



AN OBSERVATIONAL STUDY TO EVALUATE RELATIONSHIP BETWEEN JIVHĀ PARIKSHAN AND DIFFERENT DHĀTU SĀRATĀ

Dr. Manoj verma¹, Dr. Shobha Yadav²

1. Assistant Professor Department of Kriyā Shārira, SRS Ayurvedic Medical College & Hospital, Gwalior Road, Agra [U.P.] 2 Assistant Professor Department of Stri Evam Prasuti Tantra, SRS Ayurvedic Medical College & Hospital, Gwalior Road, Agra [U.P.]

Corresponding author- Dr. Manoj Verma,

ABSTRACT-

Dosha, Dhātu and mala are root factors of living body. On the basis of excellence of Sapta Dhātu and sattva. eight types of Sāra have been explained by acharya Charaka, which are *Twaka Sāra*, *Rakta Sāra*, *Mamsa Sāra*, *Meda Sāra*, *Asthi Sāra*, *Majja Sāra*, *Shukra Sāra* and *Sattva Sāra*. Acharya chakrapani has described Sāra as “*vishudhataro Dhātu*”, which means the essence of all Dhātus. Sāra is characterized by both physical as well as psychological health. In the dashvidha pariksha of Ayurveda it has been stated that Sāra pariksha is one of the important investigations for evaluation of *bala*. jivha parikshan as technique to determine a person’s state of physical, mental and emotional health. Yogaratnakara quoted the jivha parikshan under Ashtavidha parikshan. Jivha is an important point in the clinical examination to understand the health. A healthy tongue is uniformly pink in color, neither too thick nor thin, moist, without any coating. In Ayurveda jivha parikshan is done on the basis of saam (coated) & niraam (uncoated tongue). The tongue is the mirror of digestion [*Agni*].

KEY WORDS- Dosha, Dhātu, mala, jivha, Dhātu Sārata

INTRODUCTION- *Jivha pariksha* reveals our main constitution (Prakruti), imbalance of doshaja, state of *agni* & *koshtha*. According to Ayurveda *Agnimandya* is the root cause of all diseases. *Saam jivha* (Coated) indicates a presence of *ama* (undigested food) in the digestive system. The state of the *Agni* is thus assessed by the condition of the tongue. Thick coating points to the progression of disease. So *jivha pariksha* has diagnostic and prognostic values as well. *Jivha pariksha* helps to assess the imbalance of *doshaja* in the body. *Vata* imbalance is indicated by a blackish or brown, rough tongue bearing cracks while *pitta* imbalance is indicated by red, yellow or blue tongue. A *Kapha* imbalance is manifested by a white and slimy tongue. Black tongue with thorny eruptions indicates aggravation of all three doshas.

tongue reflects the overall digestive, nutritive and metabolic conditions of the entire organs. It can prove to be a key factor in determining many conditions and the overall health of the body. Examination of the tongue body

provides information on the general nutritive and structural condition of the internal organs and their tissues and condition of the blood & bloodstream,

AIM: - To study the relationship between Different *Dhātu Sārata* and jivha.

OBJECTIVES: -

To assess *Dhātu Sārata* in individuals

To assess the *jivha parikshan* in individuals.

To find out relationship between Different *Dhātu Sārata* and jivha

MATERIALS AND METHODS: -350 volunteers were chosen for the study based on inclusion & exclusion criteria. And *Dhātu Sārata* was assessed with the help of **C- DAC, ayu-software**, & Tongue were assessed by ***jivha pariksha patrak***.

The following instruments were used to conduct the examination: -

- 1- The body temperature was measured using thermometer.
- 2- Blood pressure was measured with sphygmomanometer.
- 3- Pulse rate and oxygen saturation were measured using pulse-oximeter
- 4- *Dhātu Sārata* was assessed with the help of **C- DAC, AYUSOFT-[software]**.
- 5- Tongue photo was taken by Samsung M-30 mobile.

Materials included in the *Dhātu Sārata* ayusoft Software:

- 1- SOFTWARE CD
- 2- SOFTWARE CD KEY
- 3- ADMINISTRATION MANUAL

SELECTION OF VOLUNTEERS: - On the basis of inclusion as well as exclusion criteria,[Health assessment form, **Original Source: CSIR Ayurgenomics Unit - TRISUTRA, CSIR IGIB, New Delhi**].

Inclusive criteria-

Between the age of 18-35.

Regardless of their gender, caste, religion and socio-economic status.

Exclusive criteria-

Person having systemic and mental disorders.

Person taking any type of medication.

Any types of tongue deformity, (fissured, geographic tongue, dehydrate, movement etc.)

Study design: it was a onetime observational study.

Sample size: - 350 apparently healthy individuals gave their written approval to participate.

METHODS OF EXAMINATION:

- 1- A total of 350 healthy individuals were chosen at random.
- 2- AYU- SOFT was used to evaluate different *Dhātu Sārata* of individual

STEPS OF STUDY:

written consent will be taken

Selection of 350 volunteers as per inclusion/exclusion criteria.

Evaluation of jivha in same individuals (by taking tongue photographs before & after brushing)

Assessment of Dhātu Sārata of same individual (BY AYUSOFT)

Categorization of individual into (Pravara/Madhyam/Heena) Dhātu Sārata on the basis of obtained score.

Assessed the Tongue Parameters with different Dhātu Sārata

All the 8 types of *Dhātu Sāra* are divided in to *Pravara*, *Madhyama* and *Heena* grades on the basis of the characteristics obtained by the AYUSOFT.

HEALTH ASSESSMENT-

Prashna Pariksha, was used to accomplish this. Name, age, sex, religion, occupation, Habitat, economic situation, marital status, etc were included.

General examination: Before undergoing the tongue image and Dhātu Sāra examination, each volunteer was subjected to a general examination.

Pulse: pulse-oximeter was used to determine the results.

Temperature: A scientific thermometer was used to measure temperature.

Blood Pressure: Sphygmomanometer is used to measure the volunteer's BP.

Volunteer questions were asked for **Mala**, **Mutra**, and **Kshudha**.

Other examination: It was accomplished by asking the volunteer questions on exercise, sleep, Ahara, & addictions. Any illness history was accomplished with help of **Prashna Pariksha**.

OBSERVATION

Gender-Among 350 volunteers 161 [46%] were female, 189 [54%] were male.

Dhātu Sārata * gender crosstabulation

Among 18 Pravara Dhātu Sāra 10 [55.6%] were male and 8 [44.4%] were female.

Among 290 Madhyama Dhātu Sāra 148 [51%] were male and 142 [49.0%] were female.

Among 42 Heena Dhātu Sāra 31 [73.8%] were male and 11 [26.2%] were female

Dhātu Sārata * addiction crosstabulation

Among 42 Heena DhātuSāra 8 were having no addiction, 8 were tea & 26 were having tobacco & smoke habit.

Among 290 Madhyama DhātuSāra 138 were having no addiction, 89 were tea & 63 were having tobacco & smoke habit.

Among 18 Pravara DhātuSāra 14 were having no addiction, 1 were tea & 3 were having tobacco & smoke habit.

Dhātu Sārata * exercise crosstabulation

Among 18 Pravara DhātuSāra volunteers 11 were regular in exercise & 7 in irregular in exercise. Among 290

Madhyam DhātuSāra, 47 were regular in exercise & 243 were irregular in exercise. Among 42 Heena DhātuSāra 2

were regular in exercise & 40 were irregular in exercise.

Chi-Square Tests Between Dhātu Sārata & Exercise

A chi-square test of independence was performed to examine relation b/w Dhātu Sārata & exercise. Relation b/w these variables was highly significant, (2, N=350) =15.797, $p < 0.05$.

Dhātu Sārata * Ahara crosstabulation-

Among 18 Pravara DhātuSāra volunteers 5 were vegetarian and 13 were having mixed diet. Among 290 Madhyam Sāra volunteers 84 were vegetarian and 206 were having mixed diet. Among 42 Heena DhātuSāra volunteers 25 were vegetarian and 17 were having mixed diet.

Dhātu Sārata * Sleep crosstabulation-

Among 18 Pravara Dhātu Sāra volunteers all 18 were having sound sleep. Among 290 Madhyam Sāra volunteers 253 were having sleep sound and 37 were having disturbed sleep. Among 42 HeenaSāra volunteers 24 were having sleep sound and 18 were having disturbed sleep.

Chi-Square Tests Between Dhātu Sārata and sleep- The relation between these variables was highly significant, chi-square (6, N = 350) =45.84, $p < 0.05$.

Chi-Square Tests Between Dhātu Sārata & tongue colour-

Among 295 volunteers having sound sleep, max. 190 [64.4%] were having pink colour tongue. Relation between these variables was highly significant, chi-square (2, N = 350) =11.81 $p < 0.05$.

Chi-Square Tests Between Dhātu Sārata * tongue coating

Among 295 healthy volunteers having sound sleep, max. 209 [70.8%] were having thin coat. The relation between these variables was not significant, chi-square (2, N = 350) =4.1 $p > 0.05$.

Distribution of Dhātu Sārata- Among 350 healthy volunteers 18 [5.1%] were Pravara Dhātu Sāra, 290 [82.9%] were Madhyam Dhātu Sāra, 42 [12%] were Heena Dhātu Sāra.

Distribution of Rasa Dhātu Sārata- Among 350 volunteers 185 [52.9%] were Pravara rasa DhātuSāra, 123 [35.1%] were Madhyam rasa DhātuSāra, 42 [12%] were Heena rasa DhātuSāra.

Distribution of Rakta Dhātu Sārata- Among 350 volunteers 102 [29.1%] were Pravara Rakta Dhātu Sāra, 177 [50.6%] were Madhyam Rakta Sāra, 71 [20.3%] were Heena Rakta Sāra.

Distribution of Mamsa Dhātu Sārata- Among 350 volunteers 35 [10%] were Pravara mamsa DhātuSāra, 176 [50.3%] were Madhyam mamsa Sāra, 139 [39.7%] were Heena mamsa Sāra.

Distribution of Meda Dhātu Sārata- Among 350 volunteers 34 [9.7%] were Pravara meda Dhātu Sāra, 180 [51.4%] were Madhyam meda Sāra, 136 [38.9%] were Heena Meda DhātuSāra.

Distribution of Asthi Dhātu Sārata- Among 350 volunteers 33 [9.4%] were Pravara asthi Dhātu Sāra, 137 [39.1%] were Madhyam asthi DhātuSāra, 180 [51.4 %] were Heena asthi DhātuSāra.

Distribution of Majja Dhātu Sārata- Among 350 volunteers 64 [18.3%] were Pravara majja DhātuSāra, 172 [49.1%] were Madhyam majja DhātuSāra, 114 [32.6%] were Heena majja Sāra.

Distribution of Shukra Dhātu Sārata- Among 350 healthy volunteers 89 [25.4%] were Pravara Shukra Dhātu Sāra, 203 [58%] were Madhyam Shukra Sāra, 58 [16.6%] were Heena Shukra Sāra.

Distribution of Sattva Dhātu Sārata- Among 350 volunteers 88 [25.1%] were Pravara sattva DhātuSāra, 202 [57.7%] were Madhyam sattva Dhātu Sāra, 60 [17.1%] were Heena sattva Sāra.

Distribution of Tongue colour- Among 350 volunteers 212 [60.6%] were having pink colour, 132 [37.7%] were having pale tongue colour, 6 [1.7%] were having red tongue colour.

Distribution of Tongue coating before brushing- Among 350 volunteers 242 [69.1%] were having thin tongue coating, 103 [29.4%] were having white thick coating, 5 [1.4%] were having yellow thick coating before brushing.

Distribution of Tongue shape- Among 350 volunteers 153 [43.7%] were having oval shape, 85 [24.3%] were having triangular, 65 [18.6%] were having wide, 22 [6.3%] were having bifid, 25 [7.1%] were having long shape tongue.

Distribution of Tongue movement - Among 350 volunteers 183 [52.3%] were having still, 167 [47.7%] were having shivering tongue movement.

Distribution of Tongue Texture [Taste Buds]- Among 350 volunteers 264 [75.4%] were having visible, 75 [21.4%] were having uneven taste buds, 11 [3.1%] were having wrinkle taste buds.

Distribution of Tongue Moisture- Among 350 volunteers 259 [74%] were having moist, 91 [26%] were having Unmoist tongue.

Distribution of Tongue Margin [EDGES]- Among 350 volunteers 171 [48.9%] were having same as body tongue, 156 [44.6%] were having dented, 11 [3.1%] were having thin margin, [3.4%] were having eroded tongue.

DISCUSSION OVER SAMPLE SIZE: - this was an observational study, in which 350 apparently healthy volunteers were taken after discussion with statistician.

DISCUSSION OVER USING CDAC-AYUSOFT DHĀTU SĀRATA ASSESSMENT: - in this research work, Sārata parikshan of 350 subjects were done with the help of standard Sārata parikshan proforma AYUSOFT C-DAC (**Centre for Development of Advance Computing**) Pune, India along with other collaborating institutes. Ministry of Communications and Information and Technology, Govt. of India had developed the AYUSOFT software.

RESULT

Exercise - 17% of volunteers exercised on a regular basis, while 83% exercised on an irregular basis. The P value obtained when comparing Dhātu Sārata with exercise habits was $0.01 < (0.05)$, indicating that there is a significant **link between exercise & Dhātu Sārata**. Charaka & Vagbhatt description of Sāra pariksha mentioned that, the main purpose of Sāra pariksha is to measure the strength of individual (**ch.vi. 8/118, A.H. 3/117**).

Ahara- individual who were vegetarian were 114 [33%] & 236 [67%] were following mixed diet.

Sleep- Dhātu Sārata- the majority of people in this study, 85% were having sound sleep & rest 15% having disturbed sleep. Relation between Sleep & Dhātu Sārata was highly significant, chi-square (6, N=350) =45.84, $p < 0.05$. Acharya Charaka has designated Ahara, Nidra & Brahmacharya (abstinence) as the main three pillars of life termed as **Trayaupastambhas**. These, when taken in adequate amount at the right time provide stability to the body and improve *Bala, varna & upachaya* (metabolism) in body.

Sleep- Tongue Coat- Among 295 healthy volunteers having sound Sleep, max. 209 [70.8%] were having Thin Coat. Tongue coat criteria does not show significant relationship with sleep.

Sleep- Tongue Colour- Among 295 healthy volunteers having Sound Sleep, max. 190 [64.4%] were having Pink Colour Tongue. The relation between Sleep & Tongue Colour was significant, chi-square P value 0.003.

DISCUSSION

Most of the all **Pravara Sāra** person having **pink colour** tongue.

तेषां क्षयवृद्धी शोणितनिमित्ते [सु.सू. १४. २१]. All **Dhatus** are dependent for their nourishment on **Raktadhātu**. Their status of waning or increment depends on it. According to **Dhātu poshan nyaya**, the **Dhātu** first nourishes itself & nourishes the next Dhātu. What if there is no obstruction in the **Srotas**? Since the colour of the tongue in **Rakta Sāra** individuals is pinkish red **रक्तं वर्णप्रसादं** [सु.सू. १५. ७]. Therefore, we can assume that the color of the tongue in all **Dhātu Sāra** individuals is similar to that of **Rakta Dhātu Sāra**.

Most of the **Rasa Sāra** person having long shape tongue, most of the **Rakta Sāra** person having long & oval shaped tongue, most of the **Meda Sāra** person having long & bifid tongue. Most of the **mamsa Sāra** person having wider shape, most of the **Asthi Sāra** person having oval and wider shape, most the of **Majja Sāra** person

having oval shape, most of the **Shukra Sāra** person having oval and bifid shape and most of the **Sattva Sāra** person having triangular shape tongue.

मांसं पार्थिवम् [सु.सू. भानुमतिटीका], due to the abundance of **Prithvi Mahabhuta** in **mamsa Dhātu**, the tongue is of [मांसोपाचिताः] **Sthool** [wider] shape.

Most of the **rasa, Rakta, mamsa, meda, majja** and **Shukra Sāra** person having still tongue. Most of the **Asthi** and **sattva Sāra** person having shivering movement tongue.

अस्थि पृथिव्यनिलात्मकम् / [भानुमतिटीका सु.सू. १५.८], **तत्र सत्वबहुलमाकाशं** [सु.शा. ११/२०] Due to the **laghuta guna** of **Akash Mahabhuta** in **sattva Sāra** and **Chala guna** of **Vayu Mahabhuta** in **asthi Dhātu**, the movable quality prevails in the tongue.

Most of the **Sāra** having visible taste buds. But most of the **mamsa Sāra** person having uneven taste buds. Due to the **ghantva guna** of **Prithvi Mahabhuta** in **mamsa Dhātu**, the taste buds get engulfed in the tongue body at many places. And not fully visible.

Most of the all **Sāra** person having thin tongue coat and most of the **sattva Sāra** person having yellow Coat. [पित्तं सत्वगुणोत्तरम् भा. प्र.पू.खं ३/३०]

Acc. To **Dhātu poshan nyaya [kedari- kulya]**, nutrition of all the **Dhātu** is complete due to their own **dhatwagni**. Since we can assume that **dhatwagni** is in equilibrium state in **Sāra** person. Because of this, **kapha, mala** of **rasa Dhātu** on the tongue, will accumulate in a small amount only. That is, the layer on the tongue will be thin. due to dominance of **pitta dosha & Akasha Mahabhuta** in **sattva Sāra**, the **Agni** will be **Tikshna**, & due to the **Laghuta** and **Sushirata guna** of **Akash Mahabhuta**, the **rasa mala (kapha)** will accumulate on the tongue flat out & more.

Most of the all **Sāra** person having moist tongue & **sattva Sāra** person having Unmoist tongue.

(आप्या जिह्वा रसक्लेदा (अ. ह. शा. ३/३) due to the dominance of **Jala Mahabhuta**, tongue is mostly moist, but the **agni** is predominant in **sattva Sāra person**, tongue is mostly found dry.

Most of the **rasa, Rakta** and **meda Sāra** person having same as body tongue edge. Most of the **mamsa, asthi, majja, Shukra** and **sattva Sāra** person having dented tongue.

बृहदन्तहन्वस्थिनखम् आस्थिभि [सु.सू. ३४/१६] The teeth are big in **Asthi Sāra** person and we can assume that if **asthi Dhātu** is well nourished then other successive Dhātu will also get nourished. and in **Asthi Sāra** and subsequent **Dhātu Sāra**, teeth marks will often be found on the along the perimeter of the tongue.

CONCLUSION: -

Rasa Dhātu Sārata found positively significant relation with shape, movement & moisture. but not significant relation with colour, texture, coating and margin.

Rasa Sāra person has mostly pink colour, long shape, still, visible buds, thin coat & some yellow thick coat, moist, and same as body tongue.

Rakta Dhātu Sārata found positively significant relation with colour, movement, texture, coating, moisture & margin. But not significant relation with shape.

Rakta Sāra person has mostly pink colour, oval/ long shape, still movement, visible buds, thin coat, moist and same as body tongue.

Mamsa Dhātu Sārata found positively significant relation with colour, shape, movement, coating. but not significant relation with texture, moisture, margin.

Mamsa Sāra person has mostly pink colour, wider shape, still movement, uneven buds, thin coat, moist and dented tongue.

Meda Dhātu Sārata found positively significant relation with colour, shape, movement, & margin. but not significant relation with texture, coating & moisture. MedaSāra person has pink colour, long/bifid, still movement, visible buds, thin coat, moist & same as body tongue.

Asthi Dhātu Sārata found positively significant relation with coating & margin. But not significant relation with colour, shape, movement, texture & moisture. AsthiSāra person has pink colour, oval/wider shape, shivering, visible buds, thin coat, moist, & dented tongue.

Majja Dhātu Sārata found positively significant relation with colour, movement. But not significant relation with shape, texture, coating, moisture and margin. Majja Sāra person has pink colour, oval shape, still movement, visible buds, thin coat, moist and dented tongue.

Shukra Dhātu Sārata found positively significant relation with colour, movement & moisture but not significant relation with shape, texture, coating, & margin. ShukraSāra person has pink colour, oval/ bifid/long, still, visible buds, thin/ yellow thick coat, moist, & dented tongue.

No significant relation of **Sattva DhātuSāra** to any parameter of tongue was found. Sattva Sāra person has pink, triangular, shivering, visible buds, yellow thick coat, Unmoist & dented tongue.

ADDITIONAL FINDING: -

DHĀTU SĀRATA AND EXERCISE- The P- value obtained when comparing **Dhātu Sārata with exercise habits** was **0.01 < (0.05)**, indicating that there is a **significant** relation between exercise & Dhātu Sārata. **Charaka & Vagbhata** description of **Sāra pariksha** mentioned that, the main purpose of **Sāra pariksha** is to measure the **strength** of individual (ch.vi. 8/118, A.H. 3/117).

DHĀTU SĀRATA AND SLEEP- The relation between Sleep and Dhātu Sārata was **highly significant**, chi-square (6, N = 350) =45.84, p <0.05. Charaka has designated, **Ahara, Nidra, & Brahmacharya** as the main three pillars of life termed as **Trayaupastambhas**. These, when taken in adequate amount at the right time provide stability to the body and improve **Bala, varna** (complexion) and **upachaya** (metabolism) in the body. [सू. 11/35]

SLEEP- TONGUE COLOUR- Among 295 healthy volunteers having **Sound Sleep**, maximum 190 [64.4%] were having **Pink Colour Tongue**. The relation between Sleep and Tongue Colour was **significant**, chi-square P value 0.003.

APPLICABILITY OF THIS STUDY

We can easily assess the different Dhātu Sāra with help of tongue.

Medicine can be easily selected through Dhātu Sāra.

At present it takes a lot of time to assess all Dhātu Sāra level. But we can easily find out the all Dhātu Sāra by examining the jivha. And can suggest better medicine to strengthen the Heena Dhātu. [स्वस्थस्य स्वास्थ्यरक्षणम्], Even at the medical practice, we can implement it

REFERENCES

- 1- Tewari PV. Charak Samhita [English Translation of Text with Ayurveda Dipika commentary of Chakrapani Datta), Sutra Sthan 1/42. Varanasi: Chaukhamba Vishvabharati, 1st Edition 2018.
- 2- Tewari PV. Charak Samhita [English Translation of Text with Ayurveda Dipika commentary of Chakrapani Datta), Sutra Sthan 30/26. Varanasi: Chaukhamba Vishvabharati, 1st Edition 2018.
- 3- Sharma, P.V. Susruta Samhita with English translation of text and Dalhana's commentary along with critical notes. Sutra Sthan 1/22 Varanasi: Chaukhambha Vishvabharati; (2004 ed.),

- 4- Tewari PV. Charak Samhita [English Translation of Text with Ayurveda Dipika commentary of Chakrapani Datta, Sutra Sthan 1/42. Varanasi: Chaukhamba Vishvabharati, First Edition 2018.
- 5- Sharma, P.V. Susruta Samhita with English translation of text and Dalhana's commentary along with critical notes. Sutra Sthan 15/ 3Varanasi: Chaukhambha Vishvabharati; (2004 ed.),
- 6- Shastri Ambikadutta, Mehta Pranajivana Manekchanda [Susruta Samhita of Maharsi- Susruta] New Delhi (India): Sutra Sthan 35/18 Chaukhamba Publications; Edition:2015.
- 7- Tewari PV. Charak Samhita [English Translation of Text with Ayurveda Dipika commentary of Chakrapani Datta), Vimana Sthan 8/114 Varanasi: Chaukhamba Vishvabharati, 1st Edition 2018.
- 8- Sharma, P.V. Susruta Samhita with English translation of text and Dalhana's commentary along with critical notes. Sutra Sthan 34/16 Varanasi: Chaukhambha Vishvabharati; (2004 ed.),
- 9- . Tewari PV. Charak Samhita [English Translation of Text with Ayurveda Dipika commentary of Chakrapani Datta], sharira sthan 8/51 Varanasi (India): Chaukhamba Vishvabharati; 1st Edition :2018.
- 10- Tripathi Brahmanand, Astang Hridayam, Sutra Stana 12/16" Nirmala" Hindi Commentary, Chaukhamba Sanskrit Pratisthan, Delhi, Varanasi:2012.
- 11- Tewari PV. Charak Samhita [English Translation of Text with Ayurveda Dipika commentary of CakrapaniDatta], chikitsa Sthan 28/6 Varanasi: Chaukhamba Vishvabharati; First Edition:2018.
- 12- Shastri Ambikadutta, Mehta Pranajivana Manekchanda (Susruta Samhita of Maharsi- Susruta) New Delhi (India): Sharir Sthan 4/27 Chaukhamba Publications; Edition:2015,
- 13- Acharya Charaka, Charak Samhita, Sutra sthana 8/8 Ayurveddipika mentary by Chakrapanidatta edited by Vaidya Yadavji Trikamji Acharya, Chaukhamba Prakashan, 2009,
- 14- Tewari PV. Charak Samhita [English Translation of Text with Ayurveda Dipika commentary of Chakrapani Datta], sharira sthan 8/51 Varanasi: Chaukhamba Vishvabharati; First Edition :2018.

