

**ETIOPATHOGENESIS OF SHWASA ROGA AND IMPACT OF EXTERNAL FACTORS
(POLLUTED AIR) IN ITS ORIGIN: AN AYURVEDIC LITERARY REVIEW****Dr. Kumari Madhavi^{*1} and Dr. Namrata Khobragade²**¹Post Graduate Scholar, Dept. of Roga Nidana Evum Vikriti Vigyana, Shri NPA Govt. Ayurved College, Raipur, Chhattisgarh, India.²Reader, Dept. of Roga Nidana Evum Vikriti Vigyana, Shri NPA Govt. Ayurved College, Raipur, Chhattisgarh, India.***Corresponding Author: Dr. Kumari Madhavi**

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ABSTRACT

In Ayurveda, Shwasa Roga is characterized predominantly with difficulty in Shwasa Prashwasa (breathing) in which due to obstruction in the Pranavaha Strotas the regular process of Nishwasana (inhalation) and Uchhwasana (exhalation) gets disrupted and the patient experiences difficulty in breathing. Shwasa Roga are predominant in Kapha and Vata. Most Nidanas consist of Vata and Kapha Janaka Hetus. Apart from Aharj Nidana, Rajas-Dhuma (dust, smoke, fumes), Megha-Ambu-Shita-Pragvata (seasonal changes) etc which are mentioned in Viharaj Nidana has been accepted as the major cause for Shwasa Vyadhi. These Nidanas result in Vata Prakopa, which obstructs the passage and itself being obstructed moves here and there, and produces Shwasa (dyspnoea) and makes Shwasa Roga. The Pranavaha, Udakavaha and Annavaha Strotas plays a major role in pathogenesis. Manifestation of Pranavayu Vilomatva, Anaha and Parshwashoola are important Poorvarooopa. This article is based on review on Nidana Panchaka of Shwasa Roga from Ayurvedic text such as Charaka Samhita, Sushruta Samhita, Astanga Hrudaya, Astanga Sangraha and Madhava Nidana along with textbooks. Understanding the Nidana Panchaka in detail and comprehending Samprapti would help us design particular preventive actions and handle the specifics of the Nidana Panchaka of Shwasa Roga.

KEYWORDS: Nidana Panchaka, Viharaj Nidana, Maha Shwasa, Urdhwa Shwasa, Chinna Shwasa, Tamaka Shwasa, Kshudra Shwasa.**INTRODUCTION**

In Ayurveda, human body is composed of Strotas like Pranavaha, Rasavaha, etc, which play very important role in maintenance of the equilibrium of the body elements. According to some some authors, Strotas are innumerable in number. Acharya Charak describes 13 Strotas and Acharya Sushrut has describes 11 pairs of Strotas. Both the Acharyas has given the first priority to the Pranavaha Strotas. Pranavaha Strotas means the channels which carries the external air into the body to sustain the life. Prana is said as Prana or Anila. Acharya Charak has opined that Pranavaha Strotas are the channels through which Pranavayu flows. The vitiation of Pranavaha Strotas leads to Shwasa Roga as mentioned in Charak Chikitsa Sthana chapter 17.^[1] Incidences of Shwasa Roga have been raised in recent decades due to increased industrialization and pollution. The prevalence of Shwasa Roga is increasing alarmingly nowadays due to excessive pollution, overcrowding, occupational conditions, poor hygiene etc. A detailed explanation on Shwasa Roga is characterized by difficulty in Shwasa Prashwasa (breathing) in which air moves forcefully in

upward direction. It is mentioned to originate from Pittasthana. Shwasa is broadly classified into five types in Maha Shwasa, Urdhwa Shwasa, Chinna Shwasa, Kshudra Shwasa, Tamaka Shwasa^[2] in which Kshudra Shwasa is curable easily, Tamaka Shwasa is difficult to cure, Urdhwa, Maha, Chinna Shwasa in weak patients is incurable. Due to Strotovaigunya Nidana (Rajas, Dhuma, Megha-Ambu-Shita-Pragvata etc) causes Pranavaha Strotovaigunya in body. In such condition after taking Vata provoking factors like Sheetvayu Sevan (exposure to cold air) vitiates Vata by its Ruksha and Sheeta Guna. Nidana sevan remain continue then the previously accumulated Dosha in Aamashaya become excited. Due to vitiated Vata, vitiated Kapha goes in Pranavaha Strotas (Vimargagamana) where already Khavaigunya is there. Aggravated Vata and Kapha Doshas circulating all over body localizes on the place of Khavaigunya i.e. in Pranavaha Strotas where Doshas react with Dhatus (Rasa, Rakta etc) leading to Dosha Dushya Sammurchana. Vitiated Vata by its Ruksha and Sheeta Guna producing Sankocha (contraction), Kharata (roughness) Rukshata (dryness) in the Pranavaha Strotas

and vitiated Kapha leads to Strotorodha (obstruction) in the path of Vata (Prana Vayu) thus leading to the Shwasa Roga. There are many fatal diseases but they do not take away the life so quickly as dyspnoea. Moreover, in the person suffering from other various disorders severe dyspnoea arises at the end. They are predominant in Kapha and originates from the seat of Pitta and are caused by the simultaneous aggravation of Kapha and Vata and dries up the Hridaya and Rasadi Dhatu. Hence regarded as very difficult to treat and if treated inappropriately leading to further aggravation of the condition and kill the patients like serpents.^[3]

Nidana Panchaka (Nidana, Purvaroop, Rupa, Upashaya, and Samprapthi) is thoroughly reviewed in order to reflect the natural history of the disease and to enable a full grasp of the smallest details related to it. This aids in diagnosis and treatment of a disease with high precision. Therefore in this article Nidana Panchaka of Shwasa Roga is reviewed from authoritative Ayurveda literature.

AIM AND OBJECTIVES

1. Descriptive study of etiopathogenesis of Shwasa Roga
2. Study of impact of external factors (polluted air) in Shwasa Roga

MATERIALS AND METHODS - This article is based on review on Nidana Panchaka of Shwasa Roga from Ayurvedic text such as Charaka Samhitha, Sushruta Samhitha, Astanga Hrudaya, Astanga Sangraha and Madhava Nidana along with textbooks.

NIDANA PANCHAKA OF SHWASA ROGA

NIDANA- Nidana mentioned by Acharya Charaka, Acharya Sushruta and Acharya Vagbhata in Astanga Sangraha and simulates each other. A detailed review on Nidana mentioned in Bruhat Trayee shows that Vata and Kapha Dosha play a vital role in pathogenesis of Shwasa Roga. Hence the Nidanans can be broadly classified as Vata and Kapha Janaka Nidanans and Vyadhiparak Hetu.

Table 1: Vataj Nidana.^[4,5,6,7]

Aharaj Nidana (Dietary factors)	Viharaj Nidana (Habitual factors)
1. Ruksha (dry food) - Yawa, Kalaya, Chanak etc. 2. Shita Anna (cold food) 3. Shita Paan (cold drink) 4. Visha (poison intake) 5. Adhyashana (over eating) 6. Vishamashana (intake of healthy and unhealthy food together)	1. Rajas (dust) 2. Dhuma (smoke) 3. Shita Sthana (residing in cold place) 4. Vata (cold air) 5. Ativyayam (excessive physical exertion) 6. Gramya Dharma (indulgence in sexual activities) 7. Atya Apatarpana (excessive fasting) 8. Shuddhi Atiyoga (excessive evacuation) 9. Kanth/Urah Pratighata (obstruction in throat) 10. Bhara (lifting heavy weight) 11. Adhwahata (excessive walking) 12. Vega Aghat (suppression of urges) 13. Abhigata (injury) 14. Marma Abhigata (injury to vital parts) 15. Dosha Prapidan (aggravation of dosha)

Table 2: Kaphaj Nidana.^[8,9,10]

Aharaj Nidana(Dietary factors)	Viharaj Nidana (Habitual factors)
1. Nispava 2. Masha (Black gram) 3. Pishta Anna (Intake of flour preparation) 4. Shaalooka (Kamalkand) 5. Guru Dravya (Masha) 6. Jalaj and Anoop Mansa (aquatic and marshy animals) 7. Dadhi (curd) 8. Amakshir (unboiled milk) 9. Vishtambhi (Chanak,Rajma,Dadhi) 10. Vidahi (Marich, Sarshapa) 11. Tila Taila (sesamum oil) 12. Aam Dosha	1. Abhishyandi Upchara (substances which obstruct the channels)

Table 3: Vyadhiparak Hetu.^[11,12,13]

Vyadhiparak Hetu	
1. Pratishtayaya (Coryza)	1. Pandu (Anemia)
2. Jwara (Fever)	2. Kshatha (Injury)

3. Chardi (Vomiting)	3. Kshaya (Wasting)
4. Raktapitta (Bleeding disorders)	4. Udavarta (Upward movement of Vata)
5. Alaska	5. Visuchika (Dysentery)
6. Atisara (Diarrhoea)	6. Aanaha (Flatulence)
7. Vibandha (Constipation)	

Table 4: PURVAROOPA (pre-monitory signs and symptoms).^[14,15,16]

S.NO.	PURVAROOPA
1.	Aanaha (Flatulence)
2.	Parshwashoola (Pain in the flanks)
3.	Hrid pida (Tightness of the chest)
4.	Pranasya Vilomata (mis-passage of vital breath)
5.	Bhakta Dwesho (Aversion towards food)
6.	Vairasya Vadan (Abnormal taste in mouth)
7.	Shankbhed (Splitting pain in the temporal region)
8.	Adhaman (Abdomen distension)
9.	Arati (Restlessness)

RUPA (Clinical features)- Bhedanusr Lakshan**1. Maha Shwasa**^[17,18,19]

- Uchhai Shwasiti Samrudho Matta Vrushabh Eva (deep breath associated with discomfort and sound like a mad bull)
- Pranashtha Gyan Vigyan (Patient loses all sort of knowledge)
- Vibhranta Lochana (Rolling eyes)
- Vikruta Akshi Anana (Distortion of eyes and face)
- Baddha Mutra Varcha (Retention of urine and constipation)
- Vishirna Vak (Feeble voice)
- Deena (Anxious expression)
- Doorat Vigyayate (Respiration sound becomes audible even from a distance)
- Kshipra Marana (Death instantaneously)
- Parshwa Shoola (Pain in the flanks)
- Shushka Kantha (Dryness of the throat)
- Aayamya Shwasiti (Body stretched/bent during breathing)

2. Urdhva Shwasa^[20,21]

- Deergha Shwasti Urdhwa, Na Pratyaharati Adhaha (forceful expiration and inability to have inspiration)
- Shleshmaavritmukhastrota (Adhesion of sputum in mouth and pranavaha srotas)
- Urdhwa Drushti (Gazes abnormally with eyes up and rolling)
- Pramohati (Altered unconsciousness)
- Vedana Arta (Suffering from severe pain)
- Arati (Restlessness)
- Adhaha Shwasa Nirudhyate (due to vitiation of expiration, the inspiration is impeded)
- Tamyati (Faint)
- Hanta Asoon (Unconscious and finally dies)

3. Chinna Shwasa^[22,23]

- Shwasati Vichchinnam (Intermittent respiration)
- Na Va Shwasati (Total breathlessness)

- Dukharto (Painful respiration at all due to affliction of all the channels)
- Marma Chhedaruk (Splitting pain in vital parts)
- Dahayaman Bastina (Burning sensation in urinary bladder)
- Vipluta Aksha (Watery eyes)
- Pariksheena (Extremely emaciated)
- Rakta Eka Lochanha (Redness in one eye)
- Vichetaha (Loss of consciousness)
- Pari Shushka Asya (Dryness of mouth)
- Vivarna (Abnormal complexion)
- Pralaapa (Delirium/irrelevant talk)
- Sheeghra Prajhatyshoon (death instantaneously)

4. Tamak Shwasa^[24,25]

Due to obstruction in Pranavaha Srotas, Vata moves in reverse and pervades the entire Pranavaha Srotas and stimulates the Kapha in the throat and causing rhinitis.

- Ghurgurakam (Wheezing sound)
- Ativ Tivra Vegam Shwasa (Rapid breathing)
- Pratamyati (Feeling of darkness in front of eyes)
- Kasate Sannirudhyate (Coughs with obstruction)
- Pramoham Kasamanashcha (While coughing becomes unconscious frequently)
- Shleshma Amuchyamane Tu Bhrishama (Until the expectoration patient remain distressed)
- Kapha Vimokshante Sukhama (After expectoration gets temporary relief)
- Kantha Udhwamsa (Hoarseness of voice)
- Krucchrat Shaknoti Bhashituma (Difficulty to speak)
- Sayanah Shwasa Peeditaha (In lying posture dyspnoea is aggravated)
- Parshva Graham (can't sleep because vayu seizes sides of chest)
- Aseeno Labhate Soukhyam (Feels comfortable while sitting)
- Ushna Abhinandati (Feels better in warm substances)

- Uchhrita Aksha (Eyes wide opened)
- Lalate Swidyata (Sweating in forehead)
- Vishushka Aasya (Dryness of mouth)
- Muhu Shwaso Muhu Avadhmayte (Suffers frequently from paroxysms of dyspnoea)
- Sheeta Ambu Vivardhate (aggravates by the use of cold water)
- Trut (Thirst)
- Vamathu (Vomiting)

- Durdine Tamyet Uchhwasa (appears especially on cloudy days)
- Ghoshen Mahata (Breathing with loud sound)
- Abala (Weakness)
- Anna Dwit (Anorexia)

All the Acharyas describes two types of Tamak Shwasa^[26]

1. Pratamaka Shwasa
2. Santamaka Shwasa

Pratamaka Shwasa	Santamaka Shwasa
If Tamak Shwasa is associated with fever and unconsciousness it is known Pratamaka Shwasa.	One which is caused by Udavarta, dust, indigestion, humidity and suppression of natural urges, aggravates severely in darkness and subsides quickly by cold things is known as Santamaka because the patients feels as if sinking in darkness.

5. **Kshudra Shwasa**^[27]

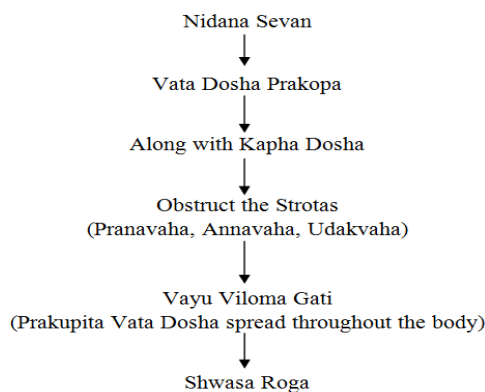
- Kinchit Arambhamaanasya Shwasa (Dyspnoea on mild exertion)
- Nishanasya Shantishcha (Relieves on rest)
- Aayas Udbhava (Exercise induced)
- Ruksha Ahara Udbhava (Dry food induced)
- Na Indriyanam Vyatha (No discomfort to any organs)

Kshudra Shwasa manifest due to mild aggravation of Vata in the Kostha which travels upward due to physical exertion and rough regimes. It subsides when person takes rest. It does not produce discomfort, does not afflict body parts, it is not complicated as other types of Shwasa are, does not restrict the normal movement of foods and drinks, does not produce any discomfort or pain in sense organs. It is curable.

SAMPRAPTI (PATHOGENESIS)

- **Samanya Samprapti:** Due to consumption of Nidana Pranavayu enters into Pranavaha Srotas and gets vitiated. This vitiated Pranavayu combining with Kapha leaves its own path and begins to move in Urha Pradesh (upward direction), this leads to increase in respiration is known as Shwasa Roga.^[28]
- **Vishishta samprapti:** When vitiated Vata Dosha along with Kapha clogs up Pranavaha, Annavaha, Udakvaha Srotas and gets obstructed because of Kapha, it starts moving in opposite direction and spreads all over the body, then that Vata Dosha develops five types of Shwasa.^[29]

SAMPRAPATI CHAKRA



Samprapti Ghataka

1.	Dosha	Vata, Kapha
2.	Dushya	Rasa Dhatu, Pranavayu
3.	Adhisthana	Pitta Sthana
4.	Srotas	Pranavaha, Annavaha, Udakavaha
5.	Srotodushti	Sanga, Vimargamana
6.	Swabhava	Ashukari
7.	Roga Marga	Madhyama Roga Marga
8.	Sadhyasadhyata	Krichchrasadhya

Upshaya/Pathya^[30]

(A)	Aharaj	1. Shuka Dhanya – Purana Sathi, Rakta Shali Chawal Yawa, Godhuma (Wheat) 2. Shami Dhanya – Kulathi 3. Shaka – Patol, Jivanti, Tanduliya 4. Harit – Jambir, Mulak, Rason 5. Phal – Bimbi Phala, Jamberi Phala, Draksha, Matalunga, Haritki 6. Anupa Mansa – Tittir, Laav, Daksh, Shuka 7. Dugdhvarga- Ajadugdha, Ghrita, Puranghrita. 8. Ushana Jal, Gomutra
(B)	Viharaj	1. Virechana 2. Swedana 3. Dhoompan 4. Vaman 5. Divaswapana

Anupshaya/Apathya^[31]

(A)	Aharaj	1. Vishtambhi (Chanak, Rajma, Dadhi) 2. Vidhahi (Marich, Sarshapa) 3. Ruksha (Yawa, Kalaya) 4. Guru Dravya (Masha) 5. Anupa Mansa (Mahisha, Varaha) 6. Taila Bhritam, Nishpav, Kanda (Suran) 7. Shital Annapan
(B)	Viharaj	1. Vega Dharan (Mutra, Udagar, Kshardi, Trit, Kasa vega) 2. Nasya 3. Basti 4. Sharam, Adhwa, Bhara, Gharam Dharma, Dhoop, Dhuli

DISCUSSION

The literature on Ayurveda explores the complex interrelationships among Doshas, Dhatus, and Malas; it highlights the significance of vitiated Vata and Kapha Doshas in respiratory disorders. Shwasa Vyadhi primarily arises from the disturbance of Vata and Kapha Doshas. Vata, linked with movement and airflow, can lead to obstruction when aggravated, while Kapha, associated with mucus, can cause congestion. The article highlights the stages of disease development.

Sama (Initial state of health), Vikriti (Disruption due to factors like improper diet, lifestyle, or environmental changes, Prakriti (Manifestation of symptoms based on the underlying Doshic imbalance). The impact of seasonal changes, pollutants, and lifestyle choices plays a crucial role in the onset of respiratory diseases. Emphasis on lifestyle modifications, dietary changes, and seasonal routines (Ritucharya) to maintain doshic balance. Ayurvedic treatments focus on restoring Doshic equilibrium through herbal remedies, Panchakarma therapies, and specific Yogic practices aimed at enhancing respiratory function.

CONCLUSION

The article provides a comprehensive understanding of Shwasa Vyadhi from an Ayurvedic perspective, emphasizing the importance of maintaining Doshic balance through preventive and therapeutic measures. This holistic approach not only addresses physical symptoms but also considers the broader context of individual well-being.

REFERENCES

1. Dr. Brahmanand Tripathi, Charak Samhita, Vol. 2, Chaukhamba Surbharati Prakashan, Varanasi, 2017; Chapter no. 17, Shloka no. 8, p-615.
2. Dr. Brahmanand Tripathi, Charak Samhita, Vol. 2, Chaukhamba Surbharati Prakashan, Varanasi, 2017; Chapter no. 17, Shloka no. 45, p-621.
3. Kashinath Shastri, Charak Samhita, Vol. 2, Chaukhamba Bharti Academy, Varanasi, 2018; Shloka no. 9, p-509.
4. Dr. Brahmanand Tripathi, Charak Samhita, Vol. 2, Chaukhamba Surbharati Prakashan, Varanasi, 2017; Chapter no. 17, Shloka no.11-13,15, p-616.
5. Kaviraja Dr. Ambikadutta Shastri, Susruta Samhita, Vol. 2, Uttarantra, Chaukhambha Sanskrit Sansthan, Varanasi, 2019; Chapter 50, Shloka no. 3-5, p-465.
6. Yadunandan Upadhyay, Madhav Nidanam, Vol. 1, Chaukhambha Prakashan, 2022; Chapter 12, Shloka no.1-2, p-315.
7. Dr. Brahmanand Tripathi, Astanga Hridayam, Chaukhambha Sanskrit Pratishthan, New Delhi, 2014; Nidan Sthan Chapter 4, Shloka no. 1 p-454.
8. Dr. Brahmanand Tripathi, Charak Samhita, Vol. 2, Chaukhamba Surbharati Prakashan, Varanasi, 2017; Chapter no. 17, Shloka no. 14, 15, p-616.
9. Kaviraja Dr. Ambikadutta Shastri, Susruta Samhita, Vol. 2, Uttarantra, Chaukhambha Sanskrit Sansthan, Varanasi, 2019; Chapter 50, Shloka no. 3-5, p-465.

10. Yadunandan Upadhyay, Madhav Nidanam, Vol. 1, Chaukhambha Prakashan, 2022; Chapter 12, Shloka no. 1, p-315.
11. Dr. Brahmanand Tripathi, Charak Samhita, Vol. 2, Chaukhamba Surbharati Prakashan, Varanasi, 2017; Chapter no. 17, Shloka no. 14, 15, p-616.
12. Yadunandan Upadhyay, Madhav Nidanam, Vol. 1, Chaukhambha Prakashan, 2022; Chapter 12, Shloka no. 3-5, p-465.
13. Dr. Brahmanand Tripathi, Astanga Hridayam, Chaukhambha Sanskrit Pratishthan, New Delhi, 2014; Nidan Sthan Chapter 4, Shloka no. 1 p-454.
14. Kashinath Shastri, Charak Samhita, Vol. 2, Chaukhamba Bharti Academy, Varanasi, 2018; Chapter no. 17, Shloka no. 20, p-510.
15. Yadunandan Upadhyay, Madhav Nidanam, Vol. 1, Chaukhambha Prakashan, 2022; Chapter 12, Shloka no. 16, p-324.
16. Dr. Brahmanand Tripathi, Astanga Hridayam, Chaukhambha Sanskrit Pratishthan, New Delhi, 2014; Nidan Sthan Chapter 4, Shloka no. 4 p-455.
17. Kashinath Shastri, Charak Samhita, Vol. 2, Chaukhamba Bharti Academy, Varanasi, 2018; Chapter no. 17, Shloka no. 46-48, p-515.
18. Dr. Brahmanand Tripathi, Astanga Hridayam, Chaukhambha Sanskrit Pratishthan, New Delhi, 2014; Nidan Sthan Chapter 4, Shloka no. 13-15, p-456.
19. Kaviraja Dr. Ambikadutta Shastri, Susruta Samhita, Vol. 2, Uttarantra, Chaukhambha Sanskrit Sansthan, Varanasi, 2019; Chapter 51, Shloka no. 12, p-480.
20. Dr. Brahmanand Tripathi, Charak Samhita, Vol. 2, Chaukhamba Surbharati Prakashan, Varanasi, 2017; Chapter no. 17, Shloka no. 50, p-622.
21. Yadunandan Upadhyay, Madhav Nidanam, Vol. 1, Chaukhambha Prakashan, 2022; Chapter 12, Shloka no. 21-23, p-328.
22. Dr. Brahmanand Tripathi, Charak Samhita, Vol. 2, Chaukhamba Surbharati Prakashan, Varanasi, 2017; Chapter no. 17, Shloka no. 42-45, p-622.
23. Yadunandan Upadhyay, Madhav Nidanam, Vol. 1, Chaukhambha Prakashan, 2022; Chapter 12, Shloka no. 24-26, p-329.
24. Dr. Brahmanand Tripathi, Charak Samhita, Vol. 2, Chaukhamba Surbharati Prakashan, Varanasi, 2017; Chapter no. 17, Shloka no. 55-62, p-623.
25. Kaviraja Dr. Ambikadutta Shastri, Susruta Samhita, Vol. 2, Uttarantra, Chaukhambha Sanskrit Sansthan, Varanasi, 2019; Chapter 51, Shloka no. 8-10, p-477.
26. Kashinath Shastri, Charak Samhita, Vol. 2, Chaukhamba Bharti Academy, Varanasi, 2018; Chapter no. 17, Shloka no. 63-64, p-517.
27. Dr. Brahmanand Tripathi, Charak Samhita, Vol. 2, Chaukhamba Surbharati Prakashan, Varanasi, 2017; Chapter no. 17, Shloka no. 65, p-625.
28. Kashinath Shastri, Charak Samhita, Vol. 2, Chaukhamba Bharti Academy, Varanasi, 2018; Chapter no. 17, Shloka no. 17, p-510.
29. Dr. Brahmanand Tripathi, Charak Samhita, Vol. 2, Chaukhamba Surbharati Prakashan, Varanasi, 2017; Chapter no. 17, Shloka no. 45, p-621.
30. Prof. Siddhinandan Mishra, Bhaishajya Ratnavali, Chaukhamba Surbharati Prakashan, Varanasi, 2012; Shloka no. 132-136, p-470.
31. Prof. Siddhinandan Mishra, Bhaishajya Ratnavali, Chaukhamba Surbharati Prakashan, Varanasi, 2012; Shloka no. 132-136, p-470.
32. Prof. Siddhinandan Mishra, Bhaishajya Ratnavali, Chaukhamba Surbharati Prakashan, Varanasi, 2012; Shloka no. 137-139, p-470.