

STUDY OF AETIOLOGY AND EFFICACY OF MEDICAL TREATMENT IN ORAL SUBMUCOUS FIBROSIS

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ABSTRACT

INTRODUCTION

Oral submucous fibrosis is a premalignant condition having diverse etiology. Many predisposing factors are implicated for its occurrence and several treatment modalities are available, but still no single effective treatment has been elicited.

OBJECTIVE

The aim of the study was to identify aetiological factors, clinical presentations and to evaluate the effect of two established medical treatment modalities in oral submucous fibrosis.

METHODOLOGY

This was an observational study involving 64 cases of oral submucous fibrosis. Patients were divided into two equal groups for the management: Group I received Intralesional steroids + intralesional hyaluronidase and Group II received Intralesional steroids + Intralesional hyaluronidase + oral steroids.

RESULTS

The commonest symptoms were difficulty in opening of jaw (47%) and increased intolerance to spice (40%). Majority of the patients (95%) consumed smokeless tobacco and 36% smoked tobacco. 26 (81.25%) patients in Group II showed improvement as compared to 17 (53.13%) in Group I. (P value < 0.05)

CONCLUSION

Among the medical modalities of treatment, a combination of local injections of steroids and hyalase and systemic (oral) steroids is the one found to be most effective.

KEY WORDS

Submucous fibrosis, aetiology, medical treatment.

INTRODUCTION

Oral submucous fibrosis (OSF) is a chronic disease of diverse etiology, seen mostly among people of south East Asian origin. It is characterized by a progressive fibrotic changes leading to inability to open the mouth. At any stage, the overlying epithelium may become a site of non specific ulcerations, dysplastic changes, or malignant transformation. Clinically there are firm, vertical fibrous bands that are palpable in the region opposite the premolars and the oral mucosa appears 'mottled' and marble like. OSF is a premalignant condition, is distressing to the patient as he is neither able to consume a normal

diet, nor maintain proper oral hygiene. In 1953, Joshi, an otolaryngologist in Mumbai coined the term Oral Submucous Fibrosis.¹ WHO defined OSF as "A slowly progressive disease in which fibrous bands form a blanched oral mucosa, resulting in severe restriction of movement of the mouth". A number of predisposing factors have been implicated in its etiology. The most commonly implicated factors are betel nut (Areca catechu) chewing, chillies, certain systemic collagen disorders and genetics have also been suggested. Many clinicians involved with OSF have tried to co-relate this disease with group of collagen diseases and a genetic predisposition of the oral mucosa.^{2,3,4} Various treatment modalities have been experimented with, but no definitive cure has been elicited.

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The different treatment modalities range from conservative approaches to intraoral injections, systemic corticosteroid therapy, oral Colchicine, oral lycopene, interferon Gamma therapy and surgery. Owing to its precancerous nature, OSF should be not underestimated. This study was carried out with the aim to study the various clinical presentations, correlate various factors pertaining to aetiology and to study the efficacy of two medical treatment modalities in OSF.

MATERIAL AND METHODS

This study was conducted in 64 patients of OSF attending Otorhinolaryngology department in tertiary care teaching hospital over a period of 2 years. A detailed history, presenting symptoms and special reference was also made to predisposing factors and personal habits like panparag, tobacco chewing, smoking etc. The interincisor distance, was measured in all cases thereby grading the disease.⁵ The routine investigations carried out were complete haemogram indicating anaemia, if present and serum proteins to rule out nutritional deficiency. In all the patients irrespective of modality of treatment followed, the following measures were adopted. a) Strict abstinence from ingestion of irritants like chillies, tobacco, betal nut b) Maintenance of proper oral hygiene c) Well balanced diet d) All patients were given multivitamins and haematinics e) Jaw stretching exercises using Jaw stretcher were advised. The patients were randomly divided into two equal groups for the management: Group I included patients receiving local Intralesional steroids + Intralesional hyaluronidase and Group II received Interlesional steroids + Intralesional hyaluronidase + oral steroids. The drug regimen was as follows, Group I received Intralesional Hydrocortisone (2cc) + intralesional hyaluronidase(1500 units) at weekly intervals for 5-7 months and Group II received Intralesional Hydrocortisone (2cc) + intralesional hyaluronidase (1500 units) at weekly intervals for 5-7 months + Oral prednisolone 100 mg daily upto total of 1500-2000 mg. Pre and Post treatment Inter-incisor distance was measured to gauge the efficacy of treatment. Intralesional (local) injections were given in fibrous area, not injecting more than one area at a time and the areas of fibrosis were alternated for injections administrations, a record being kept of each area at the time of injection. The patients were followed up for a period of 1 year after completion of treatment. The improvement after treatment was assessed by measuring the interincisor distance and symptomatic

relief from burning sensation in mouth and improvement in trismus.

OBSERVATIONS

The present study comprised of a total of 64 patients, the age range in our study was 15-65 years with a mean age of 32 ± 6 years. The maximum incidence of the disease was between 21-40 (72.6%), the youngest patient being 15 years and the oldest 65 years. The male: female ratio was 2:1 in our study with 43 (66%) males while 21 (33%) females patients. The commonest presenting symptoms for most patients were inability to fully open the mouth (73.44%) and intolerance to spicy food (62.5%) followed by oral ulceration (29.69%), difficulty in mastication (15.63), dysphagia (10.94%) and ear ache (10.94%). The analysis of personal habits of the patients revealed that 37.5% patients consumed tobacco in smoke form whereas 95.31% consumed smokeless form. 60% patients consumed both forms of tobacco. The duration of tobacco chewing was in range of 1- 5 years. Based on the inter incisor distance the severity of disease was graded as mild (≥ 3 cm), moderate (2-2.9) and severe (<2 cm). Majority of patients were in moderate grade (60%) followed by mild (25%) and severe (15%) grade. The patients were randomly divided into two equal groups for the management: Group I received local Intralesional steroids + Intralesional hyaluronidase and Group II received Interlesional steroids + Intralesional hyaluronidase + Oral steroids. The study revealed that 26 (81.25%) patients in Group II showed improvement as compared to 17 (53.13%) in Group I and this was statistically significant (P value<0.05).

DISCUSSION

In the present study comprising of 64 patients attending the ENT OPD of the hospital, the maximum age incidence (72.6%), was in the age group 20-40 years. Studies on OSF also show maximum age incidence between 20-40 years.⁶ Thus we see that OSF is a disease affecting young adults and people of middle age probably due to personal habits responsible for the occurrence of this disease. The sex incidence in present study was 2 : 1 (M : F) which was comparable to other studies where more male were more affected by this disease.⁶ This could be attributed to the fact that males indulge in the habit of pan chewing, betalnut, tobacco chewing more often than females. The commonest presenting symptoms in our study was inability to fully open the mouth (73.44%) and intolerance to spicy food (62.5%) followed by other minor

symptoms. Similar results were seen in another study conducted Mehta et al.⁶ In the present study, 95% patients were tobacco, pan masala, pan, betal nut chewers, followed by 37% patients who were smokers. The duration of pan chewing was in the range of 1-10 years. These results were comparable to another study which showed that 43.4% patients were smokers and 96.6% patients were tobacco / pan parag chewers and the duration of paan chewing was in range of 3-20 years.⁶ Since aetiology of OSF remains unknown, the factors like paan, tobacco, betal nut, smoking have been held responsible. The results of medical and surgical management are usually not up to the mark. Mehar et al⁷, tried micronutrients like retinol, vitamin B, vitamin c, vitamin D and minerals in treatment of OSF which showed improvement in symptoms but no improvement in mouth opening. Kumar et al⁸, gave trial of oral lycopene 16 mcg daily (total upto 2000 mcg) in cases of OSF but no complete success was achieved. Bhuvna et al⁹, did a comparative study and observed that Tab. colchicine 0.5 mg twice daily showed better results than intralesional injection hyaluronidase 1500 IU plus hydrocortisone 25 mg

given once a week. In the present study, all patients underwent medical management. In this study among the patients who underwent treatment as assigned in group I only (53%) showed improvement, whereas majority of the patients (80%) who underwent group II modality showed improvement. Thus, a combined drug regimen i.e. intralesional steroids and hyalase and oral steroids supplemented by multivitamins and haematinics is the one which shows the most favorable results. It also depends as much on the stage of the disease as the treatment modality used.

SUMMARY AND CONCLUSIONS

In this study 64 patients of OSF were studied. Almost all the patients in this study 95% were in habit of tobacco chewing and less commonly 37% smoking. Among the medical modalities of treatment, a combination of local injections of steroids and hyalase and oral steroids in the one found to be most effective not forgetting to improve the nutritional status of the patients by giving multivitamins, haematinics and a high protein diet.

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