sandy loam, rough stone, Black granite, and red soil are also accounting for the soil structure of the study sites.

Materials and Methods

The Details of collected plants with their scientific name, family, local name, Mode of Administration, Uses are presented in (Table 1).

Table 1: The Details of collected plants with their scientific name, family, local name, Mode of Administration

S. No	Binomial name	Family	Local name (Tamil)	Mode of administration	Uses
1.	<i>Acacia Sinuate</i> (Lour) Merr.	Mimosaceae	Shigaikai	Soap pod, Leaves, Bark of the plant are dried, ground into powder	Hair softer, Strengthen Hair root, Lesser Hair fall
2.	<i>Acalypha indica</i> L.	Euphorbiaceae	Kuppai meni	Whole plant extract is mixed with Coconut oil and applied to head	Hair loss and Baldness
3.	<i>Acorus calamus</i> L.	Araceae	Vasambu	The powdered root is mixed with Coconut mild applied on the affected area of Head	Prevention of Hair loss
4.	<i>Aegle marmelos</i> L.	Rutaceae	Vilvam	The fruit extract is Mixed with Coconut oil and Almond oil applied for Hair scalp	Improves Hair growth
5.	<i>Allium cepa</i> L.	Liliaceae	Vengayam	Bulb Juice is applied over Hair scalp	Prevents Hair fall and greying of Hair. Promotes hair growth
6.	<i>Aloe vera</i> (L.)Burm. f.	Liliaceae	Sotrukkatralai	Leaf gel is mixed with Amla oil applied daily on Scalp	Prevents Grey hair and Baldness
7.	<i>Amaranthus spinosus</i> L.	Amaranthaceae	Mullukkeerai	Juice of leaves is applied to the hair	Prevents Premature greying and falling of Hair
8.	<i>Anacardium occidentale</i> L.	Anacardiaceae	Mundiri	Leaf extract is applied to the hair	Controls Hair Loss
9.	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Vembu	Seed extracted Oil is applied over the Hair scalp	Controls premature greying and promotes hair growth
10.	<i>Bacopa monnieri</i> (L.) Pennell.	Scrophulariaceae	Brahmi	Dried or Powdered Leaves are mixed with Amla juice and Tulsi leaf extract is applied over Scalp	Promotes Hair growth and Prevents white hair
11.	<i>Capsicum annum</i> L.	Solanaceae	Milagai	Fruit paste is applied to the hair	Stimulates hair growth
12.	<i>Carica papaya</i> L.	Caricaceae	Pappali	Leaf extract is applied to the hair	Promotes Hair growth, Prevents Baldness and Thinning Hair
13.	<i>Cassia auriculata</i> L.	Caesalpinaceae	Aavaarai	Leaf paste is applied to the hair	Strengthens and Thickens hair
14.	<i>Catullus colocynthis</i> schrad.	Cucurbitaceae	Kumatti	Fruits pulp extract can be applied to Head	Prevent Hair loss
15.	<i>Citrus limon</i> (L.) Burm. f.	Rutaceae	Elummichai	Fruit juice with Coconut oil applied over the scalp	It increases Hair growth It turns grey into Black color
16.	<i>Cocos nucifera</i> L.	Arecaceae	Thennai	Coconut oil with Curry leaves, Coconut Milk, Coconut Oil applied to the hair	Black Hair, Strengthens Hair, Prevents breakage of Hair, Shining of Hair
17.	<i>Coriandrum sativum</i> L.	Apiaceae	Kothumalli	Grind the leaves and Mixed with Coconut oil applied to the hair	Promotes Long hair and Thickening of Hair
18.	<i>Datura metal</i> L.	Solanaceae	Omathai	Extraction of Leaves, Flower, and fruit applied over the scalp	Prevents Hai from fall
19.	<i>Eclipta prostrata</i> (L.)	Asteraceae	Karisilankanni	Extraction of leaves mixed with Coconut oil applied over the scalp	Controls Hair loss Prevents Premature graying of Hair
20.	<i>Ficus bengalensis</i> L.	Moraceae	Aalamaram	Dried powder of Aerial roots with Coconut oil applied to the hair	Promotes hair growth, Prevents Hair loss
21.	<i>Ficus racemosa</i> L.	Moraceae	Arasa maram	Seed powder with Coconut oil applied on the white hair	White hair makes black
22.	<i>Gymnema sylvestre</i> (retz.) R.Br. ex Schutt.	Asclepiadaceae	Sirukurinja	Whole plant Extract is applied to the hair	Prevents Hair from fall
23.	<i>Hemidesmus indicus</i>	Asclepiadaceae	Nannaari	Root with Coconut oil is applied to the hair	Improves Hair root

	(L.) R.Br				strength. Stimulate Hair growth, Controls Hair fall
24.	<i>Hibiscus rosa sinensis L.</i>	Malvaceae	Semparuthi	Flower extraction is Boiled with Coconut oil	Stops hair fall and greying of hairS
25.	<i>Lawsonia inermis L.</i>	Lythraceae	Marudhani	Powdered Leaves is applied orally to hair Powdered hair is mixed with Coconut Oil	Natural dying agent. Promotes grey hair, Controls hair fall
26.	<i>Leucas aspera L.</i>	Lamiaceae	Thumbai	Whole plant extract mixed with Coconut oil is applied to the hair	Prevents Hair fall and Maintain Black in color
27.	<i>Murraya koenigii (L.) Sprengel</i>	Rutaceae	Karuveppilai	Dried or Powdered Leaves are Mixed with Coconut oil	Hair fall and Premature greying of Hair
28.	<i>Mimosa pudica L.</i>	Mimosaceae	Thottal suringi	Leaves extract is applied over the affected area	Control Hair Loss and Baldness
29.	<i>Moringa oleifera auct.</i>	Moringaceae	Murungai	Powdered leaves Mixed with Coconut milk Applied to the hair	Promotes healthier hair and hair growth
30.	<i>Ocimum sanctum L.</i>	Lamiaceae	Thulasi	A handful of Powdered Leaves added with Amla powder stirred it well and applied to the hair	It makes black in color and prevents hair loss
31.	<i>Phyllanthus emblica L.</i>	Euphorbiaceae	Nelli	Amla fruit juice is applied to hair. Dried Amla fruit is boiled with water to make hair dye applied to the hair	Long Black hair,It turns white color into the black in color
32.	<i>Piper betel L.</i>	Piperaceae	Vettrilai	Grinding leaves with sesame oil are applied to the scalp	Control hair loss
33.	<i>Psidium guajava L.</i>	Punicaceae	Koyya	15- 20 Leaves grind well and mixed with coconut milk applied to the hair	Prevent Hair from fall
34.	<i>Ricinus communis L.</i>	Euphorbiaceae	Aamanaku	Seed oil is applied over the scalp	Promotes hair growth
35.	<i>Tectona grandis f</i>	Verbenaceae	Tekku	Seed powder of Tectona is mixed with sesame seed powder and Honey is added which is applied to the hair	Stimulate hair growth
36.	<i>Tridax procumbens L.</i>	Asteraceae	Vettukkaaya thalai	Leaf extract mixed with coconut oil is applied to the hair	Promotes hair growth
37.	<i>Withania somnifera (L.) Dunal.</i>	Solanaceae	Ammukkara	Powdered leaves are boiled with water and it is applied to the hair	Control hair loss, It turns grey hair into white.

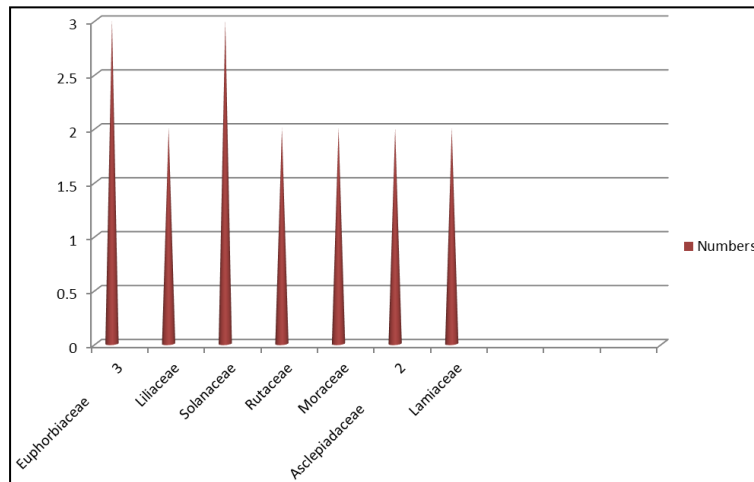


Fig 1: Dominant families with the Number of plants used for treating Hair fall and whitening of hair

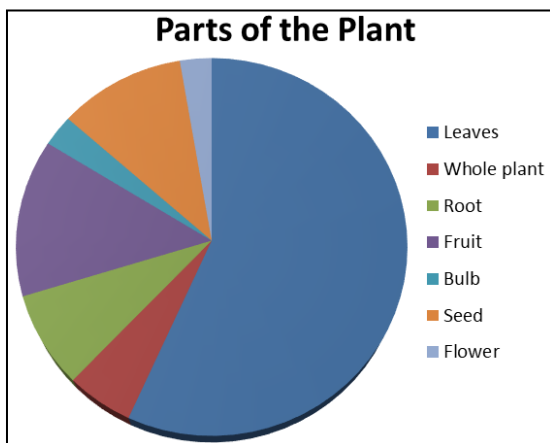


Fig 2: Parts of the plant used to treat Hair fall and whitening of Hair

The present study enumerated that there is 37 medicinal plants belonging to 27 families. It is more evident that the plant species belonging to the family Euphorbiaceae, Asclepiadaceae, Liliaceae, Rutaceae, Solanaceae, Moraceae, Lamiaceae, are maximum Used in Hairfall and white hair than any other plant species. Different parts of Medicinal plants such as Leaves, bark Bulb, root, Flower, Fruit, and seed are being used for treating Hair loss and turn the grey hair into black. The Leaves of medicinal plants such as *Lawsonia inermis*, *Eclipta prostrata*, *Murraya koenigi*, *Ocimum sanctum*, *Tridax procumbens*, *Moringa oleifera*, *Psidium guajava*, and *Carica papaya* are used in Hairfall and prevent premature greying of Hair. The fruit of Medicinal plants such as *Phyllanthus emblica*, *Aegle marmelos*, *Citrus Limon*, *Citrullus colocynthis* used in Hair loss and prevent premature greying of Hair.

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Conclusion

Medicinal products are of greatest familiarity because they are purely made up of herbs, shrubs, Trees, and Climber. The present age group which includes the men and women endure normal hair issues as there might be progressively Polluted air and hereditary reason which results in hair issue practically identical to pigmentation issues (blurring), dandruff and falling of hair (shedding). Chemical products like Hair dyeing agent may cause serious damaging of Hair and it makes permanent Hair loss. Medicinal products which may not cause any serious problem in damaging Hair and it also protect the Hair from Hair falling.

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