

Pain Management in Submucosal Fibrosis with *Alternanthera Sessilis*: An Adjuvant Therapy

Kadambari Anil Solankure*, A.S. Pethkar**, Arun Kumar B. Biradar***, Sandeep S. Sagare***

Abstract

Oral Submucous Fibrosis (OSMF) is a chronic debilitating disease of the oral cavity characterized by inflammation and progressive fibrosis of the submucosal tissues. It results in marked rigidity and an eventual inability to open the mouth. The buccal mucosa is the most commonly involved site, but any part of the oral cavity can be involved, even the pharynx. It is characterized by oral pain and burning sensation upon consumption of spicy foodstuffs, increased salivation, change of gustatory sensation, dryness of the mouth and trismus. It also represents with impaired mouth movements, Dysphagia to solids, Hearing loss due to stenosis of the eustachian tubes and Nasal tonality to the voice, etc. Number of medical and surgical therapies is still in progress to obtain the best therapeutic remedy for its effect management. But, still no drug is approved for the better management of this condition. On the contrary part the incidence of this condition is rising due to faulty food habits and addictions since childhood. Along with the routine management application of topical anesthetic agents to control the local symptoms is a common practice, which alter the taste perception and alter digestion of food significantly. *Matsyaakshi* (*Alternanthera sessilis*) is a traditional drug of choice for controlling the pain in oral cavity. This controls the pain in oral cavity rather than altering the taste perception and thus, does not interfere with the digestion

Keywords: Oral Submucosal Fibrosis; Matsyakshi; Dysphagia; Trismus; Eustachian; Anaesthesia.

Introduction

Oral Submucous Fibrosis (OSMF) is a chronic debilitating disease of the oral cavity characterized by inflammation and progressive fibrosis of the submucosal tissues. It results in marked rigidity and an eventual inability to open the mouth. The buccal mucosa is the most commonly involved site, but any part of the oral cavity can be involved, even the pharynx.

It is characterized by oral pain and burning sensation upon consumption of spicy foodstuffs, increased salivation, change of gustatory sensation, dryness of the mouth and trismus. It also represents with impaired mouth movements, Dysphagia to solids, Hearing loss due to stenosis of the eustachian tubes and Nasal tonality to the voice, etc.

Number of medical and surgical therapies is still in progress to obtain the best therapeutic remedy for its effect management. But, still no drug is approved for the better management of this condition. On the contrary part the incidence of this condition is rising due to faulty food habits and addictions since childhood.

Along with the routine management application of topical anesthetic agents to control the local symptoms is a common practice, which alter the taste perception and alter digestion of food significantly.

Matsyaakshi (*Alternanthera sessilis*) is a traditional drug of choice for controlling the pain in oral cavity. This controls the pain in oral cavity rather than altering the taste perception and thus, does not interfere with the digestion.

Author Affiliation: *Final Year PG Scholar ** Reader, Dept of P .G. Studies in Kriya Sharir, Hon. Shri. Annasaheb Dange Ayurved Medical College, Post-Graduate & Research Center, ASHTA. Tq. Walva, Dist. Sangli, Maharashtra 416301, India. ***Reader, Dept of PG Studies in Shalaya Tantra, KLE University's Shri. B. M.Kankanwadi Ayurveda Mahavidyalaya, Belagavi, Karnataka 590005, India.

Reprint Request: Solankure Kadambari Anil, Final Year PG Scholar, Dept of P .G. Studies in Kriya Sharir, Hon. Shri. Annasaheb Dange Ayurved Medical College, Post-Graduate & Research Center, ASHTA. Tq. Walva, Dist. Sangli, Maharashtra 416301, India.

E-mail: ksolankure@gmail.com

Received on 10.08.2017, Accepted on 30.08.2017

Oral Sub mucosal Fibrosis: [4,5]

Pathology of OSMF is not well established. Histopathologically the condition involves Connective tissue Progressive accumulation of fluid, constriction of blood vessels, hyalinization of collagen & fibrosis, Epithelium – Progressive atrophy, hyperkeratosis and parakeratosis

The clinical phase involves 3 stages

1. Stage of stomatitis and vesiculation
2. Stage of fibrosis
3. Stage of sequelae and complication

Clinical Grading of OSMF

Grade I: Only blanching of oral mucosa without symptoms

Grade II: Burning sensation, dryness of mouth, vesicles, ulcers

Grade III: In addition to Gr. II, restriction of mouth opening

Grade IV: In addition to Gr. III, palpable fibrotic bands all over the mouth without involvement of tongue

Grade V: Grade IV and involvement of tongue

Grade VI: OSMF with histologically proves oral cancer

Investigations

- Complete Hemogram – Decrease Hb, Increase Eosnophils
- ESR is raised in 50% of individuals
- Serum proteins – Decrease albumin, increase Y – globulins
- Electromyography – EMG of temporalis, buccinators, etc
- Exfoliative cytology–Morphological characteristics are examined

Ayurvedic View

The explanation of oral sub- mucosal fibrosis doesn't exactly co-relate with any of the disease explained in Ayurvedic cllsics.

Some of the clinical features of talu kachhapa, explained by Sushrutha and Vagbhata in the context of Talu gata roga. According to Sushrutha (Su. Ni. 16/43) the vitiated Kapha dosha causes painless, slowly progressive elevation like that of back of tortoise [1]. According to Vagbhata

(A.H, 21/39), the vitiated Kapha dosha causes swelling in talu, resembling the back of tortoise [2].

Conservative Management

Discourage from chewing betel nut and tobacco. Avoid spicy food and restrict chillies, treat periodontal and periapical diseases and maintain oral hygiene. Multi-vitamin (Vit. A & B complex) & Iron supplements. Use of topical analgesics and anaesthetics to control the pain and burning sensation symptomatically. Systemic corticosteroid therapy. Topical application of Triamcinolone acetamide 0.1% with neomycin. Betnosol 0.5mg tablet dissolve in water and used for gargle.

Sublingual Injections

Fibrinolysin, Gold, Vitamin A and D, Corticosteroids. Steroids as advised are Cortisone 20mg / 100mg daily for a total 1500 – 2500mg can be given orally / parenterally, Hydrocortisone with lignocaine is most effective in early / moderate advanced cases, Hyalase – Hyaluronic acid decreases fibrinogenesis, 1500 i.u. of Hyalase + 1 ml of 2% lignox – Twice weekly for 3 weeks, 1500 i.u. of Hyalase + 4 ml of Dexamethasone – Twice weekly for 7 weeks, Placental extract & dexamethasone – Temporary improvement, POTABA – Potassium Amino Benzioc Acid – It decreases collagen formation and intern decreases fibrosis.

Surgical Treatment

Absolute indications are Severe trismus, Dysplastic / neoplastic changes and Surgical Techniques. Excision of fibrotic bands with split thickness skin graftin, 1st technique with bilateral temporalis myotomy or coronoidectomy, excision of fibrotic bands with reconstruction.

Ayurvedic Management

Matsyaakshi (Alternanthera sessilis) is a traditional drug of choice for controlling the pain in oral cavity. This controls the pain in oral cavity rather than altering the taste perception and thus, does not interfere with the digestion. It is widely available in India, as a weed. It is used as a food and medicine which is in practice since long time with no side effects. Its young shoots contain protein 5% and iron 16.7 mg/100 g. Leaves also contain a good amount of alpha- and beta-tocopherols. It is rich in anti-oxidant, b-carotene and Vitamin C & iron, Sitosterol, campesterol, a-spinasterol, Oleanolic acid, rhamnoside, 24-

methylene cycloartenol, cycloeucalenol, lupeol, 5-stigmasta-7-enol and its palmitate. The herb is used as a galactagogue, cholagogue, abortifacient and febrifuge. The leaves are used like spinach, and in soups. Applied externally on acne and pimples. The dosage includes advising 2-6 g powder of any part plant.(API Vol. II.) [3].

Prognosis

No definite cure and management is available for OSMF. Only symptomatic relieving measures should be done. Biopsy is to confirm the diagnosis and early identification of dysplasia. Cases with dysplasia to be managed along with the line of management as CA in situ. Non-dysplastic / mildly dysplastic cases must be kept under long term observation with necessary preventive measures.



Picture 1: Oral Sub- Mucosal Fibrosis



Picture 2: Matsyaakshi Plant

Discussion

The OSMF, is a disease of unknown origin and with poorly understood histopathologically. The clinical features are burning sensation in oral cavity, sensitivity to sour bitter and salty etc. The cases in which tongue is also involved will hamper the appreciation of food and taste. Lack of proper appreciation leads to hypostimulation of Superior and Inferior nuclei which controls the submandibular, sublingual and parotid glands and intern hampers the digestion. Matsyakshi is rich in B- carotene, Vitamin C and iron. It has properties like cooling, analgesic and antiseptic. It is immunomodulator, antimicrobial, antifungal analgesic antipyretic, anti-oxidant, hematenic and hepato-protective.

Conclusion

Utility of Matsyaakshi in OSMF to control pain as an adjuvant therapy. This drug might help to improve taste perception, subsequently the digestion of patient may improve, also may help in improving general well being of the patient. This drug is immunomodulator and rich source of micronutrients, antioxidants, iron, Vitamin A and Vitamin C, hence may improve health of oral mucosa. This drug is proven as antimicrobial and antifungal. Thus, cleans up the oral cavity and reduces the irritation of mucosa due to stasis of saliva, which contributes in continuation of pathophysiology of OSMF.

References

1. K.R. Shrikantha Murthy, Sushruta Samhita, Choukambha Orientalia, Vol 1, Nidana Sthana, 16/43, 203.
2. K.R. Shrikantha Murthy, Ashtanga Hrudaya, Choukambha Orientalia, Vol 1, Sutra Sthana, 21/39.
3. D. Shantakumar Lucas, Dravya Guna - Vigyana, Choukambha Orientalia, Vol 2.
4. www.emedicine.com as on 10-8-17.
5. Ashok Mehta, Diagnosis and Management of Cancer, Jaypee Publications, ISBNno: 81-8061-212-0, 1st edition, 2004 .