Ayurvedic Review of Draksha (Vitis vinifera Linn.) And Its Effect on Kasa as a part of Charakokta Kasahara Mahakashaya

¹Dr. Shalu Sharma, ²Dr. Om Parkash Sharma

^{1.}Phd Scholar, ²Professor & H.O.D.
 ^{1,2}Department of Dravyaguna Vigyana,
 ^{1,2}Sri Ganganagar College of Ayurvedic Science and Hospital, Tantia University.

Abstract: Ayurveda is the science of life. Aim of Ayurveda is promoting the health of the healthy ones and treating the diseased ones. The keen knowledge of the *Dravyas* is essential for achieving the success in treatment. *Dravyas* have been classified in the Classical texts on the basis of very keen and intelligent observations of our Acharyas. A comprehensive classification of the *Dravyas* is presented in the form of *Panchaashat Mahakashaya* by *Acharya Charaka*. *Kasa* is a disease of *Pranavaha Srotas* and mainly vitiation of *Vata* (*Prana* and *Udana*) and *Kapha.Kasahar Mahakashaya* is the 36th *Mahakashaya* of *Acharya Charaka* which consist of ten *Dravyas* i.e. *Draksha*, *Abhaya*, *Amalaka*, *Pippali*, *Duralabha*, *Shringi*, *Kantakari*, *Vrishchir*, *Punarnava* and *Tamalaki*. This work is carried out to critically analyse the effect of *Draksha* (which belongs to Vitaceae family) in *Kasa*. Here an attempt has been made to critically analyse the pharmacological properties of *Draksha* part of (*Kasahar Mahakashaya*) to find out the probable mode of action of this *Dravya* on *Kasa* and it is concluded that *Draksha* is justify to be a part of *Kasahara Mahakashaya*. During this critical review literary work again it is proved that *Ayurveda* is eternal and infinite with wholistic knowledge.

Keywords: Ayurveda, Draksha, Dravya, Kasa, Kasahar Mahakashaya, Panchaashat Mahakashaya.

Introduction:

Ayurveda classical texts provide distinctive treatment modalities and medication for the disease conditions. In Charaka Samhita, Sutra Sthana Dravyas are classified in combination of ten drugs as per pharmacological actions into fifty Mahakashayas^[1]. Kasahara Mahakashaya is the 36th Mahakashaya among these fifty Mahakashayas^[2]. The present research work has been carried out to study of Draksha that is the part of Kasahara Mahakashaya. Drugs included in Kasahara Mahakashaya are (Draksha, Abhaya, Amalaka, Pippali, Duralabha, Shringi, Kantakari, Vrishchir, Punarnava and Tamalaki). In this paper we are try to discussing about the Kasa and Draksha's effect on Kasa, Acharya Charak already given it the important place in Kasahara Mahakashaya. A review has been done here that modern science also proven that it has many quality which is useful in the treatment of Kasa.

Disease Review

Samhita Period:

Charaka Samhita^[3]:

Five types of Kasa along with their Poorvaroopa, Samanya Samprapti, Vishesha Nidana and Samprapti, Lakshanas, Sadhyasadhyata, Shodhana and Shamana Chikitsa had elaborately explained in Charaka Samhita.

Sushruta Samhita^[4]:

Sushruta Samhita, mentioned Kasa as a symptom as well as a disease. It describes Nidana, Samprati, Bhedhas, Poorva Roopa, Lakshana, Samanya and Vishesha Chikitsa of Kasa.

Harita Samhita^[5]:

Harita has explained the disease *Kasa* elaborately with treatment. For the first time he explained eight varieties of *Kasa*, which none of the other authors have explained.

Kashyapa Samhita^[6]:

The reference of *Kasa* is also available in *Kashyapa Samhita*. Even though not mentioned separately, it is discussed under the context of *Uroghata*. *Kasa* is explained as a complication of *Uroghata*.

Ashtanga Sangraha^[7]and Hridaya^[8]:

The description of *Kasa* is available in both *Ashtanga Sangraha* and *Astanga Hridaya*, written by *Vridda Vagbhata* in 400AD. has explained *Nidana, Bhedha, Samprapti, Lakshana, Sadhyasadhyata* and *Chikitsa* pertaining to *Kasa* explained in *Charaka* and *Sushruta Samhita* along with his newer thoughts.

Madhava Nidana^[9]:

Madhavakara, the author of 800A. D has explained about the causes of the disease Kasa. The commentators Vijaya Rakashita and Shreekanta Dutta have commented on it.

Bhava Prakasha^[10]:

Bhavamishra, the 15th century AD author has described Kasa and its management in his treatise Bhava Prakasha. Nirukti^[11]:

Acharya Caraka defines Kasa as; "कसनात्कास"

The production of abnormal sound in the process of release of *Vayu* that was obstructed is termed as *Kasa*.

Hetu^[12]:

Factors which are responsible for the manifestation of *Hikka & Shwasa* are also responsible for the development of *Kasa*. Exposure to smoke & dust; excessive physical exercises; consumption of rough foods; entry of food substances in abnormal path & suppression of sneezing.

$Samprapti^{[13,14]}$:

Due to above etiological factor *Kapha* gets aggravated and brings obstruction for the movement of *Vata* in the *Uras* leading to aggravation of *Pranavata* and *Udana Vata*. As a result *Vata* moves upwards, afflicts the channels of circulation in the upper part of the body and gets lodged in the throat & chest. This agitated *Vata* enters & fills up all the channels of *Siras* to cause bending & stretching of the body, jaws, sides of neck & eyes. Further *Vata* brings contraction & stiffness of the eyes, back, chest & sides of the chest, gives rise to *Kasa* which may be dry or with sputum. It is associated with severe pain & loud sound like that of a broken bronze. *Kasa Bheda*^[15,16]

Kasa is classified into five varieties namely:-

- 1) Vataja
- 2) Pittaja
- 3) Kaphaja
- 4) Ksataja
- 5) Ksayaja

Purvarupa[17,18]:

Premonitory sign & symptom of Kasa are as follows:-

Patient feels that throat and mouth are filled with a feeling of congestion in the throat; itching sensation in the throat & palate; hoarseness of voice; loss of taste and mildness of digestive fire.

Principles of treatment:

- 1) Vataja Kasa, Pittaja Kasa and Kaphaja Kasa should be managed by appropriate pacification measures.
- 2) Drug, diet and activities may be used as pacification strategies to treat above three varieties of *Kasa*.
- 3) Ksataja Kasa and Jara Kasa are manageable with suitable wholesome measures.

Draksha in Brihattrayi

Charaka Samhita:

Charak Acharya has started the enumeration of **Phala Varga** beginning with *Draksha*, it is the best among all the fruits. In *Charaka Samhita*, *Draksha* is described in *Kasahara Mahakashaya*, *Kanthya Mahakashaya*, *Jwarhar Mahakashaya*, *Shramahar Mahakashaya*, *Phala Varga* and *Madya Varga* and described as ingredient of *Vasadi Ghrita*, *Baladi Ghrita*, *Chandanadya Taila*, *Drakshadya*, *Ghrita*, *EladiGutika*, *Jeevaniya Ghrita*, *Pushyanuga Churna*. *Charaka* indicated it in *Kasa*, *Jwara*, *Visarpa*, *Trishna*, *Pittaja Madatyaya*, *Ashmari Pittaja Hridya Roga and Arochaka*.

Sushruta Samhita:

In Sushruta Samhita, Draksha is described in Kakolyadi Gana, Parushakadi gana, Madhura Varga, Madya Varga, and described as an ingredient of Pippalyadi Ghrita, Guduchyadi Ghrita, Parushakadi gana, Mahabala Ghrita. Sushruta Indicated it in Hikka, Shwasa, Jwara and Pramad.

Ashtanga Hridyam:

Acharya Vagbhatta has also depicted "Draksha" as "Phalottama" (the superior). In Ashtanga Hridyam, Draksha is described in Parushakadi gana.

Description of *Draksha* in *Charaka Samhita*Table 1. Showing Review of *Draksha* in *Charaka Samhita*

Table 1. Showing Review of <i>Draksha</i> in <i>Charaka Samhita</i>					
Adhyaya & Shloka	Used as ingredient of				
Sutrasthana ^[19]					
2-24	Pipasaghni Yavagu				
4-10/9	Kanthya Mahakashaya				
4-13/21	Snehopaga Mahakashaya				
4-13/24	Virechanapaga Mahakashaya				
4-16/36	Kasahara Mahakashaya				
4-16/39	Jwarhar Mahakashaya				
4-16/40	Shramahar Mahakashaya				
27-125, 126	Phala Varga as Jwarhara				
27-188	Madya Varga as Deepan				
Vimanasthana ^[20]					
8-139	Madhura Asthapan Skandha				
Chikitsasthana ^[21]					
3-186	Jwaranashak Peyaa				
3-201	Anyedyushak Jwarhara Kashaya				
3-206	Madhukadi Sheeta Kashaya				
3-208	Triphaladi Kwatha				
3-220	Pippalyadi Ghrita				
3-223	Vasadi Ghrita				
3-225	Baladi Ghrita				

3-230	Virechana Ghrita					
3-258	Chandanadya Taila					
5-123	Drakshadya Ghrita					
8-96	· · · · · · · · · · · · · · · · · · ·					
8-96 8-115	Kharjuradi Ghritavleha Baladi Ksheera					
11-21	Eladi Gutika					
11-36	Amritprasha Ghrita					
11-62	Sarpi Guda					
12-32	Ashtashata Arishta					
14-162	Kanakarishta					
16-100	Dhatryaveleha					
18-39	Trayushnadya Ghrita					
18-50	Avleha in vatika Kasa					
18-71	Kasa Chikitsa					
18-87	Pittaja Kasa Chiktsa					
18-88	Pittaja Kasa Chiktsa					
18-90	Pittaja Kasa Chiktsa					
18-94	Pittaja Kasa Chiktsa					
18-127	Kantakari Ghrita					
18-136	Kshat Kasa Chikitsa					
18-163	Kasa Chikitsa					
18-176	Padmakadi Leha					
21-112	Visarpa Chikitsa					
22-34	Trishna Roga Chikitsa					
22-41	Trishna Roga Chikitsa					
24-136	Pittaja Madatyaya Chikitsa					
26-45	Ashmari Cikitsa					
26-83	Pittaja Hridya Roga Chikitsa					
26-212	Arochaka Chikitsa					
29-64	Jeevaniya Ghrita					
29-96	Sukumaraka Taila					
30-92	Pushyanuga Churna					
Kalpasthana ^[22]	·					
1-12	Anupana in Pitta Prakopa					
7-26	Nishotha Avleha in Pitta Prakopa					
7-29	Virechana Dravya					
7-56	Virechana Dravya					
Siddhisthana ^[23]	·					
3-53	Drakshadi Niruha Basti in Daha					
8-16	Gudadaha Chikitsa					
12-15	Baladi Yapana Basti					
12-18/2	Baladi Yamak Anuvasana Basti					
12-19.1	Enema in disorders of genital track					
Description of Draksha in Sushmuta Sambita						

Description of Draksha in Sushruta Samhita

Table 2. Showing Review of Draksha in Sushruta Samhita

Adhyaya & Shloka	Used as ingredient of			
Sutrasthana ^[24]	•			
38-36	Kakolyadi Gana			
38-43	Parushakadi Gana			
42-18	Madhura Varga			
44-50	Virechana Dravya in Pittaja Vikaar			
45-172	Madya Varga			
46-182	Guna of Phala Varga			
46-394	Used as Trishnashamaka			
46-518	Daha in Hridya Roga			
Chikitsasthana ^[25]				
38-73	Raasnadi Asthapana			
Kalpasthana ^[26]				
5-76	Mandolin anti venomous recipe			
Uttartantra ^[27]				

39-70	Vataja jwarahara Kwatha				
39-169	Pippalyadi Kwatha in Vataja Jwara				
39-173	Drakshadi Kwatha in Vataja Jwara				
39-182	Padmakadi Sheeta Kashaya in Pittaja Jwara				
39-185	Gandusha in Pittaja Jwara				
39-196	Katukadi Kwatha				
39-198	Kiratadi Kwatha				
39-218	Pippalyadi Ghrita				
39-223	Guduchyadi Ghrita				
39-224	Kalshyadi Ghrita				
39-304	Dadimadi Kalka Gandusha in Mukha Vrana				
40-77	Dardvyadi Ghrita				
46-19	Treatment of fainting				
47-34	Pramad Chikitsa				
47-40	Treatment of chronic alcoholism				
51-40	Treatment of Dyspnoea				
51-41	Treatment of Dyspnoea				
51-47	Treatment of Hiccup				
58-66	Mahabala Ghrita				

Synonyms of Draksha

The synonyms suggest the different morphological features along with the therapeutic properties of the plant as enlisted in classical texts are mentioned:

Table 3. Showing *Paryaya* (Synonyms) of *Draksha*

Paryaya	D.N. ^[28]	S.N. ^[29]	M.P.N. [30]	K.N. ^[31]	$Bh.N.^{[32]}$	R.N. ^[33]
Brimhani	-	-	-	+	-	-
Charuphala	+	+	-	+	-	+
Draksha	+	+	+	+	+	+
Gostani	-	-	+	+	+	-
Guchhaphala	-	-	-	-	-	+
Guda	-	-	+	+	-	-
Harahura	-	-	+	+	+	-
Karmardika	+	-	-	-	-	-
Karmarda	-	+	-	-	-	-
Kashmirika	+	-	-	+	-	-
Krishna	+	+	-	+	-	+
Madhuphala	-	-	+	+	-	-
Madhurasa	-	-	-	+	+	-
Madhusambhava	-	-	-	+	-	-
Madhuyoni	-	-	+	+	-	-
Mridwika	-	-	+	+	+	-
Phalottama	-	-	+	+	-	-
Priyala	+	+	-	-	-	+
Rasala	+	+	+	+	-	+
Swaduphala	=	-	-	+	+	=
Swadvi	-	-	+	+	-	-
Tapaspriya	+	+	-	-	-	+
Vrishya	-	-	-	+	-	-
Kashmiri	-	+	-	-	-	-
Amritaphala	-	-	-	-	-	+

Interpretation and etymology of synonyms^[34]:

द्राक्षा- 'द्राङ्क्ष्यते 'द्राक्षि' काङ्क्षायाम्'(भा.दी.)।

Its fruit is desired by all for its sweetness and other properties.

स्वादुफला -'स्वादूनि फलान्यस्याः'।

Its fruit are sweet in taste

मधुरसा - 'मधूपमो स्वादुरसोऽस्याः' ।

It has a sweet taste.

मृद्वीका - 'सौकुमार्यात्'(क्षी.)।

It is a delicate fruit.

'शरीरे मार्दवं लाति करोतीति मृद्वीका''।

हारहूरा- 'हारहूरः मद्यं, तदर्थमुपयुक्तत्वात्' ।हारा-

A kind of reddish brown grape. The spirituous preparation is prepared from it.

गोस्तनी -'गोः स्तन इव आकृतिर्यस्याः।

The fruits resembles cows (breasts) teats.

Vernacular names^[35]

Mrdvika, Gostani Sanskrit Assamese Dakh, Munaqqa

Bengali Maneka

English Dry grapes, Raisins Drakh, Darakh Gujrati Hindi Munkka Kannada Draksha Malayalam Munthringya Marathi Draksha, Angur Oriya Drakya, Gostoni

Punjabi Munaca

Tamil Drakshai, Kottai Drakshai Telugu Draksha Kottai, Drakshai

Munaqqa Urdu

Rasapanchaka of Draksha

Table 4. Showing the Rasapanchaka of Draksha

Rasapanchaka	D.N. ^[36]	S.N. ^[37]	M.P.N. ^[38]	K.N. ^[39]	Bh.N. ^[40]	R.N. ^[41]
Madhura Rasa	+	+	-	+	+	+
Amla Rasa	-	-	-	-	-	+
Kashaya Rasa	-	+	-	+	+	-
Guru Guna	-	+	+	-	+	-
Snigdha Guna	+	+	-	+	-	-
Mridu Guna	-	-	-	-	-	-
Sara Guna	-	-	-	+	-	-
Sheeta Virya	+	+	+	+	+	+
Madhura Vipaka	-	+	-	+	+	-

Karma of Draksha

Table 5. Showing the Karma of Draksha

Karma	$D.N.^{[42]}$	S.N. ^[43]	M.P.N. ^[44]	K.N. ^[45]	Bh.N. ^[46]	$R.n^{[47]}$.
Brimhani	-	-	+	-	+	+
Chaksushya	-	+	+	+	+	-
Chhardinashaka	-	-	+	-	-	-
Dahashamaka	+	-	+	+	+	+
Jwarahara	+	+	+	+	+	-
Kamlanashaka	-	-	+	-	+	-
Kasahara	-	+	-	-	-	-
Kshatnashaka	-	+	-	+	-	-
Kshayanashaka	+	+	-	+	-	-
Madatyayanashaka	-	+	+	+	+	-
Mohanashaka	-	-	+	-	+	-
Raktapittanashaka	+	-	+	+	+	-
Shwasahara	+	+	+	+	+	-
Swarabhedanashaka	-	+	-	-	-	-
Swarya	+	-	-	+	+	-
Trishnahara	+	+	+	+	+	-
Vatapittanashaka	-	+	-	+	-	-
Vataraktanashaka	-	-	+	-	+	-
Vrishya	-	+	-	+	+	+
Shrishtvinmutra	-	+	-	+	+	-
Mutrakriccha	-	-	+	-	+	-
Ruchya	-	-	-	-	-	+

Morphology^[48]

Habit: It is a large, deciduous climber, tendrils long, bifid.

Leaves: 7.5 - 15 cm Orbicular- cordate, more or less deeply (3-)5 lobed, margin irregularly and coarsely toothed, glabrous or nearly so above, clothed beneath with deciduous grey tomentum, thin membranous; petiol 3.8-7.5cm.long.

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Flowers: Green, Petals 5, cohering at the apex. Disk reduced to 5 hypogynous glands adnate to the base of the overy. Style very short, thick.

Fruit: Berries-very variable in size, greenish or bluish black.

Seeds: 2-4 pear shaped.

Chemical composition

The main basic element of grape is manganese. It also contains vitamin B6, thia-mine, riboflavin, vitamin C and potassium. Many studies demonstrated that it also contains a chemical substance i.e. resveratrol, a polyphenol which has antioxidant properties. [49] All of the acylated procyandins of grape seeds are esters of gallic acid [50]. Monomers of (+)-catechin, (-)- epicatechin, and (-)-epicatechin-3-O-gallate, 14 dimeric, trimeric, and one tetrameric procyanidin have also been reported. [51] The anthocyanins that have been reported for V. Vinifera include 3-glucosides, 3-acetylglucosides, 3-coumaroylglucosides, 3-caffeoylglucosides, 3-figlucosides, 3-acetyl-5-diglucosides, 3-coumaroyl-5-diglucosides, 3-caffeoyl-5-diglucosides of cyanidin, delphinidin, peonidin, petunidin, and malvidin. [52] Flavonoids viz, quercetin, rutin, kaempferol, luteolin. phenolic acids and β -sitosterol. [53]

Pharmacological action

Antifungal, Antiulcer, Hepato-Protective, Wound Healing, Anti Mutagenic, Anti Herpetic, Cardio Protective, Breast Cancer Suppressor, Antibacterial Activity^[54]; Antidiabetic^[55]; Laxative, Anti-Histaminic, Use In Cough & Respiratory Tract Catarrh^[56]; Anti Microbial^[57]; Anti-cancer and Anti – inflammatory^[58]; Antioxidant^[59].

Actions and Therapeutic Uses:

Draksha is used in Trishna, Jwara, Kasa, Shwasa, Daha, Shosha, Kamla, Raktapitta, Kshata, Ksheena, Vibandha, Arsha, Agnimandhya, Madatyaya, Pandu, Udavarta, Vatarakta.

Part Used: Fruit^[60].

Discussion and conclusion

- *Draksha* is *Vatapittahara* due to its *Madhura Vipaka* and *Sheeta Virya*. It can be used in *Vata Pradhana Kaphaja Kasa* and acts as *Rasayana*. The anti-inflammatory activity (Udenigue CC. *et al*, 2008) of *Draksha* may be attributed to the presence of high content of flavonoids viz, quercetin, rutin, kaempferol, and luteolin in addition to phenolic acids and β-sitosterol. The antioxidant activity (Hesham A El.Beshbishy *et al*, 2009) of *Draksha* may be attributed to the presence of phenolic acids and flavonoids. Due to its anti-inflammatory and antioxidant activity it is helpful to subside the cough.
- Antihistaminic drugs are the compound that inhibits the physiological effects of histamine, used especially in the treatment of allergic cough. *Draksha*, is act as antihistaminic so it is used in allergic cough.
- The drug such as *Draksha* nourish the body with their *Rasayana* effect. The drugs improve *Dhatusara* and *Ojas* and thus increase the *Vyadhikshamatva* (Immunity). This review shows that the drug work by its pharmacological properties to produce the resultant *Kasahar* action and *Kasahar Mahakashaya* is the complete wholistic designed formulation with related to the treatment of *Kasa*.

REFERENCES

- 1. Agnivesha: Charak Samhita with commentry Ayurved Deepika of Chakrapanidutta; edited by Lakshmi Dhar Dwivedi, Chaukhamba Krushnadas Academy Varanasi; 2007. Sutrasthana 4/8.
- 2. Agnivesha, Charak Samhita with commentry Ayurved Deepika of Chakrapanidutta; edited by Lakshmi Dhar Dwivedi, Chaukhamba Krushnadas Academy Varanasi; 2007. Sutrasthana. 4/36.
- 3. Agnivesha, Charaka Samhita. Text with English Translation, Edited and Translated by Prof. Priyavrat Sharma. Vol. II, Chaukhamba Orientalia, Varanasi; 2014. Chikitsasthana, Chapter -18; Pg. 301-319.
- 4. Sushruta, Sushruta Samhita, Part-3 (Uttara-Tantra) Edited With English Translation & Explanatory Notes By Prof. G. D Singhal & Colleagues, Chaukhamba Sanskrit Pratishthan, Delhi; 2015. Chapter- 52; Pg. 397- 407.
- 5. Harita Samhita, Text with 'Nirmala' Hindi Commentary, Editor and Translator Vaidya Jaymini Pandey, Chaukhambha Visvabharati Varanasi; 2010. Tritiya Sthanam, Chapter -12; Pg. 326-335.
- 6. Kashyapa, Kashyapa Samhita, by Ayurvedalankar Shri Satyapala Bhisagacharya et al., Chaukhamba Sanskrit Series Varanasi, Khilsthana, Chapter-10.
- 7. Vagbhatta, Ashtanga Sangraha. Edited With Hindi Commentary By Kaviraja Atridev Gupta. Varanasi Chaukhamba Krishnadasa Academy; 2011 Nidanasthana Chapter-4.
- 8. Shrimad Vagbhatta, Ashtanga Hridyam Edited With The 'Vidyotini' Hindi Commentary By Kaviraja Atridev Gupta. Varanasi Chaukhamba Prakashana; 2009. Nidanasthana Chapter-3 And Chikitsasthana Chapter-3.
- 9. Shri Madhavkar, Madhavnidanam, Edited with 'Vimala'-'Madhudhara' Hindi Commentary & Notes By Dr. Brahmananda Tripathi, Part-I, Varanasi, Chaukhamba Surbharti Prakashan; 2007. Chapter 11.
- 10. Sri Bhavmishra, Bhavprakasha, Edited with 'Vidyotini' Hindi Commentary By Bhisagratna Pandit Shri Brahma Shankar Mishra, Varanasi, Chaukhamba Sanskrit Sansthana, 9th Edition:2005, Chapter14.
- 11. Agnivesha, Charaka Samhita. Text with English Translation, Edited and Translated by Prof. Priyavrat Sharma. Vol. II, Chaukhamba Orientalia, Varanasi; 2014, Chikitsasthanam, 18/8; Pg. 301.
- 12. Sushruta, Sushruta Samhita, Part-3 (Uttara-Tantra) Edited With English Translation & Explanatory Notes By Prof. G. D Singhal & Colleagues, Chaukhamba Sanskrit Pratishthan, Delhi; 2015. 52/3-4; Pg. 397.
- 13. Agnivesha, Charaka Samhita. Text with English Translation, Edited and Translated by Prof. Priyavrat Sharma. Vol. II, Chaukhamba Orientalia, Varanasi; 2014, Chikitsasthanam. 18/6-9; Pg. 301.
- 14. Sushruta, Sushruta Samhita, Part-3 (Uttara-Tantra) Edited With English Translation & Explanatory Notes By Prof. G. D Singhal & Colleagues, Chaukhamba Sanskrit Pratishthan, Delhi; 2015. 52/5; Pg. 397.

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- 15. Agnivesha, Charaka Samhita. Text with English Translation, Edited and Translated by Prof. Priyavrat Sharma. Vol. II, Published By Chaukhamba Orientalia, Varanasi; 2014. Chikitsasthanam. 18/4; Pg. 301.
- 16. Sushruta, Sushruta Samhita, Part-3 (Uttara-Tantra) Edited With English Translation & Explanatory Notes By Prof. G. D Singhal & Colleagues, Chaukhamba Sanskrit Pratishthan, Delhi; 2015. 52/6; Pg. 397.
- 17. Agnivesha, Charaka Samhita. Text with English Translation, Edited and Translated by Prof. Priyavrat Sharma. Vol. II, Published By Chaukhamba Orientalia, Varanasi; 2014. Chikitsa Sthanam. 18/5; Pg. 301.
- 18. Sushruta, Sushruta Samhita, Part-3 (Uttara-Tantra) Edited With English Translation & Explanatory Notes By Prof. G. D Singhal & Colleagues, Chaukhamba Sanskrit Pratishthan, Delhi; 2015. 52/7; Pg. 398.
- 19. Agnivesha, Charaka Samhita Edited with 'Charaka-Chandrika' Hindi commentary by: Dr Brahmananad Tripathi and Foreword by Dr. Prabhakar Janardan Deshpande, Vol. I, Chaukhamba Subharati Prakashana, Varanasi, Reprint; 2006.
- 20. Agnivesha, Charaka Samhita Edited with 'Charaka-Chandrika' Hindi commentary by: Dr Brahmananad Tripathi and Foreword by Dr. Prabhakar Janardan Deshpande, Vol. I, Chaukhamba Subharati Prakashana, Varanasi; 2006, Vimanasthana.
- 21. Agnivesha, Charaka Samhita. Text with English Translation, Edited and Translated by Prof. Priyavrat Sharma. Vol. II, Chaukhamba Orientalia, Varanasi; 2014. Chikitsasthana.
- 22. Agnivesha, Charaka Samhita. Text with English Translation, Edited and Translated by Prof. Priyavrat Sharma. Vol. II, Chaukhamba Orientalia, Varanasi; 2014. Kalpasthana.
- 23. Agnivesha, Charaka Samhita. Text with English Translation, Edited and Translated by Prof. Priyavrat Sharma. Vol. II, Chaukhamba Orientalia, Varanasi; 2014. Siddhisthana.
- 24. Sushruta, Sushruta Samhita, Part-1, (Sutra & Nidana-Sthana) Edited With English Translation & Explanatory Notes By Prof. G. D Singhal & Colleagues, Chaukhamba Sanskrit Pratishthan, Delhi; 2015. Sutrasthana.
- 25. Sushruta, Sushruta Samhita, Part-2 (Sarira, Cikitsa & Kalpa-Sthana) Edited With English Translation & Explanatory Notes By Prof. G. D Singhal & Colleagues, Chaukhamba Sanskrit Pratishthan, Delhi; 2015. Chikitsasthana.
- 26. Sushruta, Sushruta Samhita, Part-2 (Sarira, Cikitsa & Kalpa-Sthana) Edited With English Translation & Explanatory Notes By Prof. G. D Singhal & Colleagues, Chaukhamba Sanskrit Pratishthan, Delhi; 2015. Kalpasthana.
- 27. Sushruta, Sushruta Samhita, Part-3 (Uttara-Tantra) Edited With English Translation & Explanatory Notes By Prof. G. D Singhal & Colleagues, Chaukhamba Sanskrit Pratishthan, Delhi; 2015.
- 28. Dhanvantari Nighantu" Sanskrit Text And English Translation, Vol-II, Commented by Dr. S. D. Kamat, Chaukhamba Sanskrit Pratisthan Delhi; 2011. Amradi Varga, Shloka No-53; Pg. 413.
- 29. Acharya Shodhala, "Shodhala Nighantu", Text with English- Hindi Commentaries, Commentated by Prof. (Dr.) Gyanendra Pandey et al., Chowkhamba Krishnadas Academy, Varanasi. Edition: First; 2009. Amradi Vargah, Shloka No-577; Pg. 111.
- 30. Dr. J. L. N. Sastry and Forward By Dr. K. Raghunathan, Madanpala Nighantu, English Translation, Chaukhambha Orientalia, Varanasi; 2017. Phaladi Varga, Shloka No- 2; Pg. 556.
- 31. Kaiyadeva Nighantu. (Pathyapathya-Vibodhakah) Edited and Translated by Prof. Priyavrata and Dr. Guru Prasada Sharma, Chaukhambha Orientalia, Varanasi; 2017. Aushadhi Varga, Shloka No-298, 299; Pg. 57.
- 32. BhavapraKasa Nighantuh Vol-2 Edited With 'Vaishali' English Commentary By Dr. S. D. Kamat; Chaukhamba Sanskrit Pratishthan, Delhi. First Edition; 2018. Amradiphala Varga, Shloka No-109; Pg. 839.
- 33. Sri Narhari Pandit, Raj Nighantu, (English Translation With Critical Commentary) Edited By Prof. K. C. Chunekar et al., Chaukhambha Orientalia, Varanasi; 2017. Amradi Varga, Shloka No-100; Pg. 581.
- 34. BhavapraKasa Nighantuh Vol-2 Edited With 'Vaishali' English Commentary By Dr. S. D. Kamat; Chaukhamba Sanskrit Pratishthan, Delhi. First Edition; 2018. Amradiphala Varga; Pg. 840.
- 35. "Ayurvedic Pharmacopoeia of India", Part-I, Ministry of Health and Family Welfare, Govt. of India, 1st Edition, Dept of Indian Science of Medicine Homeopathy, New Delhi, Controller of Publication Civil Lines, Reprint: 2001, Vol-III; Pg. 45.
- 36. "Dhanvantari Nighantu" Sanskrit Text And English Translation, Vol-II, Commented by Dr. S. D. Kamat, Chaukhamba Sanskrit Pratisthan Delhi; 2011. Amradi Varga, Shloka No-54; Pg. 413.
- 37. Acharya Shodhala, "Shodhala Nighantu", Text with English- Hindi Commentaries, Commentated by Prof. (Dr.) Gyanendra Pandey et al., Chowkhamba Krishnadas Academy, Varanasi. Edition: First; 2009. Amradi Vargah, Shloka No- 489, 490; Pg. 284.
- 38. Madanpala Nighantu, English Translation By Dr. J. L. N. Sastry and Forward By Dr. K. Raghunathan, Chaukhambha Orientalia, Varanasi; 2017. Phaladi Varga, Shloka No-3, 4; Pg. 556.
- 39. Kaiyadeva Nighantu. (Pathyapathya-Vibodhakah) Edited and Translated by Prof. Priyavrata and Dr. Guru Prasada Sharma, Chaukhambha Orientalia, Varanasi; 2017. Aushadhi Varga, Shloka No-302-304; Pg. 58.
- 40. BhavapraKasa Nighantuh Vol-2 Edited With 'Vaishali' English Commentary By Dr. S. D. Kamat; Chaukhamba Sanskrit Pratishthan, Delhi. First Edition; 2018. Amradiphala Varga, Shloka No-110-112; Pg. 840.
- 41. Sri Narhari Pandit, Raj Nighantu, (English Translation With Critical Commentary) Edited By Prof. K. C. Chunekar et al., Chaukhambha Orientalia, Varanasi; 2017. Amradi Varga, Shloka No-101; Pg. 581.
- 42. "Dhanvantari Nighantu" Sanskrit Text And English Translation, Vol-II, Commented by Dr. S. D. Kamat, Chaukhamba Sanskrit Pratisthan Delhi; 2011. Amradi Varga, Shloka No-54; Pg. 413.
- 43. Acharya Shodhala, "Shodhala Nighantu", Text with English- Hindi Commentaries, Commentated by Prof. (Dr.) Gyanendra Pandey et al., Chowkhamba Krishnadas Academy, Varanasi. Edition: First; 2009. Amradi Vargah, Shloka No- 489, 490; Pg. 284.
- 44. Madanpala Nighantu, English Translation By Dr. J. L. N. Sastry and Forward By Dr. K. Raghunathan, Chaukhambha Orientalia, Varanasi; 2017. Phaladi Varga, Shloka No-3, 4; Pg. 556.

- 45. Kaiyadeva Nighantu. (Pathyapathya-Vibodhakah) Edited and Translated by Prof. Priyavrata and Dr. Guru Prasada Sharma, Chaukhambha Orientalia, Varanasi; 2017. Aushadhi Varga, Shloka No-302-304; Pg. 58.
- 46. BhavapraKasa Nighantuh Vol-2 Edited With 'Vaishali' English Commentary By Dr. S. D. Kamat; Chaukhamba Sanskrit Pratishthan, Delhi. First Edition; 2018. Amradiphala Varga, Shloka No-110-112; Pg. 840.
- 47. Sri Narhari Pandit, Raj Nighantu, (English Translation With Critical Commentary) Edited By Prof. K. C. Chunekar et al., Chaukhambha Orientalia, Varanasi; 2017. Amradi Varga, Shloka No-101; Pg. 581.
- 48. Kirtikar & Basu, "Indian Medicinal Plants" Second Edition, Dehradun, Bishen Singh Mahendra Pal Singh, Vith Reprint Edition 2006, Vol-I; Pg. 607.
- 49. Escribano-Baiton T, Gutierrez-Fernandez Y, Rivas- Gonzalo JC, Santos-Buelga C. 1992. Characterization of procyanidins of Vitis vinifera variety tintal del pais Grape Seeds. J Agric Food Chem 40: 1794–1799.
- 50. Fuleki T, Ricardo da Silva JM. 1997. Catechin and procyanidin composition of seeds from grape cultivars grown in Ontario. J Agri Food Chem 45: 1156–1160.
- 51. Gabetta B, Fuzzati N, Griffini A, Lolla E, Pace R, Ruffilli T, Peterlongo F. 2000. Characterization of proanthocyanidins from grape seeds. Fitoterapia 71: 162–175.
- 52. Wang H, Race EJ, Shrikhande AJ. 2003. Characterization of anthocyanins in grape juices by ion trap liquid chromatographymass spectrometry. J Agric Food Chem 51: 1839–1844.
- 53. Hawary. S, Foulky. K, Gohary, HM, K. M. Meselhy. Phytochemical and Biological Investigation of Vitis vinifera L. (Flame cultivar) Family Vitaceae Cultivated in Egypt. Nature and science, 2012; 10: 48-59.
- 54. Sharma P. C., Yelne M. B, Dennis T. J, Data-baseon Medicinal plants used in Ayurveda, Vol-V, edi I, Central Council for Research in Ayurvedaand Siddha, New Delhi, 2008, p. 46.
- 55. M. Cheng, H. Q. Gao, L. Xu, B. Y. Li, H. Zhang, X. H. Li; Cardioprotective effects of grape seed proanthocyanidins extracts in streptozocin induced diabetic rats. J. CardiovascPharmacol, 50, 503 -509, (2007).
- 56. C. P. Khare (2007) Indian Medicinal Plants. Springer, Spring Street, New York, NY 10013, USA.
- 57. Jigna Parekh (2006) Invitro anti-microbial activities of extracts of Laurea procumbas roxb, Vitis vinifera and Cyperus rotandus. African Journal of Biomedical Research 9: 89-93.
- 58. Udenigue CC, Ramprasath VR, Aluko RE, Jones PJH. Potential of resveratrol in anticancer and antiinflammatory therapy. Nutrition Reviews 2008; 66(8):445-54
- 59. Hesham A El. Beshbishy, Ahmed M Mohamadin, Ashraf B Abdel Naim (2009) Invitro evaluation of antioxidant activity of grape seed, extract, black seed, extract and curcumin. Journal of Taibah University Medical Sciences 4: 23-35.
- 60. Prof. P. V. Sharma, Dravyaguna Vijnana Vol II (Vegetable Drugs), Chaukhamba Bharti Academy, Varanasi; 2015.; pg. 135.