



Ayurvedic Management of Shitapitta with Special Reference to Urticaria- A Case Study

Dr.Shubham Verma¹, Shweta Parwe^{2*}, Dr.Punam Sawarkar³ and Dr Milind Nisargandha⁴ 

¹ PG Scholar, Department of Panchakarma, Mahatma Gandhi Ayurved College Hospital & Research Centre, Salod (H.), DattaMeghe Institute of Medical Sciences, Wardha, Maharashtra

² Professor, Department of Panchakarma, Mahatma Gandhi Ayurved College Hospital & Research Centre, Salod (H.), DattaMeghe Institute of Medical Sciences, Wardha, Maharashtra

³ Associate Professor, Department of Panchakarma, Mahatma Gandhi Ayurved College Hospital & Research Centre, Salod (H.), DattaMeghe Institute of Medical Sciences, Wardha, Maharashtra.

⁴ Associate professor Saveetha Medical College and Hospital, Chennai – 602105

Abstract: Urticaria is a dermatological condition characterized by itchy wheals that suddenly appear on any skin region or mucous membranes. Individual lesions usually last a few minutes to a few hours and then go away without leaving any trace. It can be linked to *Shitapitta* (Urticaria) based on clinical characteristics. Medical scientists have developed treatment methods, but still, there are a lot of side effects, and the probability of recurrence is also high in this disease condition. Hence, it is necessary to find out an effective treatment for *Shitapitta*. This study aims to assess the efficacy of Ayurvedic management in *Shitapitta* based on Ayurvedic *Shaman* (palliative) and *Shodhana* (purificative) *Chikitsa*. This may be due to the elimination of aggravated *Doshas* due to *Shodhana* with *Shaman Chikitsa* being effective in managing *Shitapitta*. This patient used *Sadyo-Vaman* (medicine-induced emesis) and *NityaVirechan* (medicine induced purgation) for adequate control. Reliable in the This study shows that *Shaman* and *Shodhana Chikitsa* are cost-effective and *Shitapitta* condition; hence, they can be used in clinical practice.

Keywords: *Shitapitta*, Urticaria, *Tvak Vikara*, *Shamana Chikitsa* and *Shodhana Chikitsa*

*Corresponding Author

Shweta Parwe , Professor, Department of Panchakarma,
Mahatma Gandhi Ayurved College Hospital & Research
Centre, Salod (H.), DattaMeghe Institute of Medical
Sciences, Wardha, Maharashtra

Received On 25 June, 2022

Revised On 28 September, 2022

Accepted On 15 October, 2022

Published On 2 January, 2023

Funding This research did not receive any specific grant from any funding agencies in the public, commercial or not for profit sectors.

Citation Dr.Shubham Verma, Shweta Parwe, Dr.Punam Sawarkar and Dr Milind Nisargandha , Ayurvedic Management of Shitapitta with Special Reference to Urticaria- A Case Study.(2023).Int. J. Life Sci. Pharma Res.13(1), L36-41
<http://dx.doi.org/10.22376/ijlpr.2023.13.1.L36-41>

This article is under the CC BY- NC-ND Licence (<https://creativecommons.org/licenses/by-nc-nd/4.0>)

Copyright @ International Journal of Life Science and Pharma Research, available at www.ijlpr.com

Int J Life Sci Pharma Res., Volume 13., No 1 (January) 2023, pp L36-41



I. INTRODUCTION

Urticaria is commonly known as hives, wheals, welts, and nettle rash. It usually occurs due to an allergic reaction triggered by food, seasonal or external factors, or medication¹. In today's changing lifestyles, polluted environments, food habits, workload, stress, etc., have become the major triggering factors for the manifestation of diseases. Urticaria is a dermatological condition characterized by itchy wheals that suddenly appear on any portion of the skin or mucous membranes. Individual lesions typically last a few minutes to a few hours and then subside without leaving any trace². Urticaria is divided into two categories based on how long it lasts: (a) acute Urticaria (less than six weeks) and (b) chronic Urticaria (lasting longer than six weeks). Chronic Urticaria can be inducible or spontaneous. Both types of people can coexist³. Shitapitta (Urticaria) is one of the TvakVikara (skin diseases). The wheals all over the body with severe itching, burning, and pain are the symptoms of Shitapitta (Urticaria). The symptomatology and causative factors of Shitapitta (Urticaria) in Ayurveda are similar to the symptoms of Urticaria. *Shitapitta* is composed of the two words *Shita* and *Pitta*. The condition occurs due to the dominance of cold over *Pitta Dosha*. When someone is exposed to cold wind, *Kapha* and *Vata Dosha* aggravate and combine with *Pitta Dosha*. These spread all over the body and produce rashes on the surface of the skin⁴. *Varati Damstavat Shotha & Kandu* caused by *Kapha Dosha* vitiation, *Shula* caused by *Vata Dosha* vitiation, and *Daha* caused by *Pitta Dosha* vitiation are a few of the symptoms. *Chhardi*, *Hrillasa*, *Aruchi*, *Dehasada*, *Angagaurava*, *Jvara*, *Vidaha*, and *Pipasa* are some signs it might induce⁵⁻⁸. In modern science, antihistamines and steroids are used to treat Urticaria, and Long-term usage is hazardous to the human body⁹. However, in Ayurveda, *Shitapitta Chikitsa* can be divided into three phases: *Langhana* is recommended for *Alpadoshaavastha* (mild), *Langhana* and *Pachana* for *Madhya Dosha* (moderate), and *Shodhana* for *Prabhoot Dosha*¹⁰⁻¹⁵. *Shamana Chikitsa* also has a good effect on the *Shitapitta*. But Panchakarma provides better and permanent management for *Sheetapitta*. *Shodhana*, like

Vamana, *Virechana*, and *Raktamokshana*, is the ideal treatment for this condition & very effective. Since it radically eliminates vitiated *dosha* from the body. Therefore, a recurrence rate of the disease can be avoided. In this case, the same result was achieved after purification as there was the regular onset of signs like red rashes with itching and burning sensation all over the body. Still, after completing *shodhana chikitsa* all the symptoms subsided completely & to date, there is no recurrence. Therefore, *Shodhan* could be considered *Apunarbhav Chikitsa*. *Shodhan* procedure helps remove the *Avrut* (obstructed) *Kapha dosha* and *Pitta dosha*, thereby making the disease *Apunarbhav*. Therefore, *Sadya Vaman* and *Nitya Virechana* are planned to treat Urticaria in the present case¹⁶.

2 CASE REPORT

2.1 Details of Case

An A42-year-old female patient suffered from red rashes associated with the gradual onset of itching and burning sensation all over the body, which occurs immediately after consumption of some food items like milk, non-vegetarian diet, etc., for 04 months. The symptoms aggravate more in the evening hours. Table 01 lists the rest of the

2.2 Disease Progression

The patient was in good health four months ago. Then she started symptoms like rashes, itching, and burning sensation all over the body immediately after consumption of some foods like dairy products and a non-vegetarian diet. Is any particular food noticed? The symptoms aggravate more in the evening hours. Then she was diagnosed with Urticaria by a Physician and took allopathic treatment (Tab. Levocetirizine 5mg once daily). But she did not get relief, and the severity of all complaints was increasing daily, that is why she visited the above said Chief complaints to Panchakarma OPD, Mahatma Gandhi Ayurved College Hospital and Research Center for further *Panchakarma* Treatment.

• Patient's History

Table I: Information about the patient's medical history		
S. NO.	Head	Details of patient
1	History	No History of HTN/DM/Thyroid dysfunction/ any other allergic illness
2	Family history	Not significant
3	Medical history	<ul style="list-style-type: none"> Antihistamine drugs (Tab. Levocetirizine 5mg once a day) here duration is not mentioned No any Surgical history
4	Personal history	Appetite- Recurrent intake of spicy food, non-vegetarian and dairy products. Sleep- Normal Micturition: 2 to 3 times a day Habit- No habit of Smoking, tobacco, alcohol Bowel- Clear

• General examination

- Pulse: - 74/min
- B.P.: - 120/80 mmHg
- RR: - 16/min
- Temperature: - 98 F
- Weight: - 60Kg

6. Height: - 158cm
7. BMI: - 24.2 Kg/m²

- **Systemic examination with a Modern perspective**

- CNS: - NAD
- CVS: - S1 & S2 heard
- Respiratory: - NAD

- **Skin Examination**

- **Inspection:** Red rashes all over the body
- Colour– Red

- **Palpation:**
- Temperature – Warmth to the touch

1. Kindly comment on *Agni*, *Aama* and *Koshta* of the patient.

- *Koshta*- *Mridu*
- *Agni*- *Mandagni*

2. *Ama*- *Saamavastha*

3. *Asthavidha Pariksha* (Ayurvedic)

Table 2: Ashtavidha Pariksha of patient		
S. No.	Name	Lakshana
1	Nadi	Pitta-kapha Predominant
2	Mala	Asamyak
3	Mutra	Samyak
4	Jihva	AlpaSama
5	Shabda	Spashta
6	Sparsa	Anushnasheeta
7	Drik	Samyak
8	Akruti	Madhyama

Urticaria activity score (UAS7) is used for examination of *Shitapitta* (Shown in tables no 2&3 respectively)

Table 3: Urticaria activity scale ¹⁵¹⁷ patient's score? Patient score is 3		
Score	Wheals	Pruritus
0	None	None
1	Mild: <20 wheals over 24hrs	Mild: present but not annoying
2	Moderate: 20-50 wheals over 24hrs	Moderate: troublesome but doesn't interfere with normal daily activity or sleep
3	Intense: > 50 wheals over 24hrs or a large area of wheal that blend into one	Intense: Severe itching which is sufficiently troublesome to interfere with normal daily activity or sleep

2.3 Therapeutic Intervention

Table 4: Shodhana Chikitsa given to the patient			
S. No.	Procedure	Drug used	Duration
1	Sadyavaman	Lavanjala	One day
2	Nitya Virechana	Avipattikarchoorna 10gm HS + Aragwadhachoorana(10gm) Kadha 40ml daily in the morning	15 days

Vamanakarma is one of the *Panchakarma* procedures that can be advised in this condition as per Ayurvedic literatures¹⁸ with SOP, but this patient was not willing for classical *Vamanakarma* procedure; hence *Sadyovaman* has advocated the patient with *Lavanajala* for one day followed by three

days *Samsarjanakrama*. After following *Samsarjanakrama* for three days, *Nitya Virechana* was advised with *Avipattikarchoorna* 10 gm at bedtime from the fourth day onwards *Aragwadhachoorana* 10 gm then made its *Kadha* then taken 40 ml in the morning time for 15 days.

Table 5: Shamana Chikitsa

S. No.	Medicine	Dose and frequency	Time of administration	Anupana and Route of Administration	Duration
1	<i>Shitpittaprabhajanvati</i>	Two tabs twice a day	After meal	Lukewarm water, Oral Route	15days
2	<i>Krimikuthar Rasa</i>	Two tabs twice a day	After meal	Lukewarm water, Oral Route	15days
3	<i>Haridrakhanda</i>	One tsf twice a day	Empty stomach	Lukewarm water, Oral Route	15days

Table 6: Details of advised Pathya- Apathya

S.No.	Pathya (Do's)	Apathya (Don'ts)
1	Ahara :- LaghuAhar, Khichadi, Peya, Vilepi, Manda, JeernaShali, JangamaMamsa, Triphala, Madhu, Mudga, Yusha, Kultha, Yusha, Ushnodaka, KarkotakaShaka, KaravellakaShaka, MoolakaYusha.	Ahar :- Guru (milk, non-veg.), RukshaAhar, TikshanaAhar
2	Vihara:- Sadharana, Vyayam, Pranayam.	Vihar :- Ativyayam, UshnaAtapaSevana, Diwaswpna.
3	Aushadha:- Shaman & Shodhan	Aushadha:- Kapha-PittaVardhak, UshnaViryatmakaAushadha.

2.4 Observation and Results

Table 7: Observation & Results¹⁹

S. No	Symptoms	Observed score	
		Before treatment	After treatment
1	Varati Damsha Samsthana Shotha (rashes)	1	0
2	Kandu (itching)	2	0
3	Vidaha (burning sensation)	Present	Absent

Table 7 This table contains observation and result obtained before and after treatment. It is categorized under two heads that are Symptoms and observed score. In this condition, mainly three symptoms are observed they are *Varati Damsha Samsthana Shotha* (rashes), *Kandu* (itching) and *Vidaha* (burning sensation). These three symptoms are marked with the help of the Urticaria activity scale, as shown in Table no.4. This table shows Observations and Results obtained after

treatment, i.e. at the end of the 20th day assessed by using subjective & objective criteria. All clinical features in this patient had reduced significantly by using the above-said *Shodhana* and *Shaman Aushadhi* recommended by ancient *Acharyas* in the management of *Shitapitta*. There is a significant reduction in raised and palpable wheals after *Shaman* and *ShodhanChikitsa*. A closed ballpoint pen tip is a simple test to diagnose dermographism.



Fig 1: Before treatment (Raised and palpable wheals on the skin)



Fig 2: After treatment (Reduction of raised and palpable wheals on the skin)

3. DISCUSSION

Shitapitta is a *Tridoshaja Vyadhi*. According to *Nidaan Sevana* (etiological factors)²⁰, there is a vitiation of *Kapha* and *Vata*, which then spreads throughout the body, both externally and internally, mixing with *Pitta*. The *Tridoshas* spreading internally cause *Dushti* (pathogenesis) of *Rasa* and *Rakta Dhatus*. Then *Rasa Vaha* and *Rakta Vaha Sroto Dushti* appear,²¹ causing symptoms such as *Varati Damstavat Sotha* (rash) and *Kandu* (itching) caused by *Kapha*, *Shula* (pain) given by *Vata*, and *Daha* (burning sensation) caused by *Pitta* when they reach *Vigna Twaka* (sensitized skin).²¹ We can relate it to *Urticaria* (hives), which are red, raised, itchy spots and rash caused by allergens, according to modern research.²³ In *Ayurveda*, the presentation and prognosis of the disease depend on multiple factors. *Shitapitta* is one of the conditions found in *Bahudosh Lakshanas* and, as mentioned in *CharakaSutra's* 16th chapter *Pitaka, Kota, kandu*, and its treatment being mentioned as adoption of various *Shodhana* therapies depending on the predominance of *Dosha*.²⁴ In the current era, many cases are occurring as symptoms of *Shitapitta* due to the *Vishamashana* leading to *Tridosha Prakopathe Samprapti* taking place as mentioned in the *Rajyakshama Adhyaya* of *Charaka Samhita*; therefore, *Shodhana* becomes inevitable for the treating the diseases.²⁵ The *Shodhana* therapies are mostly adopted due to their speciality of action, treating the *Dosha* once when there is aggravation with the *Shodhana* modality of treatment, helps in the non-recurrence of the disease.²⁶ Thus, the *Shodhana* modalities of treatments are praised as the first choice of physicians in treating skin ailments. *Nitya Virechan* is a part of *Mriduvirechan*. Therefore, it is intentionally planned to induce only *Koshta-shodhana*. Therefore, *avarshuddhi* was expected, which was achieved. *SadyoVamana*²⁷ consists of two words-*Sadya* and *Vamana*. Here *Sadhya* means-immediately, Recently, quickly attaining, and by which procedure vitiated *Doshas* are expelled out from the upper part of the body through the oral route, is known as *Vamana*. *Sadyo Vamana* is a process where *Vamana* is carried out immediately without following any *Purva karma* like *Pachana*, *Snehana*, and *Swedana*. *Vamana* drugs possess the properties like *Usna*, *Tiksha*, *Suksha*, *Vyavayi*, *Vikasi* and with their '*Swavirya*' Move to '*Hridaya*' Act over the vitiated complexes in the body with the '*Agneya Property*' - liquify the complexes (ii) with the '*Tiksha Property*' - break them down into

numerous particles) through various '*Dhamanis*' that lead to micro and macro channels in the body. The liquid matter subsequently travels to *Koshta* through various unctuous or smooth routes, where it is stimulated by '*Udana Vayu*'. The presence of '*Agni*' and '*Vayu*' elements in the constitution and self-discipline. Moves upwards towards the mouth cavity (due to *Urdhaga Prabhava*) and is expelled to the outside through *Vaman*.²⁸ In this case, *Madhyam shuddhi lakshanas* like *Kapha prakop* symptoms were resolved, i.e., reduced itching, well-functioning of the Gastro-intestinal tract, and lightness in the body²⁹ were observed through *Sadhya Vaman*. Also, it was observed that after the procedure, the complaint of burning sensation all over the body was reduced. {Upper GIT Electrical Stimuli for Psychic Stimulation when full of contents delivery of medications direct stimulation is a likely modern concept. CTZ stimulation and overdistended Stimulate the hypothalamus, which is prone to excitability. Stimulates the centre of the stomach that produces vomit. Automatic motor reactionary The 5th, 7th, 9th, 10th, and 12th nerves transmit motor impulses from the vomiting centre in the skull nerves in the spine diaphragm, and abdominal muscles in the upper GIT Start the vomiting process.} *Virechana* pacifies the morbid *Pitta* and helps carry out its function normally, helping the skin lesions heal³⁰. *Nitya Virechana* removes toxins from the body and purifies it on two levels: (1) at the gross level, where the various organs and systems of the body, as well as the gastrointestinal tract, are thoroughly cleansed, and (2) at the cellular level, where the body is cleansed and purified at the level of cell membranes and molecules. Absorption in the intestines is greatly improved, and metabolism is also improved³¹. *Aragvadh* and *Avipathikar Churna* these drugs eliminate *Kleda* and *Doshas* from *Rasa*, *Rakta*, and *Meda*. It causes *Raktaprasada* by eliminating *Dushta Kapha* and *Pitta*. *Gara Vishas* present in *Rakta* is eliminated by its *Tikta Rasa*. It improves complexion by purifying blood and by absorbing *Kleda* from *Rakta*. *Vatarakta Nashaka* induces the *Jatharagni*, *Viryavardhaka*. *Sheetapitta* is a *pittasthanasamudbhava vikara* where there is *avarodha* to *ApanaVayu* due to morbid *Kapha*, the principle pathology involved & *vimargamana* of *vayanvayu* *Nityavirechana* for a short period with *Avipathikar choorna* and *Aragvadh choorna* *Kadhadravya's* helps in *vimargamana* of *Vyan Vayu* by *srotoshodhana* and reduces vitiated *pitta*. *Krimikuthar Rasa* has

Kapha and Vatahara properties. *Shitapitta Bhanjan Rasa* is *Shitapittaghan*, *Kushtaghna*, *Kandughna*, *Vatarakta*, *Nashaka* induces the *Jatharagni Viryavardhaka*. *Haridradi Khanda Paka Yoga* is *Kandughna*, *Dadru Nashaka*, *Krimihara*, *Jirnajwara Nashaka*, *Shothahara*.³²In this way, given *Sodhana* and *Shaman Chikitsa* helps in breaking pathogenesis, resulting in controlling the symptoms in *Shitapitta*.

4. CONCLUSION

As *Shitapitta* is mainly due to *Kapha* and *Vata Doshas* aggravating and combining with *Pitta Doshas*. So *Vaman* and *Virechana* pacify *Kapha* and *Vata Pitta Dosh*, respectively. Hence in this study, *Vaman* and *Virechana Karma* have shown significant results. The pruritis grading and scoring of a

patient were reduced significantly after the treatment. Also, the clinical features seen in the patient were reduced drastically. Therefore, it is concluded that *Panchakarma* procedures adopted in this study can be helpful in the effective management of *Shitapitta*.

5. AUTHORS CONTRIBUTION STATEMENT

Shweta Parwe cured the patient, Dr. Shubham Verma and Dr Milind Nisargandha designed the draft, Dr Punam Sawarkar designed the results and contributed to the manuscript.

6. CONFLICT OF INTEREST

Conflict of interest declared none.

7. REFERENCES

- Available from: <https://www.webmd.com/skin-problems-and-treatments/guide/hives-urticaria-angioedema> [cited 15/10/2022].
- Sharma SK, Munjal YP, Agarwal AK. API textbook of medicine, association of physician of India. 9th ed; 2012. p. 479, 491.
- Available from: <https://www.researchgate.net/deref/https%3A%2F%2Fwww.dermnetnz.org%2Ftopics%2Furticaria-an-overview%2F> [cited 15/10/2022].
- Vijayarakshita S. Madhavanidana Chaukhamba Surabharati Prakashana; Sheetpittodardkothanidanam/I Reprinted; 2010. p. 200.
- Vijayarakshita S. Madhavanidana Chaukhamba Surabharati Prakashana; Sheetpittodardkothanidanam/I Reprinted; 2010. p. 201.
- Sri B. Bhavmishra Part 2nd Chaukhamba Surbharti Publication. 5th ed; 1993. p. 543 sheetpittodardkothotkothaadhikar/2.
- Sri B. Bhavmishra Part 2nd Chaukhamba Surbharti Publication. 5th ed; 1993. p. 543 sheetpittodardkothotkothoadhikar/3.
- Vangsen Samhita. Vangsen. 1st ed. Mumbai: Shrikrishnadas Publication; 1996. p. 645 Sheetapittakothoadhikar/2.
- Flynn CA, Griffin G, Tudiver F. Decongestants and antihistamines for acute otitis media in children; 2002.
- Agnivesh, Charak Samhita commentary by Brahma Nand Tripathi, Chaukhamba [M.M Nidhin et al.: Commonly Practiced Rasayogas in Sheetapittaw.s.r. to Urticaria: A Review] 1281 www.ljaar.in VOL III ISSUE IX JUL –AUG 2018 Surbharti Sansthan, Varanasi, Sutra 4/17;43:24.
- Dr.Shastri AR. Sushruta, Sushruta Samhita Hindi translation Chaukhamba Surbharti Prakashan, Varanasi, Sutra 38/13. 25.
- Shastri AD, Chaukhamba Orientalia BRV. Varanasi, Sheetapitta-Udarda-Kotha7;26:12-6, 17-21, 28-30, 31-2, 37-41.
- Laxmipati Shastri Y. Hindi commentary. 3rd ed; 1983. Sansthana CS. Varanasi, Udarda-Kotha-Sheetapitta Chikitsa;7:12.
- Bhavmishra, Bhavprakash Vidyotini commentary, Sansthan CS, Varanasi MK. 5th ed;55/8:9-14, 15-20.
- Shastri BS, editor. Tripathi J.P. Commentary Chakradatta of Chakrapani. 5th ed. Varanasi: Chaukhamba Sanskrit Series Publication, 1983.
- Elman S, Hynan LS, et al. The 5-D itch scale: a new measure of pruritus. Br J Dermatol. 2010;162(3)(3)/p:587-93. doi: 10.1111/j.1365-2133.2009.09586.x, PMID 1995367.
- Shastri BS, editor. Tripathi J.P. Commentary Chakradatta of Chakrapani. 5th ed. Varanasi: Chaukhamba Sanskrit Series Publication, 1983.
- Dutta C, Samhita ADC. Vaidya Yadavji Trikamji Chaukhamba Surbharti Prakashan, Varanasi, Udarda-Kotha-Sheetapitta Chikitsa;1(2):5, 6, 7, 8, 10, 11. 23.
- Renu R, Purohit P, Kori VK. Role of Virechana karma in pediatric patient of Sheetapitta (Urticaria) – A case study. Int J AYUSH Care. 2017;1(2):14-9.
- Prof sharma A, Orientalia-Delhi C. Edition; 2017, Kayachikitsa Vol-2, chapter no. 60, page no.864.
- Prof sharma A, Orientalia-Delhi C. Edition; 2017, Kayachikitsa Vol-2, chapter no. 60, page no.865.
- Zuberbier T, Aberer W, Asero R, Bindslev-Jensen C, Brzoza Z, Canonica GW et al. The EAACI/GA 2/WAO Guideline for the definition, classification, diagnosis, and management of Urticaria: the 2013 revision and update. Allergy. 2014 Jul;69(7):868-87.
- Principles and practice of panchakarma by Dr. Vasant C Patil. 5th ed, Chaukhamba publications, pg-404, P.-16.
- Samhitai Charak, Shukla AV, Chaukhamba Prakashan V. Siddhi Stan chapter no. reprint ed. Vol. 01; 2015.
- Prof sharma A, Orientalia-Delhi C. Edition; 2017, Kayachikitsa Vol-4, chapter no. 5, page no.68.
- Prof sharma A, Orientalia-Delhi C. Edition; 2011, Kayachikitsa Vol-I, chapter no.01, page no.17.
- Agnivesha A. Charak Samhita elaborated by Charaka and Dradhabala with Commentary of Chakrapanidatta Ayurved Chaukhambhprakashan Varanasi reprint 2011 chikitsa 17/75 a Sadyo Vaman In Tamaka Shwas An Atyayik Chikitsa: A Case Report. International Ayurvedic Medical Journalhttp:. Vol. 282_285. Available from: <http://www.iamj.in/posts/images/upload/p> [cited 15/10/2022].
- Prof sharma A, Orientalia-Delhi C. Edition; 2011, Kayachikitsa Vol-4, chapter no. 04, page no.100.
- Sharma PV, editor. Madanphalkalpaadhyaya. Verses. In: Charak Samhita of Agnivesha, Kalpastana. 8th ed. Vol. 5. Varanasi, India: Chukhambha Orientalia; 2001. p. 806.