



Case Study

ROLE OF *STHANIKA CHIKITSA* BY AYURVEDA IN LICHEN PLANUS

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Article info

Article History:

Received: 25-11-2024

Accepted: 23-12-2024

Published: 15-01-2025

KEYWORDS:

Ayurveda, Oral Lichen planus, *Haridradi Lepa*, *Sarvasara Mukhapaka*.

ABSTRACT

Lichen planus is a chronic inflammatory disease that affects the skin and the mucous membrane. Oral lichen planus is classified under red and white lesions of oral cavity. Its oral manifestation can be the only sign or can involve other parts of the body.

Here is a case report of a subject who was a part of a clinical trial comprising of 30 subjects equally divided into 2 groups. A case of lichen planus in a thirty-one years old male patient who reported with discoloration, burning sensation on a part of dorsal, ventral surface of his tongue and bilateral buccal mucosa. Varied appearance from Wickham’s striae to pigmented, and erythematous lesion diagnosed as oral lichen planus is reported here. This can be closely related with *Sarvasara Mukhapaka* having similar characteristics. It disrupted his quality of life, and daily activities, even consumption of food, giving a negative effect on the subject’s overall health, emotional well-being and social life. This case showed major symptomatic relief and also changes in objective parameters like size and colorimetry in a short span of time the just by a local application of medicine. The case report aims to present the symptoms, study the effect of *Haridradi Lepa*, a *Sthanika Chikitsa* as a treatment modality for a case of Lichen Planus.

INTRODUCTION


The oral cavity is the point of entry for digestive as well as respiratory tracts. It reflects the overall health of the body and it is the first part of the alimentary canal.

Nutrition to the body is greatly impacted by taste, quality and quantity of food intake. Lichen planus is a chronic immune-mediated oral and cutaneous inflammatory disease. The term *Lichen* in Greek means “tree moss” and *planus* in Latin means flat.^[1] The disease Lichen planus (LP) was first described by Wilson in 1869.^[2]

The prevalence of oral lichen planus in Indian population is 2.6%.^[3] Commonly seen in women than in men. About 28% of the patients who have OLP also have skin lesions. It is classified under red and white lesions of oral cavity.^[4]

It can affect only the oral mucosa or also involve the skin. It is a premalignant condition with unknown aetiology. An abnormal recognition and expression of basal keratinocytes of the epithelium as foreign antigens by Langerhans cells will induce an autoimmune reaction in the body. Thereafter activation of inflammatory cells like T-lymphocytes and others become cytotoxic for basal keratinocytes leading to lichenoid inflammatory infiltrate and degeneration.^[1] Risk factors like stress due to daily life crisis can lead to increased cortisol level in blood which when secreted for longer time leads to autoimmune diseases.^[5]

Maanasa Nidanas (psychological causes) being one among the risk factors seen. Common sites are buccal mucosa and to lesser extent tongue, lips, gingiva, floor of mouth.^[4] As it is chronic in nature it can potentially disrupt the quality of life, food and nutrition of the subject. Lichen planus is classified as - Reticular (lacelike keratotic mucosal configurations), Atrophic (keratotic changes combined with mucosal erythema), or erosive (pseudo membrane- covered ulcerations combined with keratosis and erythema)

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Quick Response Code	
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and Bullous (vesiculobullous presentation combined with reticular or erosive patterns).

Lichen planus patients may report with burning sensation of oral mucosa, varies in appearance from Wicham's striae, papular, keratotic (reticular or plaque like) to erythematous and ulcerative.^[4]

Topical and/or systemic corticosteroids, retinoids as adjunctive therapy with corticosteroids are the conventional therapies available. They are known to have side effects on prolonged usage.^[4]

This can be closely related with *Sannipataja Sarvasara Mukhapaka* with symptoms such as *Daha*, *Osha* (burning sensation), *Tanu* (thin), *Kshara Kshata Sama Vrana* (ulcer resembles alkali burn), *Alpa Ruja* (pain), *Antar Vrana* (ulcer) and *Krichrena Vivrunoti* (difficulty opening mouth).^[6] As elicited in the following case. *Lepana* is among the *Sthanika Chikitsas* mentioned in Ayurveda.^[7]

In this study an effort is made to study the effect of *Haridradi Lepa* given as intervention in Lichen planus.

Case Report

Patient Information

A 31 years old male patient, from Jayanagar, Bangalore, software engineer by profession visited the Outpatient Department (OPD) of Sri Sri Ayurveda Hospital, Bangalore, Karnataka, India (OPD Regn. No. MR000262561), in November 2023 with complaints of burning sensation inside oral cavity which started 11 months back but got aggravated since one week, also associated with discoloration and difficulty in opening mouth. First, he had mild discomfort on his tongue, he noticed discoloration on right side dorsal surface of his tongue. Later in few days he noticed similar changes in bilateral buccal mucosa. Overall symptoms were gradual in onset, burning sensation was intermittent, worsens while having solid or liquid food articles especially spicy food and hot food articles. He did not complain of any loss of taste. There was no history of skin lesion.

Patient consulted in an allopathic hospital in December 2023 and was advised with following medication.

Patient was under Tab Wysolone OD AF, Tab PAN 40mg OD BF, and Clohex mouth gargles BD for 3 weeks, Kenakort oral gel at night for 15 days. Post which he did not notice much changes in his condition.

Patient did not revisit after that consultation. With course of time, symptoms did not reduce and was disrupting his daily activities, emotional well-being and social life.

Later he also felt very mild difficulty in opening mouth at left buccal mucosa and was having difficulty in mastication and ingestion of food. On further enquiry patient revealed a history of habitual intake of spicy food, regular curd intake, *Abhishyandi Ahara* (food difficult to digest), delayed sleep patterns since three years, with 6-7 hours of sleep per night and alcohol intake once a week or occasionally on events. He also had history of stress due to work load.

Thus, she came to our OPD for treatment of the same.

Clinical findings

General examination

The general condition of the patient was good and without alterations in vital signs. He had a normal appetite, bowel and bladder habit, but delayed, irregular sleep pattern. He did not have any skin lesions. His *Prakriti* was found to be *Vata-Pitta* predominant.

Local examination

Extra oral examination: No abnormality detected (NAD) face, neck, philtrum, naso-labial fold, lips, chin, temporomandibular joint, lymph nodes- Normal

Intra oral examination

Examination of oral mucosa showed inflammation, Wickham striae on bilateral buccal mucosa, a large lesion at left dorsal side of tongue having whitish irregular border and a pinkish red central floor. A small whitish lesion at right ventral side of labial mucosa. Some small regions of acanthosis seemed to be present at most of the lesions. No bleeding was present. No such lesions of LP were found elsewhere on the body.

On palpation the affected sites there was no tenderness elicited.

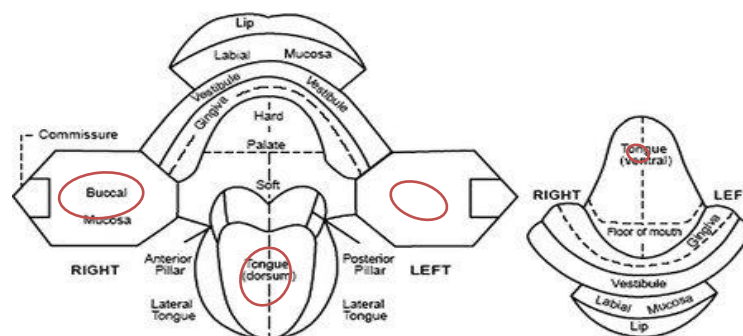


Figure 1: Map of oral cavity

On initial assessment- VAS scale scoring for burning sensation was five out of ten^[8]. International Oral Health-Related Quality of Life assessment^[9] was between 16-30 showing moderate impairment. Patient had *Kruchra Mukha Vivrunata*^[10], grade 1- mild difficulty in opening mouth (cannot open mouth completely three fingers gap was present). Overall size of the lesions showed more than three cm square area being affected. Colorimetry^[11] of grade 2 was present as per Figure No. 2 and Table 1.

Investigation

Complete hemogram and C-Reactive protein tests were done before treatment (Dated: 26/11/2023) and the reports showed to be normal. Biopsy report (Dated: 26-12-2023) of the lesions revealed the presence of orthokeratosis, acanthosis with wedge shaped hypogranulosis. There was basal cell vacuolization seen with exocytosis of inflammatory cells. No evidence of malignancy. Impression was noted as Oral lichen planus. Also a report of vitamin D and vitamin B12 values are available from previous tests (Dated: 28/9/2023) which showed to have vitamin D insufficient and B12 in normal limits.

Therapeutic Intervention

Haridradi Lepa- having ingredients *Haridra Churna*, *Yashtimadhu Churna* (of equal quantity not more than half teaspoon) and *Kumari* leaf pulp Colorimetry CMYK and RGB color specifications:

(quantity sufficient) (Figure No. 3). Intervention started from date: 26/11/2023. Mode of usage was topical application- quantity sufficient, at bed time (Overnight application from 10pm to 6am) for seven days. Related *Pathya* and *Apathya* were advised. Assessment was done on 0th day, 3rd day and 7th day after treatment.

Follow-up and outcomes

Picture of the affected site was taken at the time of initiation of the treatment and subsequently on every visit till treatment was completed [Figure No. 4, 5, 6, 7]. Follow up was done on 14th day, 21st day, 28th day. The subsequent observations and assessment were also noted [Table 2]. The small whitish lesion at right ventral side of labial mucosa was found to be resolved by the end of the treatment period. This shows a considerable improvement in the signs and symptoms after the therapy as compared to status before the treatment. No adverse effect pertaining to prescribed drug was also reported. On follow-up for 28 days, there was no exacerbation, or increase in signs and symptoms of the lesions. The patient mainly reported of complete reduction in burning sensation in oral cavity at the final follow-up day and that only on having spicy food he felt burning sensation on the tongue with VAS grading of one.

Figure 2: Colorimetric Scales¹¹

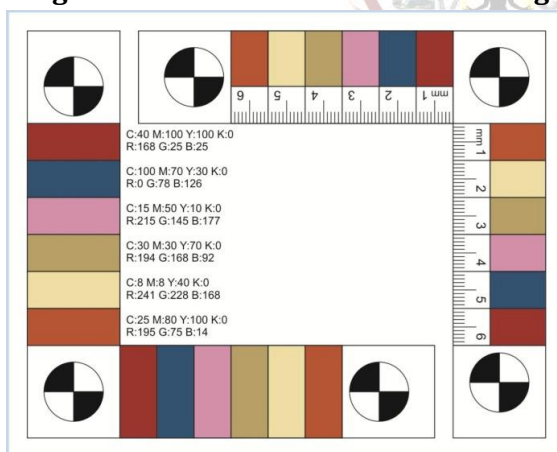


Figure 3: Showing Haridradi Lepa



Table 1: Grading for Colorimetry

Score	Color	Color specification
0	Purple	C:15 M:50 Y:10 K:0; R:215 G:145; B:177
1	Bluish	C:100 M:70 Y:30 K:0; R:0 G:78; B: 126
2	Dark red with or without Yellow/ White	C:40 M:100 Y:100 K:0; R:168 G:25; B: 25 C:8 M:8 Y:40 K:0; R:241 G:228; B:168 C:2 M:6 Y:4 K:0; R:248 G:237; B:235

Figure 4: 0th, 3rd, 7th day images of Lichen planus at site 1



Day 0

Day 3

Day 7

Figure 5: Showing 0th, 3rd, 7th day images of Lichen planus at site 2



Day 0

Day 3

Day 7

Figure 6: Showing 0th, 3rd, 7th day images of Lichen planus at site 3



Day 0

Day 3

Day 7

Figure 7: Showing 0th, 3rd, 7th day images of Lichen planus at site 4



Day 0

Day 3

Day 7

Table 2: Assessment before, during, after treatment and follow-ups

Symptoms	Before treatment	3 rd Day of treatment	After treatment	Follow up 14 th day	Follow up 21 st day	Follow up 28 th day
<i>Daha</i> (VAS)	5	1	1	1	1	1
<i>Kruchra Vivranata</i>	2	1	0	0	0	0
Size of <i>Vrana</i>	>3cm diameter	-	-	-	-	-
Colorimetry	2	1	1	1	1	1

DISCUSSION

Mukhapaka is one of the *Sarvasara Mukha Rogas* characterized by *Vedana Yukta Shopha* (pain and inflammation), *Vrana* (ulcer/ lesion) in the *Mukha Pratyangas* (subparts). Also, by its name *Sarvasara* that is *Vyapakatva* (spread).^[6] They are of four types according to *Acharya Sushruta*^[12], and five types according to *Acharya Vagbhata* based on *Doshas* involved as *Vataja Pittaja Kaphaja, Sannipataja, Raktaja Mukhapaka*. In the present case the subject exhibited features like *Daha, Osha* (burning sensation), *Tanu* (thin), *Kshara Kshata* (ulcer resembles alkali burn) like that of *Pittaja Mukhapaka, Alpa Ruja* (pain) like that of *Kaphaja Mukhapaka, Antar Vrana* (ulcer/ lesion) (in all types) and *Krichrena Vivranoti* (difficulty opening mouth) like that of *Vataja Mukhapaka*.^[6]

While *Acharya Charaka* has told *Mukhapaka* to be *Pitta* predominant.^[13] In this subject it was observed that it was *Kapha Vata Pradhana Tridoshaja Mukhapaka*. Also, as per classics there are no exact *Dvandvaja* classification mentioned. This case can be taken as *Sannipataja Mukhapaka* based on these findings. In this case there was no *Kushta* (skin lesions) present as in generalized Lichen planus and disease presented only in oral mucosa.

LP is an autoimmune disease having a strong association with anxiety, stress, and diabetes.^[14] In this case stress as a risk factor was noted, spicy food intake, habitual curd intake and intake of *Abhishyandi Ahara* were noted which leads to *Pitta Prakopa, Pitta Kapha Prakopa* and *Ama* formation respectively. *Samprapti* that can be drawn is *Nidana Sevana* that lead to *Agni Mandhya, Kapha Pitta Prakopa, Vata Adharita*, in *Kapha Sthana* i.e., *Sthanasamshraya* in *Mukha* leading to *Sannipataja Mukhapaka*.

Although the disease is diagnosed from its clinical features, biopsy is often recommended to make the diagnosis and to look for malignancy.

Here *Haridradi Lepa* be used as a safe alternative. A forethought was given on the convenience of availability and its usage, trends of effect on long term usage of the conventional treatments like steroids, preservative free drug preparation and compatibility to oral pH value.

In *Lepa*, the fine powder of *Haridra* and *Yashtimadhu* are taken, added with the fresh pulp of *Kumari* (devoid of yellow latex) and pounded into a *Lepa* form.

Haridra has been mentioned in *Kushtagna Varga, Lekhaniya Varga*.

It has *Vrana Ropana, Shothahara* properties may act indirectly by reducing *Ruja* and *Daha*. Also, in bringing about changes in colorimetry, *Kruchra Mukha Vivrunata*, reducing size of *Mukhapaka*.

Its *Kapha-Pitta Shamana* property might have helped in reducing *Daha* and *Manda Ruja/ Kinchit Daha*.

Ruksha, Lekhana property of *Haridra* may help in reducing *Kapha* and Wickham's striae.^[15,16]

Yashtimadhu being mentioned under *Varnya, Kandughna Gana*, is *Vrana Ropana, Shothahara*. The *Madhura Rasa, Sheeta Veerya, Snigdha Guna*, of *Yashtimadhu* reduces *Pitta* and *Vata* which may have helped subside *Daha, Ruja*, reduce size of *Mukhapaka*, bringing about changes in colorimetry. ^[17,18]

Madhura Rasa of *Kumari* reduces both *Pitta* and *Vata*. *Kumari* has *Snigdha Picchila Guna* which forms a soothing layer over the *Mukhapaka* reducing *Vata* and sensitization to surrounding structures. It has *Vrana Ropana, Shothahara* properties which may have helped subside *Daha, Ruja*, reduce size of *Mukhapaka*, bringing about changes in colorimetry. ^[19,20]

Conversely all the drugs used in the study are known to have anti-inflammatory, wound healing, antioxidant, anti-histamine and immunomodulatory properties which might have helped to reduce the symptoms.

As *Mukha Lepa* is a topical application of medicated paste over oral mucosa, its mode of action follows the transmucosal pathway for absorption, followed by trans cellular and para cellular pathway. As the oral mucosa mucosal tissues have no or little stratum corneum and high absorbability, there by showing lower impedance which could be a reason for higher drug permeation through oral mucosa.^[21]

According to a study done on permeability of oral mucosa to water and other substances, suggested

that water diffuse across keratinized and nonkeratinized oral tissues. Hydrophilic absorption happens through intra cellular domain and enters the micro circulation into facial, the lingual, and the maxillary branches of the external carotid artery based on the site.^[22] This could be the mode of action of the *Lepa*. *Lepa* was to be retained till next morning so as to extend the time of action and diffusion rate. If excess salivation noticed, advised to spit out the saliva as otherwise subject would be ingesting the *Lepa*.

The dietary and lifestyle modification also play an important role in the management of LP.

Further researches need to be done with longer duration of treatment, and other combination of medication. In the current study *Sthanika Chikitsa* alone played an important role in managing the condition showing its significance.

CONCLUSION

Sthanika Chikitsa of a case of lichen planus with plant-based Ayurveda drugs aided good resulted in improvement in condition and helped in the management of initial complaints of the patient in a short period of time. Long term usage of the treatment in combination with others can be adopted.

Patient Consent

Written informed consent was obtained in English from the patient before the commencement of the treatment. Also, the consent form stated that the details of the case presentation may be used for academic or research publication purposes given that the personal identity of the patient is kept confidential.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

The research was funded by Central Council for Research in Ayurvedic Sciences.

REFERENCES

1. Swapan Kumar Purkait. Essentials of oral pathology. New Delhi: Jaypee Brothers Medical Publishers; 2019.
2. Rajendran R. Oral lichen planus. Journal of Oral and Maxillofacial Pathology. 2005; 9: p 3-5. DOI: <http://dx.doi.org/10.4103/0973-029X.39050>
3. Varghese SS, George GB, Sarojini SB, et al. Epidemiology of Oral Lichen Planus in a Cohort of South Indian Population: A Retrospective Study. J Cancer Prev. 2016; 21(1): 55-59. doi: 10.15430/JCP.2016.21.1.55
4. Greenberg MS, Glick M, Ship JA. Burket's Oral Medicine. PMPH USA, Limited; 2000.
5. Stojanovich L, Marisavljevich D. Stress as a trigger of autoimmune disease. Autoimmun Rev. 2008; 7(3): 209-213. doi:10.1016/j.autrev.2007.11.007
6. Paraadakara shastri HS, editor. Ashtangahrdaya of Vagbhata with the commentaries of Sarvanga sundara of Arunadatta and Ayurvedarasayana of Hemadri, Uttarasthana; Mukharoga Vijnaniyam; Chapter 21, Verse 2-6 Varanasi: Chaukhamba Sanskrit samsthan; 2018. p.850-858.
7. Acharya JT, editor. Sushruta Samhita of Sushruta with the Nibandhasangraha commentary of Sri Dalhanacharya, Kalpasthana; Annapana Vidhi Adhyaya: Chapter 1, Verse 60. Varanasi: Chaukhambha Orientalia; 2017. p.562.
8. McCaffery M, Beebe A. Pain: Clinical manual for nursing practice, Mosby St. Louis, Mo. 1989:59. Available from <https://www.sralab.org/sites/default/files/2017-07>.
9. Shugars DA, Gentile MA, Ahmad N, Stavropoulos MF, Slade GD, Phillips C, Conrad SM, Fleuchaus PT, White Jr RP. Assessment of oral health-related quality of life before and after third molar surgery. Journal of oral and maxillofacial surgery. 2006 Dec 1; 64(12): 1721-30. Available from <https://doi.org/10.1016/j.joms.2006.03.052>
10. Nawale SG. A study on Gandusha in prevention of recurrent Mukhapaka (stomatitis), (MD dissertation): Bengaluru: Rajiv Gandhi University of Health Sciences, 2005.
11. Nuzzolese E, Di Vella G. The development of a colorimetric scale as a visual aid for the bruise age determination of bite marks and blunt trauma. The Journal of forensic odonto-stomatology. 2012 Dec; 30(2): 1. Available from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5734826/>
12. Acharya JT, editor. Sushruta Samhita of Sushruta with the Nibandha sangraha commentary of Sri Dalhanacharya, Nidana sthana; Mukharoga Nidana: Chapter 16, Verse 65-68. Varanasi: Chaukhambha Orientalia; 2017. p.336-337.
13. Sharma RK. English translation on Charaka Samhita of Agnivesa with the commentaries on Ayurveda Dipika of Chakrapani Datta. Sutrasthana; Maharogadhyayam: Chapter 20, Verse 14. Varanasi: Chowkhamba Sanskrit Series Office; 2016. p.367.
14. Rook A, Wilkinson DS, Ebling FJ. Lichen planus and lichenoid disorders. In: Champion RH, Burton JL, Ebling FJ, editors. Textbook of Dermatology. 5th ed.

- Vol. 3. Oxford: Blackwell Scientific Publications; 1992. pp. 1675-98.
15. Prakash L, A Text Book of Dravaguna Vijnana, Chapter 35, Varanasi: Chaukhambha Orientalia; Haridra; 2019, p.333-336.
16. Misra BS. Sri Rupalaaji Vaisya, editor. Bhavaprakasha Nigantu with the Vidyotini Hindi Commentry, 11th ed. part 1 Varanasi: Chowkamba Sanskrit Bhawan; 2007. p.114-115.
17. Prakash L, A Text Book of Dravaguna Vujnana, Chapter 103, Varanasi: Chaukhambha Orientalia; Yashtimadhu; 2019, p.903-906.
18. Misra BS. Sri Rupalalaji Vaisya, editor. Bhavaprakash Nighantu with the Vidyotini Hindi Commentry, 3rd ed. part 1. Varanasi: Chowkamba Sanskrit Bhawan; 2005. p.65.
19. Prakash L, A Text Book of Dravaguna Vijnana, Chapter 53, Varanasi: Chaukhambha Orientalia; Kumari; 2019, p. 503.
20. Manish Pamnani & Kamini Kaushal: Critical Review of Kumari (Aloe Vera) - An Ayurvedic Herb. International Ayurvedic Medical Journal {online} 2019. Available from: http://www.iamj.in/posts/images/upload/2049_2055.pdf
21. Takenokuchi, Mariko et al. "Evaluation of Absorbability of Macromolecular Substances in the Oral Mucosa and Skin using a Three-Dimensional Tissue Culture Model." Biology and medicine 10 (2018): 1-4. Available at DOI: 10.4172/0974-8369.1000448
22. Christopher A Squier, Barbara K Hall, The Permeability of Skin and Oral Mucosa to Water and Horseradish Peroxidase as Related to the Thickness of the Permeability Barrier, Journal of Investigative Dermatology, Volume 84, Issue 3, 1985, p.176-179, Available at <https://doi.org/10.1111/15231747.ep12264711>.

Cite this article as:

Sheethal S, Geethakumari B, Swathi A C. Role of Sthanika Chikitsa by Ayurveda in Lichen Planus. AYUSHDHARA, 2024;11(6):134-140.

<https://doi.org/10.47070/ayushdhara.v11i6.1779>

Source of support: Nil, Conflict of interest: None Declared

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