



EFFECT OF AYURVEDIC INTERVENTION IN THE MANAGEMENT OF SUBMANDIBULAR SIALADENITIS - A CASE REPORT

SUBIMOL P R^{1*} SHIVANI A C² MAHESH KUMAR E S³ SHYAM P WARMA⁴

^{1*} Final Year PG Scholar, Department of *Shalyatantra*, Shri Dharmasthala Manjunatheswara College of Ayurveda and Hospital, Hassan, Karnataka, INDIA

^{2,4} Assistant Professor, Department of *Shalyatantra*, Shri Dharmasthala Manjunatheswara College of Ayurveda and Hospital, Hassan, Karnataka, INDIA

³ Associate Professor, Department of *Shalyatantra*, Shri Dharmasthala Manjunatheswara College of Ayurveda and Hospital, Hassan, Karnataka, INDIA

Corresponding Author Email: subimolpr94@gmail.com Access this article online: www.jahm.co.in

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ABSTRACT:

Submandibular sialadenitis is one of the predominantly occurring conditions of the salivary glands. Sialolithiasis are calcified organic masses that form within the secretory system of the salivary glands. A case study of a 38 years old male patient with main complaint of swelling over left submandibular region associated with pain, difficulty in swallowing, dryness of mouth and redness of skin. The patient was treated with *Marmani vati* external application over the swelling and internally *Tab.Nimbadi Guggulu* and *Punarnavashtaka Kashaya*. By *Nimabdi Guggulu* and *Punarnavashtaka Kashaya* internally and application of *Marmani vati* externally gave good results in the management of Sialadenitis.

Key words: Ayurveda, Sialadenitis, *Marmani Vati*, Submandibular gland

INTRODUCTION

Submandibular Sialadenitis is inflammation of the submandibular gland which is caused by salivary stasis that leads to retrograde seeding of bacteria from the oral cavity.^[1] Sialolithiasis is a pathology manifested by impediment of ductal system by sialoliths (calculi).^[2] Carbonate and phosphate forms of calcium, remains of desquamated epithelia of salivary gland, mucopolysaccharides and glycoprotein like organic components constitute a sialolith.^[3-5] 92% of the sialoliths occur in the submandibular gland, 6% in parotid gland and 2% in both sublingual and minor salivary gland.^[6]

It is estimated that out of 1000 adults, 12 are afflicted with sialolithiasis annually and majority of them constitute male population.^[7] It's more common in males with a male to female ratio of 2:1 and the incidence is high in the third to sixth decade of life.^[8-9] The secretions of submandibular gland leads to increased levels of hydroxyapatite as well as phosphates enhanced viscosity, more mucous and escalated basicity.^[10] Therefore, it has more chances to develop calculus than all other salivary glands. This further leads to proclivity toward salt precipitation around the duct opening.^[11]

The symptoms of the patient include ephemeral and discomforting pain swelling, during or after having food in the salivary glands which reduce within 2 or 3 h and most importantly curtailed saliva formation.^[12] Sialolithiasis can lead to complications such as presence of secondary infections, abscess formation, stenosed saliva ducts, mucocele development, chronic sclerosing sialadenitis (Kuttner's tumour) and chronic atrophic parenchymal layer of the gland.

Submandibular Sialadenitis can be correlated with *Pashanagardabha*, which is one among *Kshudra rogas*. Symptoms includes *Hanusandhou Samudbhutam Sopha* (swelling at the root of lower jaw), *Alparuja* (slightly painful), *Sthira* (immovable), and having predominance of *Kaphavata*. *Marmani vati* with its antimicrobial and anti-inflammatory action is adopted here in the management of Submandibular sialadenitis.

CASE HISTORY

A 38 years old male patient with no known comorbidities came to OPD of Shri Dharmasthala Manjunatheswara hospital under department of *Shalyatantra* (IP Number: 068652) on 20th July 2023 with main complaint of swelling over left submandibular region associated with pain, difficulty in swallowing, dryness of mouth and redness of

skin for last one week. Patient is previously diagnosed with sialolithiasis of left submandibular gland.

General examination

Patient vitals were afebrile, pulse 72/min, blood pressure 110/80 mm Hg.

Systemic examination

In systemic examination, respiratory system, cardiovascular system, central nervous system was within normal limits.

Local examination

Local examination revealed a pustular swelling over left submandibular region approximately 3x3 cm over left submandibular region. On inspection overlying skin shows redness, shiny appearance, and movement with deglutination present. On palpation fluctuating, translucent swelling present with tenderness and mild serous discharge with local rise in temperature.

MATERIALS AND METHOD

Source of data: Patient was selected from the IPD of department of *Shalyatantra*, SDMCAH, Hassan.

Consent: A well informed written consent was obtained from patient and his wife before starting the treatment.

Routine haematology investigations (TC, DC, Hb%, ESR, RBS, LFT, RFT) and urine investigations were done and they were within normal limits.

Diagnostic assessment: Diagnosis was confirmed with CT scan neck as -Left submandibular sialadenitis secondary to distal submandibular sialolithiasis.

Photographs are given in Fig. 2a,b,c,d. Assessment was done on the basis of clinical findings.

TREATMENT PROTOCOL

Marmani Vati Lepa uniformly applied over the surface, thrice a day, once in morning, afternoon and evening as thin layer(0.5cm) as thick hot paste. (Fig 1), *Nimabdi Guggulu* and *Punarnavashtaka Kashaya* internally.



Fig 1-Application of Marmani Vati hot paste

Contents of *Marmani Vati*:

Table 1: Contents of *Marmani Vati*

| Sl No. | Contents | Botanical name |
|--------|----------------|-----------------------------|
| 1 | <i>Kumari</i> | <i>Aloe vera</i> |
| 2 | <i>Haridra</i> | <i>Curcuma longa</i> |
| 3 | <i>Usheera</i> | <i>Viteveria zizanoides</i> |

1. KUMARI ^[13]

Rasa-Tikta, Madhura

Guna-Snigdha, Picchila

Veerya-Sheeta

Vipaka-Katu

Karma-Bhedana, Jwarahara, Vishahara,

Kushtaghna

Doshakarma-Tridoshashamaka

Pharmacological Action-Anti-inflammatory

2.HARIDRA

Rasa-Katu,Tikta

Guna-Ruksha,Laghu

Veerya-Ushna

Vipaka-Katu

Karma-Vranahara, Shotahara, Vishahna,

Kushtaghna, Varnya, Twachya

Doshakarma- Kaphapitta shamaka

Pharmacological Action- Antimicrobial, hepatoprotective, antiallergic, anticancer

3.USHEERA

Rasa-Tikta,Madhura

Guna-Snigdha,Laghu

Veerya-Sheeta

Vipaka-Madhura

Karma-Pittaghna,

Vranaropaka,

Raktashodaka, Dahashamaka, Visarpahara

Doshakarma-Tridoshashamaka

Pharmacological Action-Antimicrobial, Anticonvulsant

OBSERVATION

After the application of *Marmani Vati Lepa* on the swelling regularly three times in a day for 7 days with *Nimabdi Guggulu* and *Punarnavashtaka Kashaya* internally further progression of swelling was stopped. Pain, burning sensation and redness reduced considerably. After each section progressive reduction in swelling could be attained. Repeated application of *Marmani Vati Lepa* along with internal medications gave complete relief within 7 days (table 2). Ayurveda pain management in Sialadenitis by *Marmani Vati Lepa* is innovative easy, better and cost-effective treatment.

Table no. 2: Details of given treatment

| Day | Condition of patient | Medicine given | Frequency |
|-------|--|---|--|
| Day 1 | <ul style="list-style-type: none"> Pain, and swelling over submandibular region Difficulty in swallowing Dryness of mouth and redness of skin 4-5 aphthous ulcers present. | <ul style="list-style-type: none"> <i>Marmani Vati external application</i> <i>Punarnavashtaka Kashaya</i> <i>Tab.Nimbadi Guggulu(500 mg)</i> <i>Tab.Stomatab</i> | <p>TID</p> <p>15 ml BD</p> <p>2BD</p> <p>1BD</p> |

| | | | |
|----------------------------------|---|--|---|
| Day 3 | <ul style="list-style-type: none"> • Pain, and swelling over submandibular region reduced to 40 % • Difficulty in swallowing reduced 60% • Dryness of mouth and redness of skin reduced • 1-2 aphthous ulcers present | <ul style="list-style-type: none"> • <i>Marmani Vati external application</i> • <i>Punarnavashtaka Kashaya</i> • <i>Tab.Nimbadi Guggulu(500 mg)</i> • Tab.Stomatab | TID 15 ml BD 2BD 1BD |
| Day 7 | <ul style="list-style-type: none"> • Pain, and swelling over submandibular region reduced to 95% • Difficulty in swallowing absent • Dryness of mouth and redness of skin absent • Aphthous ulcers absent | <ul style="list-style-type: none"> • <i>Marmani Vati external application</i> • <i>Punarnavashtaka Kashaya</i> • <i>Tab.Nimbadi Guggulu(500 mg)</i> • Tab.Stomatab | TID 15 ml BD 2BD 1BD |
| Followup on 15 th day | <ul style="list-style-type: none"> • No fresh complaints • All symptoms reduced completely | <ul style="list-style-type: none"> • <i>Marmani Vati external application</i> • <i>Punarnavashtaka Kashaya</i> • <i>Tab.Nimbadi Guggulu(500 mg)</i> | BD 15 ml BD 2BD |

FOLLOWUP AND RESULT

On the 1st day of application of *Marmani Vati Lepa* along with internal medications itself patient got reduction in pain and swelling. Further assessment of symptoms were done along with clinical findings on 1st,3rd,7th and follow up on 15th day. Progress attained in the following days are shown in images figure

2a,2b,2c,2d. In one week, symptoms reduced about 95% and in first followup after one week of treatment 100 % reduction in symptoms observed and patient was satisfied with the treatment. At present patient does not have any swelling, pain, burning sensation related to Sialadenitis till the date of submission of this version of manuscript.



DISCUSSION

Acute submandibular sialadenitis differs from parotid sialadenitis mainly in site of swelling and pus discharge from Wharton's duct. Xerostomia is also common predisposing factor of Sialadenitis. Sialolithiasis are main cause of obstructive submandibular sialadenitis.

Submandibular Sialadenitis which can be correlate with *Pashanagardabha*. In *Pashanagardabha* principle treatment is *Kaphavatahara Chikitsa* like *Swedana* and *Pralepa*. *Pralepa* means local application over the skin. It is easiest way among other forms of medication, as preparation time is less. High residence time over affected area and drug to correct the local pathological events ^[14].

The ingredients of *Marmani Vati Lepa* are *Kumari*, *Haridra*, *Usheera* and water. *Kumari* is *Tridoshashamaka* and *Jwarahara*, *Vishahara*, *Kushtaghna*. It helps in reducing local rise of temperature and has anti-inflammatory

action. *Haridra* can be given in *Twak Vikaras* due to antimicrobial property and it is *Ushna Veerya* so act as *Kaphapitta shamaka*. It has *Vranahara*, *Shotahara*, *Vishaghna*, *Kushtaghna*, *Varnya*, *Twachya Karmas* which helps in relieving the swelling, redness and changes texture of skin. *Usheera* has qualities of *Pittaghna*, *Vranaropaka*, *Raktashodaka*, *Dahashamaka*, *Visarpahara* which helps to reduce the burning sensation, redness and antimicrobial action of usheera helps in prevention of abscess formation.

Nimbadi guggulu has antibiotic, anti-inflammatory and analgesic properties, *Guggulu* helps in elimination of toxins from the body. *Punarnavashtaka Kashaya* contains *Punarnava*, *Nimba*, *Patola*, *Sundi*, *Tikta*, *Gudoochi*, *Darvee*, *Hareethaki* that helps as *Sophahara*, *Shoolahara*. By one week followup the patient got complete relief from symptoms. He was advised to continue *Pathya* for next few weeks.

INFORMED CONSENT Patient has signed an informed consent in structured format (Scientific writing in Health and Medicine format) All the details related his condition, severity, treatment being conducted, all the procedures involved were clearly explained to patient and he has willingly given consent.

CONCLUSION

Patient's recovery from an inflammatory condition by traditional Ayurveda medicine is a very promising one. From the above study it is concluded that *Marmanivati Lepa* along with internal medications is effective in management of Submandibular Sialadenitis, which helps to reduce the symptoms of sialadenitis and shows tremendous result. After application of *Lepa*, further progression of inflammation was stopped. So, we can give this treatment directly to the patient those who having the Submandibular Sialadenitis. Adaptive trials are necessary to explore further practical applicability of Ayurveda and modern treatment together.

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