REVIEW ARTICLE

AN AYURVEDIC PERSPECTIVE OF ANATOMY AND PHYSIOLOGY (SHAREERA) OF PANCHAGNANEDRIYA

MAMATA. Y. KHATAWAKAR¹ V. R. HIREMATH²

Abstract: The body is divided into six parts majorly and as Shadanga shareera (Six part of body) and all these comprises of Anga and Pratyangas. The Shiras is said to be one among them and it is said to be Utthamanga (superior) because all sense organs are located in Head. Achaya Vagbhata said while explaining Abhyanga (Massage) especially Abhyanga (Massage) is done to Shiras (Head) and Shravana (Ear) the intension is to nourish all sense organs and prevent respective diseases related to that particular organ. Normally all sense organs have normal perception of their subject and when Atiyoga and Ayoga of these Indriyas may lead to different diseases related to sense organs.

Key words: Panchagyanendriya, Sense organs, Panchamahabhutas, Shareera, Dosha, Srotas, Marma, Asthi etc.

¹P. G. Scholar, ²Professor and Head, Department of P. G. Studies in Shalakyatantra, Shri Vijay Mahantesh Ayurvedic Medical College, Hospital, ILKAL, INDIA

Corresponding Email id: mamataky84@gmail.com  Access this article online: www.jahm.in

Published by Atreya Ayurveda Publications under the license CC-by-NC.
INTRODUCTION:

Utthamanga that is Shiras (Head), where Prana (life) is located. Where all sense organs are situated, it is said to be Shreshta (the best) as all sense organs are situated in Shiras \[1\].

The organ connected with the vital and important activities like Chesta (motor) and Sangnavha (Sensory) Acharya Charaka and Sushruta used the word Uttamanga. Acharya Vagbhata used the word as Urdhwanga \[2\].

According to Acharya Kashyapa Shiras has been coated as Urdhva kaphasaya. Shiras is one among sadhya pranahara marma (Vital part) and any aghata (Truma) to it leads to Marana (Death) \[3\].

Shiras is the adhithana for Indriya (senses), Indriyavahi and Pranavahisrotas (Respiratory system). It is adhithana (location) for Prana so it should be protected \[4\].

Shiras is said to be Uttamanga because all sense organs are located in Head along with Brain that is Mastishka, and Manas (Mind). The sense organs are Eye, Ear, Nose, Tongue and Skin.

Synonyms: Mastaka, Urdhvakaya, Urdwanga, Uttamanga, Munda. Sheersha, Urdhva hrudaya, Urdhvakaphashaya, Urdhvajathru, Devakosha, Shirohrudaya.

The Panchagnanendriyas (sense organs) are Netra (Eye), Nasa (Nose), Karna (Ear), Jiwha (Tongue) and Twacha (Skin). Here an attempt is made to Discuss about all basic aspects of Sense organs and Anatomy and Physiological aspects of Panchagyanendriya from all classical samhita granthas.

Definition of indriya: The one which does action and helps to do karma (pratyanga) or karya is called as Indiya. For the same Acharyas have been said five sense organs. The one who is consisting of Indriyas and Manas (Mind) and Athma (Soul) is said to be Chetana shareera. In Ayurveda there are total Ekadasha Indriyas in which Panchagnanendriya, Panchakarmenriya and Manas are involved.

Indriya Vyutpatti: Indriya vyutpatti taken place by Panchamahabhutas \[5\].

Panchabouthikata of panchagyanendriya:

Netra (Eye): Akasha, Vayu, Agni, Jala and Rupagrahana is its action

Nasa (Nose): Akasha, Vayu, Agni. Jala, Prithvi and Gandhagrahana is its action

Rasanendriya (Tongue): Akasha, Vayu, Agni and Jala and Rasagrahana is its action

Karna (Ear): Akashatatva and Shabdhagrahana is its action

Twacha (Skin): Akasaha and Vayutatva and Sparshagrahana is its action
**Shabdha sparhascha rupamcha rasougandhancha tadgunaha** [6]

By the proper perception of subject by an individual organ is said to be properly functioning and come to know its existence.

**NETRA (EYE)**

The human body is divided into six parts that is *Shaddanga shareera* and further divided into *pratyanga* 7. Akshi vartma, Akshi kaninika, Bhru, Akshikuta are named as pratyangas [8].

**Panchabhoutikatva:**[9]

Table No 1- Panchabhoutika constituency of eye

<table>
<thead>
<tr>
<th>MAHABHUTA</th>
<th>PARTS OF THE EYE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prithvi</td>
<td>Flesh and Skin, tendon</td>
</tr>
<tr>
<td>Jala</td>
<td>Fluid, blood, mucous, tears, and exudates</td>
</tr>
<tr>
<td>Agni</td>
<td>Visual faculty</td>
</tr>
<tr>
<td>Vayu</td>
<td>Opening and closing of lid</td>
</tr>
<tr>
<td>Akasha</td>
<td>Gross and minute channels of the eye</td>
</tr>
</tbody>
</table>

The Agni of respective *Mahabhuta* will digest the channels of *Kapha* and *Rakta* to develop sense organs [10]. *Indriyas* are considered as *Atmaja bhavas* by Acharya Charaka and Sushruta. The clearness of senses however is attributed by *Satmyaja bhava* [11].
The shape of Netra is precisely described with three words Nayana budbudam, Suvrttam and Gostanokaram. The eye ball is round like the breast; there is also small projecting nipple like structure. Budbudam indicates smoothness, fragile nature, cystic shape and the possibly reflective or refractive property.

**Measurements:** **Bahulya:** From front to back antero posterior diameter is two angula (The central part of an individual thumb is one angula for his measurement).

**Ayama:** Vistara from above downwards vertical diameter- two angula and from side to side horizontal – two and half angula.

**Sarvatah:** The circumference is three and half angula. Acharya Yogaratnakara has substituted the word Budbuda with Mandala [12].

The total width of all the mandalas is two and half angulas. Whereas width excluding vartma mandala is two angula.

The size of Krishna mandala is one third of ayama (2.5angula) and the size of dhrishti mandala is one seventh of Krishna mandala.

**Parts of Netra:** Netra is composed of Mandala, Sandhi and Patala [13].

**Netra Mandala:** The term Mandala is used to describe visible parts of the eye. Mandala means to cover a circular field literally mean covering a circular structure.

Five mandals Dhrishti, Krishna, Sukla, Vartma and Pakshamandalas. They are arranged in concentric circles. The space between the two eyes is four angula.

**Doshas in Vartmamandala:** Pranavayu situated in Murdha has intricate connection with Hridaya (Heart) and Indriya. Hence other disease of Head can also produce symptoms in eye lids [14].

**Netra Sandhi:** Netra sandhi is the junctional area of Netra mandalas they are of six in number Paksha, Vartma, Sukla, Krishna, Kaninika and Apana.

**Akshi Patala:** The word Patala literally means a thin membrane or coat. There are six patalas. Among them two are in the eye lids and are called as bahya patala, four are situated inside the eye. Su.Utt. 1/17. The patala is formed by Teja and Jala mahabhuta.

**Akshi bandhana:** The internal parts of the eye are properly aligned by Akshi bandhana.

The components are Sira, Kandara, Meda and Kapha [15].

**Marma:** There are three Marmas related to Eye they are Apana, Avarta and Sringataka. Apana is situated in the lateral end of the lower side of the eye. It is a Sira marma of half
angula size \[16\].

Avarta is a sandhimarma lying above eyebrows. It is half angula in size. Damage to these two will result in either blindness or visual impairment \[17\].

Sringataka is the junctional area of the channels of nutrition of sense organs like nose, ear, eye and tongue. It is situated between two eye brows. It is Siramarma of four angula. There are four such Marmas and are linked to nose, ear, eye and tongue.

Sira: There are 38 sira\s to carry doshas among them Vata- 8, Pitta and Kapha- 10 sira each.

Dhamani: There are Rupavahinidhamani to transmit visual perception and Ashruvahi dhamanis for the flow of tears, one in each eye.

Snayu and Pesi: There is a snayu of prithu type in eyes. One pesi is situated in each eye which is circular in shape \[18\].

Growth and decline of Dhrishti: The growth of dhrishti is comparatively less in adult life.

The abilities of human body will gradually reduce in every decade of life. The visual efficiency according to Sharangadhara samhita starts diminishing from the age of 60 years \[19\].

NETRA KRIYA SHAREERA:

Sense of vision one of the choicest possessions of living beings.

This takes place in three stages

1. Stage of Indriyartha sannikarsha (contact between eye and object)
2. Stage of Rupa alochanam (Analysis of Images)
3. Stage of Chakshu Buddhi (Visual perception)

Stage of Indriyartha sannikarsha (contact between eye and object):

This called as pratyaksha the image travels in the media of light jyoti towards akshi. The perception of indriyartha takes place in complex mechanisms’ like conduction of the light rays reflected by the object towards the eye, refraction inside the eye and convergence into dhrishti. Vata is the functioning dosha in this stage in the presence of normal Pitta and Kapha.

Rupa Alochanam: This is the stage of receiving and analyzing the images. Rupa grahana is done by pitta in general and Alochaka pitta in particular.

It is situated in antah taraka of eye. Two aspects of Alochaka pitta like Chakshuvaisheshika and Buddhi vaisheshika to carry out this function.

Functions of Chakshuvaisheshika Alochaka pitta: Jnana urdirana after the contact of Atma,
Mana, Indriya and Artha. Bringing this to Chitta.
Informing Lakshana, Samsthana, Rupa, Varna, Swara Pranipata Jnana and Vaisheshika Jnana. Such information received in Akshigolaka is forwarded to Chakshubuddhi [20].

**Chakshurbuddhi:** Though Chakshuvaisheshika is situated in eye ball, Buddhi vaisheshika is situated in Sringataka.

**Functions of Buddhivaisheshika:**
- Perceives minute details by jnana
- Provides complete visual perception
- Records visual images and remembers these images for long time
- Recalls and recollects when necessary
- Helps to see the future things. It is instrumental in Dhyana, Pratahara and Yojana.

Chakshurbuddhi takes place in two phases kshanika and nischayatmaka.

Mind motivates the sensory faculties to perceive their respective objects [21].

**Role of Dosha, Dhatu and Mala:** Vata dosha regulates all the movements of the body. Vyanavayu is the inspirator of the eye lid movements. Pranavayu supports all the sensory faculties.

The vitiations of Vayu will prevent *indriyartha sannikarsha* and produce dysfunctions of the eye [22].

**Dhatu:** Rasadhatu- By providing preenana
The watery portion of the eye is Malas of Rasadhatu
The first *patala of dhrishti is composed of Rasa and Rakta* [23].

**Raktadhatu:** The Sira and Kandara are the Upadhatu of Rakta and they will fix the eye ball in the bony socket. The increased Raktadhatu will result in engagement of blood vessels and redness in the eye *(Su.Su.15/15). Raktasara purusha* will have *snigdha* and coppery colored eyes *(Su.Su.35/16).* The reduction of Rakta in the body is evident as in case of Panduroga.

**Mamsadhatu:** Mamsadhatu forms the second dhrishti *patala and provides pushti.* Components of the eye like Sira, Khandara, Snayu, Asthi and Sandhi get stronger by the support of Mamsadhatu.

**Medodhatu:** Medodhatu provides strength to the eyes.

**Asthidhatu:** The eye lids have cartilage. The eye lashes *Pakshma are the Malas of Asthidhatu.*

The visual efficiency will be reduced when *Asthi and Majjadhatu* are depleted.
**Majjadhatu:** The excellence of Majjadhatu will provide Mahanetra or excellent eyes.

**Shukradhatu:** The excellence of Shukradhatu makes the eye most pleasing as if eye is filled with milk.

**Ojas:** The expression feelings like happiness, anger, and sorrow in the eyes is brought about by Ojas.

**Malas:** Netra dushika and Akshi sneha are the Malas of Mamsa and Medodhatu respectively. The increase and decrease of mala will have direct impact on the eye.

**Srotas:** Though all channels are linked with the eyes and damage to Annavahasrotas and Raktavahasrotas will immediately lead to Visual loss. Damage to Annavahasrotas can make person blind. Viddha lakshana of Raktavahasrotas is redness of the eye [24].

**KARNA (EAR)**

*Indriya dravya- Akasha*

*Indriya Vishaya- Shabdha*

*Indriya Buddhi- Shabdhagrahana*

Karna is one among Panchagyanendriya which is adhishthana for Shrotrendriya.

**Paryaya:** Shhortam, Karna, Shrotrendriya, and Shruti

**Mahabhuta:** Akasha Mahabhuta

Acharya Sushruta considered Karna in Bahirmukhasrotas.

Acharya Charaka said two Karna shaskuli and two Karnaputrika.

In Karna dasha Siras and Shabdhavahini Sira. From two Dhamani Shabdhagrahana is done.

Acharya Sushruta while explaining about the different types of Asthi, mentioned the type of Asti in Nasa, Karna, Greeva and Akshikuta as Tarunasti. While explaining Asti sandhi Gandha, Karna and Shankha as a sandhi.

Further said there are 8types of Asthisandhis among them Shrotra and Shringatakas are present [25]. Shrota is considered as Buddhi indriya among five buddhendriya.

**Karnapali (Pinna):** It is lobule of external ear; Karnavyadhana is done for the same.

Karna peetha is the seat for auricle

Karna putrika is the auricle or pinna

Karna shaskuli it is external auditory meatus

Karnapataha means Tympanic membrane

The distance between Karna and apanga is 5 angula which is supplied by 2dhamani and 10 Sira.

**NASA (NOSE)**

**Embryology**

- Development of Nasa is seen during the third month of gestation
- Development of Mukha (oral cavity), Nasa (nose), Akshi (eyes) and Shrotra (ears) occurs in 6th month of gestation.
Etymology

The word ‘NASA’ is derived from the root Nastru, which becomes Nasry by the principle “Nonah” and with the addition of suitable suffix the root gets the position of Ha and thus word Nasa is derived which means to sound.

Nasa is one among Panchagyanendriya which is adhisthana for Ghranendriya.
Nasa is one among Panchapanchaka
Indriya dravya- Prithvi Gandha
Indriya adhisthana- Nasa 2 nostril
Indriya Vishaya- Gandha
Indriya Buddhhi- Gandhagyana

Paryaya: Nasa, Ghranendriya Ghrana is Buddhhi adhisthana so called Buddhindriya.

Mahabhuta: Prithvi Mahabhuta

Acharya Sushruta considered Nasa in Bhirmukhasrotas.

Nasaputa: Nasaputa prama is 1, 1/3 or 2/3 angula (Tribhagangula visthara)\textsuperscript{[26]}. It contains Tarunasti and 3 bones. It contains 2 Peshi\textsuperscript{[27]}.

It contains 2 Phana marma and helps for Gandhagyana Shringhataka marma.
Consists of 24 Siras and 2 Dhamani for smell.

JIWHA (Tongue):

Jiwha is originated from Mamsa, Rakta Kaphaprasadabhagha.
Jiwha is one among Panchagyanendriya and helps in perception of Taste which is single and located in Oral cavity. It is also one among Dashapranayatana\textsuperscript{[28]}.

It is Jalatatvapradhana pratyanga and is adhisthana for Bhodhakakapha, Pranavayu and Udanavayu. Because of Bhodhaka kapha there will be Rasagyana and reaches to Brain by Pranavayu and Movement of Tongue and Speech by Udanavayu.

Vyutpatti (origin):

Kaphashonita mamsanam saro jiwha prajayate

The vyutpatti of Jiwha is from Kapha Mamsa and Raktasarabagha\textsuperscript{[29]}.

Swarupa of Jiwha:

The Natural Tongue is Ayama and Vistarokta, Slaksha, Tanvi and Patala pushpavarna sadrusha means Raktavarana.

There are total seven sevanis in the body Jiwha sevani is one among them.

Fig. 2: Anatomy of tongue
Jiwha and Shaddrasagyana:

**Madhurarasagnana:** Jiwha purvabhaga

**Amlarasagnana:** Jiwhadharabhaga

**Lavanarasagnana:** Jiwhadharabhaga

**Tiktarasagnana:** Jiwhamula purvabhaga

**Katurasagnana:** Jiwha Agarabhaga

**MUKHA (Mouth):** Mukha consists of Ostha, Jiwha, Danta, Dantamula, Talu, Gala or Kanta. Andakosha, Chibhuka, Danta, individual Nasaputa, Karnamula, Bhru and Netra and outer covering and inner covering of netra is of 2-2 angula pramana.

Distance of Greeva and Hrudaya and Mukhadairgya is of 12angula.

When the mouth is opened it is 4angula. **Mukha and Greeva is of 24angula pramana** [30].

Acharya Sushruta considered Mukha in Bahirmukhasrotas.

**TWAK (SKIN):**

The word “Twak” is derived from the root “Twacha sam varnane” [31] it can be defined as the body substance that covers the internal tissues like Rakta, Mamsa, Medas etc. The outer protective covering of the body consisting of corium and the epidermis.

**Paribhasha of Twak:** Twacha is one among the panchajnanendriyas, which completely covers meda, shonita and all other Dhatus of the body and is extensive all over the body [32]. It is considered as the seat of Sparshanendriya as well as one among the main seat of Vata and Pitta.

**Synonyms of Twak:** Twak, Charma, Raktadhara, Asragdhara, Sparshanendriya etc

**Panchabhoutikatwa of Twak:** Twak is predominantly made of Vayu and Teja mahabhoota [33] along with rest of the mahabhootas like prithvi, Aap, Akasha.
Layers of Twak and Disease manifestation

Avabhashini: Sidhma and Padmakantaka and its size is 1/12 of Vreehi Dhanya.

Lohita: Tilakalaka, Nyaccha, Vyanga and its size is 1/6th of Vreehi.

Shwetha: Charmadala, Ajagallika and size is 1/12th of Vreehi.

Tamra: Kilasa kushta and size is 1/8th of Vreehi.

Vedini: Kushta, Visarpa size is 1/5th of Vreehi.

Rohini: Granthi, Alachi, Arbuda size is equal to Vreehi.

Mamsadhara: Bhagandhara, Arshas size is double to Vreehi.

Twak kriya:

Importance of Sparshanendriya: Though there are five Gnanendriyas, still Sparshanendriya ranks first because it is present in almost all the indriyas and is sarvashareeravyapi i.e, present in all indriyas and whole body only kesha and loma have inseparable relation between them so wherever there is a feel of touch there will be the presence of mind so vata is present in sanjnnavahinadis of Manas (Mind) because of which jnana or knowledge is acquired through Atma.

Dosha and Twacha:

Vata and Twacha: helps is grahana of all indriyas.

Pitta and Twacha: imparts prabha to the skin.

Kapha and Twacha: keeps the skin moist.

Dosha bheda and Twacha:

Pranavayu helps in dharana of indriyas and Udanavayu brings about varna to the skin.

Bhrajaka pitta: is located in the skin and does the absorption of drugs used for abhyanga, parisheka and lepa does pachana and improves the chaya and complexion.

Tarpaka kapha: provides nourishment to the skin.

Bhrajaka pitta and twacha varna: Bhrajaka pitta provides lusture and natural colour to the skin and even it governs normal and abnormal temperature of skin and even it maintains the colour of hair and eyes according to Acharya Bhela even Charaka has mentioned that normal colour of the skin and maintaining body temperature is done by pitta and he has not mentioned specifically as Bhrajakapitta. Whereas Chakrapani in his commentary has specified it as Bhrajakapitta.

Conclusion:

- Shiras is said considered as Uttamanga because all sense organs are situated and Pranavata is mainly located any impairment may impact on all sense organs.
- Shiras is said to be one of the Sadyapranaharamarma one should
protect for the normal functioning of the *Mastishkya* and normal functions of all sense organs.

- Different causative factors may produce different diseases related to those particular sense organs. In such case *Nasya, Shirobasti, Lepa, Karnapurana, Dhupana Shamayyoga* may give fruitful results.

- All sense organs play important role in every human being’s life one should protect these to lead healthy, happy and long life.

**REFERENCES**

1. Pandit Kashinath Shastry, Charakasamhita of Sutrasthana chapter 17th verse no 12th, 4th edition Varanasi; Chowkambha Sanskrit samsthana 231
2. Brahmanand Tripathi Vagbhata, Asthangahridaya of Nidanasthana chapter 1st verse no 5th, Reprint 2003, Delhi; Chowkambha Sanskrit Sansthan p. no. 5
4. Pandit Kashinath Shastry, Charakasamhita of Siddhisthana chapter 9th verse no 9-10th, 1st edition Varanasi; Chowkambha Sanskrit samsthana. 977
5. Pandit Kashinath Shastry, Charakasamhita of Shareerasthana chapter 1st verse no 24th, 4th edition Varanasi; Chowkambha Sanskrit samsthana. 694
6. Pandit Kashinath Shastry, Charakasamhita of Shareerasthana chapter 1st verse no 27th, 4th edition Varanasi; Chowkambha Sanskrit samsthana. 695
8. Pandit Kashinath Shastry, Charakasamhita of Shareerasthana chapter 7th verse no 11th, 4th edition Varanasi; Chowkambha Sanskrit samsthana. 807
9. Pandit Kashinath Shastry, Charakasamhita of Shareerasthana chapter 7th verse no 16th, 4th edition Varanasi; Chowkambha Sanskrit samsthana. 811
11. Pandit Kashinath Shastry, Charakasamhita of Shareerasthana chapter 3rd verse no 10th, 4th edition Varanasi; Chowkambha Sanskrit samsthana. 746
12. Vaidya Sri Lakshmipathi Shastry, Yogaratnakara of Netrarogadhikara 1-4 verse 8th edition, Varanasi; Chauwkambha Samskrita samsthana. 341
13. Kaviraj Ambikadatta Shastry, Sushrutasamhita of Uttaratantra chapter 1st verse no 10-14th, 11th edition,
14. Brahmanand Tripathi Vagbhata, Asthangahridaya of Sutrasthana chapter 12\textsuperscript{th} verse no 5\textsuperscript{th} Reprint 2003. Delhi; Choukambha Sanskrit Sansthan.171

15. Prof Jyotir Mitra, Asthangasangraha of Shareerasthana chapter 5\textsuperscript{th} verse no 51\textsuperscript{st} edition 2006, Varanasi; Chowkambha Sanskrita Series Office. 304

16. Prof Jyotir Mitra, Asthangasangraha of Shareerasthana chapter 4\textsuperscript{th} verse no 31\textsuperscript{st} edition 2006, Varanasi; Chowkambha Sanskrita Series Office. 393

17. Kaviraj Ambikadatta Shastry, Sushrutasamhita of Shareerasthana chapter 6\textsuperscript{th} verse no 28\textsuperscript{th}, 11\textsuperscript{th} edition, Varanasi; Chowkambha Sanskrit Sansthan.56

18. Kaviraj Ambikadatta Shastry, Sushrutasamhita of Shareerasthana chapter 5\textsuperscript{th} verse no 37\textsuperscript{th}, 11\textsuperscript{th} edition, Varanasi; Chowkambha Sanskrit Sansthan.47

19. Pandit Parashuram Shastry vidyasagar, Sharangadharasamhita of Purvakhanda chapter 6\textsuperscript{th} verse no 20, 5\textsuperscript{th} Edition, Varanasi; Chaukambha Orientalia.72

20. Girijadayalu Shukla, Bhelasamhita of Shareerasthana chapter 4\textsuperscript{th} verse no 4\textsuperscript{th}-5\textsuperscript{th} Reprint 1999,Varanasi; Chauwkambha Bharati Academy.86-87

21. Pandit Kashinath Shastry, Charakasamhita of Sutrasthaha chapter 8\textsuperscript{th}, verse no 7\textsuperscript{th}, 12\textsuperscript{th}, 4\textsuperscript{th} edition Varanasi; Chowkambha Sanskrit samsthana. 231.

22. Pandit Kashinath Shastry, Charakasamhita of Chikitsasthana chapter 28\textsuperscript{th} verse no 9,22-23\textsuperscript{rd} 1\textsuperscript{st} edition Varanasi; Chowkambha Sanskrit samsthana. .692, 694

23. Brahmanand Tripathi, Asthangahriday of Sutrasthana chapter 11\textsuperscript{th} verse no 19\textsuperscript{th}, Reprint 2003 Dehli; Choukambha Sanskrit Sansthan.164

24. Kaviraj Ambikadatta Shastry, Sushrutasamhita of Shareerasthana chapter 9\textsuperscript{th} verse no 12\textsuperscript{th}, 11\textsuperscript{th} edition, Varanasi; Chowkambha Sanskrit Sansthan.71

25. Kaviraj Ambikadatta Shastry, Sushrutasamhita of Shareerasthana chapter 5\textsuperscript{th} verse no 18\textsuperscript{th}, 11\textsuperscript{th} edition, Varanasi; Chowkambha Sanskrit Sansthan.43

26. Kaviraj Ambikadatta Shastry, Sushrutasamhita of Sutrasthana chapter 5\textsuperscript{th} verse no 18\textsuperscript{th}, 11\textsuperscript{th} edition, Varanasi; Chowkambha Sanskrit Sansthan.131

27. Kaviraj Ambikadatta Shastry, Sushrutasamhita of Shareerasthana chapter 5\textsuperscript{th} verse no 18\textsuperscript{th}, 11\textsuperscript{th} edition, Varanasi; Chowkambha Sanskrit Sansthan.45

28. Prof Jyotir Mitra, Asthangasangraha of Shareerasthana chapter 5\textsuperscript{th} 52, verse no 53\textsuperscript{rd} edition 2006, Varanasi; Chowkambha Sanskrita Series. 305


31. Pandit Haragovinda Shastri, Amarsimha, Namalinganusasana or Amarkosha, with the Ramashrami commentary of Bhanuji Dikshita and Maniprabha Hindi commentary Edited by 3rd Edition, Varanasi; Choukhambha Sanskrit Sansthan.

668.


Cite this article as: Mamata. Y. Khatawakar V. R. Hiremath. An ayurvedic perspective of anatomy and physiology (shareera) of panchagnanedriya, J of Ayurveda and Hol Med (JAHM).2016;4(2):59-71

Source of support: Nil

Conflict of interest: None Declared.