

Conceptual Analysis of Vicharchika W.S.R to Eczema: An Overview

Narayan Sahu¹, Sarita Mohanta², P.K. Panda³, Utkalini Nayak⁴, Sushmirekha Panda⁵

¹P.G Scholar, P.G Department of Rognidan Evum Vikriti Vigyana, Govt. Ayurvedic college & Hospital, Balangir, Odisha, India

²Professor & HOD, P.G Department of Rognidan Evum Vikriti Vigyana, Govt. Ayurvedic College & Hospital, Balangir, India

³Dean, SSCAS & RH, Sri Sri University, Cuttack, Odisha, India

⁴Reader & Head, P.G Department of Rognidan Evum Vikriti Vigyana, Govt. Ayurvedic College & Hospital, Balangir, India

⁵PG Scholar, All India Institute of Medical Science, Bibinagar, Hyderabad, India

¹narayanbams@gmail.com

Abstract

Skin is the mirror image of body and mind, which is also the largest organ of body; it reflects physical, mental and psychological state of an individual. Skin not only covers and protects the body but also performs some functions of excretion and metabolism. In the Ayurvedic texts all skin disorders are included under the Kushtaroga. Which is further classified in two divisions i.e. Mahakushta and Kshudrakushta, Vicharchika is one among them. Kushtha is one among Ashtamahagada also. Vicharchika is a type of kshudra kushta & Sadhya Kushtha by all acharya, often encountered by Ayurvedic Dermatologists characterized with symptoms likes Kandu, Srava, Pidika and Shyavavarna. Vicharchika can be seen at any age but frequently at a young age due to exposure to occupational, environmental factors, and mental stress. Junk food, irregular eating, repressing natural desires, using cosmetics and other chemicals, a polluted environment, a demanding existence, and emotional disorders all unquestionably play a significant role in the emergence of Vicharchika nowadays. The clinical presentation of Vicharchika is similar to Eczema in modern dermatology. Eczema (also called atopic dermatitis) is characterized by dry itchy skin with areas of poorly demarcated erythema and scale. Pruritus, erythema, oedema, papules, vesicles and oozing in the acute phase whereas itching, scaling, dryness, hyperpigmented and lichenified (thickened), and excoriations (scratch marks) are frequently seen in the chronic phase. By purging vitiated dosha and balancing the Dosha and Dhatu, Ayurveda provides treatment for the root of Vicharchika. Shodhana, Shamana, and Rasayana therapy make up the mainstay of Ayurveda's treatment for this illness.

Keywords

Kushta, Kshudra Roga, Vicharchika, Eczema

*Corresponding Author

Narayan Sahu, P.G Scholar, P.G Department of Rognidan Evum Vikriti Vigyana, Govt. Ayurvedic college & Hospital, Balangir, Odisha, India.


How to Cite this Article

Sahu N, Mohanta S, Panda PK, Nayak U, Panda S. Conceptual Analysis of Vicharchika W.S.R to Eczema: An Overview. Int. J. Ayurveda Herbal Res. 2023;1(2):1-9.

DOI: <https://doi.org/10.54060/ijahr.2023.15>

To browse



Received 2023-05-03	Funding Nil	Accepted 2023-07-02	Online First 2023-07-02	Ethical Approval Nil	Published 2023-07-25
 Copyright © 2023 The Author(s). This work is licensed under the Creative Commons Attribution International License (CC BY 4.0). http://creativecommons.org/licenses/by/4.0/					Open Access

1. Introduction

All skin diseases are included under the umbrella of *Kushtaroga*. Again, *kushtaroga* classified in two divisions i.e. *Kshudra kushtha* and *Mahakushtha*. So, all *Kushtha* are having *tridoshaja* origin so, *Vicharchika* can be said in the same way i.e. *Kapha* is responsible for *Kandu*, *Pitta* is responsible for *Srava* and *Shyava* indicate the presence of *Vata*. Despite its *Tridosha* origin, various *Acharyas* mentioned different dominancy in *Vicharchika* i.e. *Kapha*, *Pitta*, *Vata-pitta Pradhana* which also suggests specific Symptom complexes. It is a type of *kshudra kushtha* characterized by symptoms namely *Kandu*, *Srava*, *Pidika* and *Shyavavarna*, also it is included under *Rakta pradoshaja Vikara* with dominance of *kapha*. *Vicharchika* is often correlated to eczema based on clinical presentation. Eczema which is also known as atopic dermatitis characterized by dry itchy skin with areas of poorly demarcated erythema and scale. Environmental or genetic factors seem to play an important role in the manifestation of the disease.

2. Etymology of the Word Vicharchika

The word *Vicharchika* is derived from *sanskrit* origin “*charch adhyane*” by using the prefix “*Vee*” to it. The word *adhyane* has two syllables “*Adhi*” which means “above” and “*ayane*” means to spread out.

3. Classical Definition of Vicharchika

According to *Acharya Charaka*, it is a skin ailment wherein eruptions over the skin appear with dark pigmentation, itching and with a profuse discharge. *Maharshi Sushruta* described that *vicharchika* is a condition in which the skin has linear rough lesions with intense itching and pain but when the same itching, burning and pain are experienced in the feet alone, it is termed as “*vipadika*”. *Acharya Vagbhatta* narrated that the blackish eruptions with intense itching and watery discharge i.e. *Lasikadhya* is referred to as *vicharchika*. The *Bhela samhita* has mentioned the exact site of the lesion (*Dhatugatva*) i.e. blackish red deep rooted lesions i.e. *Mamseropachita* accompanied with oozing is called *vicharchika*. According to *Acharya Kashyapa* *vicharchika* as blackish brown pustuler eruptions with intense itching and pain having special symptoms like *Vrana and Paka*. *Acharya Harita* described that multiple pinhead-sized eruptions with ulceration and itching are called *vicharchika*. From the above discussion, it seems that the *charka* has described a wet type of *vicharchika* while *sushruta* has given the description of a dry type of *vicharchika*.

4. Nidana of Vicharchika

The etiological factors of *vicharchika* vary with different authors because the dominant *dosha* according to *Sushruta* is *Pitta*, whereas *Charka* and *Vagbhatta* accept the dominance of *kapha*. But according to *Charka*, the *kushtha* is never caused by any one of the singles *doshas*. Because of *sapta dravyas sangraha* (*vata, pitta, kapha and twak, rakta, mamsa, and ambu*), eighteen types of *kushthas* are produced. Hence, the etiological factors of *kushthas* are to be accepted as the etiological factors of *vicharchika*. So the *nidan*s of *vicharchika* may be classified into 3 groups: 1. *Aharaj* 2. *Viharaj* 3. *Acharaj*

5. Aaharaj Nidana

5.1 Mithya ahara

Intake of *chilchim* fish with milk, intake of *mulaka* and *lasuna* with *ksheera*, use of *mulaka* with *guda*, excessive use of alcohol with milk, intake of food mostly containing *yavaka*, *uddalaka* along with *ksheera*, *dadhi*, and *takra*, *kola*, *kulatha*, *masha*, *atasi*, *kusumbha* and *sneha*, continuous intake of *gramya*, *audaka* and *anupa mamsa* with *ksheera*, use of fish, citrus and milk together, excessive use of *navanna*, *dadhi*, *matsya*, *amla* and *lavana*, excessive use of *tila*, *ksheera* and *guda*, excessive oleation, continuous and excessive use of *madhu*, *phanita*, intake of food during indigestion, *asatmya ahara*, *adhyashana* and intake of polluted water.

6. Viharaj Nidan

6.1 Mithya vihara

To do physical exercise and to take sunbath after heavy meals, to perform sexual intercourse during indigestion, to do exercise or to perform sexual intercourse after *snehapana* and *vamana*, sudden changes from cold to heat or heat to cold without judiciously following the rules of gradual changes, entering into cold water immediately after one is affected with fear, exhaustion and sunlight. **Vega-Vidharana**: Suppression of the urge of emesis, with holding of the natural urges i.e. *Mutra* and *purisha vega* etc. are the *viharaja nidana* of *vicharchika*.

6.2 Panchakarm Apacharana

Panchkarmani kriyamani nishida sevanam, improper administration of *snehapana* therapy also creates problem.

7. Aacharaj Nidan

Acts insulting to *bramhanas*, guru and other respectable persons, indulgence in sinful activities, use of money or material acquired by unfair means are the causes of *aharaja nidana*.

Table 1. Rupas

No.	Rupa	CS	SS	AH	AS	BS	KS	MN	BP
1.	<i>Kandu</i>	+	+	+	+			+	+
2.	<i>Pidika</i>	+		+	+			+	+
3.	<i>Shyava</i>	+		+	+			+	+
4.	<i>Srava</i>	+		+	+	+	+	+	+
5.	<i>Raji</i>		+			+			
6.	<i>Ruja</i>		+				+		
7.	<i>Rukshata</i>		+						
8.	<i>Rakta</i>					+	+		
9.	<i>Praklina</i>					+			
10.	<i>Vrana</i>						+		
11.	<i>Paka</i>						+		

References: CS-Charak Samhita, SS-Sushruta Samhita, AH-Astanga Hridaya, AS-Astanga Sangraha, BS-Bhela Samhita, KS-Kasyapa Samhita, MN-Madhava Nidana, BP-Bhava Prakash

8. Purvarupa of Vicharchika

There is no illustration regarding the premonitory sign and symptoms of *vicharchika* in the text, but as it is classified as one of the kshudra kushtha roga, one can take the premonitory syndrome of the *kushtha vyadhi* to that of *vicharchika*. They are *asweda*, *swedadhikya*, *atislakshnata*, *vaivarnyata*, *toda*, *suptata*, *paridaha/Daha*, *pariharsha*, *ushmayana*, *gaurava*, *shwayathu*, and *visarpana*.

9. Rupa of Vicharchika

Rupa i.e., signs and symptoms of *Vicharchika*, as stated by different *Acharyas* can be summarized in the table 1.

These symptoms are being discussed here in brief:

- **Kandu:** *Kandu* is produced by the vitiated *Kapha dosha*. (Ch. Chi. 5/10, Su. Ni. 5/18, A. H. Su. 12/53). It is the chief symptom of *Vicharchika* and also can be felt as a Purvarupa of *Kustha*. It is a condition of severe itching and is the most distressful symptom in the patient of *Vicharchika*.
- **Pidika:** "*Peedayati Iti Pidika*" i.e. which creates the Pida (Pain). In *Charaka Sutra*, it has been explained that, when the vitiated *Pitta* gets accumulated in *Twacha* and *Rakta* creates inflammation and redness then it is known as *Pidika*.
- **BahuSrava:** *Srava* means discharge, flowing, streaming (M. Monier Williams). *Acharya Charaka* has used the adjective "*Bahu*" meaning 'profuse discharge'. Regarding the pathology of *Bahusrava* vitiated *Pitta* and *Kapha* is responsible as per *Charaka* while vitiated *Pitta* is responsible as per *Madhukosha*. *Vagbhata* has used the word *Lasikadhya* and *Indu* in his *Shashilekha* commentary defines it as '*Jalaprayah*' meaning the nature of the discharge resembles to that of water. Contrary to other *Acharyas*, *Sushruta* has mentioned the "*Rukshata*" (dryness) in *Vicharchika*. It seems if the *Vata* is dominant, the lesion will be dry, while in the dominance of *Kapha* or *Pitta*, it will be wet.
- **Shyava:** *Shyava* means dark brown or dark colored. (M. Monier William). This is the characteristic feature of the lesions of *Vicharchika*, mentioned by all *Acharyas* except *Sushruta*. It is due to vitiated *Vata*.
- **Raji:** It means lining which may develop due to thickening of the lesion, which indicates dry type of *Vicharchika*, *Sushruta* has described this symptom. *Dalhana* explained it as *Rekha*, means linings. Scratching may produce linear markings. *Raji* is caused by vitiated *Vata*.
- **Ruja:** *Vata* is the whole & sole factor responsible for *ruja*. *Sushruta* and *Kashyapa* have mentioned this symptom. *Ruja* means *Vedana* i.e. pain or irritation to the patient due to the chronic nature of the disease.
- **Rukshata:** *Rukshata* is the cardinal symptom of *Vata*. It means dryness (not smooth/soft), disagreeable hard and rough. *Acharya Sushruta* has mentioned it. This symptom is due to vitiated *Vata*.
- **Rakta:** *Rakta* means redness in the lesion. It is produced by the vitiated *Pitta*. This symptom has been mentioned in *Bhela Samhita*. In *Kashyapa Samhita*, instead of *Rakta*, the word "*Lohita*" has been used.
- **Praklinna:** *Praklinna* means 'with more wetness – more Kleda'. Due to continuous discharge the lesion becomes wet. This sign is mentioned only in *Bhela Samhita*, caused by vitiated *Kapha* and *Pitta*.
- **Vrana:** Means a wound, ulcer, crack (M. Monier William). This symptom has been mentioned in *Kashyapa Samhita*. *Vrana* means ulcerated lesion. Because of scratching *Vrana* may be created. This is due to vitiated *Pitta*.
- **Paka:** *Paka* avastha may take place due to infection & purulent discharge. This symptom has been mentioned in *Kashyapa Samhita*. *Paka* is caused by vitiated *Pitta*.

10. Samprapti of Vicharchika

In classics there is no individual description regarding the samprapti of *vicharchika*. But being a variety of *kushtha* the common samprapti of *kushtha* should be considered.



Acc to Acharya Charak nidana 5/6, samprapti of kushtha is as follows. By various causative factors as mentioned in kushtha nidana, all the three doshas are simultaneously provoked, the four dushyas (twak, mansa, rakta and lasika) thin out or lose their tone. In these deranged four dushyas, the provoked doshas get located. This causes them to become vitiated and so the kushtha or the skin disease is produced.

According to Acharya Charak and Vagbhata kapha pradhan tridosha get vitiated whereas Acharya Sushruta pitta pradhan tridosha vitiated.

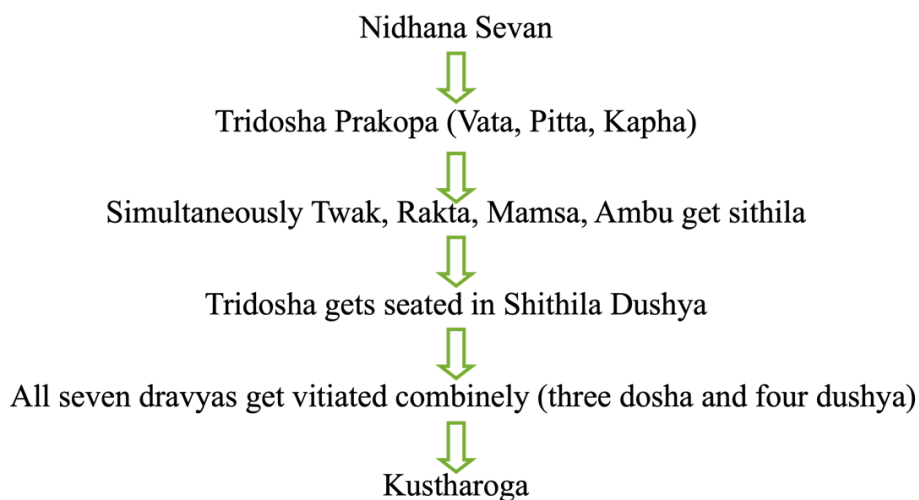


Figure 1. Causative Factors of Kustharoga

According to Charaka Samhita (Ch.chi.7/9-10) Due to various Nidana Sevana, Tridosha gets vitiated simultaneously & produces shaithilya in the Twak, Rakta, Mamsa, & Ambu. Then Tridosha gets seated in Shithila Dhatu & vitiating them with Lakshantopatti of Kustha Roga.

11. Samprapti Ghatkas

- *Doshas : Tridosha*
- *Dushya : Twak, Rakta, Mansa, Lasika(ambu)*
- *Srotas : Rasa, Rakta, mansa & Udakavaha*
- *Agni : Jatharagni & Dhatwagnimandya*
- *Srotodusti : Sang & vimargagamana*
- *Sanchara : Tiryaga sira*
- *Adhishtana : Twaka*
- *Rogamarga : Bahya*
- *Swabhava : Chirkari*

Each of Samprapti Ghatkas can be described as follows-

11.1. Dosh Kapha (Ch.) Pitta (Su.) Pradhana.

Regarding the predominant *dosha* Acharyas holds a different of opinion according to Acharya Charaka, Vagbhata, Sharangadhara & Bhavaprakash, Vicharchika is a Kapha Pradhana Vyadhi Whereas Sushruta says as Pitta Pradhana & Madhava describes as Vata Pittaja.

Among commentators, Dalhana states Pitta and Arunadatta, Indu and Shrikanthadutta Kapha predominance. From the above discussion it is clear that most of the Acharyas have accepted Vicharchika to be a Kapha dominant disease.

11.2. Dushya

Twak, Rakta, Mamsa & Ambu are four responsible constituents for Vicharchika. *Acharya Charaka* in *Nidana Sthana* has postulated that when the four *Dushyas* are vitiated by three provoked *Doshas*.

- Twak –Twacha is the Indriya adhisthana of Sparshnendriya which has Vata predominance. So its vitiation causes symptoms like Kandu, Rukshata & Vedana.
- Rakta – Acharya Charaka shows the vitiation of Rakta producing oedema, redness, Shyavata i.e. Vaivarnya & Kandu as Shonitaja Vikara (Ch. Su. 24/16)
- Mamsa – If pathology is not stopped in time, Dosha provokes deeper Dhatu like Mamsa dusti. Mamsa dusti produces Toda, Sphota, Karkashata, Pidika, etc.
- Ambu – Acharya Charaka has mentioned Vicharchika as Bahusravayukta whereas Vagbhata mentioned Vicharchika as Lasikadhya. Srava, Praklinna, Lasikadhya, etc are the result of Ambu dusti.

11.3. Srotas and Srotadusti

Srotas are the channels of transportation throughout the body. Here in *Vicharchika*, *Rasavaha*, *Raktavaha*, *Mansavaha* and *Udakavaha Srotas* are vitiated. *Lakshanas* of *Bahusrava* and *Raukshyam* are due to *Rasavaha Srotodushti*. *Kandu* and *Sthiratwam* are due to *Mansavaha Srotodushti*. In this disease, two types of *Srotodusti* are observed i.e. 'Sanga' & 'Vimarga-gamana' of *Dosha* from *Kostha* to *Shakha*. *Amavisha* accumulates with *Doshas* & *Dhatu* & create the 'Sanga' where the *Kha-vaigunya* is present.

Table 2. Pathyas

No.	Pathya	CS	SS	AH	BR
1.	Laghu Anna	+			+
2.	Tikta Shaka	+		+	+
3.	Purana Dhanya	+	+		
4.	Jangala Mansa	+	+	+	+
5.	Shastic Shali, Yava, Godhuma, Uddalak		+	+	+
6.	Masura			+	+
7.	Ghrita	+			+
8.	Mudaga	+		+	+
9.	Triphala	+	+	+	+
10.	Bhallatak	+	+	+	+
11.	Nimba	+		+	+
12.	Patola	+		+	+
13.	Adhak		+	+	+
14.	Adhak				+
15.	Chitraka	+	+	+	+
16.	Parisheka Avagaha of Khadir				
17.	Brihati Phala				+

References: CS-Charak Samhita, SS-Sushruta Samhita, AH-Astanga Hridaya, BR-Bhaisajya Ratnavali

11.4. Ama and Agni

Mithya ahara, Ahita ahara & Viruddha ahara are the main important causative factors of the disease. They cause vitiation of *Jatharagni* results in formation of *Ama* & *Amavisha*. *Jatharagnimandya* and *Dhatvagnimandya* produce *Ama*. *Ama* thus produced along with *pradhana Dasha Dushti* plays a vital role in the pathogenesis of *Vicharchika*.

- Udbhava Sthana – Initial Dosha Sanchaya occurs in Amashaya.
- Sanchara – Provocated Vata carries Prakupita Pitta & Kapha to the Bahyamarga.
- Adhithana – Twak-Shakha is the adhithuna of Vicharchika.

12. Pathya and Apathya in Vicharchika

Pathya: The list of "Pathya" for Vicharchika (being a variety of Kustha) is tabulated in table 2.

Apathya: The list of Apathya in Vicharchika is tabulated below:

Table 3. Apathyas

No.	Apathya	CS	SS	AH	BR
1.	Guru Anna	+			+
2.	Dugdha	+	+	+	+
3.	Dadhi	+	+	+	+
4.	Amla Rasa	+	+	+	+
5.	Guda	+	+	+	+
6.	Tila	+		+	+
7.	Anupa Mansa	+		+	+
8.	Matsya				
9.	Mansa and Vasa		+		
10.	Taila		+		
11.	Masha		+	+	+
12.	Kulatha		+		
13.	Ikshu Vikara		+		+
14.	Mulaka				+
15.	Madhya	+			+
16.	Lavana			+	+
17.	Vidahi Anna		+		+
18.	Abhishyandi Anna		+		
19.	Vishtambhi Anna				+
20.	Maithuna		+		+
21.	Navana				+

References: CS-Charak Samhita, SS-Sushruta Samhita, AH-Astanga Hridaya, BR-Bhaisajya Ratnavali

13. Discussion

According to all Acharyas, kustha is tridoshaja and Rakta pradoshaja vikara. In all kustharoga, the vitiation of Rakta and pitta mentioned. , hence it is called Raktapradoshaja vikara. Vicharchika is one of the chronic skin diseases that has been mentioned

in all Ayurvedic texts under Kshudra kusta. It has also been considered as Sadhya Kusta by Acharya Kashyapa. Acharya Charaka considered Vicharchika as Kapha dominant disease because Kandu, Shyava, Pidika, and Bahusrava its acute stage whereas Raji, Arti and Saruksha its Chronic or later stage. Mithya ahara, Ahita ahara & Viruddha ahara are the main important causative factors of the disease. They cause vitiation of Jatharagni results in formation of Ama & Amavisha. Among the disorders affecting the Rasavaha, Raktavaha, Mamsavaha & Swedvaha Srotas, Vicharchika is an important disease due to its higher and widespread incidence, chronicity and progression to grave condition in acute phase. In this disease, two types of Srotodusti are observed i.e. 'Sanga' & 'Vimarga-gamana' of Dosha from Kosta to Shakha. Amavisha accumulates with Doshas & Dhatus & create the 'Sanga' where the Kha-vaigunya is present. Vicharchika is the nearest term for Eczema, which is one of the Skin disorders described by Charaka. (Cha.Chi. 7/26 & Su.Ni 5/8).

14. Conclusion

On the basis of the present study, the following conclusions can be drawn. 1) *Vicharchika* is stated as a *Kshudra-Kushtha* & *Sadhya Kushtha* by all *acharya*, also Rakta pradoshaja vikara being of three dosha with dominance of kapha. But *Kushtha* is one among *Ashta Mahagada*. So, it is difficult to cure. 2) *Vicharchika* can be seen at any age but frequently seen at a young age due to exposure to occupational, environmental factors and mental stress. 3) Now a days fast food, irregularity in food taking, suppression of natural urges, uses of cosmetics and other chemicals, polluted environment, stressful life and Emotional disturbances definitely play a major role in progression of *Vicharchika*. 4) *Mithya Ahara – Vihara, Ahita ahara vihara* especially *Navanna, Viruddhahara* and *Vegavidharana* are the main causative factors of agnimandya. 5) Excessive intakes of *Santaripaka Nidana* cause *Amautpatti* and play an important role in manifestation of *Vicharchika*.

References

1. Ashtanga Samgraha - Hindi commentary By Atrideva Gupta., Krushnadas Akadami, Varanasi.
2. Sharma PV, Varanasi CO, editors. Chi.7/13 translated by Prof. Charaka Samhita. 2011;1.
3. Samhita C. Ni.5/13 translated by Prof. Sharma PV, Varanasi CO, editors. 2011;1.
4. Samhita C. Chi.7/26 translated by Prof. Sharma PV, Varanasi CO, editors. 2011;1.
5. Ydunandan U. Madhav Nidan Madhikoshika Tika verse 49/23 Part 2, Chaukhambha Sanskrit Sansthan. Chaukhambha Sanskrit Sansthan. 2004; pg. 193.
6. Samhita C. Chi.7/30 translated by Prof. Sharma PV, Varanasi CO, editors. 2011;1.
7. Acharya VYT, Acharya NR, editors. Sushruta Samhita with Nibandha Sangraha commentary of Dalhana and Nyaya Chandrika Panjika of Ga-yadasa on Nidanasthana. Chaukhambha Orientalia. 2007;5.
8. Ydunandan U. Madhav Nidan Madhikoshika Tika verse 49/35 Part 2. Chaukhambha Sanskrit Sansthan Varanasi. 2004; pg. 193.
9. Acharya VYT, Acharya NR, editors. Sushruta Samhita with Nibandha Sangraha commentary of Dalhana and Nyaya Chandrika Panjika of Ga-yadasa on Nidanasthana. Chaukhambha Orientalia. 2007;5(13).
10. Shashtri PHS, Prakashan CS, editors. Ashtang Hridaya with Sarvangasundari commentary of Arunadatta & Ayurveda Rasayana of Hemadri. Hari Sadashiva Shashtri, Chaukhambha Surbharati Prakashan, Varanasi, reprint Nidana Sthana. 2007;14, pg. 525.
11. Shukla GD, Bhavan CV, editors. Bhel Samhita Chikitsa Sthana 6/25-26 -Bhel. Varanasi.
12. Bhaishajya Ratnavali - with Vidyotini Hindi Comm. R. D. Shastri, Ed. 1991.
13. Charaksamhita Chikitsasthan. Hindi commentary by Pandit Kashinath Shastri. Chaukhambha Publication, Varanasi. Reprint 2011;7(7-8):250.
14. Agnivesha C. revised by Charaka & Dridhabala with Ayurveda deepika commentary of Chakrapanidatta, edited by Vd. Yadavaji Trikamji Acharya, Chaukhambha Prakashan, Varanasi, reprint Chikitsa Sthana, 2007; 7/4: 450 & 451.



15. Agnivesha, Charaka Samhita, revised by Charaka & Dridhabala with Ayurveda deepika commentary of Chakrapanidatta, edited by Vd. Yadavaji Trikamji Acharya, Chaukhambha Prakashan, Varanasi, reprint Chikitsa Sthana, 2007; 7/5-6: 450.
16. Shashtri PHS, Prakashan CS, editors. Ashtang Hridaya with Sarvangasundari commentary of Arunadatta & Ayurveda Rasayana of Hemadri. In: reprint UttarSthana chap. 2007, pg. 31.
17. Murthy KR. Madhav Nidan A Treatise on Ayurveda, Shrikantha, Chaukhambha Orientalia. Madhav Nidan A Treatise on Ayurveda.
18. Rakshita V, Dutta S, Vaidhya V. Madhava Nidana of Madhavakara with Madhukosha & Atanka Darpan Tika, Vchasp-ti, by. Bombay: Nirnaya Sagar Press; 1994; pg. 60.
19. Textbook of Harrison's principles of internal medicine, 19th ed. Vol. II Newyork.2009
20. Ralston SH, Penman ID, Strachan MWJ, Hobson RP. Davidson's Principles and Practice of Medicine. 23rd ed. pg. 791.
21. Singh M. Role of Plants in Different Religious Ceremonies Common to Uttarakhand Region. Int. J. Ayurveda Herbal Res. [Internet]. 2023 Apr. 25 [cited 2023 Sep. 10];1(1):19-22.

