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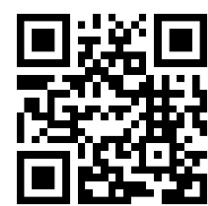
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Keshya Dravya in Dhanvantari Nighantu – A Classical Literary Exploration

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ABSTRACT:

Hair (*Kesha*) is considered as crown of beauty. *Kesha* is *Upadhatu* of *Asthi Dhatu* and *Mala* of *Majja Dhatu* in Ayurveda. Keshya dravya refer to dravya (medicinal herbs) beneficial to hair. They can be described as *Kesha sanjanana*- that which helps in the origin of hair. *Kesha vardhana*- that which promotes hair growth or which makes hair dense and thick. *Kesha ranjana*- that which gives dark black color to the hair. The *Dhanvantari Nighantu*, *Materia Medica* text (dated approx. 10th–13th century AD), has described various dravya as *keshya* (beneficial for hair). They have been mentioned as – *keshya*, *keshyavruddhikar*(hair growth promoting), *keshyamutamam*(beneficial for hair), *keshyaranjanana*(maintaining black color of hair). Nine dravyas are mentioned as *keshya dravya* in *Dhanvantari Nighantu*. This article provides a review of these specific dravyas termed as *Keshya* within this text. It provides references from *nighantu* and its Ayurvedic *Rasapanchak* (pharmacological properties) along with its research studies supporting *keshya* property.

KEYWORDS:

Ayurveda, Dravyaguna, Dhanvantari Nighantu, Keshya Dravya, Hair, Hair Care, Nighantu, Hair Health, Traditional Medicine, Herbal Remedies, Hair Growth.

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INTRODUCTION:

Ayurveda, the traditional Indian medical science, emphasizes the therapeutic application of *Dravya* (medicinal herbs) through the science of *Dravyaguna Vigyan*. It is the study of properties, pharmacological actions, clinical use of *Dravya*. Classical Ayurvedic texts such as the *Nighantus* provide detailed descriptions, classification of various *dravya* used for the prevention and management of diseases. Hair (*Kesha*) is not only for cosmetic purposes but also a physiological indicator of the health. According to *Charaka Samhita*, hair is the *Mala* formed during the metabolic transformation of *Asthi dhatu*. Therefore, the health of the hair depends on the quality of nutrition reaching the *Asthi dhatu* and the balance of the *Tridosha* (*Vata*, *Pitta*, *Kapha*). The pathologies of hair are broadly classified into *Khalitya* (hair fall), *Palitya* (premature greying), *Indralupta* (Alopecia Areata), and *Darunaka* (Dandruff). While the classical *Samhitas* (*Brihat Trayi*) provide the etiological understanding and fundamental treatment principles, it is the *Nighantus* (glossaries or lexicons) that expanded the *Dravya Guna* properties. *Dhanvantari Nighantu* (D.N) holds a prestigious position as one of the earliest *Nighantus*. *Dhanvantari Nighantu* distributes *dravya* across seven *Vargas* (sections) based on their morphology and primary associations. This text is crucial because it preserves ancient knowledge about herbs like *Gandhamansi*, *Kakadani* and *Nilini* among others. A critical review of this text helps to understand different *dravya* mentioned as beneficial to hair – *Kesha*, and their properties (*Raspanchak*) along with modern research studies.

Need of study - Literature review of *Kesha Dravyas* in *Dhanvantari Nighantu* as it helps compile *dravyas* mentioned in this *nighantu*, support the development of effective herbal formulations for hair care, and provides a

scientific basis for future pharmacological and cosmetic research. The study helps to provide detailed botanical and pharmacological profiles to ensure the correct identification of these ancient *dravyas*.

Observations and Results-

Dravya having *kesha* property mentioned in *Dhanvantari Nighantu* (DN):

1. *Valakam* ^[1]

The identity of *Valakam* has been disputed. Its identity has been compared with *Ushira* but *Dhanvantari Nighantu* and *Raj Nighantu* have mentioned both *dravya* separately. The current name is *Vetiveria zizanoides* (Linn.) Nash which is called as *Sugandhi Vala* in market places. The source of *Sugandhi Vala* in North India is *Valeriana wallichii* Dc. In South India source is *Coleus vettiveroides* K.C. Jacob. ^[2]

DN Reference: *Guduchyadi varga*

Action: *Kesha* (beneficial to hair, Promotes hair growth).

Botanical Description: *Vetiveria zizanoides* (Linn.) - belongs to the grass family Poaceae, *vetiver* is perineal growing grass that is indigenous to India. The grass has tall green stem, while the leaves are elongated, slender and somewhat firm. Flowers are of purplish color. Roots of this plant grow upto 2 to 4 metres deep. ^[3]

Valeriana wallichii Dc. - It belongs to Valerianaceae family. It is a hairy perennial herb, grows upto 45 cm tall growing in temperate Himalaya from Kashmir hills up to 3000m altitude. Leaves are ovate shaped with wavy edges having long petiole. Flowers are small pinkish white in color. ^[4]

Coleus vettiveroides K.C. Jacob - belongs to the Lamiaceae (formerly Labiateae) family and the *Plectranthus* genus. It is a perennial plant having aromatic property. It grows to a height of 30–90 cm. Stems are thick and fleshy in appearance and leaves are succulent in nature, branched plant. Emits a distinctive fragrance. ^[5]

Modern research- *Vetiveria zizanioides* (L.) Nash Vetiver grass root extract in aqueous form for the treatment and prevention of hair loss and for promoting hair regeneration through the topical administration. These findings of Porras and Francisco gained a patent for the invention of associating the vetiver grass extract for increasing growth of hair and restoring or preventing excessive loss of hair.^[6] *Valeriana wallichii* Dc essential oil composition was analyzed by GC-MS, identifying seven major components including β -vatirenene, β -patchoulene, patchoulic alcohol, and α -muurolene. Methanolic, aqueous, and chloroform root extracts were evaluated for polyphenol and flavonoid content and antioxidant activity using DPPH and metal chelation assays. A positive correlation was observed between antioxidant activity and polyphenol/flavonoid levels. The methanolic extract showed the highest antioxidant activity, attributed to its rich polyphenol and flavonoid content, while the essential oil exhibited moderate antioxidant activity.^[7]

Phytochemical screening of *Coleus vettiveroides* using different plant parts showed that the ethanol extract contained Terpenoids and sterols, while alkaloids and flavonoids varied depending on the plant part and solvent. Tannins and glycosides were absent. Ethanol proved effective in extracting saponins. The root essential oil contained 12 additional compounds, including sesquiterpenes (aromadendrene), diterpenoids (ferruginol), sterols (stigmasterol), and long-chain alkynes such as 1-octadecyne. Distinct bioactive compounds were also observed among different plant parts: leaves and roots showed varied chemical profiles, and the stem extract contained three compounds dimethyl-cyano-phosphine, tetramethylammonium borohydride, and 4-n-butylthiane. These bioactive compounds need further research for understanding its effect on

hair follicles health and its efficacy in managing hair disorders.^[8]

2. *Bhibhitaki*^[9]

Botanical Name: *Terminalia bellirica* Gaertn.

Family: Combretaceae

DN Reference: *Guduchyadi varga*

Action: *Keshyavruddhikara* – hair growth promoting property

Botanical Description: It is a large deciduous tree, 10-12 m of height, it is found in plains and forest regions. Leaves are green simple, alternate, elliptical. Flowers are greenish in color. Trunk is greyish black, broad. Mature fruits brownish in color with slightly wrinkled appearance, rind of fruit shows variation in thickness from 3-5 mm^[10]

Modern research-TBE (*terminalia bellerica* extract) alleviated the TS (testosterone)-induced suppression of hair growth in vitro and in vivo. The study investigated effects of TBE on TS-induced inhibition of hair growth in C57BL/6 mice and on HFDPC proliferation. TBE oral administration significantly induced hair growth when compared with Fina-treated C57BL/6 mice. In the dorsal skin of C57BL/6 mice, TBE increased hair growth marker expression (β -catenin, cyclin D1, PCNA, and Ki67) and increased hair follicles.^[11]

3. *Nilini*^[12]

Botanical Name: *Indigofera tinctoria* Linn.

Family: Leguminosae

DN Reference: *Guduchyadi varga*

Action: *Keshya* – beneficial to hair

Botanical Description: *Indigofera tinctoria* is a shrub like plant, 1.2- 1.8 m high, found in various regions in India. Leaves are green, alternate, compound in nature. Leaflets are 1-2.5 cm long and 0.3-1.2 cm wide, oblong or oblanceolate with very short mucronate tip. Outer surface of root is smooth with few lenticels, yellowish brown color. Flowers are small, papilionaceous with pinkish purple color.^[13]

Modern research- Ethanolic extract of leaves of *Indigofera tinctoria* also showed presence of flavonoids, glycosides, saponins and terpenoids beneficial in treating hair disorders. [14]

The natural dyes derived from *L. inermis*, *C. ternata*, and *I. tinctoria* are viable, sustainable alternatives to chemical hair dyes. The combination was found to be effective in hair dyeing, resulting in a long-lasting color that is more stable for washing and light exposure compared to each individual extract. Additionally, the extracts demonstrated favourable safety profiles, with no damage to the hair cuticle, positioning them as a promising alternative to synthetic hair dyes. [15]

4. *Saireyak* [16]

Botanical Name: *Barleria prionitis* Linn.

Family: Acanthaceae

DN Reference:

Action: Keshya- beneficial to hair

Botanical Description: *Saireyak* is a prickly undershrub, with 0.6-1.5 m height. Found throughout the country. Roots are upto 1 cm thick at the top, cylindrical and tapering, bearing lateral branches and numerous rootlets; surface has dot-like lenticels, externally the color is brown. Inner part of root is cream in color. Stem – Erect, green, glabrous, nodes swollen, branching at nodes, mature stem cylindrical with scattered dot-like lenticels. Leaf - Dorsiventral, variable in size, 6-9.5 cm long, 2.5 - 3.5 cm wide, simple, elliptic, acuminate, entire, acute, reticulate, unicostate, with short petiole. Flower – Yellow in color, funnel shaped five petals, sessile. It has four stamens 2 fertile and 2 staminodes. Filaments of the fertile stamens seen outside of flower. Fruit – Capsules, ovoid shape, 2 seeded. Seed- Compressed, 0.8 cm in diameter and clothed with silky fine glandular hairs. [17]

Modern research- Research study showed that the antioxidant capacity of methanolic extract of leaf and stem of *barleria prionitis*

were founded highest as IC50 values were 63.41 ± 0.32 , 81.69 ± 0.40 respectively. The reducing power was also highest in the methanol extract of both parts. The higher antioxidant as well as reducing power may be due to present phenolic contents. Antioxidants play important role in managing overall hair quality and hair health. Therefore, there is a potential to study further role of (*Saireyak*)*barleria prionitis* Linn.in to evaluate keshya properties. [18]

5. *Mansi (Mansidwaya)* [19]

Botanical Name: *Nardostachys grandiflora* / *jatamansi* DC

Family: Valerianaceae

DN Reference: *Chandanadi varga*

Action: Keshyamutamam – beneficial to hair

Botanical Description: *Mansi* is an erect perennial herb, 10-60 cm high growing at an altitude of 3000-5000 m on the sub-alpine Himalayan region. Dried rhizome dark brown, 2.5-7.5 cm long, cylindrical, covered with reddish brown fibres forming a network, internal colour reddish-brown colour, strongly aromatic. Leaves are Radical (from base) and cauline (on stem); radical leaves are long, stalked whereas cauline leaves are smaller. Flowers are Small, pinkish in color, bell-shaped. Fruits are small and hairy. [20]

Modern research- The hair growth promotion activity was studied by using in vivo animal model. The preliminary screening of the hexane extract of the rhizomes of *N. jatamansi* (*N. grandiflora*) showed positive response in hair growth promotion activity. The study showed that crude hexane extract required less time than pure compounds- nardin and jatamansic acid. Crude extracts or active fractions showed better activity than individual compounds. [21]

6. *Gandhamansi (mansidwaya)* [22]

Botanical Name: *Corydalis govianana* Wall

Family: Papaveraceae **DN Reference:** *Chandanadi varga*

Action: *keshyamutamam* – beneficial to hair
Botanical Description: *Corydalis* is an erect, perennial herb with height upto 15 to 70 cm. rootstock is thick covered with leaf bases. Leaves arise from the root. 1 to 2 leaves are present near base of stem. Flowers are in yellow color arranged in racemes having group of upto 25 flowers. These racemes extend upto 15 cm in length. This species is found in the Himalayan region at elevations of 2400–4800 m.^[23]

Modern research- Research study was done on *Corydalis govaniana* Wall. and *C. casimiriana* Duthie and Prain ex Prain. One tetrahydroprotoberberine type alkaloid, govaniadine (1); and six other alkaloids, caseadine (2), caseamine (3), protopine (4), stylopine (5), apocavidine (6), and fagarine I (7) was isolated from these two medicinal plants. Caseamine showed the best anti-oxidant (DPPH radical scavenging) activity. Govaniadine while caseadine showed moderate antioxidant activity. Antioxidant property of this plant can prove to be beneficial in hair disorders and maintaining hair health.^[24] *Mansi* and *Gandhamansi* are both together referred as *Mansidwaya* in *Dhanvantari nighantu*. According to *Dalhana*, *Gandhamansi* is another variety of *Mansi*.^[19]

7. *Bhringaraja*^[25]

Botanical Name: *Eclipta alba* Hassk.
Family: Asteraceae
DN Reference: *Karviradi varga*
Action: *Kesha Ranjana* - gives black color to hair
Botanical Description: It is an herbaceous annual plant. Its height ranges from 30 - 50 cm. Plant is much branched, often rooting at nodes. a common weed of moist places found throughout India ascending upto 1700 m. Leaves are green, opposite, hairy, lance-shaped. Small white or yellow daisy-like flowers.^[26]

Modern research- Research study showed Methanol extract of *Eclipta alba* promotes hair growth by inducing anagen in telogen (resting) phase hair follicles. Animals treated with 3.2 mg/15 cm² of methanol extract of *Eclipta alba* showed better efficacy as compared to lower doses.^[27]

8. *Kakadani*^[28]

Identity of this dravya has not been satisfactorily identified and the authors opinions differ widely. There is no mention of this dravya in *Charaka Samhita*. *Acharya Vagbhat* has mentioned its two types. Whereas, *Dalhana* has identified it with dravya like *Himsra*, *Vayasatinduka*, *Krsnasriphalika* and with a variety of *Kakamici* (*Physalis minima* Linn.), *Kakamari* (*Anamirta cocculus* Wi. & Arn.) and *Gunja* (*Cardiospermum halicacabum* Linn). According to *Sushuruta samhita Avaguttha* and *Veganama* are synonyms of *Kakadani*. Therefore, it is difficult to establish the identity of the dravya *Kakadani* mentioned as *keshya dravya* in *Dhanvantari Nighantu*.^[29]

DN Reference: *Karviradi varga*

Action: *Keshya* – beneficial to hair

9. *Tila*^[30]

Botanical Name: *Sesamum indicum* Linn.

Family: Pedaliaceae

DN Reference: *Suvarnadi varga*

Action: *Keshya* beneficial to hair

Botanical Description: *Tila* is an annual plant extensively cultivated throughout the plains of India upto 1200 m for its seeds. Height is Usually 1 to 1.5 meters, but can reach 2 meters. Stem is green with fine hairs. Leaves are Opposite or alternate; lower leaves are often 3-lobed, while upper ones are lanceolate. Flowers: Bell-shaped found singly or in pairs in leaf axils, white. Seed are black, flattened ovate in shape, smooth or reticulate, 2.5 mm to 3mm long and 1.5 mm broad, one side slightly concave with faint marginal lines and an equally faint central line.^[31]

Modern research- Sesamin, isolated from sesame seeds, shows antioxidant activity, 5α-reductase inhibition, and melanin induction. It has weak DPPH scavenging activity, sesamin exhibits strong lipid peroxidation inhibition and metal-ion chelating activity, which are

Kesya dravyas in Dhanvantari nighantu-

linked to its significant 5α-reductase inhibitory effect, exceeding that of finasteride. Sesamin also increases melanin content and tyrosinase activity, supporting its traditional use in treating hair loss and premature greying.^[32]

Sr.N o.	Dravya	Rasa	Guna	Virya	Vipaka	Doshagnata	Varga
1	Valakam ^[1]	Tikta	Laghu	Sheeta	Katu	Pitta- Kaphadoshaha- ra	Guduchyadi Varga
2	Bibhitaka ^[9]	Kashaya	Laghu, Sara, Ruksha	Ushna	Katu, Madhura	Kapha And Rakta Dosha Hara	Guduchyadi Varga
3	Nilini ^[12]	Tikta	Laghu Ruksha	Ushna	Katu	Kapha Vata Hard	Guduchyadi Varga
4	Saireyak ^[16]	Tikta	Laghu	Sheeta	Katu	Tridoshahara	Guduchyadi Varga
5	Mansi ^[19] (Man- sidwaya)	Madhura, Kashaya	Laghu, Snighdha	Sheeta	Katu	Tridoshahara, Rakta Dosha Hara	Chandanadi Varga
6	Gandhamansi ^[22] (Mansidwaya)	Kashaya	Ruksha	Ushna	Katu	Tridoshahara	Chandanadi Varga
7	Bhringaraja ^[24]	Tikta	Ruksha	Ushna	Katu	Kaphahara	Karviradi Varga
8	Kakadani ^[28]	Tikta		Ushna	Katu	Vata Kaphahara	Karviradi Varga
9	Tila ^[30]	Katu, Tikta, Madhura, Kashaya	Guru	Ushna	Katu, Madhura	Tridoshahara	Suvarnadi Varga

DISCUSSION:

Literature review of *keshya dravyas* in *Dhanvantari Nighantu* has provided insight into properties beneficial to hair (*keshya*). It is revealed that most of the *keshya dravya* described in are having *Tikta, Kashaya and Madhura Rasa, Laghu, Ruksha Guna, Katu*

vipaka property. According to *veerya* of all *dravyas* it is seen both *sheeta* and *ushna* *veerya* *dravyas* are described to be having *keshya* properties. *Dravya* like *Saireyak, Mansi, Gandhamansi* and *Tila* are *Tridoshahara*. Most of the *dravya* are described in *Guduchyadi* *varga*. *Vata dosha* and *Pitta dosha* are

responsible for *palitya*, *khalitya* *vyadhi* and vitiated *Rakta dosha* and *Kapha dosha* responsible for *Indralupta* and other *kesha roga*. *Tikta*, *Kashaya* and *Madhura rasas* are *pitta shamaka*. *Ushna virya*, *Laghu*, *Ruksha Guna*, *Katu Vipaka* are *Kapha Shamaka*. *Madhura rasa* and *Ushna virya* and in some *Dravya Snigdha Guna* have *Vata Shamak* effect. Hence these *dravyas* are helpful in management of *Kesha Vyadhi* (hair disorders). *Dravya Valakam* described as *keshya* in *Dhanvantari Nighantu*, the modern research studies on vetiver roots support its role in promoting hair growth and preventing hair loss through topical application. *Bibhitaki* also exhibits strong hair growth-promoting activity by counteracting testosterone-induced hair loss and enhancing hair follicle proliferation markers. *Nilini* which is widely used in hair dyes is rich in flavonoids and saponins; supports hair health, helps manage hair disorders, and serves as a safe natural hair-dye agent. *Mansi* *dravya* demonstrates significant hair growth-promoting activity, with crude extracts showing better efficacy than isolated compounds. *Bhringaraja* is mentioned as *Kesharanjana dravya* and research studies done prove to induce the anagen phase of hair follicles, promoting hair growth and imparting natural black coloration to hair. *Tila* (*Sesamum indicum*) – Sesamin from sesame seeds shows antioxidant, 5 α -reductase inhibitory, and melanin-inducing activities, supporting its use in hair loss and premature greying. *Dravyas* like *Saireyak*, *Gandhamansi* have phytochemicals potentially beneficial to hair. However, there is a need of future research studies to evaluate its *keshya* properties. *Kakadani* is mentioned as *keshya* in *Dhanvantari Nighantu* but its botanical identity remains controversial, necessitating further research for validation. Therefore, these *dravyas* can be used in form of single herb medication or in compound formulations like *Lepa*, *Churna*, *Taila* for topical use and *Kashaya*, *Ghrita*, *Gulika*, *Asava*, *Arishta*

for internal use. Future studies in isolation of specific chemical constituents from these herbs which are beneficial for hair health can be done. Once its *keshya* property is proved then many formulations can be prepared in terms of different types of cosmetics. They can be used in classically mentioned forms like *Taila*, *Lepa*, *Kashaya* etc. Further clinical studies can be done to assess efficiency of these *keshya dravyas*.

CONCLUSION:

The review of *Keshya dravyas* described in *Dhanvantari Nighantu* highlights their important role in maintaining and promoting hair health. In *Dhanvantari nighantu* nine *dravya* were found which are having direct reference as *keshya* property. Some *dravyas* like *Bhringaraja*, *Valakam*, *Bibhitaki*, *Nilini*, *Mansi*, *Tila* are proven scientifically and widely used in hair care. However, the identity of certain *dravya* *Kakadani* remains controversial, indicating the need for further Pharmacognostical and phytochemical validation. Future research studies can help to develop cosmetics using these *dravya* for hair health and also to treat hair related diseases like *khalitya* (hair loss), *palitya* (greying of hair). The integration of Ayurvedic textual evidence with modern experimental studies confirms that the *keshya dravya* mentioned in *Dhanvantari Nighantu* possess therapeutic potential. These *dravya* hold strong potential for further standardization, *in vivo* studies, clinical research studies and formulation development for their effective clinical application

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