

**STUDY DRUG KUSHMAND FROM DIFFERENT AYURVEDIC AND MODERN TEXTS.****Dr. Satyender Kumar\*<sup>1</sup>**

<sup>1</sup>Assistant Professor, Department of Dravya Guna Vigyana., S.B.M.N Ayurvedic College,  
Rohtak, Haryana (India).

Article Received on  
16 Jan. 2017,

Revised on 06 Feb. 2017,  
Accepted on 26 Feb. 2017

DOI: 10.20959/wjpr20173-8274

**\*Corresponding Author****Dr. Satyender Kumar**

Assistant Professor,  
Department of Dravya Guna  
Vigyana., S.B.M.N  
Ayurvedic College, Rohtak,  
Haryana (India).

**ABSTRACT**

The article deals with whole description about the drug Kushmand. In this regard, detailed historical aspects, classical review, classification of the drug in the different Samhita and Nighantu, synonyms of Kushmand and their interpretation is described. Moreover Rasapanchaka, effect on Dosha-Dhatu, systemic action, Roghnata, therapeutic utilities; parts used. Kushmand as Pathya-Apathya, dose, antidote, adulteration of the drug are also mentioned. Modern review of Benincasa hispida (Thunb.) Cong. where in taxonomic position of the drug, different vernacular names of the drug, family characters, genus characters, distribution, action and uses, cultivation, chemical constituents find their place.

**KEYWORDS:** Kushmand, Ayurveda, Modern, Samhita, Nighantu.

**INTRODUCTION**

Through centuries, the science has gradually developed with new experiences and facts getting incorporated and old principles which could not withstand the test of authenticity, being discarded. The advent of modern techniques and costly treatment are inaccessible to the persons of middle lower economic strata who are more likely languishing the above problems. So Kushmand has been selected for present study as it is easily available and is economically more viable.

## **HISTORICAL REVIEW**

### **VEDIC KALA**

In Vedic literature very few references was observed. In Vishnu-dharma-sutra it is described as Shaka Vishesh.

### **SAMHITA KALA**

#### **Charaka Samhita**

Charaka has mentioned the drug Kushmand two times in Saka Varga in “Annapanvidhi Adhyaya” chapter. Here he described the attributes of Kushmand as Madhura and Sheeta. When Kushmand boiled and drained of the juice and Fried with fatty substance in plenty. Also explains properties of ripe Kushmand. It is sweet sour in taste, slightly alkaline and light. It act as diuretic and laxative.

#### **Sushruta Samhita**

In “Rasavishesh Vigyaniya” Sushruta mentioned Kushmand as a drug of Madhura Varga. “Dravadravya Vidhi” he has described properties of “Tail” of Kushmand seeds. In the “Annapana Vidhi” chapter he described properties of ripe and unripe Kushmand separately. In chapters “Shukrasanita Suddhi Shariram” of Sharira Sthana and “Snehopayogic Chikitsama” of Chikitsa Sthana it is mentioned that Kushmand seeds are used in case of Mutrsanga for diuretic.

#### **Astanga Hridaya**

Astanga Hridya properties of Kushmand along with other vegetables is explain in “Annaswarupa Vigyaniya” chapter. In “Kasa Chikitsa” chapter Kushmand Rasayana yoga, which is useful in Kasa, Hikka, Jwara, Swasa, Kshata, Kshaya etc is explained. In “Arsha Chikitsa” Adhyaya, Vagbhata mentioned Kushmand along with other ingredients for piles. Sidhha Ghrita using Yastimadhu Kalka in Kushmand Swarasa is Apasmaranasaka and is voice, intellect and speech promoting.

### **NIGHANTU KALA**

#### **Dhanvantari Nighantu**

In this Nighantu Kushmand has been described under Guduchyadi Varga. Synonyms and properties of Kushmand were reported in detail.

**Sodhala Nighantu**

Sodhala explain Kushmand drug in Guduchyadi Varga. Various synonyms and action of Kushmand like Bastishudhikara, Vata-Pitanashaka and Varushya etc. are mentiond.

**Madhava Dravyaguna**

In “*Bhavaswabhavavada*” Kushmandcomes under Taila and Saka Varga.

**Hridaya Dipaka Nighantu**

Bopdeva, the author of Hridayadipaka Nighantu, kept the drug in *Dwinama Varga*.

**Madanpala Nighantu**

Madana Vinoda or Madanpala put this drug in Saka Varga. Synonyms and properties of Bala, Madhyama and Pakwa Kushmandseparately and also properties of Kushmand Majja is described in detail by Madanpala.

**Kaiyadeva Nighantu**

Kaiydeva Nighantu or Pathyapathyavibodhaka written by Kaiyadeva; he kept this drug under Aaushdhi Varga. Synonyms and Guna-Karma also explain in detail.

**Bhavaprakasha Nighantu**

Acharya Bhavmishra described Kushmand under Saka Varga. Synonyms and actions of drug Kushmand are explain by Acharya in detail.

**Raja Nighantu**

“Nighantu Raja” and “Abhidhana Chunamani” Nighantuwas written by Narhari Pandita. He described Kushmand under Mulakadi Varga. He explain 8 synonyms in detail and follow Bhavprkash in actions.

**Shaligrama Nighantu**

It is said to be the last Nighantus of the 19th A.D. Shaligrama followed Bhavprakasha Nighantu while quoting synonyms and Sodhala Nighantu and Nighantu Ratnakara while quoting properties of Kushmand. Kushmand is kept under Saka Varga in this Nighantu.

**Priya Nighantu**

Acharya Priya Vrata has mentioned it in Pipalyadi Varga and is described as follows. Synonyms and action also explained.

**ADHUNIKA KALA****Indian Materia Medica**

Sanskrit name, vernacular name, habit, part used (Seed & Fruit), constituents of fruit as fixed oil, starch, an acrid resin, an alkaloid Cucurbitin etc. and preparation (Confection and Ghrita) of Kushmand. Review also gives information about uses of Kushmand, as seeds are useful in Taenia; fresh juice of the fruit is administered as a specific in haemoptysis and other haemorrhagic disorders, it is also useful with or without the addition of Liquorices in insanity, epilepsy and other nervous diseases. It is a good antidote for many kinds of Vegetable poisoning, Mercurial and alcoholic poisoning.

**Glossary of Indian medicinal plants**

Here description of Vernacular names; uses of fruit, fruit juice, seed and oil of seed of Kushmand and it has also mentioned about habit and cultivation, as it is cultivated more or less throughout the plains of India and on the hills up to 4,000 ft.

**Indian medicinal plants**

Family characters and morphology of the plant has been described elaborately, along with its uses, therapeutic applications and Vernacular names.

**Glossary of Indian medicinal plants with active principles**

Detailed description about uses of fruits, seeds and leaves along with chemical constituent of fruit has been described.

**Compendium of Indian Medicinal Plants**

The book contains description about chemical constitution of fruit and wax coating on fruit, as Isomultiflorenol acetate isolated as major constituent of wax.

**Ayurvedic Pharmacopoeia of India**

This book described synonyms, vernacular names, macroscopic and microscopic description, chemical constitution, properties, action, important formulation, therapeutic dose and uses of plant.

**Wealth of India**

This precious book describes the plant with all its pros and cons. It gives references about the available research work done on this plant and also mentions the available minerals, proteins and other constituents present in the plant.

### Indian Medicinal Plants

This book describes regional names, habit, habitat, chemical studies, pharmacological and biochemical studies, toxicological studies, ethno botanical studies, properties and uses of the plant.

**TABLE- 01 CLASSIFICATION OF KUSHMAND VARGA AND SKANDA**

Sr.No.	Name of the texts	Varga
1.	Charaka	Saka Varga
2.	Sushruta	Saka Varga
3.	Astanga Hridaya	Saka Varga
4.	Dhanvantari Nighantu	Guduchyadi Varga
5.	Dravya Guna Samgraha	Saka Varga
6.	Sodhala Nighantu	Guduchyadi Varga
7.	Hridaya Dipaka Nighantu	Dwinam Varga
08.	Madanpala Nighantu	Saka Varga
09.	Kaiyadeva Nighantu	Aoushdhi Varga
10.	Raja Nighantu	Mulakadi Varga
11.	Bhavprakash Nighantu	Saka Varga
12.	Shaligrama Nighantu	Saka Varga
13.	Priya Nighantu	Pipalyadi Varga

**TABLE 02 SHOWING THE SYNONYMS OF KUSHMAND**

SR. N	SYNONYMS	D.N	N.S	S.N	Sidd. M	Hr.N	M.P.N	K.N	R.N	Bh.N	SLN.	P.N
1	Kushmand			+	+	+				+	+	+
2	Suphala									+		
3	Kumbhaphala	+							+			
4	Kushmandki						+	+				
5	Sthiraphala	+						+				
6	Puspaphala						+	+		+	+	+
7	Pitapuspa									+	+	+
8	Brihatphala	+							+	+	+	+

9	Karkotika								+			
10	Kushmandi	+								+		
11	Pitika	+						+				
12	Somka							+				
13	Amrita							+				
14	Kumbhari							+				
15	Somgristika							+				
16	Karkaru		+				+					
17	Pachnali						+					
18	Rajkarkati						+					
19	Kandi						+					

TABLE03 SHOWING RASA, VIPAK AND VEERYAOF KUSHMAND

		C.S	Su.S	A.H.	S.N	M.P	K.N	R.N	BH.N	R.N	P.N
Rasa	Madhura	+	+	+	+	+	+	+	+	+	+
Vipaka	Madhura			+	+		+				
Veerya	Sheeta	+				+	+		+	+	+

**ACTION ON DHATUS**

Most of the authors mentioned Kushmand, having Madhura rasa, Madhura Vipaka and Sheet Veerya with Sheet and Guru Guna. It is also described as Balya, Brimhana and Vrishya. Kushmand acts as Sapta Dhatuwardhak especially Shukra Vardhaka.

It is also mentioned as Raktapitta Shamak and Sonitasthapan.

**THERAPEUTIC UTILITIES OF KUSHMAND**

- 1) Kushmand Swarasa is given with Guda in Madatyaya.
- 2) Kushmand Swarasa is given along with Yavkshara and Sarkara in Mutrakriccha.
- 3) Phala Swarasa is used as Mutraghata, Ashmari and Sarkaranashana with Yavkshara and Guda
- 4) Kushmand Swarasa with Laksha Kalka is administered in Raktakshaya, Uroghata and Kshaya Roga.
- 5) In Unmada Chikitsa, Bhaisajya Ratnavali advised Kushmand Beeja Kalkawith honey for three days.
- 6) In Hikka- Swasa Chikitsa, Kushmand is indicated with Koshna Jala for the treatment of Swasa and Kasa.
- 7) Kushmand Swarasa is given along with Vidanga and Sarkara in Prameha.

**PARTS USED OF KUSHMAND****Bhavaprakasha Nighantu**

Swarasa – 2-4 ounce

Beeja Churna – 3-6 Masha

**KUSHMAND AS PATHYA-APATHAYA****Pathya**

Agnimandhya, Pandu, Raktapitta, Trisna, Murchha, Daha, Unmada, Apasmara, Vatarakta, Hrida Roga, Mutrakrichha, Mutraghata, Asmari, Pittaroga (B.R.) Bhrama, Nidra, Tandra, Sanyasa, Unmada, Amalpitta (Chi.P.).

**Apathya**

Atisara, Grahani, Prameha and during the treatment with Loha, Vijay Parpati Loha Rasayan and Lokanatha rasa etc.

**SUBSTITUTE**

There is no clear indication about substitute of Kushmand in Brihatiriyi.

**ADULTERATION**

Kushmand is used as adulterant or substitute in tomato ketchup in place of tomatoes.

**ANTIDOTE**

It is a good antidote for many kinds of vegetable poisoning, Mercurial and alcoholic poisoning.

**TAXONOMIC POSITION**

Kingdom	Plantae
Division	Spermatophyta
Subdivision	Angiospermae
Class	Dicotyledonae
Subclass	Polypetalae
Series	Calyciflorae
Natural order	Pasiflorales
Family	Cucurbitaceae
Genus	Benincasa
Species	hispida

**VERNACULAR NAMES**

Arabic -	Majdabh
Bengal	Chalkumra
Bombay -	Golkadu, Kohala, Koholen
Burma -	Kyaukpayon
Canarese -	Budekumbalakayi
Chinese -	Tung Kua
Cutch -	Kohula
English -	Ash pumpkin, White gourd
Gujrati -	Bhuru Kohlu
Hasada –	Pandcakakaru
Hindi -	Kumhra, pani kumhra, petha
Indo-China -	Bi dao, Biphon
Kannada -	Bood kumbala kayi
Konkani -	Cualim, Kunolem
Kumaon -	Bhunja, Kumra
Latin -	<i>Benincasa hispida</i> (Thumb.) Cong
Malaya -	Toong kwa, Tung kua
Malayalam -	Kumpalam
Marathi -	Kohla
Mundari -	Karkaru
Naguri -	Pundikakaru
Oriya -	Panikakharu
Persian -	Kadurumi
Portuguese -	Abobora de agua
Punjab -	Petha
Sanskrit -	Kushmand
Sinhalese -	Alupuhul
Tagalog -	Condol
Tamil -	Kalyana pooshni, pushanikai
Telugu -	Budida-gummadi.
Urdu -	Petha



### SPECIES DESCRIPTION

A large climbing or trailing herb with stout, angular, hispid stems, cultivated as a vegetable throughout India up to an altitude of 1,200 m.

**Leaves** large, 4-6 inch. In diameter long-petioled (3-4 inch.), 5-7 lobed, reniform-rotund, deeply cordate, upper surface sparsely pilose and scabrous, lower rigidly hispid, margin sinuate, dentate or crenulate;

**Tendrils** slender, short;

**Flowers** solitary, axillary, large, yellow, monoecious, male peduncle: 3-4 inch. Female peduncle: 1-2 inch. Calyx: teeth when young, often narrow, scarcely serrate;

**Fruits** fleshy, succulent, 25-60 cm long and 10-25 cm broad, densely hairy when young, thickly deposited with white easily removable waxy bloom when mature, flesh white, spongy;

**Seeds** white, yellowish white or pale brown, ovoid (1/2-1/8 inch.), compressed, distinctly marginate.

### DISTRIBUTION

Cultivated as a vegetable throughout India up to an altitude of 1,200 m. occasionally it is found as an escape (wild). It is found in India, Ceylon and Burma.

### CULTIVATION

The plant is cultivated in almost every part of India. It prefers a warm climate and does well in the plains and hills of low elevation. It is both a summer season and a rainy season crop. High temperature (optimum temperature, 24-27°), good sunshine and dry winds are most suited for its fruiting.

### CHEMICAL COMPOSITION OF ASH GOURD AND ITS PRESERVES

The plant was screened for the presence of free amino acid and sugars. Glycine was present in fair amount, serine in small amount and cystine, glutamic acid, threonine, alanine,  $\beta$ -alanine, tyrosine, tryptophan,  $\gamma$ -aminobutyric acid, pipercolic acid, methionine, was also found to be present. The sugars present were fructose and glucose. The iodine and fluorine contents of ash gourd (garden produce) were reported to be 0.38 and 3.5 ppm of drug edible matter, respectively the calcium and phosphorus contents of ash guard were found to be 821.4 and 544 mg. percent dry weight, respectively. The Zinc content was reposted to be 16.6 ppm of dry edible matter. It also has a higher fibre content (0.8%).

**REFERANCES**

1. Acharya Yadavaji Trikamjee, Dravyaguna Vijnana (Purvardha), Nirnanaysagar Press, Bombay. (1950).
2. Ambikadatta Sastri: Bhaisajya Ratnavali Chaukhambha publication, Varanasi, 18<sup>th</sup> Ed. (1991).
3. Astanga Hridaya with Ayurveda Rasayana and Sarvanga Sundari Comm., Chaukhambha publication.
4. Bapalal Vaidya, Nignantu Adarsh, Vol. I & II, 2<sup>nd</sup> edition; Chouknambha Bharti Academy, Varanasi. (1999).
5. Bhavamishra, Bhavaprakash Nighantu with commentary; Chuneekar K.C. and Gangasahay Pandey, Chaukhamba publication, Varanasi 9<sup>th</sup> edition.
6. Charaka Samhita, comm. by Chakrapani edited by Yadvaji Trikamji Chaukhambha publication.
7. Charaka Samhita Vol - I – VI. Gulabkunvarba society publication.
8. Dhanvantari: Dhanvantari Nighantu, edited by- P.V. Sharma, Chaukhambha Orientalia, Varanasi, 1982, 4<sup>th</sup> edition.
9. Kaiyadeva: Kaiyadeva Nighantu, commentar and edited by P.V. Sharma and Guruprasad Sharma, Edi I, Chaukhambha Orientalia, 1979.
10. Madhava; Madhava Dravyaguna edited by P.V.Sharma, Chowkhambha Vidhya Bhavana, edn. I, 1973.
11. Nadkarni A K, Dr. K.M. Nadkarni's Indian materia medica. 3<sup>rd</sup> Ed., Vol-1,185-186, Popular Book Depot, Bombay-7. (1954).
12. Narahari Pandit, Raja Nighantu, Hindi commentary by Indradeva Tripathi, Ed. I, Chaukhambha Sanskrit series, Varanasi, (1982).
13. Saligram Nighantu: Khemraj Srikrishna Das; Sri Venkanteswar press, Bombay; 1953.
14. Sarangadharasamhita, Dipika Hindi Vyakhya Sahita, Anjananidana Sahita by Dr. Brahmananda Tripathi, 2<sup>nd</sup> Samskarana, Chaukhambha Surabharati Prakasana Varanasi, 1994.
15. Sharma P.V.; Classical uses of medicinal plants, Chowkhambha Viswabharti, Varanasi.
16. Sharma P.V., Priya Nighantu Chowkhambha Surbharti Prakashana, Varanasi, 2004.
17. Ayurvedic Pharmacopoeia of India; Part-I, Vol. IV Govt. of India, Ministry of Health and Family welfare, Dept. of Ayush, New Delhi.
18. Thakur Balwant singh, Chuneekar K.C., Glossary of vegetable drugs in Brihatrayi, Chowkhambha Sanskrit series, Varanasi, first edition, 1972.

19. Theodore cooke, The Flora of the presidency of Bombay, Bishen singh Mahendra pal singh publication, Dehradun.
20. Vagbhata; Rasa Ratna Samuchchaya, edi. Ambikadatta Shastri, Chokhambha Amarbharti publication, Varanasi, ninth edition, 1995.
21. Vopdaeava, Hridayadeepak Nighantu, Sharma P.V., Ed. I, Chaukhamba Amarbharti Prakashan, Varanasi. (1977).
22. Wealth of India India, Vol. II, Publication and information directorate, rev. Ed. CSIR New Delhi (1988).