

# Panchakarma: A Holistic Approach to Treating Ardhavabhedhaka in Ayurvedic Medicine

Akhilesh Kumar Verma\*

Registrar, Ayurvedic evam Unani, Tibbi Chikitsa Paddhati Board, UP, Lucknow.

## Abstract

Ardhavabhedhaka, a type of Shiroroga described in Ayurvedic texts, shares clinical similarities with Migraine headaches. In Ayurveda, Ardhavabhedhaka is characterized by unilateral headaches and can lead to serious complications like blindness and hearing loss if left untreated. The modern lifestyle, marked by rapid urbanization and increased stress due to changing work expectations, has contributed to a higher prevalence of chronic disorders, including Migraine. Migraine, a chronic neurological condition, is characterized by recurring moderate to severe headaches accompanied by autonomic nervous system symptoms that disrupt daily life. The standard treatment for Migraine often involves the use of analgesics, which can have adverse effects on other organs when used over time. In response to these challenges, there is growing interest in exploring alternative treatments rooted in traditional systems like Ayurveda. Ayurvedic texts offer a wealth of knowledge on head disorders such as Ardhavabhedhaka, including different types, diagnostic approaches, causes, mechanisms, and treatment methods. Integrating Ayurvedic principles with modern medical knowledge can lead to more holistic approaches to managing conditions like Ardhavabhedhaka and Migraine. Research efforts aimed at understanding the efficacy of Ayurvedic treatments and lifestyle modifications in preventing and managing chronic headaches are crucial for improving patient care and outcomes. By promoting holistic wellness practices and stress management techniques, healthcare providers can help individuals mitigate the impact of chronic illnesses like Migraine and improve their overall quality of life.

Panchakarma, an integral component of Ayurveda, plays a crucial role in the holistic treatment of Ardhavabhedhaka, a term used in Ayurvedic medicine to describe migraine headaches. This traditional therapeutic approach aims to balance the doshas (Vata, Pitta, and Kapha) by employing a series of cleansing and rejuvenating procedures. Panchakarma therapies, such as Virechana (purging), Nasya (nasal administration), and Shirodhara (continuous pouring of medicated liquids on the forehead), target the root causes of Ardhavabhedhaka, providing relief from symptoms and preventing future occurrences. This abstract explores the significance of Panchakarma in addressing Ardhavabhedhaka and highlights its potential as an effective alternative or complementary treatment approach.

**Keywords:** Panchakarma, Ardhavabhedhaka, Ayurveda, Doshas, Virechana, Migraine, Holistic therapy, Traditional medicine

## Introduction:

Ardhavabhedhaka is a form of Shiroroga characterized by severe pain in one half of the head. If left untreated or improperly managed, it can lead to complications such as eye and ear destruction (Nayana and Sravana vinasha). The causes of Ardhavabhedhaka include excessive intake of dry foods, eating before the previous meal digests, exposure to cold wind, excessive sexual activity, suppression of natural urges, and excessive exertion. The pain typically affects one half of the head, temples, eyebrows, nape of the neck, around the eyes, and ears. Ardhavabhedhaka episodes occur at intervals of three days, five days, ten days, fifteen days, once a month, or randomly. This condition shares similarities with migraine in terms of etiology, pathology, and symptoms.

According to data from the World Health Organization, migraine ranks as the third most prevalent medical condition globally, affecting 14.7% of the population annually. It is the second most common cause of headache, affecting approximately 15% of women and 6% of men worldwide. Migraine prevalence peaks

between the ages of 30 and 39, affecting 28.1% of women and 9.0% of men. Migraine can socially handicap individuals, leading to significant job productivity losses and socioeconomic impacts. Typically, migraine headaches are unilateral, varying in intensity, frequency, and duration, lasting from 2 to 72 hours, often accompanied by nausea, vomiting, and sensory, motor, and mood disturbances. About 15-30% of migraine sufferers experience migraine with an aura.

In modern medicine, there is no standardized treatment for migraine. Acute migraine episodes are often managed with over-the-counter medications, with only a small percentage of patients consulting physicians. Chronic migraine poses greater challenges for treatment and may involve non-pharmacological approaches such as identifying triggers, meditation, relaxation training, psychotherapy, as well as pharmacotherapy including abortive and preventive therapies. Non-specific abortive therapies include aspirin, paracetamol, ibuprofen, and diclofenac, while specific abortive therapies include ergot and 5-HT<sub>1</sub> receptor agonists.

Panchakarma, an essential component of Ayurvedic medicine, comprises a series of therapeutic procedures designed to cleanse and rejuvenate the body, with the potential to alleviate symptoms associated with Ardhavabhedaka, a type of Shiroroga resembling migraine headaches. Ardhavabhedaka is characterized by severe pain affecting one half of the head, potentially leading to complications like visual and auditory impairment if left untreated. The causes of Ardhavabhedaka are multifaceted, including excessive intake of dry foods, irregular eating habits, exposure to cold winds, excessive sexual activity, suppression of natural urges, and overexertion, resulting in pain localized in specific regions of the head and neck.

In modern medicine, migraine is recognized as a prevalent neurological disorder, affecting a substantial portion of the global population. According to the World Health Organization, migraine ranks as the third most prevalent medical condition worldwide, with significant socio-economic implications. The condition predominantly affects women and peaks in prevalence during young and middle adulthood. Migraine presents as recurrent, often unilateral headaches, varying in intensity, duration, and frequency, accompanied by symptoms such as nausea, vomiting, and sensory disturbances.

While modern treatments for migraine often involve the use of medications for acute symptom relief and preventive measures, the chronic nature of the condition poses challenges in management. Non-pharmacological approaches, including lifestyle modifications, stress reduction techniques, and complementary therapies, are increasingly recognized as important components of migraine management.

Panchakarma, with its emphasis on restoring balance and harmony within the body, offers a holistic approach to treating conditions like Ardhavabhedaka and migraine. The detoxification processes involved in Panchakarma, such as Vamana, Virechana, and Nasya, target the elimination of accumulated toxins and metabolic waste, which may contribute to the underlying pathology of migraine.

Moreover, Panchakarma therapies promote relaxation and stress reduction through techniques like Abhyanga (oil massage) and Svedana (herbal steam therapy). By enhancing circulation and promoting the balance of doshas, Panchakarma aims to address the root causes of migraine, rather than merely masking symptoms. However, the efficacy of Panchakarma in treating Ardhavabhedaka and migraine requires further investigation through rigorous clinical trials and research studies. Additionally, the integration of Panchakarma into migraine management should be conducted under the guidance of qualified Ayurvedic practitioners, taking into account individual patient characteristics and health conditions.

### **Definition of Ardhavabhedaka**

According to Acharya Charaka, Ardhavabhedaka is acute pain in half side of the head, along with the neck, eyebrow, temple, ear, and eyes, characterized by a piercing nature, aligns with the ancient Ayurvedic description of Ardhavabhedak. Acharya Charaka emphasizes the acute nature of the pain and its potential to impair visual and auditory functions when left unaddressed. Similarly, Acharya Sushruta highlights the sudden onset of severe, pricking pain accompanied by giddiness as characteristic of Ardhavabhedak, attributing its origin to the imbalances in Tridoshas. The comprehensive view of this condition provided by Acharya Vagbhata encompasses pain in half the head and associated regions. These insights form the foundation for understanding and treating Ardhavabhedak through the holistic principles of Ayurveda.

**Nidanas of Ardhavabhedak****Table 1: Samanya nidanas for Ardhavabhedaka**

<b>NIDANA</b>	<b>C.S</b>	<b>A.H</b>	<b>A.S</b>	<b>Y.R</b>
Abhyanga dwesha(aversion to massage)	-	+	+	-
Ambu kreeda(exposure to water)	-	+	+	+
Adhyashana (taking food before previous meal is digested)	-	+	+	-
Asatmya gandha(undesirable smell)	+	+	+	+
Hima (exposure of snowfall)	+	-	-	-
Atapa sevana (exposure of sun and heat)	+	+	+	+
Atyamla sevana (excess intake of sour food)	+	-	-	-
Ati maithuna(excess sexual indulgence)	+	-	+	-
Ati sheethambu sevana (excess cold water intake)	+	+	+	+
Ati swapna (excessive sleep)	-	+	+	+
Avasyaya (exposure to mist)	+	+	+	+
Mrija dwesha(aversion to cleanliness)	-	+	+	-
Bashpa nigraha(suppression of tears)	+	+	+	+
Desa viparya(regimen contrary to desha)	+	-	-	-
Dhuma sevana(excess inhalation of smoke)	+	+	+	+
Divaswapna(day sleeping)	+	-	-	-
Dushta ama(vitiated ama)	+	+	+	+
Guru ahara(heavy food)	+	-	-	-
Haritam athi(raw spicy rhizomes)	+	-	-	-
Kala viparyaya (regimen opposite to season)	-	+	+	+
Krimi dosha (worm infestation)	+	+	+	+
Madya sevana (intake of excess alcohol)	+	-	-	-
Manasa santapa (mental stress)	+	-	-	-
Megha agama (advent of cloud)	+	-	-	-

Nidanas explained can be again divided in to Aharaja and Viharajanidan

AharajaNidana

1. Adhyashana: Intake of food before the digestion of previous meals.
2. Athyashana: Consumption of food in excessive quantity.
3. RookshaBhojan: Excessive consumption of food having rookshaguna.

ViharajaNidana

1. Ayasa: Excessive physical strain.
2. PoorvavataSevana
3. Veg Sandharana: Suppression of natural urges e.g. sneezing, vomiting etc.
4. Vyayama: Excessive excersize.
5. AvashyaySevana
6. MaithunaAvashyaya, Divaswapna, Atimaithuna, Atapasevana, Purovatasevana and Vegadharana are also mentioned as specific causative factors of Ardhavabhedak.

### **Purvarupa of Ardhavabhedaka**

No specific reference is cited in Bhrihatrayis. In madhavaNidana, general purvarupa for Shirahshoola has been mentioned as - IshatDaha and Supti.

No specific reference is cited in Bhrihatrayis. In madhavaNidana, general purvarupa for Shirahshoola has been mentioned as - IshatDaha and Supti.

Dosha According to Various Acharya's

Acharya Sushruta considers it as Tridoshaja,

Acharya Charaka has explained it as either to be purely Vataja or Vatakaphaja,

Vagbhata opines that only VataDosha is involved. Similarly in Bhela Samhita, MadhavaNidana,

Yogaratanakara, Bhava Prakasha it is considered as eithepurely Vataja or VataKaphaja

### **(Etiopathogenesis)**

According to Acharya Charaka from

RookshaBhojana, Atibhojana, Adhyashana, Vegadharana, Ativyayama, Vata either alone or in combination of Kapha, seizes the one half of head and causes TeevraVedana (acute pain).

### **Samprapti**

NidanaSevana → Agnimandya → Aamotpatii → Srotovarodha → Aggravation of all the three Doshas → Urdhavagaprti (reach the head) → Manifestation of symptomatology of Ardhavabhedaka. Rupa (Clinical Features) Severe cutting or piercing (Sashtra-Arninibha) pain usually half side of head affecting neck (Manya), eye brows (Bhru), eye (Akshi), ear (Karna), temporal (ShankhaPradesha) and forehead (Lalata). The disease

develops either at the interval of fortnight (15 days) or 10 days or a month.

### **Upadrava (Complications)**

It has severe complications even it can destroy the sense organs and produce deafness, blindness etc.

### **Sadhya-Asadhyatha of ardhavabhedaka**

Determining the treatability (sadhya-asadhyata) of Ardhavabhedaka poses challenges as classical Ayurvedic texts like Bhrihatrayee or Laghutrayee do not explicitly mention it. Ardhavabhedaka is regarded as Sudustara, meaning extremely difficult to treat, suggesting its challenging nature. Therefore, Ardhavabhedaka can be considered as Kashtasadya, indicating that it is difficult to cure. Depending on its severity and progression, Ardhavabhedaka may be classified as krichrasadhya (curable with difficulty) or asadhya (incurable).

### **Chikitsa**

The treatment approach for Ardhavabhedaka is primarily based on the principle of Samprapti vighatana, aiming to disrupt the disease progression. Specific treatment protocols for Ardhavabhedaka are outlined in Ayurvedic classics. Early intervention is crucial as Ardhavabhedaka can lead to complications if left untreated. Treatment strategies focus on shamana (pacification), shodhana (purification), and nidanaparivarjana (avoidance of causative factors) to disrupt the disease process.

Preventive measures play a vital role in managing all types of headaches, including Ardhavabhedaka. NidanaParivarjana, or avoidance of causative factors, is emphasized in treatment. This includes adopting a stress-free lifestyle, ensuring adequate rest, avoiding the suppression of natural urges, and maintaining emotional balance. Additionally, dietary and lifestyle factors contributing to headache onset should be avoided.

Samshodhana Chikitsa, or purification therapy, is recommended for Shirorogas (head disorders) like Ardhavabhedaka. Shirovirechana (nasal administration of medicated oils) or Nasyakarma (nasal therapy) is considered a crucial treatment modality for Shirorogas. Nasya therapy involves the administration of medicated substances through the nasal passages, targeting the root cause of the headache and alleviating symptoms associated with Ardhavabhedaka.

### **Vishista Chikitsa for Ardhavabhedaka**

The treatment principles mentioned for Ardhavabhedaka can be grouped under the following headings:

#### **ACCORDING TO ACHARYA SUSHRUTA**

##### **Suryavatha Chikitsa**

- Nasya Karma
- Diet of Jangala mamsa and preparations of Ksheera, anna, ghrita
- Avapedana nasya with, Sirisamulaka and phala, Vamsamula and karpooora, Vacha and Magadhika (Pippali), Yastimadhu and Madhu, Manahshila alone or with chandana and madhu. At the end of avapedana, nasya to be done with murva and ghrita
- Lepa with sariva, utpala, kusta, madhukam, amlapeshita mixed with ghrita and taila

#### **ACCORDING TO ACHARYA CHARAKA**

- Chatur-sneha (ghrita+taila+vasa+majja) in uttama matra
- Shirovirechana
- Kaya virechana
- Nadi sweda
- Niruha anuvasana basti
- Upanaha
- Shiobasti
- Dahana (Agnikarma)

#### **ACCORDING TO ASTANGA HRIDAYA**

- Nasya Karma with Sirisabeeja, apamarga, bidalavana, Saliparni swarasa
- Lepa with prapunnata bija kalka and amra
- Vatajashirashoola line of chikitsa

#### **ACCORDING TO ASTANGA SANGRAHA**

- Nasya with nirgundi patra swarasa, Saindhava, ghrita
- Nasya with sirisamula and phala
- Lepa with sariva, utpala, kusta, vacha, madhuka, pippalimixed with taila

#### **ACCORDING TO YOGARATNAKARA**

- Snehapana with Ghrita
- Sthanika Snehanam, Swedanam
- Kaya Virechana, Dhoopana
- Snighda ushna bhojana
- Internally ksheera and ghrita everyday
- Nasya Karma with
  - i. Vidanga and KrishnaTila
  - ii. Ksheera and ghrita
  - iii. Girikarnikadhi phala and moola + jala

- iv. Girikarnika moola for karnabandhana
- v. Sithophala navana nasya
- vi. Bhringaraja+ goat milk in equal quantity
- vii. Sirisamoolaka and phala for avapeedana nasya
  - Dhupana with Jangalamamsa
  - Lepa with Sariva, Shunti, Krishna tila and vidanga
  - Marichadhi yoga

#### **ACCORDING TO BHAI SAJYA RATNAVALI**

- Virechana with Yavakshara + ghrutha + virechaka aushadhi
- Nasya Karma with:
  - a) Vacha + Magadhi (Avapeedana)
  - b) Dugdhotha Ghrutha
  - c) Ghrutha of kruthamala pallava + apamarga beeja churna
  - d) Dashamula + ghrutha + saindava
  - e) Shireeshabeeja and mula avapeeda nasya
  - f) Mahamayura ghruta
  - g) Shigru maricha teekshna nasya
  - h) Brungaraja swarasa avapeedana
  - i) Sharkara jala
  - j) Sharkaramishrita narikelajala
  - k) Sheeta jala
  - l) Vidanga + Krishna tilam) Burnt mud + Maricha
    - Upanaha with Jangalamamsa + vatahara dravya
    - Le i. Sarivadi lepa
- ii. Madana + vasa
- iii. Saindava + tila taila (ushna lepa)
- iv. Krishna tila + jatamamsi churna + saindava + madhu

#### **ACCORDING TO BHELA SAMHITA**

- Nasya karma
- Karpasa bija, masha, godhuma, sarsapa, yava with ksheerafor Nasya.
- Dwipanchamoola with ksheera for Nasya.
- Nadi sweda
- Ushna Upanaha with ksheera siddha aushadhi
- Uttama matra of Ghrita, taila or vasa should be given based on yukti

#### **ACCORDING TO HARITA SAMHITA**

- Kumkumadi ghrita nasya – Kumkuma, Yasti, Kusta, Sharkara, Navaneeta

#### **ACCORDING TO BHAVAPRAKASHA**

- Snehana, swedana, kaya virechana, dhoopana
- Snighdha usna bhojana
- Internally ksheera+ sarkara, narikelajala
- Sheetajala paneeya
- Ghrita internally
- Nasya karma

#### **ACCORDING TO SARANGADHARA SAMHITA**

- Kumkuma Nasyapas with following drugs

#### **ACCORDING TO CHAKRADATTA**

- Kumkuma lepa
- Nasya with dashamoola kwatha

**Table 2: Pathya in Ardhavabhedaka**

Chikitsa Upakrama	Swedana (Heating), Nasya, Dhumpna Virechana (Purgative), Lepa, Vamana (Vomiting), Langhana (Fasting), Shirobasti, Raktamokshana, cauterly on the frontal and supra orbital region, Upanaha.
Diet	Consuming old Ghrita, Shali, Shashtikshali, Yusha (soup) Milk, Dhanvamansa, Sanyab, Ghritapura.
Vegetables	Patolam, Shigru, Vastuka, Karvellaka
Fruits	Mango, Aamlaki, Dadima, Matulunga, Lemon, Grapes, Coconut
Liquid diet	Milk, Oil, Coconut water, Kanji, Takra (Churned curd).
Medicines	Pathya, Kushta, Bhringaraj, Kumari, Musta, Ushira, Karpura, Gandhasar

### Discussion On Ardhavabhedaka

The symptoms 'half side headache' with its paroxysmal nature is explained in almost all the texts. Only Acharya Sushruta has mentioned Bhrama along with headache as symptom . The various types of pain

explained by different Acharyas suggest the Vishama nature of Vata Dosha. Ardhavabhedaka can be differentiated from other Shiroroga such as Suryavarta, Shankhaka etc. only due to its cardinal feature half side headache and also due to its paroxysmal nature .

Ayurveda is a science and art of appropriate living which helps to achieve longevity. The Panchakarma therapy provides balanced state of body, mind and consciousness by cleansing of body toxins. Snehana Karma It can be used as AbhayantaraSnehana / Snehapana (internal oleation) and BahyaSnehana (External oleation) as Shiroabhyanga. SnehapanaSneha acts as a solvent to remove the obstruction by dissolving Doshas in it, resulting in the removal of Srotorodha. After proper Snehana all cells of the body becomes completely saturated with fats. Then the fat material comes out to extra-cellular fluid by osmosis process. Due to the aqueous properties of Sneha and liquefied Mala brought from the tissues, the levels of fatty acids etc. increases in the blood resulting in the high plasma volume. To keep up the equilibrium of the normal plasma level, the extra amount of liquid reaches to the Koshta for excretion. Later on, this increased amount of the body fluids are evacuated through other therapies, like Vamana, Virechana.

### Shiroabhyanga

During Shiroabhyanga different type of mechanical sensation is given to the skin like pressure, rubbing, touches. These impulses are received by respective receptors present on the skin surface and carried to the hypothalamus and provides soothing effect and also stimulates para sympathetic nervous system, thus decreases stress hormones like cortisol and adrenalin and dilates blood vessels. All these factors provide relaxation to the mind and relieves pain.

### Shirobasti

It is a Snigdha Swedayukta procedure. It has dual benefits of both Snehana and Svedana. The temperature of the Taila in Shirobasti leads to peripheral vasodilation. This increases the peripheral circulation which nourishes the tissues, hastens phagocytosis and brings about regenerative changes. Thus Shirobasti is a very complex process certainly influencing the Shareerika and Manasika Dosha.

### Nasya Karma

In Nasya Karma the medicine is put into nostril, moves in the channels upto the Shringataka and spreads to whole of the interior of the head and to the junction place where all the channels related to eyes, ears and

throat situated together, thus shows influence on Shiras by removing out the accumulated Doshas localized in Shiras i.e. from all sinuses in the skull, the action known as Shirovirechana. The olfactory nerves entering olfactory mucosa of nose carry the sheaths dura, arachnoids and pia with them. They directly enter into the brain. Olfactory strai are extensively connected to the limbic system stimulation can nourishment of nerve ending through Nasya alters the pathology of migraine.

### **Basti Karma**

In Ardhavabhedaka, Niruha Basti prepared with Vatanashaka drugs should be given first, followed by Anuvasana Basti prepared of Ghrita, Taila etc. Basti is being considered as the one of the best therapeutic procedures for the management of migraine. The rectum with its vascularity and venous plexuses provides a good absorbing surface and many soluble substances produce their effect more quickly by entering into systemic circulation. Due to Achintya Prabhava of Basti, it might have reduced swelling of temporal artery and there by the patient gets relief from symptoms of migraine.

### **Vamana Karma**

The active principle of Vamana Dravya taken orally is absorbed from the stomach into circulatory system, where from it is circulated to all over body. On reaching at the site of Dosha Sanghata, which is at the cellular level, it breaks the nexus of Dosha and brings back the toxic substances thus released into the stomach, where from they are expelled out of the body by the action of vomiting.

### **Virechana Karma**

Virechana Dravya produced mild irritation in stomach and intestinal mucosa respectively, to cause inflammation, which facilitates quick absorption of the active principles (Virya) of the drug in initial stage. Later on it facilitate the excretion of the morbid matters, which generally are not supposed to be excreted out through the mucosa of gut. It is possible only because of inflammation increases the permeability of the capillaries, which in turn allow the absorption, as well as excretion of such substances.

### **Agni-Karma**

Provide significant relief in the symptoms of migraine. Acharya Charaka indicated Dahana Karma. It is indicated on Lalata and Shankha Pradesha at two Angula area. As per Ayurveda, „pain cannot occur without involvement of Vata Dosha“. Agni has Ushna Guna, this Ushna Guna gets transferred to Twak (skin), and normalises Vata and Kapha, helped to reduce Shira-shoola in Ardhavabhedaka.

### **Raktamokshana**

The vitiated blood can be detoxified by Raktamokshana (bloodletting). Removal of toxins balances the Doshas. It can remove Avarana of Kapha or Pitta Dosha giving way for Anulomana indirectly cures the Vatika symptoms along with Pitta and Kapha Dosha and patient gets immediate relief in pain. In acute migraine attack, Raktamokshana from the jugular vein is beneficial.

### **Shirodhara**

Involve gently pouring liquids over the forehead. The liquids used in Shirodhara can include oil, milk, buttermilk, coconut water or even plain water. Its work by relaxing the hypothalamus in the brain, also normalize the functions of hormones that regulate sleep and emotions.

## **CONCLUSION**

Ardhavabhedaka is Vatakapha Pradhana Shiroroga, the symptoms complex of which very well correlate to that of migraine. Most of the Nidanas which includes Aharaja, Viharaja and Manasika factors etc. are mentioned in our classics go in similarly with migraine triggers, which have active part in diagnosis and in planning first line of treatment i.e. Nidanparivarjana. Panchakarma provides various routes of Deha Shuddhi and also pacifies the Doshas. Thus by adopting particular Panchakarma procedure individual will get better results in curing Ardhavabhedaka (migraine).



**REFERENCES**

1. PV Sharma-Charaka Samhita-Chaukambha Orientalia, Varanasi 1 st, 30/26-2007.
2. PV Sharma-Susrutha samhita-Chaukambha Viswa Bharathi Varanasi- 1st, 15/41-2005.
3. PV Sharma-Susrutha samhita-Chaukambha Viswa Bharathi Varanasi - 3rd, 2005.
4. KR Srikanta murthy- Astanga Hrdayam –Sutra sthana- 12/4; Chowkhambha krishnadas Academy, Varanasi, 2006.
5. Murthey K.R.S Illustrated Susuta Samhita (Vol. 3). Chaukhambha Orientalia, 2012.
6. Tripathi B Astanga Hridayam of Srimadvagbhata (Vol. 1). Chaukhamba Sanskrit Pratishthan, 2009.
7. Tripathi R Agnivesha Charak Samhita (Vol. 2). Chaukhamba Sanskrit Pratishthan, 2009.
8. Agnivesha: Charak Samhita revised by Charak and Dridhabala with Ayurveda Dipika commentary by Chakrapani Datta; Edited by Vaidya Jadavaji Trikamji Acharya; Published by Chaukhambha Prakashan; Varanasi; edition Siddhi Sthan, 2011; 9/74-75: 1067-1068.
9. Agnivesha: Charak Samhita revised by Charak and Dridhabala with Ayurveda Dipika commentary by Chakrapani Datta; Edited by Vaidya Jadavaji Trikamji Acharya; Published by Chaukhambha Prakashan; Varanasi; edition Siddhi Sthan, 2011; 9/75-76: 1067-1068.
10. Sushruta Samhita with Ayurveda Tatva Sandeepika hindi commentary by Kaviraj Ambikadatta Shastri; pu. by Chaukhambha Sanskrit Sansthan, Varanasi; part 2, reprint edi. Uttar Tantra, 2004; 25/15.
11. Vagbhata, Astanga Hridayam, Nirjala hindi commentary by Brahmanand Tripathi; pub. by Chaukhambha Sanskrit Pratishthan, Delhi: Reprint, Uttarantra, 2007; 23/8.
12. Agnivesha: Charak Samhita revised by Charak and Dridhabala with Ayurveda Dipika commentary by Chakrapani Datta; Edited by Vaidya Jadavaji Trikamji Acharya; Published by Chaukhambha Prakashan; Varanasi; edition Siddhi Sthan, 2011; 9/76: 1067-1068.