

STUDY ON JIHWA PAREEKSHA W.S.R TO AMAVATA (RHEUMATOID ARTHRITIS)

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INTRODUCTION

Health is a state of complete physical, social and mental well-being and not merely the absence of disease or infirmity.^[1] *Agni* is indeed crucial for maintaining health and balance in the body. It represents not just the physical process of digestion, but also the body's ability to metabolize and assimilate nutrients, and maintain overall equilibrium. *Ama*, on the other hand, is a toxic substance that forms when *Agni* is impaired. When digestion is disrupted, partially digested food can accumulate as *Ama*, leading to various health issues. *Ama* is considered the root cause of many diseases because it can circulate through the body, leading to imbalances and contributing to various pathological conditions.^[2]

Amavata is a condition where *Ama* and *Vata* interact to cause disease, leading to *Angamarda* (Body pain), *Aruchi* (Loss of desire for food), *Trishna* (Thirst), *Alasya* (Lack of enthusiasm towards work), *Gourava* (Heaviness), *Jwara* (Fever), *Apaka* (Indigestion), stiffness and other symptoms resembling rheumatoid arthritis or similar inflammatory conditions. In rheumatoid arthritis constitutional symptoms like

fatigue, malaise, feverish feeling, loss of appetite and weight loss are seen.^[3]

OBJECTIVES

1. Validated tool of *Jihwa Pareeksha* is subjected to the diagnosed cases of *Amavata* (Rheumatoid arthritis) for the assessment of *Jihwa* in relation to *Dosha Vishesha*.

METHODOLOGY

First, the general data, physical examination, and laboratory data of a minimum of 50 diagnosed cases of *Amavata* (Rheumatoid arthritis) were recorded using a preformed case proforma. Then, the validated tool for *Jihwa Pareeksha* was used. Images of the tongue were captured with a camera using a uniform auxiliary light source. The obtained data was classified, analysed, and interpreted.

STUDY DESIGN

It was a construct validity study for *Jihwa Pareeksha* using a descriptive, cross-sectional, observational approach.

INCLUSION CRITERIA

- 1) Diagnosed patients of *Amavata* (Rheumatoid Arthritis) were selected for the study.
- 2) Patients of either gender between the ages of 18 to 60 years were selected for the study.
- 3) Subjects had the ability and willingness to sign a written informed consent.
- 4) Subjects had adequate communication skills, willingness, and the ability to comply with study requirements.

EXCLUSION CRITERIA

- 1) Musculoskeletal disorders other than Rheumatoid Arthritis.
- 2) Rheumatoid Arthritis associated with metabolic and endocrine disorders.
- 3) Pregnant and lactating mothers.

Diagnostic criteria

Clinical features of *Amavata* mentioned in *Madhava Nidana*. For Rheumatoid Arthritis- The American Rheumatism Association 1987 revised criteria.^[4]

DISCUSSION AND RESULT

AMAVATA LAKSHANA

In the current study, *Samanya Amavata Lakshanas*, *Praseka* and *Hrithgraha* were not observed in any patients. However, *Jadhya* (inactivity), *Rujuatyartha*, and *Bahumootrata* were present in all patients. *Utsahahani* was noted in 96% of patients, *Nidraviparyaya* in 92%, *Anaha* in 88%, *Apaka* and *Agnidaourbalya* in 60%, and *Aruchi* in 54%. *Kukshikatinyatha* was found in 50% of patients, *Trishna* in 40%, *Jwara* in 34%, and *Gourava* in 30%.

The *Pratyatma Lakshanas* of *Amavata*, such as *Sandhi Shola*, *Sandhi Shopha*, and *Sandhi Graha*, were observed in most patients. These characteristics are quite similar to those of inflammatory joint diseases like rheumatoid arthritis, where joint pain, swelling, and stiffness occur.^[5] In rheumatoid arthritis, constitutional symptoms such as fever and malaise were present which was noted in 34% and 96% of patients, respectively.

TOOL FOR JIHW PAREEKSHA

As the research works on the concept of *Jihwa Pareeksha* is minimal and the works that were carried out had no validated tool to assess the *Jihwa* for the same. Hence it becomes necessary to develop a *Jihwa Pareeksha* tool to estimate the *Dosha Pradhanyata*. There are four phases to creating a tool which can be break down into eight further steps. The information regarding the *Jihwa Pareeksha* was collected from the *Yogarathnakara*^[6] and Other common pathological symptoms of *Jihwa* are also considered based on the literature available in some of the disease conditions.^[7] The 14 domains were identified with the assessment tool. Divided into *Darshana* (inspection) and *Sparshana* (palpation) *Pareeksha* methods. A preliminary pilot study is conducted on 30 healthy individuals to test the feasibility, time, cost and for refinement. The tool is reduced to 12 domains to improve the efficiency and effectiveness. Content Validity has done through Expert's Review. Validity and Reliability has assessed.

SHEETA

In this study, none of the patients exhibited decreased temperature or coldness of the tongue. Coldness of the tongue can be related to rheumatoid arthritis (RA) in a few ways, though it's not a common symptom directly associated with the condition.

- RA can cause inflammation that affects blood flow, potentially leading to sensations of coldness in extremities, including the tongue.
- Inflammation may impact nerves, leading to altered sensations, which could be perceived as coldness.
- Some individuals with RA may experience Raynaud's phenomenon, a condition that causes reduced blood flow to certain areas (like fingers and toes) in response to cold or stress. This could theoretically extend to the tongue in some cases.

A cold tongue may signify a predominance of *Vata* or *Kapha Dosha*, reflecting an imbalance that could exacerbate the symptoms of *Amavata*. A cold tongue might also indicate poor circulation or reduced digestive fire (*Agni*), which can contribute to the formation of *Ama*.

KHARA SPARSHA

In this study, *Khara Sparsha* of the tongue was observed in a minority of cases (16%). The texture of the tongue can provide insights into a person's overall health, including potential connections to rheumatoid arthritis (RA).

- RA can lead to systemic inflammation, which may manifest in changes to the tongue's texture, such as swelling or a smooth appearance.
- Many individuals with RA experience dry mouth due to medications or conditions like Sjögren's syndrome. This dryness can lead to a rough or altered texture on the tongue.
- RA patients may have dietary restrictions or malabsorption issues that can lead to deficiencies in vitamins and minerals, potentially causing changes in tongue texture, like fissures or a geographic appearance.

Kharasparsha can also indicate a disturbance in the balance of *Doshas*, particularly *Vata*, which is aggravated in *Amavata*. A coarse texture may signify poor digestion or a weakened digestive fire (*Agni*), which can further contribute to the formation of *Ama*.

SPUTHITA

In this study, 60% of patients had fissures on their tongues. Fissured tongue can sometimes be associated with various health conditions, including rheumatoid arthritis (RA). While the exact relationship isn't fully understood, some points to consider include

- Autoimmune Connection: Both fissured tongue and RA can occur in individuals with autoimmune disorders. Inflammatory conditions can affect mucous membranes, potentially leading to tongue fissuring.

- People with RA may have dietary restrictions or malabsorption issues, leading to deficiencies in vitamins and minerals that could contribute to oral health issues, including fissured tongue.
- Certain medications used to treat RA can have side effects that impact oral health, possibly leading to changes in the tongue's appearance.
- The systemic inflammation present in RA could influence the oral mucosa, potentially resulting in fissured tongue.

Fissures may indicate the accumulation of *Ama* or poor digestion, which is directly related to the pathophysiology of *Amavata*. The presence of *Ama* can worsen symptoms and contribute to the overall condition. A fissured tongue may signify an imbalance in the body, particularly related to *Vata Dosha*, which is already elevated in *Amavata*. This can further exacerbate joint issues.

PRASUPTHA

Numbness or tingling in the tongue is often related to pressure or damage to nerves that can cause a loss of sensation. This can be a minor and temporary sensation, or the sign of a much bigger and more serious reason. A numb tongue can have many causes, including: A lack of certain vitamins and minerals, such as iron, zinc, B vitamins, calcium, and phosphorus, can cause a tingling sensation in the mouth. Patients with rheumatoid arthritis (RA) can have deficiencies in many nutrients, including: Vitamin D, Folic acid, Calcium and magnesium, Zinc, copper, and pyridoxine.

An increase in *Kapha Dosha* can lead to a swollen appearance, which may exacerbate the symptoms of *Vata* disorders like *Amavata*. In this study I did not find any patients with *Prasupta* of tongue. This could be attributed to medications and dietary restrictions that are part of their disease management.

SUSHKA

In this study, 60% of patients experienced dryness, categorized into three levels: mild, moderate, and severe. Dryness of the tongue, or xerostomia, can be associated with rheumatoid arthritis (RA) for several reasons

- Many individuals with RA may also develop Sjögren's syndrome, an autoimmune condition that affects the salivary glands, leading to dry mouth and dryness of the tongue.

- Some medications used to manage RA, such as nonsteroidal anti-inflammatory drugs (NSAIDs) and certain DMARDs, can have side effects that contribute to dry mouth.
- Systemic inflammation from RA can affect various glands and tissues in the body, including those that produce saliva, potentially leading to dryness.
- Chronic pain or fatigue associated with RA may lead individuals to drink less fluid, which can contribute to a dry mouth and tongue.

A *Sushka* tongue typically signifies an elevated *Vata Dosha*, which is already implicated in *Amavata*, which can lead to symptoms like dryness and roughness in various parts of the body. The presence of a *Sushka* tongue can reflect systemic dehydration, which can exacerbate the pain and inflammation associated with *Amavata*, leading to increased stiffness and discomfort in the joints.

PARIDAGDHA

In this study, only 20% of patients showed ulcers on their tongues. Ulcers on the tongue can be associated with rheumatoid arthritis (RA) for several reasons:

- RA is an autoimmune condition that causes systemic inflammation, which can affect the mucous membranes and lead to oral ulcers.
- Some treatments for RA, such as disease-modifying antirheumatic drugs (DMARDs) or nonsteroidal anti-inflammatory drugs (NSAIDs), can have side effects that contribute to oral ulcers or lesions.
- Patients with RA may have dietary restrictions or absorption issues, leading to deficiencies in vitamins and minerals that are important for oral health, increasing the likelihood of ulcers.
- The chronic pain and stress associated with RA can also contribute to the development of oral ulcers.

A *Paridagdha* tongue typically signifies an increase in *Pitta Dosha*, which is associated with heat, inflammation, and metabolic processes. This can suggest an underlying inflammatory condition.

KANTAKA

Among the 50 patients, 76% were free from *Kantaka*, 24% had *Kantaka*. Pigmentation on the tongue can sometimes be linked to rheumatoid arthritis (RA) through several mechanisms:

- RA is an autoimmune condition that can lead to various skin and mucosal changes, including alterations in pigmentation.
- Individuals with RA may experience nutritional deficiencies, particularly in B vitamins or iron, which can lead to changes in the tongue's appearance, including pigmentation.
- The ongoing inflammation associated with RA may affect the mucous membranes, potentially leading to localized pigmentation changes.

A *Kantaka* tongue often reflects an increase in *Vata Dosha*, which is associated with dryness and roughness in the body. A rough or prickly tongue may suggest the presence of *Ama*, indicating compromised digestion and metabolic function.

VARNA

Out of 50 patients, 76% had normal colour (greyish pink) tongue, 24% had *Rakta Varna* of tongue. Red discoloration of the tongue can have several potential connections to rheumatoid arthritis (RA)

- RA is characterized by systemic inflammation, which can affect various tissues, including the mucous membranes of the mouth, leading to a reddened appearance of the tongue.
- Individuals with RA may experience dietary restrictions or absorption issues that can lead to deficiencies in B vitamins, iron, or folate. Such deficiencies can cause a smooth, red, and inflamed tongue, known as glossitis.

In Ayurveda, the colour of the tongue is a significant diagnostic tool that can reveal underlying health issues, including conditions like *Amavata*.

- A pale tongue may indicate a deficiency in vital energy (*Ojas*) and can be associated with a lack of nourishment. This can lead to weakened immunity and increased susceptibility to *Ama* formation, potentially contributing to *Amavata*.
- A red tongue may suggest heat or inflammation in the body. This is particularly relevant in *Amavata*, where inflammation is a key symptom. The presence of *Pitta Dosha* involvement can contribute to excess heat.
- A yellowish tint may indicate a buildup of *Pitta Dosha*, suggesting issues related to bile or liver function.
- yellow coating over the tongue can have several connections to rheumatoid arthritis (RA): including effect of inflammation, nutritional deficiencies, side effects of medications and poor oral hygiene.

- *Mandagni* is often linked to both tongue coating and *Amavata*. If *Agni* is compromised, it can lead to the formation of *Ama*. *Amavata* is often associated with an imbalance in the *Kapha Dosha*, which governs the formation of mucus and bodily fluids. A heavy, sticky coating on the tongue may reflect excess *Ama*, aligning with the symptoms of *Amavata*.

GURU

Among the 50 patients, none had *Guru* (heaviness of tongue). RA involves systemic inflammation that can affect the muscles and tissues of the tongue, potentially leading to a sensation of heaviness or swelling. Nutritional deficiencies can contribute to muscle weakness or fatigue, which might be perceived as heaviness impacting its mobility.

Amavata is often linked to an imbalance in the *Kapha Dosha*, which is associated with heaviness, sluggishness, and dampness. A heavy tongue may reflect this excess *Ama*, contributing to the symptoms of *Amavata*.

BAHULA

The length of the tongue is not directly associated with Rheumatoid Arthritis (RA), but some factors related to RA may influence tongue appearance and mobility. Chronic inflammation in RA can lead to changes in the oral cavity, potentially affecting the tongue's structure or size, though this typically wouldn't manifest as a significant change in length. In this study 12% patients had *Bahulatva*.

An enlarged tongue could suggest issues with tissue health and metabolism. In Ayurveda, poor tissue health can lead to the accumulation of *Ama*, which can settle in the joints and cause the symptoms of *Amavata*.

CONCLUSION

TOOL OF JIHW PAREEKSHA

- All the literature available regarding *Jihwa Pareeksha* is identified and described.
- Guidelines for the development of *Jihwa Pareeksha* tool is summarized.
- 12 Domains of tool of *Jihwa Pareeksha* are identified and divided into *Darshana* and *Sparshana Pareeksha*.
- Scoring is given according to *Dosha* predominance.

- Validation of tool is done by experts review who are qualified with MD *Ayurveda* in *Roganidana* and *Vikriti Vigyana* subject and are having teaching experience in various institutes.
- Validation is accepted by Correlation is significant at the 0.01 level and Correlation is significant at the 0.05 level.

JIHWA PAREEKSHA ON AMAVATA PATIENTS

- In the present study, it was found that maximum number of the patients of *Amavata* were having *Jadhya*, *Rujuatyartha*, *Bahumootrata*, *Utsahahani*, *Nidraviparyaya*, *Anaha*, *Apaka*, *Agnidaourbalya*, *Aruchi*, *Jwara* and *Gourava* type of *Lakshan*.
- The *Pratyatma Lakshanas* of *Amavata*, such as *Sandhi Shola*, *Sandhi Shopha*, and *Sandhi Graha*, were observed in most patients.
- In the present study of *Jihwa Pareeksha* in *Amavata* patients, it was seen that maximum patients have coating present whether it is thin, thick or patchy.
- Clinically it was also concluded that *Spathita* (fissure over tongue) are also present in *Amavata* along with coating in the patients who have prolonged duration.
- In the current study on *Jihwa Pareeksha* among *Amavata* patients, it was observed that the majority of patients exhibited dryness, regardless of whether it was mild, moderate, or severe.
- Although a minority of patients exhibited a *Rakta Varna* of *Jihwa*, tongue color serves as an important diagnostic indicator that can uncover underlying health problems, such as *Amavata*.
- It was found that maximum number of patients had normal tongue color, size, shape, texture and movement of the tongue.
- There is no relationship between size, shape, movement of the tongue to *Amavata*.
- It is found that there is predominance of *Vata Kapha* in *Amavata* by *Jihwa Pareeksha*.

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