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# Concept and application of *Pramana Pareeksha*

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## ABSTRACT

Science is the knowledge about the natural world that is based on facts learned through experiments and observations. A scientific study is the concerted human efforts to understand, or to understand better, the history of natural world and how the natural world works with the observable physical evidence as the basis of understanding. It includes annotations, measurements of entities addition of data's and lastly scrutiny of entire findings to arrive at a conclusion. To unscrew the pathology of various diseases and to assess the *Bala Pramana* of an individual, thorough understanding of the structural and functional built up of human physique is inevitable. Among *Dashavidha Pareeksha*, *Pramana Pareeksha* is one of such aspect of *Charaka* which includes the study of measurements of human body constituents. It is of great significance as it proves the individualistic approach of Ayurveda rather than a generalized one. Applications of *Swangula Pramana* can be seen in different contexts like in preparing different *Shastras*, *Yantras* related to *Shalya*, *Shalakyas* and *Panchakarma* and probably these are prepared by assessing the *Swa-angula Pramana* of *Rogi* who is under treatment. *Charakacharya* enumerates that a person endowed with '*Pramanavat Shareera*' has longevity, strength, happiness, power, wealth and virtues where as those with high or poor measurements hold qualities contrary to that which explained in the classics. Hence, this paper conveys the relevance of concept of *Pramana Pareeksha*, and throws light on its role in clinical practice.

**Key words:** *Pramana Shareera*, *Swa-Angula Pramana*, *Dashavidha Pareeksha*, *Bala Pareeksha*.

## INTRODUCTION

In Ayurveda, *Sharira* is having its own space and importance as one among those factors which contribute to Ayu of an individual along with *Indriya*, *Satwa*, and *Atma*. The complete knowledge about *Sharira* is very much essential for physician in order to provide a healthy life for mankind. Thus to know the

essentiality of *Shareera* the understanding of *Pramana* concept is must. *Pramana* is depicted in the fundamentals of Ayurveda as the *mana Pramana* of *Hitayu*, *Ahitayu*, *Sukhayu* and *Dukhayu* are the ones which constitutes Ayurveda. Maintenance of health and cure of disease is the principle of Ayurveda. This principle of Ayurveda can be achieved with the help of *Pramana*. Concept of *Pramana* is included in *Shareera* for understanding the physical built and mental constitution. *Pramana Shareera*, requires immense perceptive of measurement of various body part and in many instances explains the quality of life. Ample references from classics explain that *Pramana Shareera* can play a major role in determination of life span of a person.<sup>[1]</sup> It describes that the person having appropriate measurement may attain a long span of life. Out of the *Anguli* and *Anjali Pramanas* described in the classics, *Anguli Pramana* bears the prime important. *Anguli Pramana* is a salutary anthropometric concept as described in Ayurveda,

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where *Anguli* is the unit of measurement of a body part and structure.<sup>[2]</sup>

## MATERIAL AND METHODS

This is conceptual type of research. All sorts of references has been collected and compiled from various available Ayurvedic classics texts and commentaries.

Research articles are also searched from various websites related to concept of *Pramana Shareera*. All matter is analyzed for the discussion and attempt has been made to draw some conclusions.

## THE CONCEPT OF PRAMANA PAREEKSHA

*Pramanas* are considered as the tool for gaining knowledge in Ayurveda. *Angula Pramana* is the means to quantitatively expressing the dimensions of the human body parts. *Charaka* considered it as one among the *Dashavidha Pareekshya Bhavas*. The patient should be examined by measuring *Anga-Pratyanga* by using *Swa-angula Pramana* as unit measurement.<sup>[3]</sup> It helps in the determination of the *Ayu* and *Bala* of the patient.<sup>[4]</sup> The patient or an individual having appropriate *Pramana* of different *Anga-Pratyangas* mentioned is considered to attain *Deerghayu*.

There are basically two types of *Pramanas* that we find in Ayurvedic classics, one is *Anjali Pramana* and the other one is the *Anguli Pramana*. The *Anjali Pramana* is used for measuring other body constituents including fluids.<sup>[5]</sup> On the other hand *Anguli Pramana* which is based on *Swa-angula Pramana* is used for measuring the dimensions (*Ayama, Vistara, Parinaha*, etc.) of the different *Anga-pratyangas* of the body,<sup>[6],[7]</sup>

*Ayu Pareeksha* is an important procedure before starting with the treatment. Ayurvedic principles state the *Pramanataha Pareeksha* as one of the criterion to ascertain the *Ayu* of the patient.<sup>[8]</sup>

The person who have appropriate *Pramana* of his *Anga-pratyangas* will attain *Deerghayu* and the person with moderate and poor measurements attain *Madya* and *Alpaayu* respectively.<sup>[9]</sup> An expert

physician should understand that a man at the age of 25 years and a woman at the age of 16 years attain *Samatva* and *Gataveeryata*,<sup>[10]</sup> and *Dalhana* says at this stage the individual will have the *Shareera Pramanas* as mentioned in the classics.<sup>[11]</sup>

According to *Ashtanga Sangraha* full growth of individual takes place at the end of 2<sup>nd</sup> decade of his life.<sup>[12],[13]</sup>

In *Ashtanga Hrudaya*, it has been mentioned that a person having height equal  $\frac{1}{2}$  to 3 of his own *Hasta* will have a happy life,<sup>[14]</sup> but it is not applicable for *Ashta Nindita Purusha*.<sup>[15]</sup>

There is some difference of opinion between *Sushruta* and *Charaka*. *Sushruta* mentioned the height of man as 120 *Angulas*.<sup>[16]</sup> Commenting on that *Dalhana* opines that; height given by *Sushruta* is to be measured by making the person stand on his toes with arms raised above the head.<sup>[17]</sup> While *Chakrapani* comments that the *Angula* taken by *Sushruta* is smaller than taken by *Charaka* and there is actually there is no difference between the two.<sup>[18]</sup>

Both *Charaka* and *Vagbhata* considered 84 *Angulas* as the height of an individual.<sup>[19],[20]</sup> According to *Chakrapani*; height is to be measured from *Padatala* to *Shirahparyanta* that is the top of the head.<sup>[21]</sup>

According to *Bhela* individual with *Lalata, Nasika* and *Karna* of length 6 *Angula* each will attain *Shatayu*.<sup>[22]</sup>

## Pramana Pareeksha<sup>[23]</sup>

This is determined by measuring the height, length and breadth of the organ by taking the finger breadth of the individual at the unit measurement. A body possessed of organ having proper measurement is endowed with longevity, strength, *Ojas*, happiness, power, wealth and virtues. If the measurement is either on the high or low side, the individual possesses qualities contrary to what are mentioned for proper measured body.

For clinical assessment it can be subdivided into

1. **Pravara Pramana** - Standard measurement criteria excellently height, length and breadth.
2. **Madhyama Pramana** - Standard measurement criteria moderately height, length and breadth.

### 3. *Avara Pramana* - Standard measurement criteria lesser extent height, length and breadth.

All classical texts described *Pramana Pareeksha* through linear measurement of the body for *Bala*

*Pramana* and used *Anguli Pramana* as a unit.

These measurements can be interpreted with the following standard measurements mentioned in the Ayurvedic classics;

**Table 1: Measurement of lower limb in Angula.**

Name of the body part	Sushruta				Charaka				Vagbhata			
	Ayama	Vistara	Parigaha	Utseda	Ayama	Vistara	Parigaha	Utseda	Ayama	Vistara	Parigaha	Utseda
Lower Limb												
Padangushta	2								2			
Padamshini	2								2			
Madhyama	9/5								9/5			
Anamika	8/5								8/5			
Kanishtika	7/5								7/5			
Parade	4	5							4	6		
Padatala	4	5							4	5		
Parshini	5	4						4	4	4		
Pada	14		14		14	6		4	14		14	4
Jangha	18		14		18		16		18		14	
Janu			14		4		16		4			
Uru + Janu	50											
Gulpha			14						14		14	
Uru	18		32		18		30		18	6	30	

**Table 2: Measurement of upper limb in Angula.**

Name of the body part	Sushruta				Charaka				Vagbhata			
	Ayama	Vistara	Parigaha	Utseda	Ayama	Vistara	Parigaha	Utseda	Ayama	Vistara	Parigaha	Utseda
Upper Limb												
Angushta	3 ½								3 ½			
Padamshin	4 ½								4 ½			
Kanishtik	4 ½								3 1/2			

Madhyama	5								5			
Pani									12			
Hastatala	6	4										
Angabula Padamshini	5											
Manibandha Karpura Sandhi	16											
Hasta	24				12							
Prabahu					16				16			
Bhuja	32											
Skandha					8				8			
Amsa					6				6			
Kaksha					8				8			
Prapani					8				8			

Table 3: Measurement of head and neck in Angula.

Head and Neck	Sushruta				Charaka				Vagbhata			
	Ayama	Vistara	Parigaha	Utseda	Ayama	Vistara	Parigaha	Utseda	Ayama	Vistara	Parigaha	Utseda
Chibuka	2					4			4			
Darshana	2											
Anana	2						24	12			24	12
Nasaputa	2								1/3			
Karnamula	2											
Bhunvanantara		2										
Vadana	4											
Nasavansha	4				4				4			
Karpa	4				4				4			

Lalata	4				4				4			
Greeva	4		24									
Netra									2			
Akshimadhya						4						
Shravanaapanga	5											
Mukha	12		24									
Nasaputa		1 <sup>1/3</sup>							1/3			
Taraka		1/3 of Nayana										
Keshantamastaka	11											
Karnavitannara		14										

Table 4: Measurement of trunk in Angula.

Trunk	Sushruta				Charaka				Vagbhata			
	Ayama	Vistara	Parigaha	Utseda	Ayama	Vistara	Parigaha	Utseda	Ayama	Vistara	Parigaha	Utseda
Vrushna	2				6		8		6		5	
Mehana	4								6		5	
Bhaga			12				12					
Mahana Nabhi	12											
Nabhi Hrudaya	12											
Prushta- Uraha						24		12		24		12
Kati		18				16				16	50	
Vastishiraha					10				10			
Udara					12	10			12			
Parsha					12	10			12	10		
Stana					2				2			
Stanantara		12				12			12			

Stri -Ura		18										
Hrudaya				2				2				
Trika							12					12
Shepha				6		5						
Prushta							18					18

Table 5: Total measurements in Angula.

Total	Sushruta	Charaka	Vagbhata
Height	120	84	84
Breadth		84	84

### Reasons for abnormal Pramana in now a days lifestyle <sup>[24]</sup>

At the end of *Satya Yuga*, some rich people got heaviness of the body due to over indulgence, they suffered from fatigue because of heaviness of the body. Fatigue gave rise to laziness, laziness made them to accumulate things, accumulation led to the attachment for these things and attachment resulted in greed.

While explaining attributes in different *Yugas* they explain it as in *Satyayuga* as fair measurement of bodily organs and shape were endowed to the peoples as later *Yuga* changes and till the *Tretayuga* the life span reduced and the property of bodily organs in now is not in a much subsequent form in the individuals due to the disappearance of *Dharma*, unusual changes in the maintenance of equilibrium of bodily tissue elements, vitiation of *Agni* and *Maruta*.

### Finally Charaka empathizes the concept of Samashareera <sup>[25]</sup>

Person having proportionate musculature and compactness of the body, no doubt possess very strong sensory and motor organs and as such they are not overcome by the onslaught of diseases. They can withstand hunger, thirst, the heat of the sun, cold and physical exercises. They can digest and assimilate properly.

### Applications of Pramana Pareeksha

1. Applications of *Swangula Pramana* can be seen in different contexts like in preparing different *Shastras*, *Yantras* related to *Shalya*, *Shalakyas* and *Panchakarma*, and probably these are prepared by assessing the *Swa-angula Pramana* of *Rogi* who is under treatment. (Ch.Si.9/65)
2. Specificity is the characteristic property of *Swaangula Pramana*, This is applicable in present era too. If a person loses both his legs then rather than using the present anthropometric knowledge to make average based artificial limbs we can utilize the concept of *Swa-angula* based *Pramana Shareera* and prepare proportionate artificial limbs
3. An individual with *Anga-pratyangas* having proper measurements is endowed with longevity, wealth, prosperity, happiness, *Ojas*, strength etc.
4. The measurements mentioned in the classics for each part of the body are appropriate and desirable where as the less or more of these suggest the abnormal and undesirable.
5. Useful in the measuring the different parts of the body.
6. It is one among the ten folds of examination and also useful in assessing the *Ayu* of the patient.



7. It helps to understand the prognosis of the disease.
8. With the study of *Anguli Pramana* and *Anjali Pramana* health of an individual can be assessed.
9. Helps to identify the *Nindita Purusha* explained in Ayurvedic classic. It helps in determining *Atideergha* and *Atihrasva Purushas*.
10. It is useful in assessing the *Bala* of the person.
11. Helps in assessing the age of an individual.
12. In *Vyavahara Ayurveda*, the data of *Pramana Shareera* can be used to evaluate the unknown measurements from unknown measurements.

## DISCUSSION

### Why is much importance given to *Swa-angula Pramana* in Ayurveda rather than the standardized measures of *Pramana Shareera*?

No two individual are completely alike physically, physiologically, psychologically, or in vital reactions. Hence, Ayurveda has individualized the concept of health. The word "*Swastha*" also is significant of this recognition of individuality denoted by the term "*Swa*", which means one's own peculiar constitution. Ancient sages of India, like *Charaka* and *Sushruta* have built up their system of health and disease on this bed-rock of individual constitution. If physician wants to know the state of equilibrium of all the body elements, he can do it only by finding the sign of perfect health in that individual i.e. *Samadosha*. *Samaagni*, *Samadhatu*, *Sama Malakriya*. For measuring the *Maana* of *Doshas* and *Dhatu*s various system of measurements like *Anjali Pramana*, *Anguli Pramana* are been described. Thus in that era where neither standardized measures nor measuring instruments were in general use, which not only provided a unit for measuring, but also provided the flexibility of being personalized, i.e. Being specific for each individual.

### How can be the concept of *Samashareera* given by *Charaka* can be well understood??

An individual's physical strength is determined by two factors; the cross-sectional area of muscle fibers

recruited to generate force and the intensity of the recruitment. Individuals with a high proportion of type I slow twitch muscle fibers will be relatively weaker than a similar individual with a high proportion of type II fast twitch fibers, but would have a greater inherent capacity for physical endurance. A strong physical endurance both physically and mentally makes a person capable of withstand hunger, thirst, the heat of the sun, cold and physical exercises and they can overcome on slaughter of diseases easily. Thus this will lead to attainment of *Dharma*, *Artha*, *Kama* and *Moksha*. Hence *Samashareera* concept has its own significance.

### How can one evaluate the unknown body measurement from known body measurements?

It can be well understood by an example, as if the cut upper limb or any other body part is obtained, the data of *Pramana Shareera* and these proportions of the human body can be used to determine the height and all other body measurements of the individual.

It becomes further significant when observed that even if a cut digit of the individual is obtained, a scientific estimation of all his body measurements can be indirectly made based on data obtained from the analysis of references related to *Pramana Shareera*. This example illuminates the logic behind the *Vyavahara Ayurveda*.

## CONCLUSION

The concept of *Pramana Pareeksha* provides flexibility of being personalized, i.e. Being specific for each individual in the assessment of *Ayu* of an individual, *Bala* of an individual, prognosis of the disease, health wealth and happiness because based on a standard fixed parameter of measurements it is difficult to assess each and every individual because Ayurveda believes no two individual are completely alike physically, physiologically, psychologically, or in vital reactions. Hence, Ayurveda has individualized the concept of health in the form of *Pramana Pareeksha*.

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