# WORLD JOURNAL OF PHARMACEUTICAL RESEARCH

SJIF Impact Factor 8.084

Volume 12, Issue 6, 123-136. **Review Article**  ISSN 2277-7105

### ASHMARI - A CLASSICAL REVIEW

Dr. OP Vyas, Dr. Megha Gupta\*, Dr. Preeti Parmar, Dr. Nimina Nanu Manikkoth and Dr. Shweta Dhurve

India.

Article Received on 24 Feb. 2023,

Revised on 16 March 2023, Accepted on 06 April 2023

DOI: 10.20959/wjpr20236-27684

\*Corresponding Author Dr. Megha Gupta India.

#### **ABSTRACT**

Ashmari has been known to humanity since time immemorial and is one of the most prevalent disease of the mutravah strotas. Ashmari has described in all the ayurvedic samhitas but, "Father of surgery" Acharya sushrut has described ashmari in the most scientific manner with regard to its causes, types, symptoms, complications and treatment. Ashmari can be correlated with urolithiasis (Calculi), the third most commen urinary tract disease. Stone formation occurs in ashmari's disease which exerts serious pain like enemy.

**KEYWORDS:** Ashmari, Urolithiasis, Ayurvedic view, Chikitsa, Shastra Karma.

#### INTRODUCTION

Ayurvedic life science and an atharveda upang have defined many illness under mutrakrichha, mutraghat, ashmari etc. Ashmari is one of the most prevalent panic disease in the urinary disorders. In the field of medicine and surgery it is a challenging clinical condition.

Acharya sushrut, a pioneer in the art of surgery has extensively and comprehensively defined the issue of ashmari during early civilization and included it into ashta- mahagad.

Ashamari is originally tridoshaj marma ashraya (vital illness) and basti is vyaktsthan, basti has been included in dashvidha pranaytan and is also a krichharra sadhya vyadhi (Difficult to treat).

Acharya sushrut, comparing the ashmari to yamsa (Sure sign of death) and describing it as vyadhirantak- pratima (The patient's last phase of the illness), patients will experience symptom such as pain in lower abdomen, dusuria, burning micturation, and urine retention. most of the time they fail to eradicate the root cause of urolithiasis, so recurrence of the disease is common.

Therefor, it is essentials to understand ashmari in detail such as nidan, samprapti, lakshan, updrava, sadhya- asadhya and chikitsa in order to prevent or cure this disease.

#### **Etymology**

The word Ashmari is derives from the root "Ashu" which has the meaning samphata by adding the suffix "mnin" and "krit" It result in the derivation of the term Ashmara the suffix "meesh" is added to give the significance of gender so the term "Ashmari" is obtained.

#### **Defination**

Ashma (stone) formation as substance within the urinary system is called ashmari.

#### **Synonyms**

Ashmari, Ashmarih, Pathari, Stone, Gravel, calculus, calculi.

### **Etiopathogenesis**

In five steps in ayurveda which are nidan, purvroopa, Roopa, upashaya and samprapti the manifestation of any disease is described. These are the five steps that help the doctor to reach a correct diagnosis.

#### 1. Nidan

Nidan includes all the factors of etiology. Nidan's knowledge is useful for proper dignosis, disease prevention and treatment. Acharya sushrut has separately described ashmari's causative factor.

In people who are not regularly purified and indulge in unhealthy foods and activities, kapha become aggravated combines with urine, reaches the urinary bladder stays there and produce ashmari.

#### **Asamshodhanshil**

Acharya mentioned specific shodhan measures as natural dosha accumulation due to the lack of proper shodhan, both the kitta bhag of digestion and the accumulated dosha precipitate in the system that contributes to the formation of ashmari.

124

#### **Apathyasevan**

Diatary intake and diatary regimen are directly related to ashmari formation. ashmari's predominant dosha is kapha, so the diet that increase kapha many lead to the formation of ashamri. Guru, sheeta, snigdha, madhura, ahar vihar execessive intake and irregular diat habit day sleep etc. may increase the kapha and cause ashamari.

#### According to acharya charak

The factors responsible for production of eight types of mutrakrichha including ashmari are ativyayam, tikshna ahar vihar, aushadha, ruksha ahar vihar sevan, madya sevan, mans - matsya sevan, ajirna adhyshan.

According to acharya kashyap- Bharvahan on kati and skandh produce dysuria, which later cause the formation of ashmari.

**2. Purvaroopa:-** Every disease must necessarily have certain sign and symptoms before it manifest in the body. The purvroopa of ashmari according to acharya sushrut are basti peeda, aruchi, mutrakrichhra, basti shirovedna, mushka vedna, jwar, avsad, basti gandhitva, sandra mutra and avilmutra.

#### According to ashtang hridya

Basti peeda, Aruchi, mutrkrichhra, jwar, basti gandhitva, Parikartika and Basti adhman.

#### According to ashtang sangrah

Basti peeda, aruchi, mutrakrichhra, basti shirovedna, mushka vedna, sphik vedna, jwar, basti Gandhitva and Basti adhman.

#### According to madhav nidan

Basti peeda, aruchi, mutrakrichhra, jwar, basti gandhitva, parikartika, basti adhman.

#### According to bhawprakash

Basti peeda, aruchi, mutrakrichhra, jwar, basti gandhitva, parikartika, basti adhman.

According to Yog ratnakar - Basti peeda, aruchi, mutrakrichhra, jwar, basti gandhitva, basti adhman.

**3. Roopa:-** When fully manifested sign and symptoms are called roopa which are useful in diagnosis a manifested disease.

#### According to acharya sushrut

Nabhi, basti sevani mehan vedna, mutra dharasang, sarudhir mutra, mutra vikiran, Gomeda prakasham, atiavil sasiktam, dhavan -plavan- langhan adhavgaman vedna.

#### According to acharya charak

Basti, sevani and mehan vedna, sarudhir mutra, vishirna dhara. According to ashtang hridya:-Nabhi, basti and sevani mehan vedna, sarudhira mutra, gomed prakasham, sukham mehati vyapyate.

#### According to ashtang sangrah

Nabhi Basti and Sevani vedna, mutradharasang, sarudhir mutra, sarudhir mutra, Dhawan plavanlanghan, pristhayama adhavgaman vedna.

#### According to madhav nidan

Nebhi basti and sevanj vedna, vishirna dhara, sukham mehati vyapyate.

#### According to kashyap

Sasiktam, Atimutratvam, pratatam roditi and kasmana. Commen roop mentioned by almost all the acharya.

#### 4. Upshaya- Anupshaya

The factor reduce disease sign and symptoms are called the upshaya. While the factor aggravating the disease are called anupshaya.

Ashmari is kapha dominant disease, so all the steps leading to kapha's control can be regarded as upashaya, like all measures vitilating kapha can be regarded as ashamri's anupshaya.

#### 5. Samprapti

The method of manifestation of a specific disease is known as samprapti. Thedosha's, dushya, strotodushti, agni state etc. can be evaluated Samprapti vighattan evam chikitsa is anathor important aspect of samprapti in ayurvedic therapy.

#### According to acharya sushrut

Vata yukt kapha, pittayukt kapha or just kapha get aggravated in people who do not frequently go through shodhan process and unhealthy diet. Then it reaches basti mixes with

mutra and takes the form of an ashmari.

Anathor instance was provided by acharya sushrut to clarify the development of ashmari as clear water in a fresh pitcher become muddy over time calculus in basti is created likewise.

#### According to acharya charak

Acharya charak shows ashmari's formation cycle with gorochana's instance. He suggests that when the doshayukt mutra or shukrayukt mutra reaches basti, where they are dried up by vayu and pitta's intervention, mutra is transformed into ashamri.

Types of ashamri - The ashmari disease was categorized into four kinds by acharya sushrut.

- 1. Shleshmashmari
- 2. Pittashmari
- 3. Vatashmari
- 4. Shukrashmari

#### Sadhyta asadhyata

Ashmari is regarded by acharya sushrut among ashtamahagad and mahagad is very hard to treat because in nature they are asadhya.

Ashmari is a serious disease like the god of death. It can be cured with drugs when freshly created and smaller in size.

#### **Updrava**

Sharkara (Urinary growal), sikata meha (Diabetes variety) and bhasmakhya roga secondary ashmari illness.

#### Arishta lakshan

According to acharya sushrut, if patient are inflamed with nabhi and vrishanas, serious pain and urine obstruction occurs and the ashmari is linked with sharkara or sikata it rapidly kills the patient.

**Chikitsa:-** Ashmari can be managed in different ways.

- 1. Aushadha Chikitsa
- 2. Basti Chikitsa
- 3. Kshara Chikitsa

#### 4. Shastra Chikitsa

#### 1. Aushadha Chikitsa

Ashmari is known to be a fatal and serious illness. Rapid diagnosis and treatment of it is mandatory. At the Purvaroopa stage itself, Acharya Sushruta has recommended to treat the disease. A newly formed Ashmari can be treat with medicines while surgical steps should be used to treat a large or chronic Ashmari.

### Vatashmari chikitsa<sup>[36]</sup>

Ghrita is to be cooked with a decoction of Pashanabheda, Vasuka, Vashira, Ashmantaka Shatavari, Gokshura, Brihati, Kantakari, Brahmi (Kapotvanka), Artagala, Kacchaka, Ushira, Kubjaka, Vriksadini, Bhalluka, Varuna, Shaka- phala, barley, Kulattha, Kola and Kataka fruits, and with the Kalka that make up Ushakadi Gana''s group. This Ghrita breaks down the Ashmari induced by Vata easily.

Alkali, gruels, soups, decoction and milk well prepared with Vata-subduing drugs should also be recommended as food and beverages.

### Pittashmari chikitsa<sup>[37]</sup>

Ghrita should be cooked with the decoction of Kusha, Kasa, Sara, Gundra, Itkat, Morata, Pashanabheda, Shatavari, Vidari, Shalimula, Trikantaka, Bhalluka, Patola, Patha, Pattura, Kuruntika, Punarnava and Shirisha; and the Kalka of Shilajatu, Madhuka, Indivara (blue lotus), Trapusha and Ervaruka. This Ghrita disintegrates the Pitta-caused Ashmari easily.

Often recommended as food and drinks should be alkali, gruels, soups, decoction and milk properly prepared with above Pitta-subduing drugs.

### Shleshmashmari chikitsa<sup>[38]</sup>

Ghrita of Goat's milk should be cooked with the decoction of Varunadi Gana, Guggulu, Cardamom, Harenu, Kutha, Bhadradi, Maricha, Chitraka and Devadaru and the Kalka of Ushakadi Gana. This Ghrita breaks up the Ashmari caused by Kapha easily.

Often recommended as food and drinks should be alkali, gruels, soups, decoction and milkproperly prepared with the above Kapha- subduing medicines.

### Shukrashmari chikitsa<sup>[39]</sup>

Spontaneously brought down to the urinary passage a seminal concretion or gravel, it should be extracted through the same channel. The urethra should be cut open and a hook like instrument (Badisha shastra) or any other tool should be used to remove the stone if the passage does not eject it. The person must refrain from sexual intercourse, horseback ridingor an elephant's back, diving, climbing on trees and up mountains and exchanging indigestible substances for one year.

#### 2. Basti chikitsa

All the Acharyas suggest Basti chikitsa in Ashmari. According to Sushruta.

When decoction of latex trees is delivered through a urethral bath, the calculus flushes outinstantly along with the blood accumulated in the bladder.<sup>[40]</sup>

#### 3. Kshara chikitsa

Acharya Sushruta has promoted the preparation of Kshara from the above medicines to prepare Ghrita. This Kshara removes calculus, abdominal swelling and urinary gravel.

To dissolve urinary gravel, an alkali made from Tila, Apamarga, Kadali, Palasha and Yava paste should be taken with the sheep's urine. [41] Patala and Karvira alkali should also be used.

#### 4. Shastra chikitsa

Surgery must be the main treatment because progress is unpredictable even with professional surgeons. Operative procedure should be considered first of all in these situations when death with non-operative care is expected. Therefore, surgery should be done by a skilled surgeon afterobtaining the authority's permission.<sup>[42]</sup>

#### **Indications for surgery**

Shastra karma is the final treatment when Ashmari treatment with Ghritas, alkali decoctions, milkpreparations and uttarbasti is not effective.<sup>[43]</sup>

### a) Purvakarma<sup>[44]</sup>

- In the first instance, the patient should be compensated by the use of the oleaginous material.
- Then the body channels of the patient are washed and drained with emetics and purgatives, so that all doshas are eliminated.

- After being sedated and massaged with oil, the patient is now givenmeal.
- After that Bali-pradaan, Mangal-paath, Swasti-vaachan karma is over.
- Collect all the tools and medicines listed in Agropaharaniya adhyay.
- The surgeon must inform the patient afterwards. Positioning of the patient

A person with a strong body and not a nervous person should first be made to sit as high asthe knee joint on a table. The patient should then be allowed to lie on his/her back on the table positioning in the lap of the attendant, the upper part of his/her body with his/her waistlying on an elevated cloth cushion. Then it is appropriate to contract the elbows and knee joints (of the patient) and bind them by ropes or straps.

#### **Pre-operative manipulation of the stone**

After positioning, the patient's umbilical region should be massaging with oil, then pressing down the left side of the umbilical region with a closed fist to bring down thestone.

The surgeon should insert his lubricated index and middle finger into the rectum. Then the finger should be brought up to the perineum's raphe i.e.in the middle line to put the stone between the rectum and the penis when pushed to appear like an elevated granthi.

## b) Pradhana karma<sup>[45]</sup>

- On the left side of the perineum raphe, an incision should be made at the length of abarleycorn and with enough width to allow free stone egress.
- For the ease of the procedure, most experts recommend that the incision to be made on the right side of the perineum raphe.
- In removing the stone from its cavity, careful care should be taken to prevent it from breaking into pieces and leaving any broken particles behind (inside the bladder). Even if a small particle is left behind then it again increases in size, therefore by the Agravakra yantra(curved forceps) it should be completely removed.
- For women, the uterus is adjacent to the urinary bladder, which is why the stone should be removed by making an oblique and upward incision, otherwise there would be a urineexuding ulcer will occur. During the procedure, any injury to Bastimukha would be attended in a male patient patient with the same case.
- Patient is fomented by sitting in a Droni after stone removal, which avoids the chance of blood accumulation in the bladder. However, if blood is accumulated in the bladder, a Pushpa-netra instrument should be used to administered decoction of latex trees into the

bladder.

# c) Pashchata karma<sup>[46]</sup>

- A treacle solution is supplied to the patient for clearing the urinary tract, and the operated wound should be lubricated with honey and Ghrita after taking him out from the Droni.
- The patient should be given a yavagu boiled with drugs (which purify the urine) and combined with Ghrita for three consecutive days every morning and evening.
- After that, rice milk and a large amount of treacle are given to the patient for ten days (for urine and blood purification, as well as moistwound).
- After the lapse of ten days, the patient is made to share a diet (rice) with the soup of Jangala animals' flesh and the expressed citrus fruit juice.
- The patient's body is carefully administered sudation therapy either by oil or by liquidafter that period. Then the wound with the decoction of latex trees should be cleaned.
- The wound is filled with pastes from, Rodhra, Madhuka Manjishthaand Prapundarika.
- The wound should be treated with medicated oil or ghrita prepared from the same substancetogether with Haridra.

#### **Precaution during surgery**

In asituation where the stone is handled, the person drops down motionless with his head bent down and eyes fixed on the vacant stare like that of a dead man, no effort should be made to remove the stone. In such a scenario, the death is sure to follow. In the absence of such an event, the procedure should be continued he following parts to be covered during Ashmari's surgical removal-

#### Sevani mutra praseka

Shukravaha Srotasa Mutravaha Srotasa Mushka srota Yoni.

#### Guda basti

Death may result in a Mutravaha Srotasa cut, which causes to accumulate in the bladder. Any Shukravaha Srotasa accident results in the patient's death or impotence. Some Mushkainjury leads to Dhwajabhanga (loss of erection), Mutra Praseka injury leads to frequent urine dribbling. Yoni or Sevani injury causes extreme pain, whether rectum or bladder injury leads to immediate death.<sup>[48]</sup>

#### Pathya-Apathya

Charaka Samhita Harita Samhita, Bhaishajya Ratnavali mentioned Ashmari's Pathyapathya, but it was not listed explicitly by Acharya Sushruta.

**Pathya:** Useful in Ashmari are Langhana, Vamana, Virechana, Basti, Avagaha sweda. The recommended dietetic items are Yava, Kulattha, Purana Shali, Mudga, flesh of Krauncha bird, Yavakshara and all Vata Nashaka Aahara. Most of these items are Vatanulomana and Mutrala. Gokshura, Yavakshara, Varuna, Punarnava and Pashanabheda are also listed as medicine.<sup>[49]</sup>

**Apathya:** According to Acharya Sushruta, for Ashmari Ativyayama (physical work or exercise), Adhyashana, Samashana, Sheeta, Snigdha, Guru, Madhura Aahara, defication and micturition suppression and heavy diets are viewed as Apathya. For Ashmari, according to Acharya Charaka, Vyayam, Sandharana, Sushka, Ruksha, Pishtanna, Vaartaka seven, Vyavay, Kharjur, Shalook, Kapittha, Jambav, Bisma (kamal mool), Kashaya rasa sevana etc.<sup>[50]</sup>

#### **CONCLUSION**

Thus, it can be concluded that conservative modality by Ayurvedic herbs is very popular, safe, without any side effects as well as economical for the management of Ashmari upto 10 mm size, which has been proved by various research studies. Moreover, the Ashmari drug are alsohelpful in prevention of recurrence of Ashmari.

#### REFERENCES

- 1. Sushruta Samhita, Sutrasthana with Nibandhasamgraha commentary of Shri Dalhanacharya. In: Acharya VY, editor Reprint ed. Varanasi: Chaukhambha Surbharati Prakaashana, 2010; 144: 33 4.
- 2. Sushruta Samhita "Ayurveda Tatva Sandipika", commentary. In: Shashtri A, Sanskrit C, editors. Reprint, Nidansthan. Varanasi: Chaukhambha Surbharati Prakashana, 2010; 19: 20 3.
- 3. Sushruta Samhita "Ayurveda Tatva Sandipika", commentary. In: Shashtri A, Sanskrit C, editors. Reprint, Chikitsasthan. Varanasi: Chaukhambha Surbharati Prakashana, 2010; 7: 3.
- 4. Sushruta, Vedotpattimadhyayam, Acharya Trikamji Yadavji (Sushruta Samhita with Nibandhasamgraha commentary of Shree Dalhanacharya & Nyayachandrika commentary

- of Shree Gayadasacharya on Nidanathan). Reprint, Nidansthan, Varanasi: Chaukhambha Surbharati Prakashana, 2005; 13, 3: 8-10.
- 5. Sushruta Samhita "Ayurveda Tatva Sandipika", commentary. In: Shashtri A, Sanskrit C, editors. Reprint, Nidansthan. Varanasi: Chaukhambha Surbharati Prakashana, 2010; 8: 10 3.
- 6. Agnivesha. Charaka Samhita, Revised by Charaka & Dridhbala with "Ayurveda Deepika" commentary, by Chakrapanidatta. In: Acharya VD, Surbharati C, editors. Reprint, Vimanasthana. Varanasi: Chaukhambha Surbharati Prakashana, 2002; 8: 122.
- Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary volume 1, Nidansthan-Ashmarinidan. Varanasi. Chaukhambha Sanskrit Sansthan Publisher, 2012; 311: 3 – 4.
- 8. Chaturvedi G, Shastri K. Charak Samhita of Agnivesh with vidyotini Hindi commentary volume 2, Sastri R, Upadhyaya Y, Pandeya GS, Gupta B editors. Chikitsasthan, Trimarmiyachikitsitamadhyay. Varanasi: Chaukhambha Bharati Academy publisher, 2009; 722: 4.
- 9. Satyapala. Kasyapa Samhita of Vrddha Jivaka with Vidyotini Hindi commentary, Chikitsasthan, Mutrakricch chikitsa adhyay. Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2005; 10: 121-122.
- Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary -valume 1,
  Nidansthan-Ashmarinidana Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012;
  311: 3, 5 6.
- 11. Gupta A. Astangahrdayam of Vagbhata with Vidyotini Hindi commentary. Upadhyaya Y editor. Nidansthan-Ashmarinidana Varanasi: Chaukhambha Prakashan Publisher, 2012; 489: 9 7.
- 12. Murthy K.R.S. Astanga samgraha of Vagbhata with English translation. Nidansthan-Mutraghata nidanam Varanasi: Chaukhambha Orientalia Publishers, 2005; 418: 9 1.
- 13. Vijayraksita & Srikanthadatta. Madhavanidanam of madhavakara with madhukosa Sanskrit commentary, Tripathi B editor. Ashmarinidanam. Varanasi: Chaukhambha Surbharati Prakashan Publisher, 2003; 2: 638-646.
- Misra BS. Bhava Prakash with Vidyotini Hindi commentary, Uttarardh- madhyamkhanda,
  Ashmari Rogadhikar. Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2005; 376:
  37 3.
- 15. Shastri L. Yogratnakara with Vidyotini Hindi commentary. Shashtri B. editor. Uttrardha Ashmarinidan adhyay. Varanasi. Chaukhambha Sanskrit Sansthan Publisher,

- 2005; 2: 68.
- Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary-volume 1,
  Nidansthan-Ashmarinidana. Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012;
  312: 3 7.
- 17. Chaturvedi G, Shastri K. Charak Samhita of Agnivesh with Vidyotini Hindi commentary-volume 2, Sastri R, Upadhyaya Y, Pandeya GS, Gupta B editors. Chikitsasthan-Trimarmiyachikitsitamadhyay, Varanasi: Chaukhambha Bharati Academy Publisher, 2009; 723: 26, 37 38.
- 18. Gupta A. Astangahrdayam of Vagbhata with Vidyotini Hindi commentary. Upadhyaya Y editor. Nidansthan-Mutraghatanidanam, Varanasi: Chaukhambha Prakashan Publisher, 2012; 489: 9, 9 10.
- 19. Murthy K.R.S. Astanga Samgraha of Vagbhata with English translation, volume 2, Nidansthan- Mutraghatnidana, Varanasi: Chaukhambha Orientalia Publishers; 2005; 418: 9 13.
- 20. Vijayraksita & Srikanthadatta. Madhavanidanam of madhavakara with Madhukosa Sanskrit commentary -volume 1. Tripathi B editor. Ashmarinidanam, Varanasi: Chaukhambha Surbharati Prakashan Publisher, 2003; 640: 32, 2 5.
- 21. Misra BS. Bhava Prakash with Vidyotini Hindi commentary, Uttarardh- madhyam khanda, Ashmari Rogadhikar, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2005; 376, 8, 37: 4 5.
- 22. Shastri L. Yogratnakara with Vidyotini Hindi commentary, Shastri B. editor. Uttarardha-Ashmarinidana adhyay, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2005; 68: 8, 4 5.
- 23. Satyapala, Kasyapa Samhita of Vrddha Jivaka with Vidyotini Hindi commentary, Sutrasthan-Vedana adhyay, Varanasi Chaukhambha Sanskrit Sansthan Publisher, 2005; 34: 25 24.
- 24. Harita Samhita with Nirmala Hindi commentary, Tritya sthan, chapter Varanasi: Chaukhambha Bharati Academy Publisher, 2010; 411: 31, 5 8.
- 25. Gupta A. Astangahrdayam of Vagbhata with Vidyotini Hindi commentary, Upadhyaya Y editor. Nidansthan-Sarvaroganidanam. Varanasi: Chaukhambha Prakashan Publisher, 2012; 295: 2.
- 26. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Nidansthan- Ashmarinidana, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 315: 3 24.

- 27. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Nidansthan- Ashmarinidana, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 315: 3 25.
- 28. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Nidansthan- Ashmarinidana, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 315: 3 26.
- 29. Chaturvedi G, Shastri K. Charaka Samhita of Agnivesh with Vidyotini Hindi commentary-volume 2, Sastri R, Upadhyaya Y, Pandeya GS, Gupta B editors. Chikitsasthan-Trimarmiyachikitsitamadhyay, Varanasi: Chaukhambha Bharati Academy Publisher, 2009; 723: 26 36.
- 30. Gupta A. Astangahrdayam of Vagbhata with Vidyotini Hindi commentary. Upadhyaya Y editor. Nidansthan-Mutraghatanidanam, Varanasi: Chaukhambha Prakashan Publisher, 2012; 489: 9 6.
- 31. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Nidansthan- Ashmarinidana, nd ed. Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 311: 3 3.
- 32. Gupta A. Astangahrdayam of Vagbhata with Vidyotini Hindi commentary. Upadhyaya Y editor. Nidansthan-Mutraghatanidanam, Varanasi: Chaukhambha Prakashan Publisher, 2012; 490: 9 15.
- 33. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, volume 1, Chikitsasthan- Ashmarichikitsa, Varanasi: Chaukhambha Sanskrit Sansthan Patel et al. World Journal of Pharmacy and Pharmaceutical Sciences Publisher, 2012; 52: 377.
- 34. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Nidansthan- Ashmarinidana, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 313: 3 13.
- 35. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Sutrasthan-Avarniyaadhyay, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 163: 33 12.
- 36. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Chikitsasthan- Ashmarichikitsa, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 52: 7 5.
- 37. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Chikitsasthan- Ashmarichikitsa, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 52: 7, 9 13.

- 38. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Chikitsasthan- Ashmarichikitsa, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 53: 7 14.
- 39. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Chikitsasthan- Ashmarichikitsa, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 56: 7 34.
- 40. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Chikitsasthan- Ashmarichikitsa, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 56: 7 35.
- 41. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Chikitsasthan- Ashmarichikitsa, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 53: 7 22.
- 42. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Chikitsasthan- Ashmarichikitsa, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 54: 7, 28 29.
- 43. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Chikitsasthan- Ashmarichikitsa, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 53: 7 27.
- 44. Shastri A. Sushruta Samhita with Ayurved tatva Sandipika Hindi commentary, Chikitsasthan- Ashmarichikitsa, Varanasi: Chaukhambha Sanskrit Sansthan Publisher, 2012; 54: 7 30.