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Research Article

AN OBSERVATIONAL STUDY OF *CHARAKOKTA ANGULA PRAMANA* FOR STANDARDIZATION OF *SHIROGREEVAGATA PRATYANGA*

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ABSTRACT

Ayurveda is a science of life that deals with prevention and cure of diseases. To unscrew the pathology of various diseases, a thorough understanding the structural and functional built of the human physique is inevitable. To achieve such goals there should be knowledge of body (*Sharir*), body parts (*Anga* and *Pratyanga*) and their *Pramana* (anthropometry). *Angula Pramana* is determined by measuring the height (*Utsedha*), length (*Ayam*), breadth (*Vistar*) and circumference (*Parinah*) of *Pratyangas*. Here finger breadth of the individual (i.e. *Swa-Angula*) is used as the reference unit of measurement. Anthropometry measurement of the human body means measurement of height and weight where *Acharya Charaka, Sushruta,* and *Vagbhatt* have given different values of human height which is 84 *Angula*, 120 *Angula*, 31/2 *Hasta* respectively. The study was conducted on 200 healthy volunteers in age group of 18-50years. One *Angula* as a unit of *Angula Pramana* was obtained by measuring the width of *Madhyamparva* of middle finger of working hand. The measurements were taken in centimetres for standardization as per metric system. This article summarizes the facts related to *Anguli Pramana* from classical, Ayurvedic and modern literature along with result of our research work to identify the anatomical landmark of *Sheerogreevagata Pratyanga* measured through *Anguli Pramana* and its applied aspect. At present, there are many physical anomalies i.e., genetic, endocrine, congenital, developmental disorders and traumatic injury which results as anatomical disfiguration of *Shira* and *Greeva* that can distinguish from their *Anguli pramana* or anthropometry.

INTRODUCTION

Science aspires to the betterment of living. A scientific study is a radiance thrown on facts in a matter of curiosity. It includes annotations, measurements of entities, the addition of data and lastly scrutiny of entire findings to conclude. To unscrew the pathology of various diseases, a thorough understanding of the structural and functional built of the human physique is inevitable. *Pramana Shareera* is one such aspect that includes the study of measurements of human body constituents. *Charakacharya* enumerates length of human body (*Ayam- Vistar*) is 84 *Anguli* and that a person endowed with '*Pramanavat Shareera*' will have longevity, strength, happiness, power, wealth and virtues where as those with high or poor measurements will hold qualities contrary to that explained in the classics. Mentions supportive of the above view can be seen in *Susruta Samhita* also.

A reference from *Ashtanga hrudaya* shows that even in the olden days also there was curiosity regarding the fact that different parts of the body have a definite relation with the height of the person and can be useful in determining the same. Hence estimation of the stature with the help of the measurement of different parts of the body has been a topic for research for a long time. Anthropometry is widely utilized in forensic science with the help of the dimensions of different parts of the human body and skeleton. It is utilized for establishing the identity of a person for

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identification as well as estimation of stature, age, sex, race, etc from the body parts. In view of the fact that no two individuals are ever alike in all their measurable characters (except perhaps monozygotic twins) and that the later tend to undergo change in varying degrees, hence persons living under different conditions and members of different ethnic groups and the offsprings of unions between them frequently present interesting differences in body form and proportions. It is, therefore, necessary to have some means of giving quantitative expression to the variations exhibited by such traits. Anthropometry constitutes a means towards this end.

AIMS AND OBJECTIVES

1. To review the facts related to *Angula Pramana* from Ayurvedic literature along with Modern literature.
2. To identify the anatomical landmarks for measurement of *Shiro Greevagata Pratyanga* through *Swangula.*
3. To evaluate the applied aspect of *Angula Pramana* in relation to *Shiro Greevagata Pratyanga* through review of various sources (Literature, Internet etc.).

Review on Ayurvedic Literature

Vedic Kala

References regarding the *Angula Pramana* can be cited in *Yajurveda*. *Angula Pramana* is utilized in home *Kunda* preparations. Other references regarding the length of *Darbha* used for *Homa* is available in *Yazurveda.* It is mentioned like *Darbha* should be cut in 6 *Angula Pramana*. In *Rigveda* a reference explains like *Pramatma* takes *Ashrya* in *Dasha Angula Pradesha.*

Purana- Upanishad Kala

In *Agni Purana, Angula* details regarding *Pramana* of different parts like *Hridya, Pristha, Kati* etc available and also references regarding to *Sama Ayama Vistara* is available [1].

In *Shrimat Tantrasara Sangraha* by *Shrimadananda Thirtha* in the context of *Pratima Yoga Lakshana* various *Pramanas* of different body parts has been mentioned for making statue which is based upon *Swa- Angula* concept [2].

Charaka Samhita

Acharya *Charaka* has explained *Pramana Shareera* as one of the *Dasha Vidha Pareeksha* of the patients [3].

Acharya Charaka stated that height of a person is 84 *Angula.* He has put forth concept of *Sama Shareera*. The person having normal measurement of the body are endowed with longevity, strength, immunity, happiness, supremacy, wealth and other desired quality[4].

Height and Breath of Human Body

केवलं पुनःशरीरमङ्गुलिपर्वाणि चतुरशीतिः||११७||(च.वि. 8/117)

According to *Acharya Charaka* the length of human body (*Ayam-Vistar*) is 84 *Angula*.

Importance

तत्रायुर्बलमोजः सुखमैश्वर्यं वित्तमिष्टाश्चापरे भावा भवन्त्यायत्ताः प्रमाणवति शरीरे; विपर्ययस्त्वतो हीनेऽधिके वा||११७||(च.वि. 8/117)

The person having normal measurement of body are endowed with longevity, strength, immunity, happiness, supremacy, wealth and other desired quality. Those having body with less or more measurement have qualities contrary to these.

Method of Measurement

प्रमाणतश्चेति शरीरप्रमाणं पुनर्यथास्वेनाङ्गुलिप्रमाणेनोपदेक्ष्यते उत्सेधविस्तारायामैर्यथाक्रमम्||११७||(च.वि. 8/117)

As length and breadth of finger of every person is differ from one another. Therefore, the terms have been used *Swangula* it means *Ang- Pratyanga* should be measure with their own *Angula*.

Sushrutha Samhitha[5]

Acharya Sushruta has explained the *Angula Pramana* of different parts of the body. *Acharya Shushruta* stated that height of a person is 120 *Angula*. According to him a person with appropriate *Pramana* of *Anga - Pratyanga* is bestowed with good health and long life.

Ashtanga Sangraha

Vriddha Vagbhat has also explained the *Pramana* of different parts of the body and also explained regarding *Sama Shareera* concept [6].

Detailed description regarding the *Pramana Sharira* is not found in *Ashtanga Hridya*. But *Acharya* has explained that appropriate height of a person is equivalent to 3 ½ times the length of his *Hasta* [7].

Modern Review[8]

Anthropometry

'*Anthropos*' means man and the science deals with man are known as anthropology.

Anthropometry can be defined as "A systemized body of techniques of measuring and taking observations on man, his skeleton, the skull, the limbs and trunketc as well as the organs, by the most reliable means and scientific methods.

For the sake of convenience anthropometry may be subdivided into

1. **Somatometry:** Measurements of body morphology. It deals with the measurements on the living human body or the cadaver. When the measurements are confined only to head and face, then it is known as cephalometry.
2. **Osteometry:** Measurement of skeleton and its parts. It is concerned with the measurements on the bones of the skeleton. When such measurements

are confined to skull only we call it crainometry. On the other hand craniology refers to the measurements as well as observations on the bones of the skull. While osteology refers to the study of the structure and functions of the bones.

Measurements and its Types

The term measurement generally refers to the act of measuring, and in context of anthropometry it refers to a definite measure between two clearly defined landmarks, related to bony points.

Examples:

1) Linear measurement- It is the measure of vertical distance between the surfaceland marks. E.g. Hand length, foot length, facial height.
2) Transverse measurement- It is the measure between two land marks perpendicular top linear axis. E.g. Head breadth, biorbital breadth.
3) Circumferential measurement- These measure the circumference of different parts of the body. e.g. Upper arm circumference, head circumference.

The technique of anthropometry has application in many areas of human concern and welfare.

- Morphological differences within and between populations
- Identification of individuals i.e., helpful in understanding the ethnic affinities between populations.
- Study of evolutionary changes, inter-population and intra-population differences.
- Study of comparative anatomy of primates particularly those closer to man.
- Field of forensic science for identification of an individual and in determination of age, sex.
- Human Growth and Development: The study of the processes and patterns of growth and development
- General Standards of Health can be evaluated by using composite measurements like height and weight.
- Orthopedic surgery, particularly in the preparation of artificial limbs.
- Field of Eugenics, in which promotion of better trait in future generation is mainly considered.
- Sports evaluating the suitable physique and the constitution in different sports specialty.
- Field of Genetics it is helpful in evaluating the zigosity of twins.
- Industry standards are being used in industry-dress designing, shoes, gloves, seats in aero planes, railway, buses, helmets, manufacture of artificial limbs etc.

1. Alare (al): It is the most lateral point on the wings of the nose.
2. Cheilion (ch): The most lateral point at the termini of the mouth where the lateral margins of the upper and lower lips meet.
3. Ectocanthion (ec): This point is located on the outer/lateral corner of the eye or palpebral opening, where the upper and the lower lid margins meet.
4. Endocanthion (en): It is the point on the inner/medial corner of the eye or palpebral opening where the upper and lower lid margins meet.
5. Frontotemporale (ft): The most medial point on the incurve of the temporal ridges just above and lateral to the orbit.
6. Glabella (g): The most prominent point, in the mid sagittal plane between the two eye brow ridges just above the root of the nose.
7. Gnathion (gn): It is lowest point on the lower border of the mandible in the mid sagittal plane.
8. Gonion (go): It is the most posterior, inferior and lateral point upon the external angle of the jaw (formed by the ramus and the body).
9. Labraleinferius (li): It is the median point in the lower margin of the lower membranous lip.
10. Labrale superius (Is): The median point in the upper margin of the upper membranous lip.
11. Menton (me): It is the lowest point on the anterior wall of the chin.
12. Nasion (n): Anatomically nasion is the point at the intersection of the frontonasal suture and the internasal suture in the median plane.
13. Opisthocranion (op): It is the point of the most backward projection of the head in the median plane.
14. Otobasion inferius (obi): It is the lowest point at which the ear attaches to the side of the head.
15. Otobasion superius (obs): It is the point where the ear attaches to the side of the head above.
16. Postaurale (pa): It is the most posterior point on the free margin of the ear, i.e., on the helix of the ear.
17. Preaurale (pra): It is the point in the line connecting the two otobasia, and crossing the isthmus of attachment of the ear to the head, which is directly opposite to the postaurale.
18. Pronasal (prn): It is the most anteriorly placed point at the tip of nose in the median plane.
19. Stomion (sto): It is the median point of the oral slit when mouth is closed naturally.
20. Subaurale (sba): It is lowest point on the free margin of the ear or ear lobe, when the head is held in the eye-ear plane.

21. Su nasale (sn): It is the point where the nasal septum, between the nostrils, merges with the upper cutaneous lip in the mid sagittal plane.
22. Superaurale (sa): It is highest point on the superior border of the helix when the head is held in eye-ear plane.
23. Tragion (t): It is the notch just above the tragus of the ear.
24. Trichion (tr): It is the point where the anterior line of the hair on the forehead is cut by the midsagittal plane.
25. Vertex (V): It is the highest point of the head in the midsagittal plane when the head is held in eye-ear plane.
26. Zygion (zy): It is the lateral most point on the zygomatic arch, felt through the skin.

MATERIAL AND METHODS

Inclusion Criteria

- Apparently healthy Indian individuals.
- Age group: 18-50yrs
- Sex- both male and female

Exclusion Criteria

- Individuals with congenital deformities.
- Individuals with post operative or accidental deformities.
- Individuals with chromosomal deformities.
- Individuals with developmental anomalies.
- Infectious disorder
- Hormonal and metabolic disorder affecting face and neck (i.e., Cushing syndrome, goiter, obesity etc).
- Neurological disorder affecting face (facial nerve palsy, ptosis, strabismus).
- Skeletal anomalies and other associated disease (scoliosis, lordosis, kyphosis).
- Clinical condition like severe dehydration, malnourishment, generalized edema etc

ASSESMENT CRITERIA

Subjective Parameters

चतुरङ्गुलोत्सेधा द्वाविंशत्यङ्गुलपरिणाहा शिरोधरा, द्वादशाङ्गुलोत्सेधं चतुर्विंशत्यङ्गुलपरिणाहमाननं, पञ्चाङ्गुलमास्यं, चिबुकौष्ठकर्णाक्षिमध्यनासिकाललाटं चतुरङ्गुलं, षोडशाङ्गुलोत्सेधं द्वात्रिंशदङ्गुलपरिणाहं शिरः; इति पृथक्त्वेनाङ्गावयवानां मानमुक्तम्|(च.वि.8/117)

Table no.1

Shira				***Shirodhara* (neck)**	
Cranio		**Facial**			
Anga	***Angula***	***Anga***	***Angula***	***Anga***	***Angula***
Shira (head) *Utsedha*	16	*Anana* (Face)*Utsedha*	12	*Shirodhara* (neck) *Parinah*	22
Shira (head) *Parinah*	32	*Anana* (Face)*Parinah*	24	*Shirodhara* (neck) *Utsedha*	4
Lalat (Forehead)	4	*Aasaya* (Mouth)	5		
		Chibuka (Chin)	4		
		Ostha (Lips)	4		
		Karna (Ear)	4		
		Akshi (Eye) *Madhya*	4		
		Nasika (Nose)	4		

DISSCUSION ON OBSERVATION

Discussion on volunteers

Total 200 volunteers were registered in the study, among them 47% volunteers have mean of *Aayam-Vistara* 84.23 *Angula*, 49% volunteers have mean of *Aayam-Vistara* 94.1 *Angula* and 4% volunteers have mean of *Aayam-Vistara* 80.8 *Angula*.

The volunteers who have the mean of *Aayam-Vistara* 84.28 *Angula* they also have mean of one *Angula* 1.84cm.

The volunteers who have the mean of *Aayam-Vistara* 94.1 *Angula*, they also have mean of one *Angula* 1.75cm.

The volunteers who have the mean of *Aayam-Vistara* 80.8 *Angula* they also have mean of one *Angula* 1.97cm.

It was observed that out of 200 volunteers, 82% volunteers were b/w 18-30 year, 18% volunteers were b/w 31-50 year.

In this series, the maximum i.e., 60% volunteers were female while rest of the volunteers i.e., 40% were male.

Discussion on *Angula*

In this study mean score from Width of proximal inter-phalangeal joint of middle finger of working hand was 1.84, SD 0.085 and SE was 0.045.

1. **Discussion on *Aayama***

In this study mean score of Height was 84.28, SD 1.20 and SE 0.13.

2. **Discussion on *Vistaara***

In this study mean score of arm span was 84.03, SD 0.09 and SE was 0.098.

3. ***Shira Utsedha* (Head length)**

In this study measurement has taken from 3 places-

- Posterior Head Length: From Inion (i) to top of the head/ vertex (v).
- Lateral Head Length: From Gonion (go) to top of the head or vertex (v).
- Midline Head Length: From Gnathion (gn) to top of the head or vertex (v).

In this study mean score of inion to top of the head/vertex was 17.92, SD 0.82, and SE was 0.19. Mean score of gonion to top of the head/vertex was 18.95, SD 0.758, and SE was 0.17. Mean score of gnathion to top of the head/vertex was 20.26, SD 0.59 and SE was 0.131.

4. ***Shira Parinaha* (Head circumference)**

In this study measurement has taken from 4 places-

1. Glabella (g) to opisthocranion(op)
2. Glabella (g) to inion (i)
3. Trichion (tr) to inion (i)
4. Trichion (tr) to opisthocranion (op)

In this study mean score of glabella to opisthocranion was 53.18, SD 0.54, and SE was 0.07. Mean score of glabella to inion was 55.97, SD 0.57, and SE was 0.08. Mean score of trichion to opisthocranion was 51.01, SD 0.59 and SE was 0.13. Mean score of trichion to inion was 56.40, SD 0.72 and SE was 0.09.

5. ***Lalata* (Forehead)**

In this study to measure *Lalata (*Forehead*)* measurement has taken from 3 places-

1. Trichion (tr) to nasion (n)
2. Trichion (tr) to glabella (g)
3. Right fronto temporal (ft) to left frontotemporal (ft)

In this study mean score of trichion to nasion was 7. 11, SD 0.307, and SE was 0.115. Mean score of of trichion to glabella was 6.69, SD 0.337, and SE was 0.130. Mean score of right frontotemporale to left frontotemporale was 8.67, SD 0.524 and SE was 0.178.

6. ***Annana* (face)**

In this study measurement of *Annana* (face) has taken from 3 places

1. Trichion (tr) to gnathion (gn)
2. Nasion (n) to gnathion (gn)
3. Glabella (g) to gnathion (gn)

In this study mean score of trichion to gnathion was 18.23, SD 0.674, and SE was 0.158. Mean score of of nasion to gnathion was 12.28, SD 0.721, and SE was 0.206. Mean score of glabella to gnathion was 13.28, SD 0.607 and SE was 0.167.

7. ***Chibuka* (chin)**

In this study measurement of *Chibuka* (chin) has taken from 2 places-

1. Labrale inferius (li) tognathion (gn)
2. A perpendicular line from right to left chelion (ch) to inferior border of mandible.

In this study mean score of labrale inferius to menton was 3.44, SD 0.335, and SE was 0.181. Mean score of a perpendicular line from right to left chelion to inferior border of mandible was 6.18, SD 0.336, and SE was 0.135.

8. ***Karna* (ear)**

In this study measurement of *Karna* (ear) has taken from 3 places

1. Superaurale (sa) to subaurale (sba)
2. Preaurale(pra) to postaurale (pa)
3. Otobasion superius (obs) to otobasion inferius (obi)

In this study mean score of preaurale to postaurale was 3.47, SD 0.234, and SE was 0.125. Mean score of of otobasion inferius to otobasion superius was 4.44, SD 0.249, and SE was 0.118. Mean score of superaurale to subaurale was 6.28, SD 0.271 and SE was 0.107.

9. ***Akshi* (eye) *Madhya***

In this study measurement of *Akshi* (eye) *Madhya* has taken from 3 places

1. Intercanthal width (en-en)
2. Outer canthal distance (ec-ec)
3. Inter puppilary distance.

In this study mean score of intercanthal width was 3.54, SD 0.290, and SE was 0.154. Mean score of of outer canthal distance was 10.54, SD 0.634, and SE was 0.195. Mean score of inter puppilary distance was 7.16, SD 0.352 and SE was 0.131.

10. ***Nasika* (nose)**

In this study measurement of *Nasika(*nose) has taken from 4 places-

1. Nasion (n) to pro-nasale (Prn)
2. Nasion (n) to sub-nasale (sn)
3. Glabella (g) to pro-nasale (prn)
4. Glabella (g) to sub-nasale (sn)

In this study mean score of nasion to pro-nasale was 6.02, SD 0.227, and SE was 0.092. Mean score of nasion to sub-nasale was 6.50, SD 0.258, and SE was 0.101.

Mean score of glabella to pro-nasale was 7.07, SD 0.281 and SE was 0.106. Mean score of glabella to sub-nasale was 7.19, SD 0.315 and SE was 0.118.

11. *Shirodhara* (neck) *Utsedha*

In this study measurement of *Shirodhara* (neck) *Utsedha* has taken from 2 places

- Lateral Neck Length: mandibular angle (Gonion) to mid portion of ipsilateral clavicle
- Midline Neck Length: Sternal notch to Hyoid bone upper margin.

  In this study mean score of sternal notch to hyoid bone upper margin was 7.75, SD 0.329, and SE was 0.118. Mean score of gonion to mid portion of ipsilateral clavicle was 11.94, SD 0.412, and SE was 0.120.

12. *Shirodhara* (neck) *Parinaha*

In this study measurement of *Shirodhara* (neck) *Parinaha* has taken from 2 places

- Anteriorly in the midline from hyoid bone to the level of C3 vertebra posteriorly.
- Anteriorly in the midline from thyroid cartilage to the level of C5 vertebra posteriorly

  In this study mean score of hyoid bone to C3 vertebra was 30.52, SD 0.873, and SE was 0.158. Mean score of of thyroid cartilage to C5 vertebra was 32.88, SD 1.121, and SE was 0.195.

13. *Ostha* (lips)

In this study measurement of *Ostha* (lips) has taken from 2 places-

1. Labrale superius (ls) to Labrale inferius (li).,
2. Right cheilion (ch) to left cheilion (ch)

In this study mean score of labrale superius to labrale inferius was 2.41, SD 0.194, and SE was 0.13. Mean score of right cheilion to left cheilion was 6.19, SD 0.300, and SE was 0.12.

RESULT OF OBSERVATION

Comparison with Ancient Literature

Table no. 2

Anga	Landmarks	Vol.	Mean	SD	SE
Shira (head) *Utsedha*	Midline Head Length: From Gnathion (gn) to top of the head or vertex (v)	94	20.26	0.591	0.131
Shira (head) *Parinah*	Glabella (g) to opisthocranion (op)	94	53.18	0.54	0.07
Lalat (forehead)	Trichion (tr) to nasion (n)	94	7.11	0.307	0.115
Anana (face) *Utsedha*	Trichion (tr) to gnathion (gn)	94	18.23	0.674	0.158
Chibuka (chin)	A perpendicular line from right to left chelion (ch) to inferior border of mandible	94	6.18	0.336	0.135
Ostha (lips)	Right cheilion (ch) to left cheilion (ch)	94	6.19	0.300	0.12
Karna (ear)	Superaurale (sa) to subaurale (sba)	94	6.28	0.271	0.107
Akshi (eye) *Madhya*	Inter puppilary distance	94	7.16	0.352	0.131
Nasika (nose)	Nasion (n) to sub-nasale (sn)	94	6.50	0.258	0.101
Shirodhara (neck) *Parinah*	Anteriorly in the midline from hyoid bone to the level of C3 vertebra posteriorly	94	30.52	0.873	0.158
Shirodhara (neck) *Utsedha*	Midline Neck Length: Sternal notch to Hyoid bone upper margin	94	7.75	0.329	0.118

Height of volunteers measured by establishing unit like the width of the proximal interphalangeal joint of middle finger vis-a-vis one *Angula* of working hand satisfies the measurements mentioned in *Charaka Samhita*.

Shira (head) *Utsedha* is measured from the gnathion (gn) to top of the head or vertex (v) satisfies the measurements mentioned in *Charaka Samhita*.

Shira (head) *Parinah* is measured from glabella (g) to opisthocranion (op) satisfies the measurements mentioned in *Charaka Samhita*.

Lalat (forehead) *is* measured from trichion (tr) to nasion (n) satisfies the measurements mentioned in *Charaka Samhita*.

Chibuka (chin) is measured from perpendicular line from right to left chelion (ch) to inferior border of mandible satisfies the measurements mentioned in *Charaka Samhita*.

Anana (face) *Utsedha* is measured from trichion (tr) to gnathion (gn) satisfies the measurements mentioned in *Charaka Samhita*.

Ostha (lips) is measured from right cheilion (ch) to left cheilion (ch) satisfies the measurements mentioned in *Charaka Samhita*.

Karna (ear) *is* measured from superaurale (sa) to subaurale (sba) satisfies the measurements mentioned in *Charaka Samhita*.

Akshi (eye) *Madhya* is measured between inter puppilary distance satisfies the measurements mentioned in *Charaka Samhita*.

*Nasika (*nose*)* is measured from nasion (n) to sub-nasale (sn) satisfies the measurements mentioned in *Charaka Samhita*.

Shirodhara (neck) *Parinah* is measured from hyoid bone to the level of C3 vertebra posteriorly satisfies the measurements mentioned in *Charaka Samhita*.

Shirodhara (neck) *Utsedha* is measured from sternal notch to hyoid bone upper margin satisfies the measurements mentioned in *Charaka Samhita*.

At present, there are many physical anomalies i.e., genetic disorders, endocrine disorders, congenital disorders, developmental disorders and traumatic injury which results as anatomical disfiguration of *Shira* and *Greeva* that can distinguish from their *Anguli pramana* or anthropometry.

Such as-

Klinefelter's syndrome, Down Syndrome, Turner's syndrome, Fragile X syndrome (FXX), Smith-lemli-opitz syndrome, Jackson-Weiss syndrome, Achondroplasia, Noonan syndrome, Klippel–Feil syndrome, Kabuki syndrome, Goldenhar syndrome etc.

CONCLUSION

On the basis of above mentioned literary review, observations, discussion and results, the final conclusion of the present work, Body parts and their *Pramana* are specially described in Ayurveda which is an important part of *Rachana Sharir*.

REFERENCES

1. Vedavyasa. Baladeva Upadya, editor. Agnipurana 1st ed. Varanasi; Choukhamba Sanskrit series office; page no. 563, 357.
2. Shrimat anandathirtha. Bhimasenaharya, editor. Shrimat tantra sara 1st ed. Ballari; Madhva grantha prakashana; 1991. Page no. 232, 92.
3. Charaka Samhita Vol.1 English Translation 9th Edition 2005 Publisher Chaukambha Orientalia Page No. 374, 375.
4. Charaka Samhita Vol.1 English Translation 9th Edition 2005 Publisher Chaukambha Orientalia Page No. 381.
5. Sushruta. Yadavji trikamji Acharya, editor. Sushrutha samhita with Nibandha sangraha of Dalhanacharya. 8th ed. Varanasi; Choukhamba orientalia; 2008. Page no. 824, 150-152.
6. Vriddha vagbhata. Shiv Prasad sharma, editor. Ashtang sangraha with Sasilekha commentary of Indu. 1st ed. Varanasi; Choukhamba Sanskrit series office; 2006. Page no. 965. 332.
7. Vagbhata. Harisadasiva shastri paradakara, editor. Ashtang hrudaya with Sarvangasundari of Arundatta and Yurvedarasayana of Hemadri. 1st ed. Varanasi; Choukhamba subharti prakashan; 2007. Page no. 956, 405.
8. Sudha Rastogi and BRK Shukla. Laboratory manual of Physical anthropology. Lucknow: Bharat book center; 2021, Page no -4-11.
9. Sudha Rastogi and BRK Shukla. Laboratory manual of Physical anthropology. Lucknow: Bharat book center; 2021., Page no -282-285

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