

ORAL SUBMUCOUS FIBROSIS- A NEW SURGICAL PROTOCOL

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ORIGINAL ARTICLE

Fibrotomy with bilateral coronoidectomy without reconstruction in the surgical management of oral submucous fibrosis

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A Brief history.....



Schwartz coined the term “atrophica idiopathica mucosa oris” to describe an oral fibrosing disease in year 1952.

Joshi subsequently coined the term oral submucous fibrosis (OSF) for the condition in 1953.

Caniff, et al., in 1986 described submucous fibrosis as a chronic progressive scarring disease of the oral cavity and oropharynx



Introduction

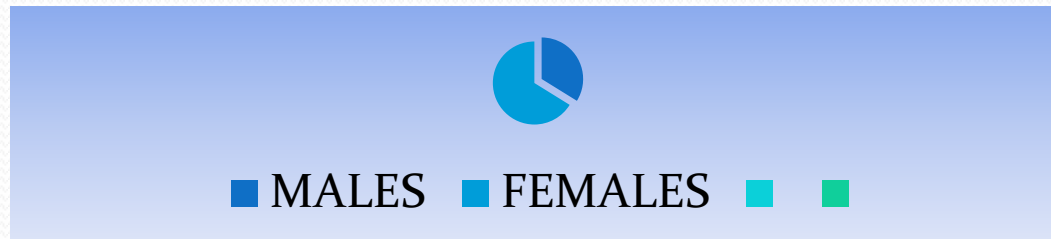
Oral Submucous fibrosis is a chronic debilitating disease of the oral cavity characterized by inflammation and progressive fibrosis of the submucosal tissues (lamina propria and deeper connective tissues).



Epidemiology

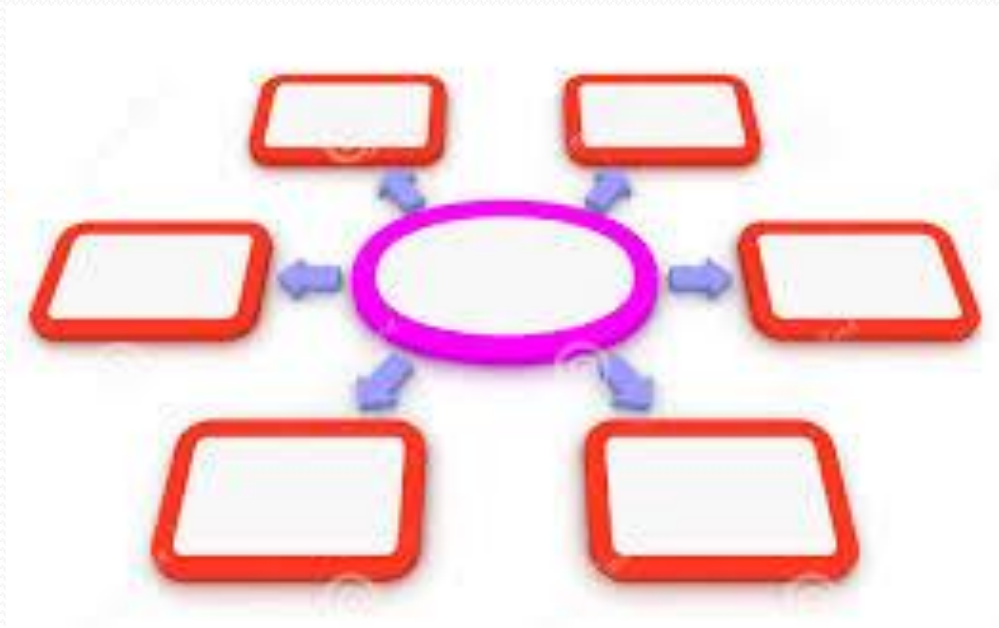


- . predominately in Southeast Asia and India.
- . 2.5 million people affected, with most cases concentrated in the Indian subcontinent, especially southern India.
- . prevalence rate varies from 0.2- 2.3% in males and 1.2-4.5% in females in Indian communities



CLASSIFICATION

- 1) CLINICAL
- 2) SURGICAL



1) CLINICAL

Clinically divided into 3 stages:

Stage 1: stomatitis;

Stage 2: fibrosis;

2a-early lesions of blanching of the oral mucosa;

2b-older lesions consisting of vertical and circular palpable fibrous bands in and around the mouth or lips, resulting in a mottled, marble-like appearance of the buccal mucosa;

Stage 3: sequelae of oral submucous fibrosis comprising of

3a-leukoplakia &

3b- speech and hearing deficits



2. SURGICAL MANAGEMENT

- Group I: earliest stage without mouth opening limitations with an interincisal distance of greater than 35 mm.
- Group II: patients with an interincisal distance of 26-35 mm.
- Group III: moderately advanced cases with an interincisal distance of 15-26 mm. Fibrotic bands are visible at the soft palate, and pterygomandibular raphe and anterior pillars of fauces are present.
- Group IVA: severe trismus with an interincisal distance of less than 15 mm and extensive fibrosis of all the oral mucosa.
- Group IVB: advanced disease with premalignant and malignant changes throughout the mucosa.



Materials and methods

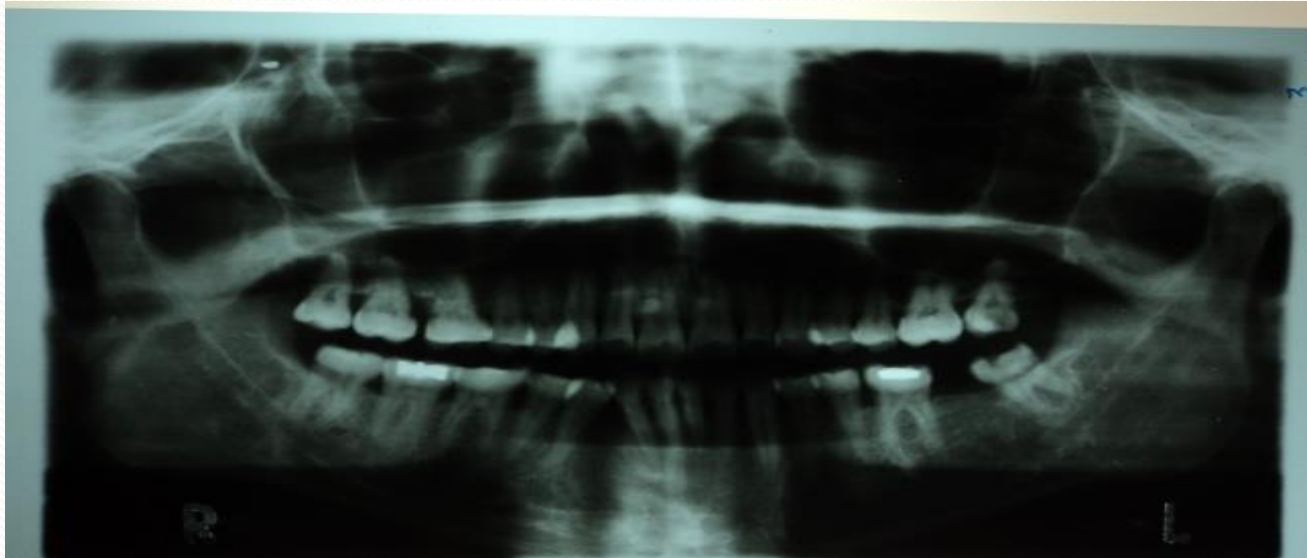


A total of 50 patients of oral submucous fibrosis were admitted with advanced oral submucous fibrosis with interincisal distance not more than 20 mm.

Patient's age, sex, risk factors, history of gutkha chewing, and preoperative mouth opening were documented, with all cases histopathologically proven.

Patients were subjected to surgical intervention and physiotherapy with follow up for 1 year, interincisal distance was measured with Vernier calipers and noted.

PRE OPERATIVE



Surgical intervention

Surgical technique involved

- (1) bilateral release of fibrotic bands
- (2) bilateral coronoidectomy & temporalis myotomy
- (3) Aggressive Physiotherapy

Procedure

1. Fibrotomy



- The operation was performed under general anesthesia with nasal intubation.
- After opening the mouth, the buccal mucosa was incised transversely from just behind the commissure of the oral cavity to extending posteriorly at the level to 1 cm below the orifice of Stensen's duct depending upon the location of the fibrotic bands.
- All the bands were released by blunt dissection starting from the pterygomandibular raphe to the corner of the mouth, bilaterally. Confirmation was done by palpation that all the bands are dissected thoroughly



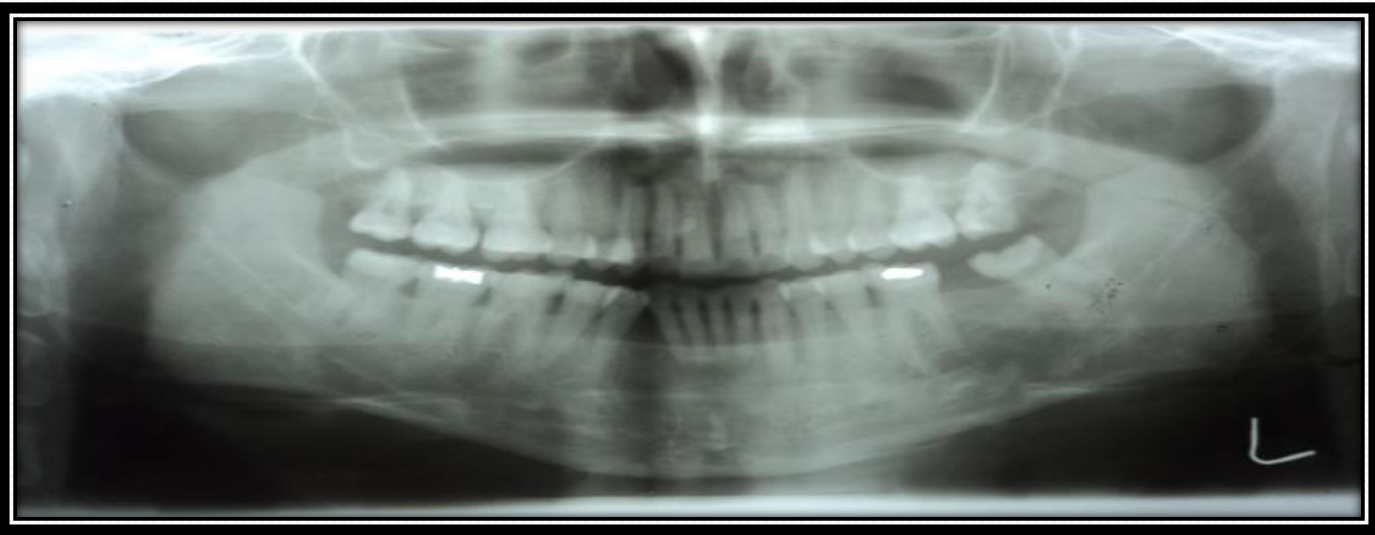
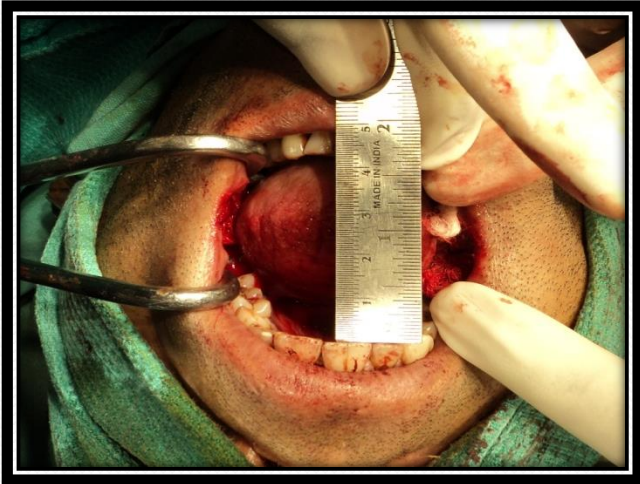
2. Coronoidectomy



- This incision was extended vertically along the coronoid process up to its tip.
- The overlying tissue was cleared by sharp dissection till the coronoid process was visible.
- Using a micromotor burr, chisel and mallet the coronoid process was excised bilaterally. Interincisal distance was measured after coronoidectomy

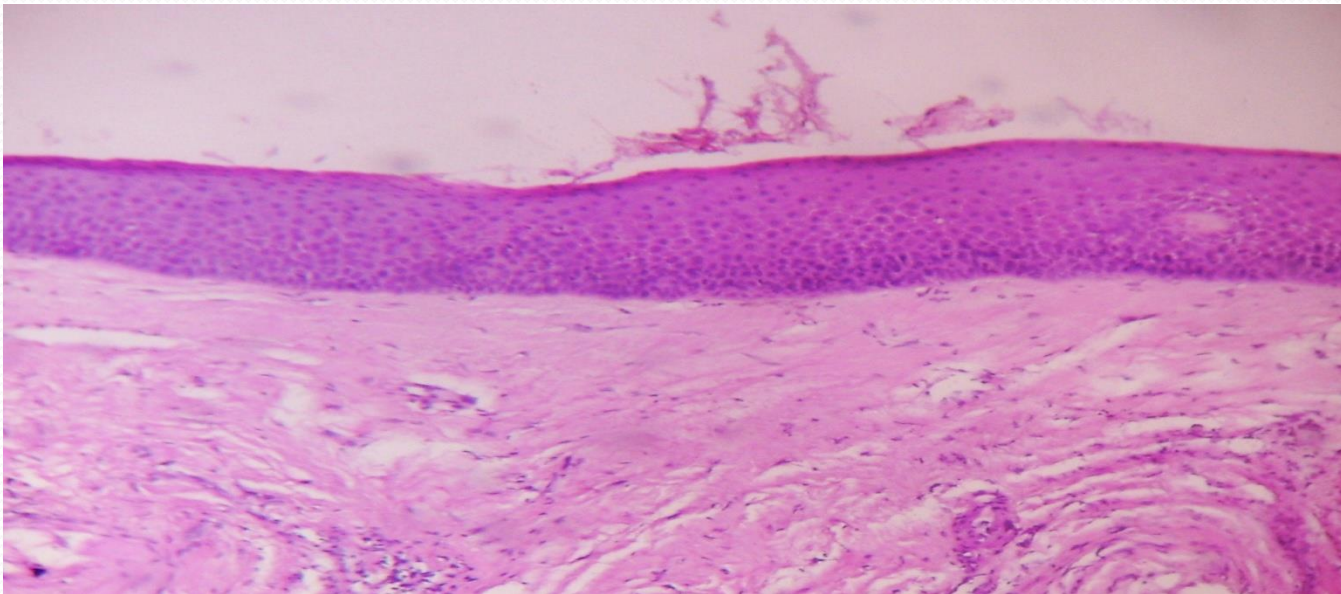


Results



HISTOPATHOLOGY

Photomicrograph shows an atrophic stratified squamous surface epithelium associated with a fibrous connective tissue. The connective tissue exhibits dense collagen bundles, few blood vessels and foci of inflammatory cells.(H & E, 40X)



INFERENCE

A total of 50 patients of age 20 years to 50 years

Mean age - 32 years

Mean maximum mouth opening

preoperatively - 12.3 mm.

postoperatively - 38.0mm.

Mean mouth opening after 5 years follow up - 39.6mm



DISCUSSION



The advantages of using coronoidectomy are as follows:

- There are no adverse effects in removing the bilateral coronoids.
- No morbidities which is associated with coronoidectomy.
- No problems associated with post operative healing.
- Simple and easy procedure to perform. Therefore, it can be advocated after bilateral fibrotic band release, along with coronoidectomy.

RECENT ADVANCES

Physiotherapeutic treatment improves oral opening in oral submucous fibrosis

Stephen Cox, Hans Zoellner

The Cellular and Molecular Pathology Research Unit, Oral Pathology and Oral Medicine, The Faculty of Dentistry, The University of Sydney, Westmead Centre for Oral Health, Westmead, NSW, Australia

Diode Lasers for Oral Submucous Fibrosis – An Experimental Study

Dr. Harsha V. Babaji¹, Dr. Anuradha², Dr. Abhishek Nagaraj³,
Dr. Veena G.C⁴

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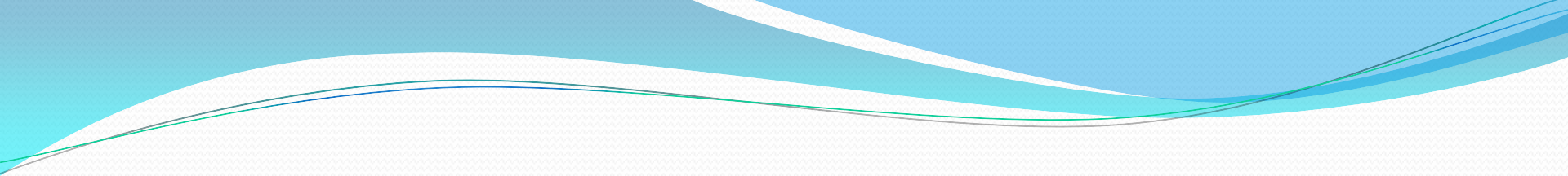
Development of novel alginate lyase cross-linked aggregates for the oral treatment of cystic fibrosis†

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- **THANK YOU!!!!!!**

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