

## Original Article

### Evaluation of Two Different Treatment Modalities for the Management of Oral Submucous Fibrosis: A Relative Report and Analysis

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#### ABSTRACT:

**Background:** Oral submucous fibrosis is a perpetual dynamic ailment of the oral cavity with capability of threatening malignancy formation. For the treatment of this pathologic condition, an extensive variety of modalities comprising of medication administration, surgical treatment, and physiotherapy have been endeavored till date; with shifting degrees of advantage, yet none of them have turned out to be a cure for this ailment. Subsequently, we arranged this investigation to analyze the viability of Levamisole and Colchicine in the treatment of oral submucous fibrosis against the Hyaluronidase injections. Existing medicines give just transitory symptomatic help. Colchicine is an old medication with strong action against fibrotic and inflammatory properties. **Materials and Methods:** The present examination included an evaluation of OSMF patients who experienced treatment by Levamisole and Colchicine against the Hyaluronidase injections. Every one of the 60 patients were isolated arbitrarily into two examination gatherings. Gathering A included patients who were given Levamisole and Colchicine thrice day by day by oral route and gathering B included patients who were given Hyaluronidase injections once a week alternatively. Records of the considerable number of readings and estimations of the patients previously beginning of the treatment and amid the subsequent time were kept up. Every one of the outcomes were broke down by the analytical team. **Results:** The mouth opening amid the primary follow-up period toward the finish of first month of treatment among the Group A and Group B patients was noted. Noteworthy outcomes were acquired while looking at the mean mouth opening in both the gatherings at various interim of time. Both groups showed relief from burning sensation as well. **Conclusion:** Significant diminishment in the mouth opening of the patients happens with both Levamisole and Colchicine and Hyaluronidase injections.

**Key words:** OSMF, Levamisole and Colchicine, Hyaluronidase injections.

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#### INTRODUCTION:

Oral Submucous Fibrosis (OSF) is a perpetual condition observed most commonly in the Asian population, more commonly India.<sup>1</sup> However, with the expansion in migration of individuals from the Indian subcontinent, dental experts in multiple well-developed nations will experience this malady in the close future.<sup>2</sup> Once the pathology has cultivated, there is neither relapse nor any powerful treatment. It is considered as a pre-threatening phase of oral growth and the extent of the malignant change fluctuates. An extensive variety of treatment including drug administration, surgical treatment,

and physiotherapy have been endeavored till date, with changing degrees of advantage, yet none have possessed the capacity to cure this disease. This is chiefly because of the way that the etiology of the ailment is not completely comprehended and the ailment is dynamic in nature.<sup>3</sup> Clinical highlights of Oral Submucous Fibrosis incorporate burning sensation on taking spicy sustenance, enhanced salivation, dryness of the mouth, damaged gustatory sensation and dynamic limitation of mouth opening and the projection of the tongue. It is portrayed by over the top creation of collagen prompting inelasticity of the oral mucosa and atrophic changes of the epithelium. Instead of

proceeding with the restricted accessible methods of treatment, the idiopathic idea of this condition demonstrates new roads for its management.<sup>4</sup>

Colchicine is an antiquated medication which is drawing in restored intrigue in view of its activities at a subcellular level. Many investigations amid the previous years have explained an assortment of already unsuspected drug activities and have exhibited the changing adequacy of colchicine treatment for a shockingly wide cluster of ailments, especially submucous fibrosis. Dexamethasone and Hyaluronidase by separating hyaluronic acid (the ground substance in connective tissue) brings down the consistency of intercellular bond substance. Better outcomes were seen regarding trismus and fibrosis.<sup>5</sup>

Over the span of ailment treatment, the accommodation of drug administration is one of the elements for successful management of the infection. The oral route of drug administration of the medication is more advantageous contrasted with intralesional tranquilize organization, and hence it would be perfect if an oral substitute to intralesional delivery is accessible.

**MATERIALS AND METHODS:** The present examination included an evaluation of OSMF patients who experienced treatment by Levimasole and Colchicine against the Hyaluronidase injections. Every one of the 60 patients were isolated arbitrarily into two examination gatherings. Gathering A included patients who were given Levimasole and Colchicine thrice daily by oral route amounting to 400 mgs and gathering B included patients who were given Dexamethasone and Hyaluronidase injections 1500 IU once a week alternatively via intralesional route. Records of the considerable number of readings and estimations of the patients previously beginning of the treatment and amid the subsequent time were kept up. Every one of the outcomes were broken down by the analytical team.

**RESULTS:** The mouth opening amid the primary follow-up period toward the finish of first month of treatment among the Group A and Group B patients was noted. Noteworthy outcomes were acquired while looking at the mean mouth opening in both the gatherings at various interim of time. Both groups showed relief from burning sensation as well.

Table 1.1 shows the comparison in the mouth opening

Group	Mouth Opening (Initially)	Mouth Opening (After a month)
A (Levamisole and Colchicine)	2.87	3.21
B (Hyaluronidase injections)	2.91	3.42

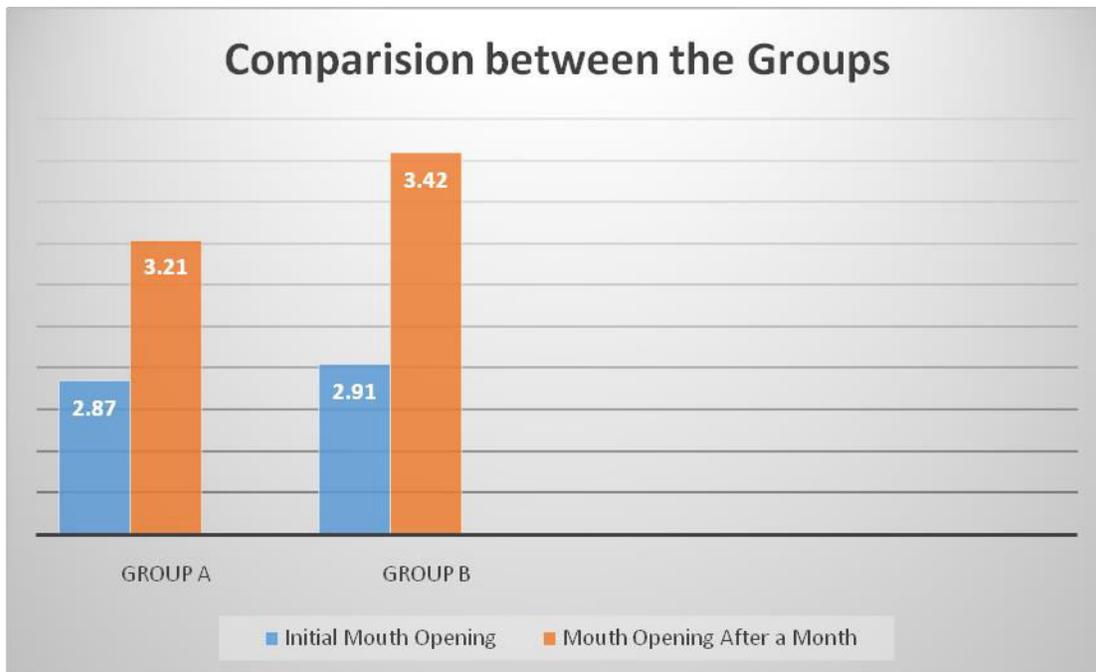


Chart 1.1 Showing Comparison between the Groups

**DISCUSSION:** One of the tormenting issues related with patients experiencing oral submucous fibrosis is burning sensation and trismus which obstructs ordinary capacity and functionality. Oral submucous Fibrosis has influenced a huge number of people and is probably going to achieve a disturbing extent sooner rather than later. The beginning of oral submucous fibrosis is over a time of two to five years. The patients at first whine of burning sensation in the oral cavity while devouring hot nourishment. As the sickness advances, the oral mucosa ends up plainly whitened, somewhat hazy and that seems to prompt trouble in opening the mouth, failure to shriek and trouble in gulping. The patients in Group A demonstrated an early diminishment in the burning sensation. There was likewise a critical change in the mouth opening and in the development of the tongue. The histopathological discoveries additionally demonstrated a checked lessening in the provocative cell penetration and thickness of collagen fibrils. The component by which colchicine and levamisole enhanced the clinical status in our examination was anything but difficult to understand.

Colchicine has been accounted for to be advantageous in the treatment of sicknesses related with fibrosis in creatures and human beings<sup>6</sup>. The short and long haul organization of colchicine treatment in direct measurements is shockingly endured. None of our patients revealed any side effects amid treatment or after the suspension of medication. The most known symptom and side effect to the medication's activity was observed on loose bowels and stomach torment.

**Conclusion:** In the present investigation, the expansion in mouth opening, diminish in burning sensation and change in cheek adaptability in puffed state in oral submucous fibrosis patients demonstrated better outcomes by treatment with Hyaluronidase when contrasted with levamisole and Colchicine. However it is important to comprehend that Hyaluronidase is administered intralesional while levamisole and Colchicine combination is administered orally.

**REFERENCES:**

1. Pindborg JJ, Bhonsle RB, Murti PR, Gupta PC, Daftary DK, Mehta FS. Oral Submucous fibrosis as a precancerous condition. Scand J Dent Res. 1984; 92:224–9.
2. Aziz SR. Coming to America: Betel nut and oral submucous fibrosis. J Am Dent Assoc. 2010; 141:423–8.
3. Borle RM, Borle SR. Management of oral submucous fibrosis: A conservative approach. J Oral Maxillofac Surg. 1991; 49:788–91.
4. Gupta DS, Gupta M, Oswal RH. Estimation of major immunoglobulin profile in oral submucous fibrosis by radial immunodiffusion. Int J Oral Surg. 1985; 14:533–7.
5. Coman DR, Mccutcheon M, Zeidman I. Failure of hyaluronidase to increase in invasiveness of neoplasms. Cancer Res. 1947; 7(6):383–5.
6. Guttadauria M, Diamond H, Kaplan D. Colchicine in the treatment of scleroderma. J Rheumatol. 1997; 4:272–6.

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