

A Review on Siddha Management of Hair Fall Using Quail Bone Ash and Sesame Oil

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ABSTRACT

Hairfall is the excessive loss of hair beyond the normal limit of 50-100 hairs per day and may result in thinning / alopecia. It can occur due to stress, nutritional deficiencies and medical conditions. According to siddha medicine, hairfall is caused by dearrangement of mukkutram, particularly aggravated vatham, pitham and deficiency of enbu thathu(bone marrow).² This study reviews a traditional siddha formulation prepared using quail bone ash (*Coturnix coturnix*) and sesame oil for topical application. The formulation was observed to reduce hair fall, stimulate dormant follicles and promote new hair growth. Sesame oil provided scalp nourishment and reduced dryness through its emollient action. The study concludes that this traditional preparation may support hair growth and scalp health, however further scientific and clinical validation is required.

Keywords: Hairfall, Sesame oil, Quail bone ash, Hair Growth, Siddha medicine.

INTRODUCTION

Hairfall also known as Hair shedding means excessive loss of hair from the scalp beyond normal shedding. Normal hairloss should be 50-100 hairs/day. When hair shedding is more than normal and leads to thinning or bald patches, it is considered to be hairfall or alopecia.¹ Hair loss can happen for various reasons, including emotional stress, physical strain, certain medical issues, and nutritional gaps.

Phases Of Hair Cycle:

1)Anagen phase (Growth phase):

- This is the active growth of hair. Hair matrix cells rapidly proliferate, producing the hair shaft and extending the follicle deep into the dermis. Scalp hairs typically stay in this phase for several years (often 2-6 years).¹
- At any time most hairs (80-90%) are in anagen.¹

2) Catagen phase (transitional phase):

- A short regression stage between growth and rest.¹
- Cell division stops, the lower follicle shrinks and the hair bulb forms a club hair. This phase lasts for 2-3weeks. Only a small percentage of hairs (1-3%) are in catagen at any time.¹

3) Telogen phase (resting phase):

- A resting or quiescent phase where the follicle is inactive. The club hair remains in place, it does not grow but can be shed, as new hair begins to form. ¹
- This phase lasts around 2-3 months for scalp hair and about 10-15% of hairs are typically in telogen.¹
- At the end of telogen, the next anagen begins and pushes the old hair.¹

Siddha Concept:

According to mukkutram basis, excessive Vatham causes hairloss due to dryness and brittleness. Increase in Pitham leads to hairfall from excessive heat. In udal thathukkal, deficiency in Enbu (bone tissue) quality leads to hair problems like shedding or cracking.²

MATERIALS AND METHOD

This review of literature is taken from the classical Siddha texts & research journals.

REVIEW OF LITERATURE

Ingredients:

1. Quail bone - Required quantity
2. Sesame oil - Required quantity

Preparation:

Ingredients and its action:

1. Quail bone- stimulates dormant follicles and strengthens hair root.
2. Sesame oil-nourishment of scalp and improves blood flow.

Table 1: Ingredients of Kaadai Elumbu Parpam

| S. No | Tamil Name | Botanical name/ Zoological name | Family Name | Parts used |
|-------|------------|---------------------------------|-------------|------------|
| 1 | Quail | <i>Coturnix coturnix</i> | Phasianidae | Bones ash |
| 2 | Sesame oil | <i>Sesamum indicum</i> | Pedaliaceae | Seed |

Preparation:

1. The bones were purified.
2. The bones were burnt into charcoal and mixed with the oil and applied over the places where hair needs to grow.

Dosage: Required quantity

Indications: Mudi Uthirthal (Alopecia / Hairfall)

Application: Used as external use only.

Table 2: Actions and Chemical Constituents of Kaadai Elumbu Parpam

| Name | Actions | Images | Chemical Constituents |
|------------|---|---|---|
| Quail | Stimulates dormant follicles and strengthens hair root. |  | Calcium phosphate, Calcium hydroxyapatite |
| Sesame Oil | Nourishment of scalp and improves blood flow. |  | Oleic acid, Palmitic acid |

Benefits of calcium phosphate and calcium hydroxyapatite:

Calcium plays an essential role in keratinocyte differentiation and maintenance of normal hair follicle cycling, and sustained calcium availability may indirectly support follicular health. Additionally, hydroxyapatite (Ca₁₀PO₄6OH₂) deposition enhances the mechanical strength and surface properties of hair fibers. Overall, calcium hydroxyapatite contributes indirectly to hair health by reinforcing hair structure, supporting the follicular microenvironment, and offering potential applications in hair regeneration, tissue engineering, and cosmeceutical research rather than directly inducing hair growth.⁴

Benefits of sesame oil:

Sesame oil contains high levels of fatty acids (oleic and palmitic acids) that hydrate, nourish and strengthen the hair shaft by penetrating the cuticle and forming a protective layer, helping to reduce dryness, split ends, and enhancing shine. It may have antimicrobial properties that could help with dandruff.⁶

RESULT AND DISCUSSION

Application for hair care, Calcium phosphate [Ca₃(PO₄)₂] nanoparticles can act as efficient vehicles for delivering dyes, nutrients, and other bioactive molecules directly to the hair follicle and scalp. Since calcium is naturally present in quail bone, the formulation derived from quail bone ash serves as a rich source of bioavailable calcium, which plays a vital role in follicular nourishment and cellular regeneration.⁵ The presence of calcium supports keratinocyte activity, strengthens hair roots, and enhances follicular function, thereby promoting healthy hair growth. When combined with sesame oil, which provides deep scalp nourishment, antioxidant protection, and improved microcirculation, the formulation exhibits synergistic effects that help reduce hair fall, stimulate dormant follicles, and improve overall scalp health. Therefore, this traditional Siddha medicine demonstrates significant potential as a natural, safe, and effective topical remedy for managing alopecia and promoting hair regrowth.

CONCLUSION

The combination of quail bone ash and sesame oil possess traditional siddha activity in promotion hair growth, strengthening hair roots and nourishing the scalp³. The mineral components of quail bone and antioxidant rich nature of sesame oil together may support follicular activity and improves blood supply to scalp region. Therefore, this preparation may serve as simple traditional topical remedy for alopecia, hair thinning, scalp dryness, though further scientific evaluation and clinical studies are required to validate its mechanisms and longterm safety.

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