

CONCEPTUAL STUDY ON KAPHAJA SIRASHOOLA WITH SPECIAL REFERENCE TO MAXILLARY SINUSITIS AND ITS MANAGEMENT**BY NASYA KARMA****Dr. Varun T. V.^{1*} and Dr. Vishnu Damodar²**

¹PG Scholar, Department of PG Studies in Shalakyatantra, SVMAMC, Ilkal, Bagalkote, Karnataka.

²Associate Professor, Department of Rachana Sareera, PNPSAMC, Parakalai, Kasargod, Kerala.

Article Received on
17 Oct. 2020,

Revised on 06 Nov. 2020,
Accepted on 27 Nov. 2020

DOI: 10.20959/wjpr202015-19304

Corresponding Author*Dr. Varun T. V.**

PG Scholar, Department of
PG Studies in
Shalakyatantra, SVMAMC,
Ilkal, Bagalkote, Karnataka.

ABSTRACT

Shiras is an important organ situated above the Jatru. Shiras is said to be the Uttamanga, as it is the seat of vital organs like Prana, Indriya, Pranavaha srotas and Sadhyo Pranahara marma. Acharaya Sushruta has mentioned 11 types of Shiro-Roga in Uttara Tantra and Kaphaja Shirashoola is one of them. In Kaphaja Shirashoola, there is heaviness in head along with dull pain and numbness in head, feeling of the head being covered with a wet cloth and stiffness. The diseases in which head ache is the prime symptom those are named as Shirashoola. Various Shirorogas are mentioned in our classics, Kaphaja Shirashoola is one among them. It is characterized by headache, heaviness, rigidity, facial pain and Peri-orbital oedema. The headache persists throughout

the day and it may increase in night, this condition is commonly associated with post nasal discharge and nasal blockage. The pain from sinus headaches is usually more of a dull pain versus a sharp rapid pain. Therefore sinusitis can be considered under the heading of Kaphaja Shirashoola. In Ayurveda it is said that, the head disease caused by Kapha should be controlled with measures which eliminate Kapha, such as head evacuation, emesis, and gargling with irritant drugs. For this Acharyas mentioned Nasya karma is the prime one.

KEYWORDS: Shiras, Kaphaja Shiroroga, Maxillary Sinusitis, Nasya karma.

INTRODUCTION

Kaphaja Shira Shoola is one among the ten types of Shirorogas, explained by Vagbhata

Acharya.^[1] It is one of the commonly found diseases in day to day clinical practice, found irrespective of age, sex, and religion. The cardinal features of Kaphaja Shira Shoola include mild/moderate head ache and heaviness of head. The head ache persist throughout the day and it may increases in the night. This condition is commonly associated with Nasal obstruction, post Nasal discharge and Nasal discharge.

Most of the clinical features are correlated with the signs and symptoms of Maxillary Sinusitis, the incidence of this is becoming more significant in population because of few Nidanas such as – Rajo – Dhoomasevana (atmospheric pollutants), Purovatasevana (exposure to wind currents and moist breeze), Jalakrida (swimming), Madura, Singdha, Sheetha, Guru Ahara Sevana.

“Nasta Karmacha kurveta shirorogeshu shastravid”^[2]

In Ayurvedic classics, we come across the treatment of Kaphaja Shira Shoola Nasya Karma is main among them and considered as the prime modality in all types of Shiroroga.

“Kaphottitam shirorooge jayeet Kapha nivaranahi shirovirekahai”.^[3]

Similarly in modern science during headache classification, the IHS classified headache from sinus origin which is associated with coexisting symptoms like nasal obstruction, nasal discharge, post nasal drip etc. Sinusitis is an extremely prevalent disorder that has a significant impact on the quality of life of affected individuals. The reason behind this may be the changing lifestyle, urbanization, increasing pollution and increasing resistance to the antibiotics. Being a developing country the incidence of the disease is high among Indian population.

The treatment of sinusitis includes antibiotics, decongestants, antihistamines, analgesics and surgical procedures. Although these treatments offer good contributions towards the healing process, but sinusitis is not successfully combated due to its recurrence and well known side effects of the medicines. Fear of surgery, its expense and complications have restricted patients from opting surgery. In view of magnitude of the problem, there is a need to elucidate a therapy within reach of patient and having the potential to drain the sinuses by removing the pathology with sustained effect and reduced recurrence. Therefore the present review on Kaphaja Shirashoola with special reference to maxillary sinusitis helps to find out an alternative treatment option like Nasya Karma.

SHIRAS AND KAPHA

Shiras (head) is one of the most vital organs of body. In Ayurveda, it is listed under Dashavidha Pranayatanas and three Marmas. Shiras is the seat of all Gyanendriyas and controls the functions of Karmendriyas. All the Indriyas, Indriyavahi and Pranavaha Srotas depend on the Shiras for their functions and all the sense organs and the channels carrying the sensory and vital impulses from the Shiras are like the rays from the sun.^[4] Ayurveda considers that Vata, Pitta and Kapha are the three pillars of human body. According to Ayurveda seers, Shiras (head) is a place where Kapha is dominant. Kapha, in its normal states of functioning represents a potential source of strength and resistance to disease i.e. Bala and Ojas. Acharya Charaka described Aatmarupa of Kapha, which are Sneha, Shaitya, Shaukalya, Gaurav, Madhurya, Sthairya, Paichchilya and Matsarya. These properties are responsible for different disease originated from this Dosha.^[5]

SHIROROGA

“Shiroroga shabdena shirogata Shoolarupa Rujabidiyate”^[6] Vijayarakshita comments that, the word Shiroroga has to be considered as pain or ache in Shiras.

“Shiroroga Shabdasya Shoola Eva Rujakare Vritatvat”^[7]

Acharya Chakrapani commenting in the context of Vataja Shiroroga explained that, one has to understand Shiroroga as Shoola or Ruja in Shiras (headache).

KAPHAJA SHIROROGA

All the acharyas have stated that, Kaphaja Shiraroga is a condition where there will be mild pain in Shiras, throughout the day and felt more at night.^[8]

NIDANA^[9]

- Aasya Sukha (sedentary life style).
- Swapana Sukha (excessive sleeping or sleeping during day-time).
- Guru Bhojana (intake of heavy diet).
- Snigdha Bhojana (unctuous diet).
- Ati Bhojana (excessive food intake).

Due to Sevana of these Nidanas, Kapha is formed in excess which causes Srotorodha and impaired digestion (Mandagni). Due to hypo functioning of Agni, the undigested food residue is formed. This residue is known as Ama and is said to be the root cause of all the disease. As

per Amarakosha, “*Amyate Peedyate Srotasa Samuho Anena iti Aam*” i.e. substance which is detrimental to Srotas is termed as Ama and it produces pain or creates pressure on Srotamukha and accumulates in Srotamukha.

RUPA^[10-12]

Due to indulgence in the above mentioned etiological factors the Kapha gets vitiated and provoked in the head and results in the following sign and symptoms of Kaphaja Shirashoola- Kaphaupadigdham Shiras(Feeling of having a coating of phlegm inside the head), Kaphaupadigdham Galam(Post nasal discharge), Guru(Heaviness in the head), Pratishtabdham(Fullness in the head), Himam(coldness in the head), Shuna Akshikoota (swelling around the eyes), Shuna Vadanam(swelling on the face), Aruchi(Anorexia), Mandrujam(mild pain in head), Suptam(Numbness of head), Stimita(stiffness in the head), Shiranispandata(Veins not pulsating), Aalasya(Lassitude), Rukmandaahanya Adhikanishi (mild pain during day time and severe at night), Tandra(Drowsiness), Karnakandu(Itching inside the ears) and Vami(Vomiting).

SAMPRAPTI

Aacharya Charaka explained that as a consequence of indulgence in the Nidanas of Kaphaja Shiroroga, Kapha gets vitiated and lodges in Shirah Pradesh causing Kaphaja Shiroroga (Table 1).

Table 1: Samprapti Ghataka of Kaphaja Shiroroga.

Dosha	Kapha
Dushya	Rakta
Adhithana	Shiras/Mastiska Pradesh
Vyakta Sthana	Akshikoota (Periorbital area), Vadanam (Face), Nasa (Nose), Galam (Pharynx)
Agni	Jatharagnimandya
Rogamarga	Madhyama

SINUSITIS

The term, sinusitis, refers to a group of disorders characterized by inflammation of the mucosa of the paranasal sinuses. The newer definition is: Rhinosinusitis is a group of disorders characterized by inflammation of the mucosa of the nose and paranasal sinuses.^[13]

The paranasal sinuses are air containing spaces in certain bones of skull and they are in direct communication with the nasal cavity through their openings called ostia. They are four on each side- Maxillary sinus, Frontal sinus, Ethmoidal sinus and Sphenoid sinus.^[14] The sinus

most commonly involved is the maxillary sinus followed in turn by ethmoid, frontal and sphenoid. Very often, more than one sinus is involved (multisinusitis).^[15]

Sinusitis is one of the most common diseases affecting an estimated 15% of the population as a whole. It is seen that increased air pollution and exposure to cold and flu have caused an increase in this condition.^[16]

MAXILLARY SINUSITIS

Pair of sinuses is found in the maxillary bones of the face, are called the maxillary sinuses, and the infectious conditions in these pair of sinus known as maxillary sinusitis. Pathology of maxillary sinusitis is similar to those of general sinus pathology, but LOGAN TURNERS specifies few other pathological conditions are.^[17]

- The most common pathological changes are the result of increased vascular permeability causing hypertrophy of the mucosa which may eventually become polypoidal.
- There is a chronic inflammatory cellular infiltration, particularly around the vessel and the number of seromucinous glands and goblet cells is increased.
- Fibrosis of the lamina propria will result and often small multiple abscesses occur in the thickened mucosa.
- Endarteritis obliterans of the arterioles occurs with loss of the typical respiratory epithelium and general flattening of the epithelium.
- There is also a dense chronic inflammatory cell infiltrate in the deeper layers.

SYMPTOMS OF MAXILLARY SINUSITIS

- There is usually a copious postnasal discharge which may be greenish-yellow when acutely infected but is often clear. Clinical examination may not demonstrate this but the history will be quite empatic.^[18]
- Nasal obstruction is usually swelling of the inferior turbinate mucosa consequent on the presence of sepsis.
- The severe pain of acute sinusitis is absent, but a deep chronic head ache over the forehead, the bridge of the nose and the face is common. This is due to increased pressure in the sinuses (not a vacuum head ache). The timings of the head ache is said to be diagnostic but this is so variable as not to be useful.
- The presence of chronic sepsis in the upper respiratory tract may lead to be anosmia or cacosima, there are several causes of total or partial loss of smell but sinusitis, albeit otherwise asymptomatic, should be excluded.

- Anosmia results from the prevention of inspired and expired air reaching olfactory groove, Cacosmia is the result of chronic odiferous sepsis.
- Chronic irritation inside the nose may produce a vestibulitis or excoriation due to excessive use hand kerchief. Nosebleeds are also a common accompanying factor.
- The purulent discharge may also produce oedema of the eustachiantube orifice with consequent otitis media, granular pharyngitis and chronic laryngitis and followed by vomiting/nausea.
- In chronic maxillary sinusitis pain and tenderness are less sever.

DIAGNOSIS

Table 2: Conventional criteria for the diagnosis of sinusitis based on the presence of at least 2 major or 1 major and ≥ 2 minor symptoms.^[19]

Major Symptoms	Minor Symptoms
Purulent anterior nasal discharge	Headache
Purulent or discoloured posterior nasal discharge	Ear pain, pressure, or fullness
Nasal congestion or obstruction	Halitosis
Facial congestion or fullness	Dental pain
Facial pain or pressure	Cough
Hyposmia or anosmia	Fever (for sub-acute or chronic sinusitis)
Fever (for acute sinusitis only)	Fatigue

NASYA KARMA

The derivation of the word Nasya is from “Nasa” dhatu. Here, the Nasa dhatu is inferred in sense of nose. According to Vachaspatyam word “Nasata” means beneficial for nose.

In context of Ayurveda, the word Nasya suggests the nasal route for administration of various drugs. As per Acharya Sushruta, administration of medicine or medicated oils through the nose is known as Nasya.^[20] Arunadatta and Bhavaprakasha opine that all drugs that are administered through the nasal passage are called Nasya.^[21] Sharangadhara and Vagbhatta also hold the same view.

The procedure of Nasya karma also mentioned in the names *Prachchardana*^[22], *Shiro virechana*, *Shiro vireka*, *Murdha virechana*, *Navana*, *Nastaha Karma*.

Amongst the various synonyms of Nasya Karma shiro virechana, shiro vireka, prachchardana and murdha virechana are suggestive of elimination of doshas from the Shira or parts situated

above the jatra (clavicle). The terms nastaha and navana indicates site of administration.

Classification according to various Acharya is described in the table No.3^[23]

Sl. No.	Name of Acharya	Types	Classification
1	Charaka	3	According to mode of action: Rechana, Tarpana, Shamana
		5	According to the method of administration: Navana, Avapidana, Dhmapana, Dhuma, Pratimarsha
		7	According to parts of the drug used: Phala, Patra, Mula, Kanda, Pushpa, Nirryasa, Twaka
2	Sushruta	5	Shirovirechana, Pradhamana, Avapida, Nasya, Pratimarsha
3	Vagbhatta	3	Virechana, Brimhana, Shamana
4	Kashyapa	2	Brimhana, Karshana
5	Sharangadhara	2	Rechana, Snehana
6	Bhoja	2	Prayogika, Snaihika
7	Videha	2	Sangya Prabodhaka, Stambhana,

PROCEDURE OF NASYAKARMA

The procedure adopted for the Nasya Karma is followed as per Brihatrayi.^[24,25,26,27]

The procedure can be done in steps.

- Poorva Karma
- Pradhana Karma
- Paschat Karma

Poorva karma

The pre requisites for Nasya Karma are, Nasya Karma should be done on an appropriate day. It is advised that all drugs, materials and utensils necessary for Nasya Karma are collected adequately prior to Nasya Karma. Patient should have passed the natural urges like mutra (urine) and puresha (stool) and attended daily regimens such as bahir mukhadhavana (washing the face), dantadhavana (brushing the tooth), etc. Then patient is advocated with snehana and swedana on Shira (anointing with oil and fomented mildly) for liquefaction of dosha, and prayogika dhuma (medicated smoke inhalation) for the purpose of mukha and sroto suddhi. Patient who has undergone snehana and swedana is made to lie in supine position comfortably with the pravilambita Shira (head lowered) and his legs are to be slightly raised. The room should be free from direct blow of wind, intense heat or dust. After preparation of patient, mridu swedana and mardana is frequently done over gala (neck), kapola (scalp), lalatapradesha (forehead) or jatrurdvam (parts above clavicle). Here, swedana

can be taken as panitapa (warmed palms of the hands).

Pradhana karma

After fulfilling all the pre requirements, eyes of the patient are covered with chaturguna vastra (four folded cloth). The medicament to be administered is made sukoshna (lukewarm) by placing it in utensils those are made of swarna(gold), rajata(silver), tamra(copper), mrut patra(small mud vessel) or sukthi(conch shell) in ushnodaka(hot water). After that, tip of patient's nose is drawn upward by the vama pradeshni (left index finger), and with dahshina hasta (right hand), lukewarm medicament is instilled to either nostrils using suktika or pichu. The medicine is administered to both nostrils in avichina dhara (continuous stream), one after the other, keeping one nostril closed while the other is being medicated. The patient should remain relaxed during and after the time of administration of Nasya and has to avoid speech, anger, sneezing, laughing and shaking the head.

Pashchata karma

The Patient should lie in supine position for hundred Matra kala. After administration of Nasya, the regions of ears, forehead, scalp, and cheek, nape of neck, shoulders, palms and sole has to massage properly. Patient is asked to suck and spit out the medicine. Frequent fomentation is given till all the medicament is brought out and care is taken that no portion of medicament is left behind. Medicated dhumpana and gandusha (gargling) are advocated to expel out the residual doshas. Patient is advised to avoid dust, smoke, sunshine, head bath, anger, riding, excessive intake fat, alcohol and liquid diet.

Samyaka Yoga

The symptoms of samyak (proper) Nasya according to Charaka are Urah-shiro laghava (Feeling of lightness in chest and head), Indriya vishuddhi (sensoria proficiency) and Sroto vishuddhi (cleansing of channels). In addition, Sushruta has described sukha swapna-prabodhana (good sleep and awakening), chitta-indriya-prasannata (mental and sensorial happiness) and vikara pashama (alleviation of the disease). Besides these, Vagbhata described sukha swasa niswasa (proper respiration) akshi laghutva (lightness of eyes) and swara vishuddhi (clarity in voice) as symptoms of samyaka yoga of Nasya Karma.^[28,29,30,31]

MODE OF ACTION OF NASYAKARMA

Ayurvedic aspect

According to Charaka, the drug administered through the nose enters the uttamanga (Shira)

and eliminates the morbid doshas residing there.^[32] Ashtanga Samgraha described that, nasa (nose) is the dwara (door) for Shiras. The drug administered through nose reaches the shringataka marma and spreads throughout murdha, netra, shrotra and kanta through their siras (shringataka marma is a sira marma and formed by the siras of nasa, akshi, kantha and shrotra). Thereby eliminates the morbid doshas of urdhwajatru and extracts them from the uttamanga.^[33]

MODERN ASPECT

Steam inhalation and nasal wash

- Steam inhalation will liquefy and soften crusts and moisturize the dry inflamed mucosa.
- Steam inhalation will help to reduce the pain and irritation of the somatic constriction, due to heat stimulation and vasodilatation.
- The drug absorption is enhanced by local fomentation due to vasodilatation that is caused by heat stimulation.
- Nasal wash helps in loosening thick nasal secretions and decrease crusting of secretions near the nasal ostia and prevent sinus ostia obstruction.

CONCLUSION

Paranasal sinuses which are air filled spaces in the bones of skull are one among the structures of Shiras (Head). Most of the description of Kaphaja Shirasoola is similar to maxillary sinusitis. Therefore maxillary sinus headache or maxillary sinusitis can be considered as Kaphaja Shirasoola based on etiology, pathology and clinical features.

Considering the points like side effects of modern medicines, developing resistance of antibiotics, cost, fear and complications of surgeries; thus the ayurveda treatment nasya karma plays an important role in the management of Kaphaja Shirasoola are quite safer and have the potential to drain the sinuses along with immunomodulation.

REFERENCES

1. Shri harinarayana sharma vagbhata's Ashtanga sangraha Published by chaukambha vishwabharati. A.s.u. 27/23 page no.923.
2. Dr. Brahmanand Tripathi, Agnivesha, Charaka Samhita, edited with Charakachandrika, Published by Chaukambha Surabharati Prakashana Ch.S.Si.-9/111 Page no 1089.
3. Kaviraja Ambikadatta Shastri, Susrutha Samhita of Maharsi Susrutha edited with Ayurveda Tattva Sandipika, Published by Chaukhambha Sankrit Sansthan S.S.U-25/7

Page:-122.

4. Agnivesh, Charaka Samhita (2008) Vidyotini Hindi commentary. Chaukhamba Bharti Academy, Varanasi, India, page no. 1051.
5. Agnivesh, Charaka Samhita (2008) Vidyotini Hindi commentary. Chaukhamba Bharti Academy, Varanasi, India, page no 405.
6. Shri Sudarshana Shastri editor Madhavanidanam with Sri Vijayarakshita and Srikantadatta with Vidyotinihindi Srimadhavakara with Madhukosha Sanskrit commentary Part –1, Chaukhambha Sanskrit Bharati, Varanasi. 26th edition 1996. M.N 60/1 page no 15.
7. Dr. Kushavaha Harishchandra, Charaka Samhita of Agnivesha edited with Charakachandrika, 2009 edition Published by Chaukhambha Surabharati Prakashana Ch.su.-17/21 Page no 258.
8. Kaviraj Atrideva Gupta, with Vidyotini Hindi commentary, Ashtanga Hridaya of Vagbhata edited, Published by Chaukhambha Sankrit Sansthan. Uttarantra. A.H.U 23/10 Page no 536.
9. Agnivesh, Charaka Samhita (2008) Vidyotini Hindi commentary. Chaukhamba Bharti Academy, Varanasi, India, page no 334.
10. Agnivesh, Charaka Samhita (2009) Vidyotini Hindi commentary. Chaukhamba Bharti Academy, Varanasi, India, page no 334.
11. Sushruta, Sushruta Samhita (2008) Ayurveda Tattva Sandipika. Chaukhambha Sanskrit Sansthan, Varanasi, India, page no 161.
12. Vagbhata, Ashtangahridayam (2008) Vidyotini Hindi Commentary. Chaukhambha Prakashan, Varanasi, India, page no 726.
13. <http://www.crcnetbase.com/isbn/978-0-340-80893-1>
14. <https://docs.google.com/file/d/0B-Z6-qA19s-SDBHTmtJNHJTWG8/view>
15. <https://docs.google.com/file/d/0B-Z6-qA19sn-SDBHTmtJNHJTWG8/view>
16. Sinusitis, <http://www.nym.org/healthinfo/docs/062/doc62medicat.html>
17. Logan Turner's Diseases of the Nose, Throat and Ear Head and Neck Surgery edited by S. Musheer Hussain, 11th Edition, Sinusitis Chapter.
18. Bhargava, a short textbook of E. N. T. Diseases.
19. Chow, Benninger MS, Brook I, Brozek JL, Goldstein EJ, et al. (2012) IDSA Clinical Practice Guideline for Acute Bacterial Rhinosinusitis in Children and Adults. Clin Infect Dis., 54(8): e72-e112.
20. Dr. Kushavaha Harishchandra, Charaka Samhita of Agnivesha edited with

- Charakachandrika, 2009 edition Published by Chaukambha Surabharati Prakashana Ch.chi.26/106 page no 691.
21. Kaviraja Ambikadatta Shastri, Susruta Samhita of Maharsi Susruta edited with Ayurveda Tattva Sandipika, Published by Chaukhambha Sankrit Sansthan S.S.U-25/7 Page no 122.
 22. Kaviraja Ambikadatta Shastri, Susruta Samhita of Maharsi Susruta edited with Ayurveda Tattva Sandipika, Published by Chaukhambha Sankrit Sansthan Su.chi- 40/21-29 Pageno 1084.
 23. Pandit Sri Brahma Sankara Mishra, Bhavamishra editor Bhavaprakasha Vidyotini with Hindi commentary Part-2 Chaukhambha Sanskrit Series office Varanasi. 3rd Edition, 1961. B. P. Shiroroga chikisa 70.
 24. Yadavaji trikamaji Achar, Sri Dalhanavirachita Nibandhasangraha vyakhyana and Gayadasa virachita Nyayachandrika vyakhyana, Sushruta Sushrutasamhita, Chaukhambha Surabharati prakashana Varanasi Reprint 2003. Su.chi. 40/42 page no 1010.
 25. Yadavaji trikamaji Achar, Sri Dalhanavirachita Nibandhasangraha vyakhyana and Gayadasa virachita Nyayachandrika vyakhyana, Sushruta Sushrutasamhita, Chaukhambha Surabharati prakashana Varanasi Reprint 2003. Su.chi. 40/25-31 page no 1007.
 26. Dr. Kushavaha Harishchandra, Charaka Samhita of Agnivesha, edited with Charakachandrika, 2009 edition Published by Chaukambha Surabharati Prakashana Ch.Si.9/98-106 page no 1088.
 27. Kaviraj Atrideva Gupta, Vidyottini Hindi commentary on Ashtanga Sangraha of Vagbhata, Published by Chaukhambha Sankrit Sansthan A.S.Su- 29/13-16 page no 596.
 28. Kaviraj Atrideva Gupta, Vidyottini Hindi commentary on Ashtanga Sangraha of Vagbhata, Published by Chaukhambha Sankrit Sansthan A.H.Su- 20/17-22 page no 129.
 29. Dr.Kushavaha Harishchandra, Charakachandrika commentary on Charaka Samhita of Agnivesha, 2009 edition Published by Chaukambha Surabharati Prakashana Ch.Si.1/51 page no 957.
 30. Yadavajitrikamaji Achar, Sri Dalhanavirachita Nibandhasangraha vyakhyana and Gayadasa virachita Nyayachandrika vyakhyana, Sushruta Sushrutasamhita, Chaukhambha Surabharati prakashana Varanasi Reprint 2003. Su.chi. 40/33-38 page no 1009.
 31. Kaviraj Atrideva Gupta, Vidyottini Hindi commentary, Ashtanga Sangraha of Vagbhata,

Published by Chaukhambha Sankrit Sansthan A.S.Su- 29/17 page no.-597.

32. Dr.Kushavaha Harishchandra, Charakachandrika, Charaka Samhita of Agnivesha, 2009 edition Published by Chaukambha Surabharati Prakashana Ch.Si.1/52 page no. 957.
33. Dr.Kushavaha Harishchandra, Charakachandrika, Charaka Samhita of Agnivesha, 2009 edition Published by Chaukambha Surabharati Prakashana Ch.Si.2/22 page no. 973.