

Development of Standardized Operating Protocol for Jivha Parikshan According To Rachana Sharir In Vata Vyadhi

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Abstract: The study of structure of body is the entry gate for any system of medicine including Ayurveda. It is mandatory for students to get detail knowledge of *Rachana Sharir* (Anatomy). Without its knowledge no one is able to treat patient. Our Sages described importance of *Rachana Sharir* (Anatomy) and given detail explanation about human body organs like *Saptatwacha*, *Marma*, *Pranayatana*. Out of all organs explained, *Jivha* (Tongue) is one of the most important organs because it is included in *Pranayatana* which is a *Rasanendriya Adhishthana* out of five *Dnyanendriyas*. Tongue is mirror image of internal organs. Its

function is to provide information about *Shadrasa*, also a vital instrument used in *Ayurvedic* medicine to assess a person's current status of health and for prognosis of diseases. "Ayurveda" the oldest known modality in the world describes *Jivha Parikashana* (Tongue examination) as technique to determine a person's state of physical, mental and emotional health.

Key words: *Rachana Sharir*, *Dnyanendriyas*, *Jivha Parikashana*, *Vata Vyadhi*

Introduction: Acharya Charaka has given information about *Jivha* of *Dirghayu balak* in *Jatisutriya Adhyaya* in *Sharir-Sthana* of Charaka Samhita ⁽¹⁾. A

person whose tongue turned black or coated or dragged in or furrowed roughly will perish. Ancient art of Tongue examination also describes quite characteristics that reveals the functional status of respective internal organ merely by observing the surface of Tongue. *Acharya Yogaratnakar* quoted the *Jivha Parikshana* (Tongue examination) under *Ashatavidha Parikshana* which comprises of *Nadi* (pulse) *Mutra* (Urine), *Mala* (Feces), *Shabda*, *Sparsha*, *Druka*, *Akruti* and *Jivha* ⁽²⁾.

Lot of study is going on all over the world on tongue examination in specific disease like, “Tongue diagnosis in stroke patient” ⁽³⁾ ⁽⁴⁾ “Detecting Diabetes Mellitus and Non diabetic Retinopathy using tongue colour, texture and geometry features” and so on. Not only medical professionals, but Engineering people are also working on tongue to develop instrument for tongue examination. In future tongue may be an important tool for diagnosis of diseases. But there is no such type of study is going regarding tongue as diagnostic tool in Ayurveda. So this is an effort made to study characteristics of tongue in *Vata Vyadhi* persons, so that one can diagnose it by merely inspecting the tongue. This study will help to reduce the costly investigations and time

consumption and therefore it can be beneficial to both physician and patient.

Aim:

To develop Standardized Operating Protocol for *Jivha Parikshana* according to *Rachana Sharir* in *Vata Vyadhi*.

Objective:

To observe the changes on *Jivha* in *Vata Vyadhi*.

Review of Literature related to *Jivha* and *Jivha Parikshana* from Ayurvedic view

□ *Jivha* formation ⁽⁶⁾ ⁽⁷⁾:

The *Jivha* (tongue) is formed by the essence of the *Kapha*, *Rakta* and *Mamsa*.

□ *Jivha* Swarupa:

The *Jivha* (Tongue) is pinkish red, broad and thin.

□ *Jivha* Synonyms:

Rasadnya, *Rasana*, *Jivha*.

□ Development of *Jivha* ⁽⁸⁾

During the third month, all the body and all sense organs are formed simultaneously.

□ *Jivha* of *Dirghayubalaka*

Tongue having sufficient in length and breadth, smooth, thin and normal colour.

□ Structure of Oral cavity ⁽⁹⁾

Mukha i.e. oral cavity is defined as an organ, consisting of *Oshtha* (Lips), *Dantamula* (Gums), *Dantta* (Teeth),

Jivha (Tongue), *Talu* (Palat), Cheeks and *Gala* (Throat).

□ ***Saptha Sevani and Jivha*** ⁽¹⁰⁾

Sevani are seven in number. Out of them five are present on skull, one underneath the penis and one underneath the tongue.

□ ***Avedhya Siras at Jivha:***

There are thirty-six *Siras* (Veins) in tongue; out of these sixteen which are below the tongue are not to be injured by instrument; the two *Rasavaha* and two *Vakavaha* are also not to be punctured.

□ ***Jivha as Kapha Dosha Sthana:***

Ura, Kantha, Shira, Kloma, Parva (Joint), *Amashaya, Rasa, Meda, Ghrana, Jivha* (Tongue) are the site of *Kapha Doshas*. *Jivha* is explained as main site of *Bodhaka Kapha* whose main *Karma* is *Rasa bodhana* (Sensations of test).

□ ***Jalamahabhuta Guna Varnana:***

Gustatory sensation, tongue, coldness, unctuousness, heaviness and all fluids inside the body including semen belong to *Jala Mahabhut*.

□ ***Indriya Varnana:***

Tongue represents the organ of speech. The true speech is light and the false speech is darkness.

□ ***Jivha Pranavayu Sthana:***

Prana is located in head, chest, throat, tongue, mouth and nose. Its function is spitting, sneezing, belching, respiration, digestion etc.

□ ***Dasha jivita Dhamani/Pranayatan***
(Ten vital parts):

Ten vital parts where *Prana* is locate are *Shira* (Head), *Rasanabandhanama, Kantha,*

Examination of *Jivha:* ⁽¹¹⁾

In *Vataj* conditions tongue is cold, rough and cracked; in *Pittaja Vyadhi* it is reddish and blackish, while in *Kaphaja* it is whitish and sticky one. In *Sannipata* conditions, the tongue is blackish, *Kantaka* (Thorny) and dry in nature. In the cases of *Dwandwaja Dosha*, mixed symptoms and sign appear.

Dirghayu Purusha Jivha
characteristics:

A patient whose tongue is soft will never perish.

□ ***Alpayu Purusha Jivha***
characteristics:

A patient whose tongue turned black or dragged in or furrowed roughly will perish.

A patient cannot survive, when his tongue become black and turn rough.

VATA-VYADHI: ⁽¹²⁾

The term *Vata* denotes *Vata-Dosha*. The term *Vyadhi* denotes a disease. *Vata-Vyadhi* means a disease caused by *Vata-Dosha*. An extraordinary and specific disease caused by *Vata* is *Vatavyadhi*.

All *Samhita Granthas* deal with *Vata-Vyadhi* at length. In practice also we find that a very large number of people in society all over the world are affected with this ailment. Men, women, and children, rich and poor, educated and uneducated, service class and businessman, young and old alike are not exception. Urban, rural and remote jungle folks are not free from this disorder.

□ ***Vata Vyadhi Nirukti:***

An extraordinary and specific disease caused by *Vata* is *Vata-Vyadhi*.

□ ***Vata Vyadhi Samanyakarana:***

Due to rough, cold, little food, excessive coitus and vigils, faulty therapeutic management, excessive elimination of impurity and blood, excessive movement such as leaping, jumping, wayfaring and physical exercise, wasting of *Dhaatus*, excessive emaciation due to anxiety, grief and illness, on comfortable bed and seat, anger, day sleep, fear, suppression of urges, *Aamdosha*, injury, fasting, injury in vital parts, falling down from elephants, horse and other fast vehicles *Vayu* gets aggravated and filling up the vacant channels in the body produces various disorders pertaining to the entire body or one of the part.

□ ***Vata Vyadhi Poorvaroopa and Roopa Lakshana:***

The unmanifested symptoms of these disorders are known as *Purvarupa* (prdomal symptoms). When the same are manifested they represent the own entity of disorders while their lightness (listened severity) denotes the subsidence of the disorder.

Kupitavata Lakshana:

Contractures, stiffness in joints, tearing in bones and joints, Horrification, delirium, stiffness in hands, back and head, limping, Crippledness, Humpedness, drying of organs, crookedness of head, nose, eyes, clavicle region and neck, tearing, piercing pain, distress, convulsion, mental confusion and exhaustion these symptoms are produced by the vitiated *Vayu*.

MATERIAL AND METHODS

The study has been conducted in two phases:

a) Conceptual study:

A detail *Ayurveda* literature regarding:

- 1) *Jivha*,
- 2) *Jivha Parikshana*
- 3) *Vata Vyadhi*

From *Samhitas* and their commentaries as well as other contemporary writing has been reviewed or studied.

A detail Modern literature regarding:

- 1) Tongue anatomy
- 2) Clinical anatomy of tongue

- 3) Embryology of tongue
- 4) Histology of tongue
- 5) Tongue examination

Variability in tongue as per diseases like Macroglossia, Microglossia, tongue tie, pale tongue etc are reviewed from Grays anatomy, A text book of symptoms and signs by A.F.Golwala, Clinical methods in medicine by S.N.Chugh ,E-magazines' on pubmed .

b) Observational study:

As per assessment criteria *Jivha*(tongue) of pre-diagnosed *Vata Vyadhi* patients are observed with the help of naked eye observation, colour of *Jivha* was compared with colour chart and then photograph was taken with digital camera.

PLACE OF WORK:

Study was conducted in Department of *Rachana-Sharir* and OPD of our *Ayurveda* hospital.

SAMPLE SIZE:

Study was conducted on 100 pre diagnosed patients of *Vata Vyadhi*.

INSTRUMENTS USED:

- 1) Digital camera

Type of camera compact.

Effective resolution 12MP.

Optical zoom 4 xs.

Digital zoom 4 xs.

- 2) Colour chart

INCLUSION CRITERIA:

- a) Age: 30-60 years.
- b) Gender: Both genders.
- c) Pre diagnosed patients of *Vata Vyadhi*.

EXCLUSION CRITERIA:

- Patient of CA tongue and Stomatitis.
- Patient having congenital abnormality regarding tongue.
- Patient of diabetes mellitus.
- Patient having history of trauma of tongue.
- Individuals suffering from hormonal disorder.
- Patient taking medicines that affect tongue colour e.g. antibiotics, Bronchodilators.

METHODOLOGY:

- 1) Pre diagnosed patients of *Vata Vyadhi* are selected according to inclusion and exclusion criteria.
- 2) Patient was informed about *Jivha Parikshana*, importance of study.
- 3) Written and informed consent of all patients are taken in local language.
- 4) Sitting or supine position was given to patient to observe the tongue and capture photograph.
- 5) Patient was asked to open the mouth and protrude the tongue outside as possible to visualize clearly and observe carefully for its Surface, Size, Alignment, Edge, Colour, Movement, Shape, Texture and Coat to know what

changes are occurred in his tongue and colour of his/her

tongue was compared with colour chart and then photograph was captured with digital camera.

6) Essential clinical information was gathered as per case record form.

7) Observations are noted and assessed as per criteria.

OBSERVATION AND RESULTS:

Table No. 1, Age wise distribution:

Age Group	Frequency	Percentage
30-40 Years	56	56
40-50 Years	26	26
50-60 Years	18	18
OTAL	100	100

Table No. 2, Sex wise distribution

Gender	Frequency	Percentage
Male	50	50
Female	50	50

Table No. 3, Out of 100 patients, all were central alignment.

Alignment	Frequency	Percentage
Central alignment	100	100
Left alignment	0	0

Table No.4, Colour wise distribution:

Sr. No	Colour	Frequency	Percentage
1	Pink	52	52
2	Red	3	3
3	Pale	43	43
4	Purple	2	2

Table No.5, Disease wise distribution

1	Diagnosis	Frequency	Percentage
2	<i>Asthimajjagatvata</i>	6	6
3	<i>Grudhrasi</i>	3	3
4	<i>Manyagatvata</i>	14	14
5	<i>Sandhigatavata</i>	27	27
6	<i>Pakshaghaata</i>	1	1
7	<i>Paadshoola</i>	9	9
8	<i>Avabahuk</i>	6	6
9	<i>Pakvashayagatvata</i>	10	10
10	<i>Twakagatavata</i>	1	1
11	<i>Vaatarakta</i>	2	2
12	<i>Kampavata</i>	1	1
13	<i>Amashayagatvata</i>	4	4
14	<i>Hradgatvata</i>	1	1
15	<i>Gudagatvata</i>	1	1
16	<i>Kativata</i>	14	14
17	TOTAL	100	100

Table No.6, Association between Vyadhi and colour

Sr. No.	Test	Value	Df	P-value
1	Pearson Chi square	143.939 _a	70	0
2	Likelihood ratio	50.326	70	0.96
3	Linear by Linear association	0.46	1	0.49
4	N of valid cases	100	-	-

Since the observation on nominal scale, chi square test is use for test of significance. From the above table it can

be observed that p-value is less than 0.05. Hence it can be concluded that there is significance association between color and diagnosis.

Discussion:

Study was conducted on 100 patients of pre diagnosed *Vatavyadhi* to develop Standard operating protocol for *Jivha Parikshan* according to *Rachana sharir* in *Vata Vyadhi*. For this study case record form was developed having criteria's like Alignment, Colour, Shape, Edge, Cracks/Marks, Movement, Texture, and Coat. After analysis of collected data it was concluded that out of nine criteria's explained Colour, Edge, Mark, Shape, Texture and movement have strong association with diagnosis of *Vata Vyadhi* and Alignment, Surface and coat have no significant association with diagnosis of *Vata Vyadhi*. For data analysis Chi-square test was applied. In 48 patients abnormal colour was found and in 52 patient normal colour was found .Since observations on nominal scale. Chi-Square test was applied and value was drawn which was less than 0.05 so we conclude that there was significant association between Vata vyadhi diagnosis and colour criteria. In 48 patients normal edge was found and in 52 patient abnormal edges was found .Since observations on nominal scale. Chi-Square test was applied and value

was drawn which was less than 0.05 so we conclude that there was significant association between *Vata vyadhi* Diagnosis and edge criteria. In 62 patients Marks was found and in 38 patient Marks was absent found .Since observations on nominal scale. Chi-Square test was applied and value was drawn which was less than 0.05 so we conclude that there was significant association between *Vata vyadhi* diagnosis and Marks criteria.

In 53 patients tongue was still found and in 47 patients tongue was shaky. Since observations on nominal scale. Chi-Square test was applied and value was drawn which was less than 0.05 so we conclude that there was significant association between Vata vyadhi diagnosis and Movement criteria. In 85 patients tongue texture was normal and 15 patient texture was abnormal .Since observations on nominal scale. Chi-Square test was applied and value was drawn which was less than 0.05 so we conclude that there was significant association between Vata vyadhi diagnosis and Texture criteria. In 59 patients oval shape, 19 patient trangular, 10patients wider, 3 patients long and in 3 patients short was found .Since observations on nominal scale. Chi-Square test was applied and value was drawn which was less than 0.05 so we

conclude that there was significant association between *Vata vyadhi* diagnosis and Shape criteria. Alignment criteria does not show significant association with *Vata Vyadhi* diagnosis in this study because tongue in normal healthy individual present with central alignment. Mostly right or Left alignment was seen in patients of *Pakshaghata* and *Ardita*. But in this study out of 100 patient's only one patient of *Pakshaghata* was observed, in that patient Alignment was central. Surface criteria not have significant association with diagnosis of *Vata Vyadhi* because out of 100 patients 55 had even surface, 21 with deeps and 24 bulges. So that after applying Chi-square test P value is greater than 0.05 hence it signifies that there is no significant association between tongue surface criteria and *Vata Vyadhi* diagnosis.

Likewise there is no significant association found between Coat criteria and *Vata Vyadhi* diagnosis due to 43 patients have thin coat, 34 have white coat and 23 have yellow coat because of this p value is greater than 0.05 after applying Chi-square test.

CONCLUSION:

After reviewing detail literature, discussion and on the basis of observations made, it can be concluded that for Diagnosis of *Vata Vyadhi*

following *Jivha Parikashan* protocol can be followed which includes a) Mark b) Colour c) Shape d) Edges e) Movement f) Texture g) Alignment h) Coat i) Surface.

Total 9 criteria of standard operating protocol were observed in this study out of which 6 criteria significant association on the basis of statistical analysis has. Edge, Mark and Movement show close association with *Vatavyadhi* because *Vatavyadhi* are caused due to *Vata Dosha*. *Vata Dosha* have properties *Kharata* (rough), *Sphutit* (cracks), *Kampa* (shaky).

Out of 100 patients studied 72% patients were with more than three significant abnormal criteria, 28% patients were having less than two significant abnormal criteria and only 3 patients has all normal criteria.

Above mentioned protocol can play important role for diagnosis of *Vata Vyadhi* on the basis of *Rachana Sharir of Jivha*.

It can be concluded that after detail study *Jivha Parikshana* can be used to assess *Vata Vyadhi* as a tool according to *Rachana Sharir*.

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