

## EXPLORING AYURVEDIC TRICHOLOGY: HOLISTIC HAIR AND SCALP CARE FOR MODERN HAIR HEALTH

Dr. Tara B.\*

Assistant Professor, Department of Kayachikitsa, Bapuji Ayurvedic Medical College,  
Shivamogga.

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\*Corresponding Author

Dr. Tara B.

Assistant Professor,  
Department of Kayachikitsa,  
Bapuji Ayurvedic Medical  
College, Shivamogga.

### ABSTRACT

Healthy hair is a reflection of your overall well-being. Hair also has a great role in the aesthetic values of humankind from the time immemorial, it has been a symbol of beauty, attractiveness, personal image and self-confidence. Trichology is the paramedical science that studies hair, hair loss, and associated scalp problems. According to Ayurveda, *Kesha* (hair) is an *Upadhatu* (secondary *dhatu* derived from *dhatu*s) derived from *Majja* (bone marrow). Various descriptions of *Keshya Dravyas* can be found throughout Ayurveda Samhitas. According to Ayurveda the health of hair depends upon *Kesha sanjanana* (origin of new hair), *Kesha vardhana* (thicker and denser hair) and *Kesha ranjana* (maintaining the normal color and luster of hair). In contemporary times, numerous studies focus on hair and its health. Ayurveda emphasizes holistic health, thus placing significant importance on the health of hair. We can find various preventive as

well as therapeutic regimens for hair care in our Samhitas. This review aims to provide a bird's-eye view of the concept of Trichology in Ayurveda.

**KEYWORDS:** *Keshashatana, Darunaka, Keshya, Trichology, Shiroabhyanga.*

### INTRODUCTION

Healthy hair is a reflection of your overall well-being. Hair also has a great role in the aesthetic values of humankind from the time immemorial, it has been a symbol of beauty, attractiveness, personal image and self-confidence. Trichology is the paramedical science of the hair, hair loss and associated scalp problems. It encompasses the study of the diseases of the human hair and scalp, as well as the assessment of the cause(s) and treatment of these

disorders.

The word “trichology” comes from the Greek word, ‘Trikhos’, meaning ‘hair.’ Trichology is perceived as the “bridge between cosmetology and dermatology.”<sup>[1]</sup>

According to Ayurveda *Kesha* (Hair) is an *Upadhatu* (Derived from *Dhatu*) of *Majja* (Bone marrow) One can find various descriptions of *Keshya Dravyas* ”*Keshaaya Hitam Yat Tat*’ (that which promotes hair health) scattered throughout Ayurveda Samhitas.

The health of hair depends on three things: *Kesha sanjanana* (origin of new hair), *Kesha vardhana* (thicker and denser hair) and *Kesha ranjana* (maintaining the normal color and luster of hair).

## HAIR IN AYURVEDA

The word *Kesha* has been derived from the root ‘shi’ with ‘ech’ prefix and ‘kulak’ conjugation that grows on the head.

Halayudha Kosha has depicted it in “*Kesha Mastake Shete*”. Which means *Kesha* are the elements that grow on the *Mastak*, *Shirah*. Acharya Susruta has explained the features of hair for different *prakriti* individuals.

### Characteristics of hair according to different Prakriti (Body Constitution)

Table I.

Feature of Hair	Vata Prakriti	Pitta Prakriti	Kapha Prakriti
<b>Texture</b>	<i>Sputita</i> (Splitted) <i>Ruksha</i> (Rough) Frizzy	Soft, Silky, Lustrous	<i>Kutila</i> (Curly) <i>Sthira</i> Strong rooted
<b>Colour</b>	<i>Syava</i>	Tamra Prone to early <i>Palitya</i>	Black
<b>Thickness</b>	Thin	Normal	Thick
<b>Hair Density</b>	<i>Alpa</i> (Little)	Prone to <i>Khalitya</i> Early	Voluminous

### Stages of Hair growth

The growth of the hair follicle is cyclical.

**Anagen** - Growth phase. The majority of hair follicles will be in this phase. The hair grows in length. On a healthy scalp 90% of the hair will be in this growing phase which may last for several years.

**Catagen** - Transition phase. The Catagen phase begins after the end of the Anagen phase.

Hair begins to undergo apoptosis. The dermal papilla is broken away and the follicle shrinks. This lasts for a few weeks.

**Telogen** - Resting phase. The hair follicle is dormant and growth of hair shaft does not occur. The hair doesn't grow but stays attached while the dermal papilla is resting. After telogen the follicle re-enters anagen and the dermal papilla reattaches to the base of the follicle. If the old hair has not already been epilated it will be pushed out by the new growing hair. This phase lasts for 2-3 months.<sup>[2]</sup>

### Ayurvedic Regimens

**Table II.**

Ayurveda for Maintaining healthy hair & Scalp	Ayurveda treatment for diseases of hair & scalp
<ul style="list-style-type: none"> <li>▪ <i>Murdhni Thaila</i></li> <li>▪ <i>Lepa</i></li> <li>▪ <i>Snana</i></li> <li>▪ <i>Dhoopana</i></li> <li>▪ <i>Pratimarsha nasya</i></li> <li>▪ <i>Keshya Dravyas</i></li> <li>▪ <i>Rasayana Prayoga (Internally)</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ <i>Shodhana</i></li> <li>▪ <i>Shamana Oushadis</i></li> <li>▪ <i>Prachana</i></li> <li>▪ <i>Raktamokshana</i></li> <li>▪ <i>Shiroabhyanga</i></li> <li>▪ <i>Shirolepa</i></li> <li>▪ <i>Shirobasti</i></li> <li>▪ <i>Avapeedana Nasya</i></li> </ul>

### MOST COMMON DISORDERS OF HAIR

Ayurveda which are related to hair such as *Khalitya*, *Palitya*, *Indralupta* etc.

**Table III.**

	Modern	Ayurveda
<b>Disorders of Scalp</b>	Psoriasis	<i>Kushta</i>
	Seborrheic Dermatitis Dandruff	<i>Darunaka</i>
	Alopecia Aerate Alopecia Universalis Frictional Alopecia Frontal Fibrosing Alopecia Loose Anagen Syndrome Telogen Effluvium Anagen Effluvium	<i>Kesha Satana</i> <i>Khalitya</i> <i>Indralupta</i> <i>Rujaya or Ruhaya</i>
<b>Disorders of Shaft</b>	Trichomycosis nodularis Trichoptilosis	
<b>Hair Colour</b>	Premature Greying of Hair	<i>Palitya</i>
<b>Pathogenic</b>	Tinea capitis Head lice	<i>Yuka</i> <i>Liksha</i>

### Khalitya (Hair Fall)

According to Ayurveda *Khalitya* is classified under *Kshudra roga*. *Kshudra roga* is a disease

which is mild and it is not life threatening as compared to other diseases. Acharya Sushruta explains its etiology is due the vitiation of *Pitta* and *Vata* in *Roma Koopa* (Hair roots) causing hair fall, further due to the vitiated *Kapha* and *Rakta* filling up the nearby *roma kupa* it inhibits the origin of new hair follicles which when continued for longer period of time leads to evident diffuse baldness. In *Khalitya* the hair is lost gradually and generalized all over the scalp.<sup>[3]</sup>

In the contemporary scenario, Telogen effluvium has more similarities as for *Khalithya* as for the diffuse hair loss over a short period of time, which is temporary. Telogen effluvium is when hair roots are pushed into the telogen resting phase. This usually occurs after some stress and can be acute or chronic. It is usually caused due to any stress, Nutritional Deficiencies, Drug induced, and hormonal imbalances. Which may be *Tridoshaja* (Involvement of *Trisdosha*). Once the underlying *Nidana* (cause) is addressed, hair growth typically returns to normal.

Here Androgenic Alopecia is also similar to *Khalitya* where the hair loss follows a particular pattern, there is receding hairline in Male patter and Female pattern baldness. Many Ayurvedic treatments are explained to prevent and manage *Khalithya*.

### **Indralupta (Patchy hairloss)**

*Indralupta* is a *Kapala roga* (disorder of the scalp) characterized by patchy hair loss from the scalp and other body parts. According to Acharya Sushruta, *Indralupta* is a *Kshudra roga* affecting the beard only, whereas *Khalitya* affects the scalp and *Rujaya* or *Ruhaya* affects the *roma koopas* of the whole body.<sup>[3]</sup> These presentations are similar to that of conventional terms like Alopecia areata, Alopecia Totalis, Androgenic alopecia, Alopecia Universalis.

Alopecia means hair loss. Hair loss can be temporary or permanent. A wide variety of factors influence hair loss like hormonal imbalance, genetic factors, environmental, personal hygiene. Alopecia may be due to Scarring or Non-scarring disorders. Alopecia areata has the characteristic “exclamation point” hairs that are short and broken and appear to be floating exclamation marks.<sup>[4]</sup>

Other skin conditions that may be confused with AA include traction alopecia, temporal triangular alopecia, androgenic alopecia, trichotillomania, tinea capitis, secondary syphilis, pressure-related alopecia, aplasia cutis, chemotherapy-induced alopecia, telogen effluvium,

and the many forms of cicatricial alopecia.<sup>[4]</sup>

### **Darunaka (Dandruff, Seborrheic Dermatitis)**

Acharya Sushruta classified *Darunaka* among the *Kshudra Rogas*. *Darunaka* is a *Vatakapahaja Dosha* vikara, which manifests as *Kandu*, *Keshachyuti*, *Rukshta*, and *Twak Sphutana*. *Darunaka* is derived from the word '*Daruna*' which means 'difficult to bear or tolerate'.<sup>[5]</sup>

*Darunaka* has a clinical spectrum similar to Dandruff and Seborrheic dermatitis. Dry dandruff is caused because of *Vata Pradhan Kapha dosha* and wet dandruff due to *Kapha Pradhan Vata dosha*. The *Pitta dosha* also plays an important role in causation of dandruff.

Dandruff and Seborrheic Dermatitis are of a continuous spectrum of the same disease that affects the seborrheic areas of the body. The spectrum of dandruff is difficult to define because it blurs with seborrheic dermatitis and some other scaly conditions. The inflammation and extension of scaling outside the scalp exclude the diagnosis of dandruff from seborrheic dermatitis.<sup>[6]</sup>

Dandruff is restricted to the scalp, and involves itchy, flaking skin without visible inflammation. Seborrheic Dermatitis can affect the scalp as well as other seborrheic areas, and involves itchy and flaking or scaling skin, inflammation and pruritus. *Malassezia* are lipophilic yeasts that are found mainly on seborrheic regions of the body. The scalp form a biocenose for various organisms such as *Staphylococci* spp., *Propionibacterium* spp., and *Malassezia* spp.,<sup>[7]</sup> *Malassezia* was shown to have lipase activity, which hydrolyzes human sebum triglycerides and releases unsaturated fatty acids such as oleic and arachidonic acid.<sup>[8]</sup>

*Shirolepa* by *Masha Kanji* is explained by Chakradatta with *Masha Choorna* and *Kanji* as ingredients is found beneficial in managing *Darunaka*.<sup>[9]</sup>

Datturadi thailam prepared by Kalka (paste) of *Dattura Beeja* and *Patra Swarasa* (Juice of leaf) is therapeutically indicated for Itching of Scalp and dandruff. The antidandruff activity of ethanolic extract of *Datura metel* against *Malassezia furfur* was studied by disc diffusion method, in SDA medium the zone of inhibition was measured. It was observed that the zone of inhibition was moderate when compared to the standard drug clotrimazole and Zone of inhibition was slightly concentration dependent & not significant and having moderate inhibition.<sup>[10]</sup>

Using oils on the scalp can be both beneficial and problematic for seborrheic dermatitis, depending on the type of oil and how it's used. Some oils, which have antifungal properties that can help control the overgrowth of *Malassezia* yeast, which is associated with seborrheic dermatitis. However, other oils might aggravate the condition and should be avoided.

Other *Shirolepas* which have *Vata Kaphahara* properties are also indicated in managing *Darunaka*.

### Palithya

*Palithya* is a condition where there is greying of hair. *Palitya* is of two types. *Kalkrita Palitya* and *Akalakrita Palitya*, where *Kalakrita Palitya* is also known as *Prakrita Palitya* which is caused due to natural aging process whereas *Akalakrita Palitya* is premature greying of hair. Greying of hair is a natural event in the process of aging. Even though the age of greying of hair is determined immensely by the genetic factors, premature greying is an abnormal condition. Ayurveda explains *Aharaja*, *Viharaja*, *Manasika* and *Anyā Nidanas* (Causative factors) for *Palithya*., where basic pathology is described is *Bhrajaka Pitha Dushti*. The responsibility of *Bhrajaka Pitha* is to impart color, texture and complexion to skin and its appendages. It is caused due to *Pitha Prakopa* (aggravation of *Pitha Dosha*), the *Ushna guna* of *pitha* increases in the scalp.<sup>[11]</sup> It is also explained as a *Rasa Pradoshaja Vikara*.<sup>[12]</sup>

Greying of hair is also called canities or achromotrichia. Greying of hair happens when the melanocytes (cells at the base of the hair) fail to produce melanin, the pigment which is responsible for imparting colour to the hair.

Ayurvedic way to rectify *Palithya* is to consume *Jeevaniya* (vitalising), *Brimhaniya* (building and nourishing), *balya* (strengthening) and *Pithahara dravyas* (which pacifies *Pitha dosha*). Internally.

*Kesharanjana* (Hair Dyeing) is a temporary process of imparting colour to hair strands, Ayurvedic drugs like *Neeli* (*Indigofera tinctoria*), *Bhringaraja* (*Eclipta alba* (L.) Hassk), *Madayanthi* (*Lawsonia inermis* L.) etc are found to have temporary hair colouring effects.<sup>[13]</sup>

Other practices helpful in correcting *Palithya* are use *Prapoundarikadi thaila pratimarsha Nasya*, application of *Neeli thaila*, *Malatyadi Thaila*, *Durdurapatradi keram*, applying *Shirolepa* with *Tiladi yoga*, *Priyaladi yoga*, *Palithyanashaka yogas* prepared out of *Lauha bhasma*, cooked with *saindhava lavana*, *suktamla* (sour vinegar) and rice (all in equal

amounts), *Triphala lepa*.

### **KESHA POSHANA IN AYURVEDA**

*Keshya* drugs are the drugs which are beneficial to hair by helping in the formation of new hair, promoting strength of existing hair, maintaining the lustre, texture and colour of the hair.

*Keshya* drugs can be classified into *Keshavardhaka* drugs and *Kesha Ranjaka* drugs. Innumerable medicines have been described in Ayurvedic texts which are beneficial in hair health. Most widely used are *Neelibhringadi thailam*, *Nilikadya taila*, *Bhringaraja taila*, *Yastimadhuka taila*, *Triphaladi Keram*, *Triphala Ghrita* (Internally), *Abhraka bhasma*, *Bhringamalakadi tail*, *Chemparathyadi Kera thailam*, *Kayyunyadi Kera Thaila*, *Prapaundarikadi Thailam*, *Narasimha Rasayana* (Internally) etc. but in Bhava Prakasha Nighantu total 16 drugs are found having *Keshya* property, out of which 14 drugs are of plant origin, one is *rasa aushadhi* and one is of animal origin. Out of 14 plant origin drugs we are able to find only 3 plants (*Yastimadhu*, *Bhringaraja* and *Japa pushpa*) on which research work has been done in reference to *Keshya karma*.

### **PRACTICES**

#### ***Murdhini thaila***

It is a form of *Bahya snehana*. It can be done in four ways i.e., *Shiroabhyanga*, *Shiropichu*, *Shirodhara* and *Shirobasti*. It prevents headaches, greying of hair, hair fall and it also gives strength to the skull, strengthens hair roots and makes the hair black and long.<sup>[14]</sup>

#### ***Shiroabhyanga***

*Abhyanga* is a *dinacharya* that must be performed *nithyam* (daily) and Acharya Vagbhata give emphasis on doing *Abhyanga* over *Shira* (head), *sravana* (ears) and *Pada* (sole).<sup>[15]</sup>

Researches has proven the efficacy of *Shiro abhyanga* or scalp massage for hair growth.<sup>[16]</sup>

While doing *abhyanga* a hydrostatic pressure is created in the extra cellular compartment of the skin, which increases the blood circulation to that area and which in turn causes blood pooling in that area.<sup>[17]</sup>

#### ***Shirolepa***

*Shirolepa* is a non-invasive Ayurvedic therapy where a medicinal *kalka* (paste) is applied



over the scalp and covered with a leaf for a specific duration. It is also known as *Thalathichil* in Keraliya Ayurveda treatment procedures. *Shirolepa* wide ranging indications like *Shirashoola* (Headache), *Anidra* (Insomnia), *Ardita* (Facial Paralysis), *Netra rogas* (Disorders of Eye), *Nasa* (Nose), *Karna* (Ear), *Gala rogas* (Throat), *Shiro kapalagata rogas* like *Darunaka* (Dandruff), *Keshashatana* (Hairfall), *Palitya* (Premature graying of hair) etc.

*Shirolepa* is topical application of drugs. Noticeable absorption doesn't occur between cells or through hair follicles or sweat pores. This is a passive method of diffusion, where the magnitude will depend on the integrity and efficacy of epidermal barrier and will be influenced by the drug itself. Drugs having low molecular weight and high lipid and water solubility shows the greatest penetration. So, the vehicle used for the desired drug is important.<sup>[17]</sup>

Acharya Sushruta advised application of *Sneha dravyas* mixed with the *lepas*, probably due to this reason. In classical texts, the duration of *Lepa* application is traditionally defined as the time it takes for the *Lepa* to dry naturally. Recent research has demonstrated that the drug penetrates the full thickness of the epidermis within 100 minutes or less, introducing the concept of short-contact therapy. Studies also reveal that a single application in the morning, sustained over a longer period, achieves superior outcomes compared to divided dose applications throughout the day. This finding aligns with the Ayurvedic emphasis on maximizing the efficacy of treatments through timing and duration of application.<sup>[17]</sup>

### **Nasya**

*Nasya* is the medical procedure of instilling medicated oils into the nostrils. *Nasya* is the best treatment for *Shirogata Rogas*. Various case studies have given proven results in the role of *Nasya* in disorders of hair and scalp. *Pratimarsha Nasya* with *Prapoundarikadi thaila* is said to rectify all shirorogas. Modern science says that the lipid soluble substance has greater chance of passive absorption directly through lining of olfactory nerve. Later the drug may traverse through capillaries and veins since *Nasya* consists of *Taila Dravya* may be quick and beneficial. That is the reason why ancient *Acharyas* had used lipid media for processing drug.<sup>[18]</sup>

### **Kesha Dhoopana**

*Dhoopana* is the concept of Fumigation in Ayurveda. It is the process of burning medicated substances in a particular way to attain particular results, especially sterilization and healing



of *vranas*. *Kesha dhoošana* is traditionally practiced to attain benefits like Stress relief, Hair growth, removes head lice, anti-bacterial effects and for good fragrance.

### Use of *Keshya Dravyas*

Table IV.

Sl no	Ayurvedic Name	Latin Name	Ayurvedic karma	Chemical Constituents and Potential Action
1	<i>Bhrinjaraja</i>	<i>Eclipta alba</i> (L.) Hassk	<i>Kesharanjana</i> <i>Kushtaghna</i> , <i>Rasayana</i>	<b>Wedelolactone:</b> reducing oxidative stress (which can damage hair follicles) and inflammation (which can impair hair growth) could support healthier hair follicles, Promotion of melanin production and promote hair regeneration. <sup>[19]</sup>
2	<i>Bhibheetaki</i>	<i>Terminalia bellirica</i>	<i>Keshya</i> , <i>Krimi nashana</i>	<b>Tannis:</b> reduce Oxidative stress counteract testosterone-induced hair growth inhibition in both human follicle dermal papilla cells. <sup>[20]</sup>
3	<i>Neelini</i>	<i>Indigofera tinctoria</i>	<i>Keshya</i>	effectively impart a natural brown to black hue Studies have shown that formulations including indigo can dye grey hair effectively within 30-60 minutes. <sup>[21]</sup>
4	<i>Amalaki</i>	<i>Phyllanthus emblica</i>	<i>Tridosahara</i> , <i>Rasayana</i>	<b>Vitamin C (Ascorbic Acid):</b> Promotes collagen production, which is essential for hair strength. <b>Tannins:</b> Help in strengthening hair roots and reducing hair fall. <b>Gallic Acid:</b> Has antioxidant properties that protect hair follicles from damage. <b>Ellagic Acid:</b> Contributes to hair health by preventing premature aging of hair. <b>Phyllembein:</b> Enhances hair growth and improves hair texture.
5	<i>Jatamansi</i>	<i>Nardostachys jatamansi</i>	<i>Keshya</i>	Even though the plant is being used in the preparation of hair oils, so far there are no reports on the compounds responsible for hair growth promotion activity. <sup>[22]</sup>
6	<i>Yashtimadhu</i>	<i>Glycyrrhiza glabra</i>	<i>Keshya</i>	Liquorice has a significant hair growth activity and it can be safely used in herbal formulations in treatment of various types of Alopecia. <sup>[23]</sup>
7	<i>Bakuchi</i>	<i>Psoralea corylifolia</i>	<i>Keshya</i> , <i>Kushtaghna</i> ,	Psoralen and isopsoralen help stimulate hair follicles and promote

		Linn.	<i>Kumighna</i>	hair growth <sup>[24]</sup>
8	<i>Madayanti</i>	<i>Lawsonia inermis</i>	<i>Kushtaghna</i>	<b>1,4-naphthoquinone Lawsone:</b> Lawsone binds to the keratin protein in hair, giving it a reddish-brown colour, conditioning effect on hair, potentially improving hair strength and texture <sup>[25]</sup>
9	<i>Japa Pushpa</i>	<i>Hibiscus rosasinensis</i> (Linn.)	<i>Ranjana, Keshya</i>	<b>Mucilage fibres:</b> Adds elasticity to hair strands, reducing split ends and hair breakage. <b>Alpha-hydroxy acids (AHAs):</b> Help regenerate hair structure and repair damage.
10	<i>Kaidarya</i>	<i>Murraya koenigii</i>	Keshya, Kushtaghna, Kandughna,	Contributes to hair health by preventing hair thinning and breakage, Prevent greying of hair Rich in Vitamin A and B5 These compounds are rich in antioxidants and help in hair growth <sup>[26]</sup>
11	<i>Dattura</i>	<i>Datura metel</i>	<i>Krimihara, Yuka Liksha hara, Kandughna</i>	<b>Anti-Fungal, Anti Dandruff</b> <sup>[27]</sup>
12	<i>Nimbha</i>	<i>Azadirachta indica</i>	<i>Krimihara</i>	<b>Nimbin and Nimbidin:</b> Have anti-inflammatory and antifungal properties, which help in maintaining a healthy scalp. <sup>[28]</sup>
13	<i>Tila Thaila</i>	<i>Sesamum indicum</i> Linn	<i>Keshya</i>	<i>Beneficial against hair loss and canities</i> <sup>[29]</sup>
14	<i>Kera Thaila</i>	<i>Cocos Nucifera</i>		<b>Monolaurin:</b> antibacterial antifungal <b>Lauric acid:</b> ability to penetrate the hair shaft, improving hair structure and preventing damage. <b>Medium-chain fatty acids</b> (MCFAs): moisturizing properties, help reduce protein loss in hair
15	<i>Eranda Taila</i>	<i>Ricinus Communis</i>	—	<b>Ricinoleic acid:</b> penetrate skin and act as an inhibitor of prostaglandin D2 synthase (PGD2). Has a two-dimensional structure, which is very similar to the prostaglandin family and has also been demonstrated to have some degree of effect on hair growth <sup>[30]</sup>

## CONCLUSION

Hair health is a vital aspect of overall well-being and plays a significant role in one's aesthetic and psychological confidence. The science of trichology offers a structured understanding of

hair disorders and their management. Ayurveda, with its holistic approach, provides comprehensive insights into the anatomy, physiology, and care of hair, linking it intrinsically to one's Prakriti and Dosha balance.

Various Ayurvedic practices such as *Murdhni Thaila*, *Shirolepa*, *Nasya*, and the application of *Keshya Dravyas* are time-tested methods that promote hair health by addressing both the symptoms and root causes of disorders like *Khalitya*, *Indralupta*, *Palitya*, and *Darunaka*.

Ayurveda's emphasis on lifestyle modifications, dietary balance, and stress management aligns well with modern trichological practices, offering a comprehensive approach to addressing common hair and scalp conditions. By integrating traditional wisdom with contemporary scientific understanding, Ayurvedic practices for hair health can provide enduring benefits, ensuring hair that is strong, vibrant, and lustrous.

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