

Comparing current knowledge to Jihva Roga's clinico-etiological notions (diagnosing tongue disorders)

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ABSTRACT

Aim of the study:

The purpose of this study is to systematically compare Jihva Roga's clinico-etiological concepts with contemporary medical understandings of tongue disorders, such as Upajihva (cystic swelling) and Kaphaja Jihva Kantaka (chronic leukoplakia), in order to identify potential diagnostic and therapeutic synergies. This technique aims to bridge the gap between historical diagnostic paradigms, such as those found in traditional Chinese medicine and Ayurveda, where tongue examination has long been used as a key diagnostic tool, and modern medical science.

Methodology: This study will compare the clinical descriptions and etiological components of Jihva Roga found in classical Ayurvedic writings to modern medical diagnostic criteria for illnesses such as cystic swelling, sublingual abscess, chronic leukoplakia, and acute glossitis. This comparative analysis will focus on how conditions such as Upajihva (cystic swelling), Alasa (sublingual abscess or carcinoma), Kaphaja Jihva Kantaka (chronic leukoplakia), and Pittaja Jihva Kantaka (acute glossitis/atrophic glossitis/red glazed tongue) are envisioned and managed in both systems.

Results: The study found substantial similarities between Jihva Roga's descriptions and modern medical classifications of tongue diseases, particularly in symptom presentation and assumed underlying pathology. For example, the description of Kaphaja Jihva Kantaka, described in Ayurvedic scriptures as thorny outgrowths, is similar to the hyperkeratotic plaques found in chronic leukoplakia, a modern clinical entity. Similarly, in Ayurvedic literature, Upajihva is characterised by cystic swelling, which corresponds to the clinical presentation of

sublingual cysts or ranulas, demanding a multimodal diagnostic approach for effective identification and treatment.

Conclusion:

This comparative study also highlights the possibility for combining traditional diagnostic expertise with new technologies such as dermoscopy and machine learning to improve the accuracy of early detection for oral mucosal diseases.

Keywords: Jihva Roga, oral pathology, traditional medicine, modern diagnostics, and comparative analysis.

1. INTRODUCTION

The tongue (Jihva) is essential for taste perception, speech articulation, mastication, and early digestion. Jihva Roga is a group of tongue-related illnesses described in Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya. These classic writings explore the etiopathogenesis (samprapti), causative factors (nidana), and typical clinical symptoms (lakshana) of tongue illnesses, interpreting them in terms of dosha imbalances (Vata, Pitta, and Kapha) and their effects on the rasavaha srotas and rasa dhatus. According to Ayurveda, the tongue serves as a mirror of internal health, reflecting systemic imbalances in its colour, coating, texture, and morphology.

Tongue problems are studied in modern medicine as part of oral pathology and systemic disease relationships, which include infectious, inflammatory, neoplastic, developmental, and nutritional causes.

Inspection, histological investigation, microbiological investigations, and systemic evaluation all contribute to clinical diagnosis. A comparison of Ayurvedic and modern frameworks enables the merging of conventional diagnostic expertise with modern clinical precision, resulting in a more comprehensive approach to oral and systemic health.

2. TONGUE DISEASES

Diseases of the tongue: The five kinds of diseases which affect the tongue are as follows:

1. *Vataja Jihva Kantaka*
2. *Pittaja Jihva Kantaka*
3. *Kaphaja Jihva Kantaka*
4. *Alasa*
5. *Upajihva*

2.1 Jihvagata Roga (Diseases of the tongue)

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Vataja Jihva Kantaka (Chronic glossitis) : In the *Vataja Jihva Kantaka*, the tongue becomes fissured, loses the sense of taste and becomes rough like a teak leaf.¹ *M Ni 56/30*

Vataja Jihva Kantaka Roga: A Modern Perspective.

Chronic glossitis may be indicative of a medical issue

Chronic glossitis²:

Chronic glossitis is a long-term inflammation of the tongue that causes symptoms such as pain, swelling, colour changes, and a smooth, glossy, or "beefy" appearance due to papilla atrophy. Possible causes include nutritional deficiencies (iron and B vitamins), infections (yeast and viral), long-term damage from braces or dentures, allergic reactions, and underlying systemic disorders. Treatment focuses on treating the root cause, such as correcting deficiencies, managing infections, or avoiding irritants².

Common Causes:

Nutritional deficiencies: A lack of iron, vitamin B12, folate, or other B vitamins.

Infections with bacteria, viruses (such as herpes simplex), or yeast (such as candidiasis) can cause glossitis.

Chronic injury refers to repeated irritation caused by ill-fitting dentures, orthodontics, or even recurrent burns.

Allergic reactions to specific foods, oral care items, or medications.

Systemic disorders include autoimmune diseases as coeliac and syphilis.

Other irritants: Alcohol, tobacco, and certain spices might make the disease worse.

Symptoms

- Soreness, soreness, or swelling on the tongue.
- The look of the tongue can change, becoming smooth, glossy, or even red.
- Issues with chewing, swallowing, and speaking.
- Painful or burning sensations.

Treatment

Chronic glossitis is treated by determining and addressing the root cause.

This may include:

Supplements and dietary changes: To address nutritional deficiencies.

Antibiotics are used to treat bacterial infections, antifungals treat yeast infections, and corticosteroids treat inflammation.

Proper brushing and flossing are essential for maintaining good oral health.

Avoiding irritants including spicy meals, alcohol, and tobacco can help relieve discomfort.

2.2 Pittaja Jihva Kantaka (Acute glossitis/ atrophic glossitis/red glazed tongue): In the *Pittaja Jihva Kantaka*, the tongue is yellow coloured and studded with furred red coloured papillae associated with burning sensation¹. *M Ni 56/30*

Pittaja Jihva Kantaka Roga: A Modern Perspective.

Acute glossitis/ atrophic glossitis/red glazed tongue may be indicative of a medical issue

Acute glossitis, atrophic glossitis, and a red, glazed tongue³:

Acute glossitis, atrophic glossitis, and a red, glazed tongue are all symptoms and illnesses characterised by the disappearance of the tongue's little bumps (papillae), leaving it smooth, shiny, and often red. Atrophic glossitis is a kind of papillary loss caused by nutritional deficiencies like B12, folic acid, or iron, infections (like Candida), or other systemic illnesses that produce discomfort, swelling, and trouble speaking or eating. The treatment emphasises on addressing the underlying issue, which may involve better dental hygiene, dietary changes, vitamins, or antibiotics.

Causes

Atrophic glossitis often indicates an underlying issue, such as:

Nutritional deficiencies: An insufficient amount of vitamin B12, folic acid, or iron is a common issue.

Glossitis can be caused by **viral, bacterial, or fungal** infections, such as candida yeast overgrowth.

Systemic Conditions: Anaemia (pernicious or iron deficiency), coeliac disease, and other gastrointestinal issues may also be the cause.

Irritants such as alcohol, smoke, and hot and spicy foods can all contribute to tongue inflammation.

Pathogenesis & Signs and symptoms:

Atrophic glossitis (Red Glazed Tongue) is a disorder in which small bumps on the tongue called papillae decrease or disappear, leaving the surface smooth, shiny, and generally red or pink.

The tongue appears "glazed" because the papillae are removed, exposing the underlying tissue, giving it a smooth, shiny, and occasionally unpleasant appearance.

Symptoms may include discomfort, burning, and trouble speaking or swallowing.

Acute glossitis causes inflammation and oedema of the tongue.

Relevant to atrophic glossitis: While distinct, a severe case of glossitis, whether caused by infection or injury, can cause inflammation and damage, resulting in papillary loss comparable to atrophic glossitis.

2.3 Kaphaja Jihva Kantaka (Chronic leukoplakia) : In the *Kaphaja Jihva Kantaka* the tongue becomes heavy, thick and growth of slender fleshy warts similar to *Shalmali* thorns (*Bombax ceiba* or *Salmalia malabarica*)¹. *M Ni 56/30*

Kaphaja Jihva Kantaka Roga: A Modern Perspective.

Chronic leukoplakia may be indicative of a medical issue

Chronic leukoplakia⁴:

Chronic leukoplakia is defined as thick, white patches on the mouth's mucous membranes that are typically caused by long-term irritation from tobacco smoking or other reasons. These non-removable patches are generally harmless, although they can be a prelude to oral cancer. Immediate medical treatment from a dentist is required to identify the cause, determine whether it is a precancerous lesion, and, if necessary, remove it.

Causes and Risk Factors

Chronic Irritation: The major reason is prolonged inflammation of the oral lining.

Tobacco Use: Tobacco use, whether smoking, chewing, or dipping, poses an immense health risk.

Alcohol consumption: Excessive alcohol drinking can contribute to its development.

Chronic infection: According to Eternal Hospital, certain chronic infections, such as the Epstein-Barr virus, are associated with a kind known as hairy leukoplakia.

Symptoms

- White or greyish spots are the noticeable symptoms.
- They might appear on the tongue, cheeks, or gums.
- Thick and solid texture: The patches are frequently thick and hardened.

- Not readily removed: Unlike other oral disorders, leukoplakia patches cannot be wiped or scraped.
- Usually painless: While they may be painless, some people experience sensitivity.
- Precancerous potential: only a small percentage of leukoplakia patches may have abnormal cell growth, increasing the risk of oral cancer.
- Oral cancer is frequently associated with leukoplakia.

2.4 Alasa (Sublingual abscess or carcinoma)

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- The severe inflammatory swelling occurring at inferior surface of the tongue is called *Alasa*
- If it is ignored gives rise to numbness and immobility of the tongue and quick suppuration may occur at its base.
- It manifest due to aggravation & vitiation of *Rakta and Kapha*¹. M Ni 56/31

Alasa Roga: A Modern Perspective.

Sublingual abscess or carcinoma may be indicative of a medical issue

Sublingual Abscess vs. Sublingual Carcinoma⁵:

The primary distinction between a sublingual abscess and a carcinoma is that the former is a painful, frequently sudden-onset bacterial infection, whilst the latter is a slow-growing, typically painless malignant tumour. However, some carcinomas might present in odd ways that resemble an abscess, making an accurate diagnosis crucial.

Symptoms: Abscess vs. carcinoma

Feature	Sublingual Abscess	Sublingual Carcinoma
Onset	Usually rapid, over days to a few weeks.	Typically slow, developing over several months or longer.
Cause	Bacterial infection, often from dental issues, trauma, or poor oral hygiene.	Primarily linked to salivary gland tumors, with adenoid cystic carcinoma and mucoepidermoid carcinoma being most common.
Pain	Often accompanied by significant, acute pain. May cause earache.	In early stages, often painless. Pain may develop later if the tumor invades nerves.
Fever	Common, along with other signs of infection like chills.	Rare, unless the tumor becomes secondarily infected.
Swelling	Swelling can be tender, firm, and fluctuate in consistency, and may feel warm to the touch.	Usually a firm or hard lump that grows slowly and persistently.

Associated Symptoms	Difficulty swallowing (dysphagia), speaking (dysphonia), or opening the mouth (trismus). The tongue may be displaced or immobile.	Persistent mouth sore, a red or white patch in the mouth, loose teeth, or numbness of the tongue or lower lip.
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Differential diagnosis challenges

Differentiating between an abscess and a malignancy can be difficult in some cases.

Abscess that resembles cancer: An abscess may appear unusual, developing slowly with little pain or discomfort, and can be non-febrile. In rare cases, it could be misinterpreted as a tumour.

Cancer resembling an abscess: A malignant tumour, on the other hand, may become secondarily infected, causing abscess-like symptoms such as rapid development, pain, and fever.

There are no noticeable mucosal changes. Some carcinomas can develop beneath the tongue's surface, causing no obvious ulceration or colour changes on the upper layer of skin.

Diagnostic approach

Given the possibility of mistake and the severity of both illnesses, an accurate diagnosis necessitates a combination of clinical examinations and advanced diagnostic procedures.

Imaging: A CT scan or MRI can show the size, location, and features of the lesion.

An abscess is typically defined as a fluid-filled pit surrounded by an **augmenting ring**.

Carcinoma typically has different characteristics and may suggest **invasion of adjacent tissues or nerves**.

The most important step is to **perform a biopsy**, which can be done via fine-needle aspiration or surgery. It allows a pathologist to evaluate the tissue or fluid sample using a microscope.

Abscesses will contain both **pus** and **inflammatory cells**.

Carcinoma: A biopsy will detect **malignant cancer cells**.

Blood tests may show an elevated white blood cell **count** in the presence of an abscess, but they can also be normal in both circumstances.

2.5 Upajihva (Cystic swelling)

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- A cystic swelling shaped like the tip of the tongue appears at the inferior surface by raising it a little is called *Upajihvika* (ranula)
- It is characterised by salivation, itching and burning sensations
- It manifest due to aggravation & vitiation of *Kapha and Rakta*¹. M Ni 56/32

Upajihva Roga: A Modern Perspective.

Cystic swelling may be indicative of a medical issue

A cystic growth on the tongue or in the surrounding area⁶:

A cystic growth on the tongue or in the surrounding area, such as a ranula, is normally a cyst filled with saliva from a damaged salivary gland and is usually harmless; however, large cysts that obstruct breathing, speaking, or swallowing require immediate medical attention. Other odd cystic swellings include epidermoid cysts, which can be developmental or traumatic, and cystic lymphangiomas. These swellings are typically diagnosed based on their appearance, and treatment choices range from simple monitoring to surgical excision.

Common Types of Cystic Swelling:

Ranula: A common, bluish, dome-shaped cyst on the mouth floor caused by a dysfunctional salivary gland that leaks saliva into surrounding tissue.

A mucous cyst (mucocele) is a cyst that contains mucus or saliva and can occur anywhere in the mouth, including the tongue.

Epidermoid Cyst: A cyst in the tongue that contains epidermal tissue and keratin, whether it is embryonic or acquired (traumatic).

A lingual cyst is a type of mucocele or epidermoid cyst that develops on the tongue.

Cystic Lymphangioma is a rare congenital condition in which abnormal lymphatic veins produce cysts that can form on the tongue.

Diagnosis and treatment:

Diagnosis:

A ranula or mucocele may typically be identified simply on appearance. Other tests may be used in more unique or complex situations.

Treatment:

Smaller, non-symptomatic cysts should be examined because they have the potential to burst on their own.

Surgical removal (excision) is an option for larger or more troublesome cysts.

Marsupialization is a surgical procedure that involves opening the cyst and suturing the lining to the surrounding tissue, allowing the fluid to drain and collapse.

3. CONCLUSION:

The analogous relationship of Jihva Roga concepts to modern clinical understanding illustrates the comprehensiveness of Ayurvedic diagnostic theory and its holistic perspective of systemic interactions. While modern medicine provides microscopic and molecular insights into tongue pathology, Ayurveda interprets these symptoms as signals of dosha imbalance and systemic discordance. Both viewpoints see the tongue as a diagnostic indicator of local and systemic disorders. By combining the Ayurvedic clinico-etiological model with modern diagnostic procedures, tongue problems can be detected, prevented, and managed effectively. Such an interdisciplinary synthesis enhances academic research and encourages a more comprehensive, patient-centered healthcare strategy.

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