



A Review Study of *Jivhagata Rogas* w.s.r. Tongue Disorders

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ABSTRACT

The tongue is a vital organ for chewing and swallowing food, as well as speech. The tongue is an important accessory organ in the digestive system. Therefore, it deserves proper care and maintenance. If we neglect, then it can affect the rest of the mouth. Oral cancer is becoming the most common disease in the world. Besides this, there are various types of tongue disorders, which are also becoming a big problem for the populations. In *Ayurveda*, cleaning of the tongue (*Jivhanirlekhana Karma*) has been described to maintain tongue hygiene, to prevent tongue disorders & also to improve digestive system. So, here we have discussed about the common tongue disorders in Ayurvedic as well as modern aspects.

Key Words: *Tongue, Jivhagatarogas, Jivhanirlekhana, Tongue disorders*

INTRODUCTION

Tongue is a muscular organ in the mouth which helps the food for mastication & also useful in swallowing. It is an important part of digestive system & thus can affect the human health. Therefore, it is important to maintain the tongue cleaned & disease free. Out of five sense organ, *Jivha* is one of the most important sense organ. In *Ayurveda*, tongue examination (*Jivha Parikshan*) is elaborated, as it is important in diagnosis of diseases. In *Yogratnakar*, *Jivhaparikshan* has been included in *Ashtavidharogipariksha* & detailed study of various diseases has been done in *jivhagatarogas* where *Susruta* has mentioned five types of *jivhagatarogas*¹. Whereas *Vagbhata* has mentioned 6 types of *jivhagatarogas*². Charaka has explained about natural height, length, texture

of tongue in chp.8 of *Sharirasthan*³. In modern science various abnormalities of tongue are mentioned. Many tongue conditions are benign and require reassurance and explanation, with little or limited treatment.

AIMS & OBJECTIVES

To study the *Jivhagatarogas* in *Ayurvedic* Aspect.

To study various tongue disorder as per modern aspect.

To study the tongue examination.

To study the *Ayurvedic* treatment in tongue disorders.

To study & compare the treatment protocols of *Ayurveda* with Modern science.



METHODOLOGY

References are from Ayurvedic texts i.e. *Charaka Samhita*, *Sushruta Samhita*, *Ashtang Hridaya*, *Yogaratanakara*. Modern texts, previous research journals and websites are also referred and logical analysis will be done.

REVIEW OF LITERATURE

Prakruta Jivha-

The *Jivha* (tongue) is formed by essence of *kapha*, *rakta* & *mansa*. (*Su.Sha. 4/27*)

Prakrutajivha is pinkish red, broad 7 thin, is weighs about 12 *pala*.

According to *Charaka*, *Prana* is located in head, chest, throat, mouth & nose. (*Ch.chi 28/6*)

Jivha is the site of *kapha dosha*. (*Aa.Hr.Su.12/3*)

Jivha is explained as main site of *Bodhaka Kapha* whose main karma is *Rasa bodhana* (*Aa.Hr.Su.12/6*).

According to modern texts, the tongue is a muscular organ in the mouth of most vertebrates that manipulates food for mastication & is used in the act of swallowing⁴. The tongue's upper surface or dorsum is covered with taste buds, housed in numerous lingual papillae. It is sensitive & kept moist by saliva & is richly supplied with nerves & blood vessels. The tongue also serves as a natural means of cleaning of teeth.

The sense of taste and smell are closely interrelated. Sense of taste does not evolve solely. In the absence of olfaction taste sensation is remarkably altered. Primary taste sensation are mainly four which are as follow⁵ -

1. Sweet (from the tip of tongue)

2. Sour (from the side of tongue)

3. Bitter (from the back of tongue)

4. Salt (dorsum of tongue)

• Other tastes are – metallic and Alkaline

➤ Factors affecting the Taste sensation⁶-

• Area: The taste papillae increases the surface area of the tongue several times and make sure that individual tastes can be perceived more intensely.

• Temperature: maximum taste sensation is observed at 30 to 40 degree.

• Olfaction: if olfaction sensation is poor, taste sensation also poor.

• Individual variation: changes person to person as per their taste.

• Adaptation: taking tea after eating of sweets, sweet sensation of taste reduces. Acceptance and rejection of foods. E.g. sweets mostly accepted, acids and salts in higher concentration is rejected.

➤ Yogaratanakara has mentioned Jivha Parikshan according to doshas⁷-

• *Vaata* - Due to vitiation of *vaata* dosha, the appearance of tongue is rough, cold and torned.

• *Pittaja*- Due to vitiation of *pitta* dosha, the appearance of tongue is reddish and blackish.

• *Kaphaja* - Due to vitiation of *kapha* dosha, the appearance of tongue is whitish and jelly like.

• *Sannipataja* - Due to vitiation of all 3 doshas, the appearance of tongue is blackish, thorny and shrunken.

• ***Jivhanirlekhana***: It is also a part of cleaning the oral cavity. Cleaning of tongue is known as *Jihvanirlekhana*.^{8,9}



• Materials for *Jihvanirlekhana*- A thin plate of gold, silver, copper or leaf or a thin wooden plate may be used as a tongue cleaner. It should be soft and smooth with rounded edges. Its length should be ten fingers.

• **Advantages of *Jihvanirlekhana*** - It helps to get rid of waste products of food. It helps to reduce foul smell of the mouth. It improves taste sensation ^{8,9}.

Table 1 Classification of *Jivhagatarogas* as per *Ayurvedic* classics^{10,11,12,13}

Sr. no.	<i>Sushruta</i>	<i>Vagbhata</i>	<i>Sharangdhar</i>	<i>Yogratnakar</i>	<i>Dosha</i>	<i>Chikista</i>	<i>Adhishthan</i>
1.	<i>Vatikjivhakantaka</i>	<i>Vatikjivhakantaka</i>	<i>Vatikjivhakantaka</i>	<i>Vatikjivhakantaka</i> <i>V</i>	<i>Vataja</i>	Same as <i>Vatajoshtaroga</i>	<i>Jivha</i>
2.	<i>Paitikjivhakantaka</i>	<i>Paitikjivhakantaka</i>	<i>Paitikjivhakantaka</i>	<i>Paitikjivhakantaka</i>	<i>Pittaj</i>	<i>raktamokshan</i>	<i>Jivha</i>
3.	<i>Shleshmikjivhakantaka</i>	<i>Shleshmikjivhakantaka</i>	<i>Shleshmikjivhakantaka</i>	<i>Shleshmikjivhakantaka</i>	<i>Kaphaj</i>	<i>raktamokshan</i>	<i>Jivha</i>
4.	<i>Alaas</i>	<i>Alaas</i>	<i>Alaas</i>	<i>Alaas</i>	<i>Kapha-raktaj</i>	<i>Asadhya</i>	<i>Jivhamula</i>
5.	<i>Upajivhika</i>	<i>Adhijivhika</i>	<i>Adhijivhika</i>	<i>Upajivhika</i>	<i>Kapha-raktaj</i>	<i>Raktamokshan by lekhan</i>	<i>Below the Jivha</i>
6.	-	<i>Upajivhika</i>	<i>Upajivhika</i>	-	-	-	<i>Below the Jivha</i>
	05	06	06	05	-	-	

Table 2 *Ayurvedic* Treatments protocols for *Jivhagatarogas*^{14,15}

Sr. no.	<i>Jivharogas</i>	Lakshanas	<i>Ayurvedic</i> Management
1.	<i>Vataj Jivhakantaka</i>	Rough dry, thorny and cracked tongue with loss of taste perception, loss of sensation, discomfort, pain and burning sensation	1. <i>Abhyanga with chaturesenah</i> 2. <i>Nadi or upnahaswed</i> 3. <i>Senhapratisarana</i> 4. <i>Snehannasya</i>
2.	<i>Pittaj Jivhakantaka</i>	Tongue appears red or yellow with thorny buds, pain, discomfort, burning sensation and loss of taste perception.	1. <i>Raktamokshan</i> 2. <i>Siravyadhana</i> 3. <i>Pratisarana</i> 4. <i>Kakolyadidravayakwathgandoosha</i> 5. <i>Kakolyadidravayya milk+ Snehasidhasnehanasya</i> 6. <i>Pittahara Ahara-vihar</i>
3.	<i>Kaphaja Jivhakantaka</i>	<i>Jivha</i> is Heavy, thick, wide, scattered with thorny buds resembling <i>shalmalikantaka</i> , pain, discomfort, itching sensation and sticky salivation	1. <i>Lehana or gharshana with gojivha</i> 2. <i>Raktamokshana</i> 3. <i>Pratisarana</i> 4. <i>Yushasewan</i>
4.	<i>Alaas</i>	A dreadful swelling underneath the tongue, immobilisation of tongue, suppurations of root of tongue	<i>Asadhya, but can give -</i> 1. <i>Virechan</i> 2. <i>Raktamokshan</i> 3. <i>Kawala</i> 4. <i>Shirovirechan</i> 5. <i>Dhoomapana</i> 6. <i>Vaman</i> 7. <i>Nasya</i>
5.	<i>Upajivhika</i>	Cystic swelling resembling the tip of tongue	1. <i>Raktamokshan-lekhan-pratisaran-nasya-gandoosha-dhoompan</i> 2. <i>Chedan-tikshandravyapratisarana (vagbhata)</i>
6.	<i>Adhijivhika</i>	A cyst arises on the dorsum of the tongue	1. <i>Chedan</i> 2. <i>Lekhan</i> 3. <i>Pratisarana</i>



• **Tongue disorders and their management as per Modern Science** .^{16,17,18}

- 1. Congenital disorders :
- Aglossia - complete absence of the tongue at birth
- Ankyloglossia (tongue tie) - where the lingual frenum tethers the tongue to the floor of the mouth. If it interferes with oral hygiene and feeding, frenectomy may be indicated.
- Hypoglossia - congenitally short tongue
- Microglossia
- Macroglossia - an abnormally large tongue, seen in some disorders such as Down's syndrome (although macroglossia can be an acquired condition as well).
- Hamartomata - for example Leiomyomatoushamartoma
- Glossoptosis
- Choristomata - For example, osseous choristoma of the tongue, a very rare condition characterized by a nodule on the dorsum of the tongue containing mature lamellar bone without osteoblastic or osteoclastic activity.
- Lingual thyroid- Ectopic thyroid glands at the base of the tongue have been classified as lingual thyroid glands
- Cleft tongue (bifid tongue) - completely cleft tongue is a rare condition caused by a failure of the lateral lingual swellings to merge. This is normally classed as fissured tongue.
- Caviar tongue - the veins underneath the tongue can become dilated and prominent, giving the undersurface of the tongue a caviar like appearance.

- 2.Acquired (Infective) Tongue disorders :
- Glossitis - some types of glossitis are caused by infections, e.g. median rhomboid glossitis (Candida species), "strawberry tongue" (seen in scarlet fever), and syphilitic glossitis (seen in tertiary syphilis).
- Oral hairy leukoplakia (seen in people with immunosuppression, caused by Epstein–Barr virus)
- Oral candidiasis can affect the tongue due to antibiotic and corticosteroid use, and immunodeficiency (e.g. HIV, diabetes mellitus).
- Autoimmune conditions can cause xerostomia, with resultant glossitis.
- Oral lichen planus
- Hypoglossal nerve weakness can cause atrophy and fasciculation of the tongue.
- Melkersson–Rosenthal syndrome - a neurological disorder characterized by fissured tongue, facial palsy and orofacial swelling.
- The sides (lateral) and undersurface (ventral) of the tongue are high risk sites for the development of oral cancer, most commonly squamous cell carcinoma.
- • Motor neuron disease (Lou Gehrig's disease) can cause impaired control of tongue movement, affecting speech and swallowing.
- • Poor diet can cause malnutrition and nutritional deficiencies. Deficiency of iron, B vitamins and folic acid are common causes for atrophic glossitis.
- • Black hairy tongue - some factors thought to cause black hairy tongue are environmental, such



as eating a soft diet, poor oral hygiene, smoking and antibiotic use.

- • Geographic tongue (benign migratory glossitis) - a common disorder which occasionally causes a burning sensation but is usually painless. Irregular patches of depapillation form on the tongue giving the appearance of a map. The cause is unknown.

- • Leukoplakia - can affect the tongue

- • Tongue coating - food debris, desquamated epithelial cells and bacteria often form a visible tongue coating, bad breath (halitosis), which can be managed by using special oral hygiene instruments such as tongue scrapers or mouth brushes.

- • Burning mouth syndrome - this chronic pain disorder commonly involves the tongue. In reflection of this, some of the synonyms for the condition include tongue-specific terms such as "glossodynia" or "burning tongue syndrome". Burning mouth syndrome is characterized by chronic burning sensation on the tongue and other oral mucous membranes in the absence of any identifiable signs or causes.

- Paratrachosis tongue- Real hair implanted on tongue.

- **Tongue color changes**-The tongue's papillae (tiny, rounded projections) may become discolored if a person smokes or chews tobacco, eats certain foods or vitamins, or has colored bacteria growing on the tongue¹⁹.

- **Black discoloration on the top of the tongue** may occur if a person takes bismuth preparations for an upset stomach. Brushing the

tongue with a toothbrush or scraping it with a tongue scraper can remove such discoloration.

- A small **blue-black discoloration** on the underside of the tongue may be a tattoo caused by a fragment of dental amalgam filling material, which contains silver.

- A **pale and smooth tongue** can be caused by iron deficiency anemia or by pernicious anemia, which is caused by a deficiency of vitamin B12.

- A **strawberry-red tongue** may be the first sign of scarlet fever or, in a young child, a sign of Kawasaki disease.

- A **smooth red tongue** and painful mouth may indicate general inflammation of the tongue (glossitis) or be caused by pellagra, a type of undernutrition caused by a deficiency of niacin (vitamin B3) in the diet.

CONCLUSION

As tongue is the first part of digestive system, so, it is necessary to maintain tongue cleaned and diseased free. In *Ayurveda*, *Jivhanirlekhana* i.e. cleaning of tongue, is an important part of *Dincharya*, followed by *Dantadhavanvidhi* i.e. cleaning of teeth. Prevention is better than cure, that's why *Ayurvedacharyas* focuses on maintaining the tongue normal or *prakruta*.



On the basis of available data from various *Ayurvedic* books, texts books, research articles, journal, websites etc. we can conclude that the *Ayurvedic* medicines are easily available in market and is cost effective and also having less or no side effects.

Modern medicines are much costly, having limitations, long term use can produce further complications or side effects on the body.

Congenital deformities are difficult to treat but acquired tongue disorders can be treated with an integrated approach i.e. binding *ayurvedic* and modern techniques for complete cure of Tongue from the diseases.



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