



CRITICAL REVIEW OF VALAY – ASTHI

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Abstract: The science of *ayurveda* is well organised system of medicine and beyond, has unique technique for harmonious living. There are different theories which are explained in our science and each theory is having its own importance. In *shareerasthana*, itself there are different theories like *asthishareera*, *sandhi shareera*, *sankhashareera* and *garbhashareera* etc. among these to clarify such concepts the study is taken up here is critical study of *valayaasthi*. The quest to understand the logic behind different counting methods and their understanding about the *asthi* and its classification, which has attracted me to consider this topic for literary study. According to various *samhitas* such as *Ashtangasangraha*, *Bhavaprakash*, and *Sushruta*, there are maintain different location for *valayaasthi*. After reviewing the literature it is clear that there are difference of opinion in enumeration of *asthi* and types of *asthi* but we find some similarities between *valayaasthi* and irregular bone, short bone and flat bone to some extend according to their shape, size and location. By the bases of observing their external features of bone we can say that *valayaasthi* are the type of bone which are possible irregular bone, short bone and to some extend flat bone according to modern anatomy. Eventually we can conclude that the *valayaasthi* which are present in the region of *pani*(hand), *pada*(foot), *parshav*, (side), *prustha*(back), *ura*(chest) *jathara*(abdomen), *payu*(anus), *parshani*(calcaneous) and *greeva*(neck). This are the irregular structures present in that area.

Key words: *Asthi, Valay-asthi, pani, pada, parshay,*

INTRODUCTION

In the *shareerarachana* there is one theory of *asthishareerain* the *shareerasthana* of different *samhita*, lot of difference about the number of *asthi*, which are given by our *Acharya Charaka, Vagbhat, , Kashyapa* and *Bhela*, are 360. And *Acharya Sushruta* and *Bhavamishra* said only 300 *asthi* in the body. The difference of the location of various types of *asthi* and *valayaasthi* are said by our different ancient *Acharya* in our body. The classification of bones is one of the require things in today era because every structure of the human body is having particular shape and structure and base on this only one can easily understand and identify the things properly.

So this different theory keeps in the mind, it is right time to find out reasons of those differences, so we can run through the various *samhita* to make our knowledge more and more scientific and realistic.

Acharya Sushrut¹, Vagbhat², Bhavamishra³ and *Charaka⁴* said about the concept of

valayaasthi under the types of *asthi* and mentioned the *asthi* which are present in the region of *parshava, prustha, ura, pani, pada, jathara, payu, greeva* and *parshani* are *valayaasthi*.

The word *valaya* is meaning ring like, circular⁵ in *shape* and round in shape, therefore by analyzing and understanding the concept of *valayaasthi* later comparing with modern concepts on the basis of modern parameters that the *valayaasthi* may be compared or referred as short bone⁵ to some extent, flat bone to some extent and irregular bone⁶ of the body.

When we understand the *valayaasthi* as short, flat and irregular bone⁶ which has been mentioned by our modern science so up to what extent the concept of comparing the *valayaasthi* with short, flat and irregular is true.

AIMS AND OBJECTIVES

The study of *valayaasthi* on the basis of modern parameters which are shape, size and location of irregular bone, short bone and to some extent flat bone according to modern anatomy. And mention the *valay-asthi's* number by counting this bone.

METHODOLOGY

We studied from different classical *ayurvedic samhitas*, review, research article of *ayurveda* and thesis of *ayurveda* for the concept of *asthi* and *valay-asthi*.

LITERARY REVIEW

In *ayurveda* the *valayaasthi* are mentioned as one of the *asthi* type, when we discuss about the term meaning of *valaya* is understood as ring, circle, coil like, circular, etc. on the other hand the term meaning of irregular is

understood that not regular, unsymmetrical, varying in form and uneven (of a surface)¹⁰ etc.

The *valayaasthi* are present in the various regions in human body according to different *samhita*, which have been put forth during the study of *valayaasthi* i.e.

According to the *Sushruta samhita*¹, the *valayaasthi* present in the *parshava* (ribs), *prustha* (vertebrate) and *ura* (sternum)¹⁰.

According to the *Astanga samgraha*², the *valayaasthi* is located in the region of the *pani* (hand), *pada* (feet), *parshava* (ribs), and *prustha* (vertebrate)¹⁰.

According to the *Bhavaprakasa-samhita*³, the *valayaasthi* present in the *parshni* (heel), *parshava* (ribs), *prustha* (vertebrate), *vaksha* (chest), *jathara* (abdomen/lumber), *payu* (rectum), *pada* (feet).

The study on *valayaasthi* different opinion of different *Acharya* about the location or region or site where it is located, which are *parshava*,

prustha, ura, pani, pada, vaksha, jathara, payu, greeva and parshni.

Parshava – So the meaning of *parshava* is that the part of body below the arm-pit, or ribs¹⁰ they are 72 in number according to the *ayurveda*,¹ as according to modern anatomy they are 12 pairs of ribs and this are comes under the flat bone.

But in *ayurvedaasthi* of *parshava*, here we can take ribs in included under *valayaasthi* according to their shape, that is half round shaped or ring like structure so the ribs included in the variety of the *valayaasthi*, they have said 72 in number. So because of this reason, ribs are divided in 3 parts that is *parsuka, sthalaka, arbuda*.

Prustha - The *prustha* is considered as vertebrae and no doughy all the vertebrae can be included under the *valayaasthi* including their inter vertebral disc which are round in shape, so we can included under the *valayaasthi*, which are thoracic, lumbar, sacrum and coccyx vertebrae and inter vertebral disc. In this reason according to modern they have only included the vertebra

under the irregular bone. But inter vertebral disc are not included as an irregular bone.

The irregular bone that is thoracic, lumbar, sacrum and coccyx vertebrae and their number is $12+5+1+1 = 19$, according to the modern . And according to the *ayurveda* their number is 30 according to *Acharya Sushruta*.

Ura – The *ura* can be understood as a chest region. The *asthi* of *ura*, is *uraphalaka*, that which is said by *Acharya Sushruta* and can be understood as *sternum*, flat bone according to the modern science. So *valayaasthi* present in the *ura* region is sternum that is one (1) in number.

Pani - The *Pani* as per dictionary meaning it is compared as the hand, the hand consist of carpal bone, metacarpal and phalanges. *Acharya* said that the *valayaasthi* is present in the *pani*, when we under go through the literary review it become difficult for understand which bones of the *pani* are to be considered as a *valayaasthi* as per our *Acharya's* opinion. According to modern i.e:

The carpal is type of short bone.

Metacarpal comes under the short long bone.

Phalanges come under the short-long bone.

According to *ayurvedic* view metacarpal and phalanges can be consider under the *nalakasthi* and it is included under the short-long bone according to modern, now remaining bone can be understood as *valayaasthi* on the basic of their size and shape that is irregular, so the *valayaasthi* is present in the *pan* that is carpal bone and their number is sixteen (16).

Pada – The *pada* as per dictionary meaning *pada* means foot, the foot consist of tarsal, metatarsal, and phalanges, our *Acharya* said that the *valayaasthi* is present in the *pada*, when we under go through literary review it becomes difficult for understand which bone of the *pada* is to be considered as a *valayaasthi* as per our *Acharya's* opinion. According to modern i.e:

The tarsal bone is type of the short bone.

Metatarsal bones come under the short-long bone.

Phalanges comes under the short long bone.

According to *ayurvedic* view metatarsal and phalanges can be consider under the *nalokasthi* and it is including under the short-long bone because presence of tubular structure and *medullary* cavity, now remaining bone can be understood as *valayaasthi* on the basic of their size and shape that is irregular, so the *valayaasthi* is present in the *pada* that is tarsal bone and their number is fourteen (14).

Vaksha(chest) – The dictionary meaning of *vaksha* is the breast or the chest⁷, according to *Acharya Bhavaprakasa* the *valayaasthi* are located in the *vaksha* region, that means the chest region. In the chest region the bones are present which are sternum, ribs, vertebra and costal cartilage.

The ribs comes under the *parshava* region, and vertebra comes under the *prustha* region, so they remained bone is sternum that is one(1) in number.

Here the term *vakshais* only mentioned by the *Bhavamishra*. that not said by *Acharya Sushruta* and *Vagbhat*. So the sternum can be taken as bone of *valayaasthi* that is one in number.

Jathara(abdomen) - The *jathara* (abdomen) was told by *Acharya Bhavamishra* for the location of *valayaasthi*, other *Acharyas* not mentioned the term *jathara*.

In the *jathara* there is present the bone that is 5 lumber vertebra, lower five false ribs and upper part of the Ilium according to the modern science, the lumber vertebra are comes under the *prustha* region and lower five false ribs are comes under the *parshava* region according to the *ayurveda*.

So here we consider the bone which comes under the *valayaasthi* that is lumber vertebrae and lower five false ribs.

Payu – The meaning of *payu or guda* is the anus⁸. In the *payu* (anus) region there are present of *valayaasthi* which is said by *Acharya Bhavamishra*. The bones present in this region are sacrum and coccyx according to the modern because the relation of posterior surface of rectum and anal canal with the anterior surface of sacrum and coccyx vertebra, which comes under the *prustha* region according to the *ayurveda*.

So here the sacrum and coccyx is consider as the *valayaasthi* their number is sacrum- 1, and coccyx- 1.

Parshni– the meaning of *parshni* is the heel⁹. The *parshni* (heel) is site for *valayaasthi* according to the *Bhavaprakash Samhita*. *Acharya Sushruta* are not mentioned term *pada* and *parshni* as a location for the *valayaasthi*, but *Astanga* use term for the *valayaasthi*, that is *parshni*, there is only one bone present that is calcaneus according to the modern science.

So *parshni* is consider as the calcaneus and there are two in number.

Greeva – The *greeva* is said by the *Acharya Bhoja*. So *asthi* present in *greeva* region, are to be considered as *valayasthi* but he has not mentioned their number. The meaning of *greeva* is the neck or the back part of the neck¹⁰.

There are 15 *asthis* in *greeva* said by *Acharya Charaka*, 9 said by *Sushruta*, but they have not mentioned *greeva-*

asthi under the *valayasthi*. But according to *Bhajaivalayasthis* are present in the *greeva* region. Here we consider all the *greevaasthis* as cervical vertebrae according to modern anatomy.

So here the *greevaasthis* are considered as *valayasthi* because their size and shape i.e. round, ring like structure and circular.

COMPARE OF VALAYASTHI WITH BONE ACCORDING TO LOCATION AND NUMBER.

Location or region	Acc. To ayurveda and number	Acc. To modern and number
<i>Parshava</i>	<i>Parsuka</i> 24 <i>Sthalaka</i> 24 <i>Arbuda</i> 24	Ribs 24
<i>Prustha</i>	<i>Prusthaasthi</i> 30	Thoracic vertebra 12 Lumbar vertebrae 5 Inter vertebral disc
<i>Greeva</i>	<i>Greevaasthi</i> 9	Cervical vertebrae 7 Inter vertebral disc
<i>Ura</i>	<i>Uras(urahaphalaka And akshakasthi)</i> 8	Sternum 1

		Clavicle 2
<i>Pani</i>	<i>Hasta-talakorca, manika 12</i> <i>Manika 2</i>	Carpal bone 16
<i>Pada</i>	<i>Tala-korca-gulpha 10</i>	Tarsal bone 14
<i>Jathara</i>		Lower five ribs
<i>Payu</i>	<i>Trika 1</i> <i>Guda 1</i>	Sacrum 1 Coccyx 1
<i>Parshani</i>	<i>Parshani 2</i>	Calcaneous 2
	Total 147	Total 85

Table 1: Valayasthi.

So here *valayaasthi* includes circular structure that is irregular bone but limited only, short bone but limited only and flat bones like sternum and ribs

DISCUSSION

According to the *ayurveda* there are many bones coming under the *valayaasthi* which are irregular bone, short bone and to some extend flat

bone. *Valayaasthi* are the bones which are located in *parshava, prustha, ura, pani, pada, jathara, payu,* and *prashani* are to be considered.

Now we try to understand this bones according to modern literature the *parshava* = ribs¹⁰, *prustha*= vertebrae, *ura*= sternum, *pani*= carpal, *pada*= tarsal, *jathara* = lumber and lower five false ribs, *payu* = sacrum and coccyx, this are the bone we can compare. We have to take *valayaasthi*

only the mentioned region of the *valayaasthi* according to the *ayurveda*. i.e. *parshava* and *ura*, when we compare *parshava* and *ura* with the ribs and sternum, than it is not included under the irregular bone, infect it is included under flat bone according to modern anatomy. In the same way when we take next *valayaasthi* i.e. *pani* and *pada*, which are been compared with the carpal and tarsal bones which is not included under the irregular bone, but modern anatomy have given one more classification i.e. under the short bone.

valayaasthi has to be not only includes irregular bone but it also includes flat bone i.e. ribs, because the ribs are having curved and twister shape, so it is better to see that under the *valayaasthi* which has said by the *ayurveda*.

So finally *valayaasthi* has to be not only included the irregular bone but it also included the short bone i.e. carpal and tarsal bones because they are having different shape and size, so it is more appropriate to include in the short bone.

And according to *ayurveda*, that are *valayaasthi*,

According to the modern most of the facial bone are included under the irregular bone, but it not included under the *valayaasthi* by the *ayurveda*, one of the main rezones may be the appearance of the bone which are flat, for that reason it is not included under the *valayaasthi*.

CONCLUSION

- The shape of the *valaya* may understand as a ring like structure, a circular circumference, coil like structure and curved.
- The *valayaasthi* are present in the region of the *hasta*, *pada*, *parshava*, *prustha*, *ura*, *vaksha*, *jathara*, *payu*, *parshan* and *greeva* according to our *Acharya*.
- The *valayaasthi* can be consider as vertebrae (cervical, thoracic, lumber, sacrum, coccyx), ribs, sternum, carpal bones and all tarsal bone according to the modern which are describe above.

- The numbers of valayaasthi are 147 according to the *ayurveda*.

REFERENCES

1. Prof K.R.Srikantha Murthy, Susrutasamhita (Text English Translation), Vol-1 ShareeraSthana 5/21-22, 3rd edition, Reprint 2007, Varanasi, Chaukhambhaorientalia. P-86
2. prof. K. R. Srikanthamurthy, Astangasamgraha of vagbhat(Text English translation), volume – II, 5th edition, ShareeraSthana 5/6, Varanasi, chaukhambhaorientalia. P – 59.
3. 5. Prof K.R.Srikantha Murthy, Bhavaprakasha of Bhavamishra, Vol-1 Purvakhanda 3/154, 2004, Varanasi, ChowkhambaKrishnadasAcadamy . P-39.
4. R.K.Sharma&Bhagwan Dash, Agnivesha's Charaka Samhita, Vol-2, Vimanasthana 5/7, Reprint 2007, Varanasi,
5. chowkhambasanskrita series office P-17.
6. Medical dictionary , English to hindi, Publisher Ashokeprakashan, 2615, naisarak, delhi 6, page no 897.
7. B. D. Chaurasia, Hand Book of general Anatomy, 4th edition reprint 2012, Publisher and Distribution, 4819/ XI Prahlad street, 24 Ansari road, Daryaganj, new Delhi.
8. Medical dictionary , English to Hindi, Publisher Ashokeprakashan, 2615, naisarak, Delhi:- 6,
9. Encyclopedic Dictionary of Ayurveda. Chaukhambha Publication 4262/3 Ansari road, Darya Garaj, New Delhi 110002.
10. Medical dictionary , English to Hindi, Publisher Ashokeprakashan, 2615, naisarak, Delhi:- 6,

11. Medical dictionary , English to Hindi, Publisher Ashokeprakashan, 2615, naisarak, Delhi:- 6.

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