Oral submucous fibrosis is a premalignant condition having higher risk of developing cancer of oral cavity if untreated at early stages, and is characterized by stiffening of oral mucous membrane due to changes in connective tissue fibers of lamina propria involving deeper connective tissue. It results in limited mouth opening which may leads to, chewing swallowing, and speech problem. It occurs due to various reasons like chewing tobacco for a long time specially gutkha (pan masala is commonly known as) which contains areca nut, consumption hot and spicy food regularly and various other factors. OSMF is quite common in Indian subcontinent due to various oral habits like chewing tobacco, chewing pan masala etc. Early diagnosis is very important to prevent the lesion to be malignant.

OSMF varies patient to patient in their signs and symptoms, some patients complain none other than that of restricted mouth opening and without a burning sensation or vesicles formation. However in majority of cases it starts with burning and sensation of oral mucosa, dry mouth, blanching of oral mucosa occurs due to reduced vascularity and increased fibrosis that gives a marble like appearance of oral mucosa. The burning sensation most commonly occurs while taking hot and spicy foods or in some cases the normal food may cause burning mouth sensation. The blanching of oral mucosa occurs due to reduced vascularity and increased fibrosis that gives a marble like appearance of oral mucosa. The spicy food containing capsaicin may be the reason of burning and vesicle formation in a patient of OSMF. Intraoral examination revealed poor oral hygiene, plaque and calculus was present. When he was asked to blow with lips closed he was unable to go inside the oral cavity. There were thick fibrous band around the buccal and labial mucosa of cheek and lips which is preventing mouth opening. The colour of mucosa is pale white. In extreme cases Eustachian tube also involved which leads to hearing loss.

The most common reason for OSMF as reported in literature is chewing of betel quid containing areca nut, the amount of areca nut in betel quid and frequency of duration of chewing betel quid are clearly related to OSMF. However the consumption of pan masala in various forms containing areca nut and other products are seeing very hazardous and cause of concern. It is suggested that the juxtaepithelial inflammatory reaction and fibrosis of oral mucosa, probably due to increased cross linking of collagen through up regulation of lysyl-oxidase activity. This fibrosis which increases collagen production to many fold due to areca nut containing arecoline and decreases the degradation of collagen. Thus OSMF now considered as collagen metabolic disorder.

Intraoral examination revealed poor oral hygiene, plaque and calculus was present. The most significant finding was that there were no mouth opening at all, even a handle of mouth mirror was not going inside the oral cavity. There were thick fibrous band around the buccal and labial mucosa of cheek and lips which is preventing mouth opening. The colour of mucosa is pale white i.e. marble like which is typical in oral submucous fibrosis was present. When he was asked to blow with lips closed he was unable to whistle or blow in advanced cases. They lack the regular elasticity of oral mucosa. Involvement of tongue leads to depapillation as well as fibrosis and blanching around the lateral border of tongue. Hard palate involvement leads to blanching of the mucosa and soft palate including uvula involvement leads to shrunk uvula. In extreme cases Eustachian tube also involved which leads to hearing loss.
unable to do so, hence the usual puffed cheek appearance was not seen, due to fibrosis or loss of normal elasticity of the tissue. Lymphnodes were not palpable. Other physical examinations were normal. Laboratory examinations of CBC were in normal range.

The diagnosis of OSMF at advanced stage was provisionally made based on the presenting signs and symptoms. Most of the time the diagnosis of OSMF were made upon the clinical presentation of burning sensation, difficulty in chewing and difficulty in mouth opening and blanching of oral mucosa.

He was sent for histological examination to confirm the diagnosis. Later on the histological examination confirmed it a case of oral submucous fibrosis.

Treatment modalities: Quitting the habit of taking pan masala and other tobacco related products is most important to further progression of the OSMF.

Intralesional: injection of corticosteroid, placental extract and hyaluronidase is very important in breaking collagen and helps in improvement of the condition.

The combination of local injections including, chymotrypsin, hyaluronidase, and dexamethasone, give better results than with one drug alone or combination of dexamethasone with chymotrypsin or dexamethasone with hyaluronidase alone. Combined therapy with nilydrin hydrochloride (peripheral vasodilator), vit D, E, B –complex, iodine, placental extract, local and systemic corticosteroids and physiotherapy claims a success rate of 62% in OSMF.

Surgical management- surgical management including the forceful mouth opening and surgical removal of fibrotic bands have resulted in more fibrosis and disability. A new surgical technique consisting of excision of surgical band and submucosal placement of fresh human placental grafts, followed by local injection of dexamethasone was recommended for advanced cases.

Table 1: Different treatment regimen in OSMF

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Modalities</th>
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<tbody>
<tr>
<td>Steroids(topical)</td>
<td>To be applied locally at site of lesion</td>
</tr>
<tr>
<td>Steroids(intralesional)</td>
<td>Submucosal injection twice a week in multiple sites for 3 months at the site of lesion.</td>
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<tr>
<td>Combination of chymotrypsin, hyaluronidase and dexamethasone</td>
<td>Chymotrypsin(5000LU) Hyaluronidase(1500LU) Dexamethasone(4mg) Twice weekly submucosal injection for 10 weeks.</td>
</tr>
<tr>
<td>Turmeric</td>
<td>Alcoholic extract of turmeric (3g), turmeric oil (600mg), turmeric oleoresin (6oomg) for 3 months.</td>
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<tr>
<td>Lycopene</td>
<td>8 mg twice a day for 2 months.</td>
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<tr>
<td>Interferon gamma</td>
<td>Intralesional injection of interferon gamma,0.01-10 U/ml thrice a day for 6 months</td>
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Discussion:

Oral submucous fibrosis is a premalignant condition which has potential to turn malignant if the offending factors are not withdrawn. The malignant transformation was first reported by paymaster in one third cases of OSMF cases seen in Tata memorial hospital Bombay. The frequency of cancerous changes is reported to be 3% to 6% in OSMF cases as reported by various authors. In Ernakulum district of Kerala in 10 year follow up period, Gupta et al reported malignant transformation in 2.3% of patient with OSMF. In the same area and familiar method Pindborg et al in a 15 year follow up period reported malignant transformation rate of 4.5%. The most common reason as seen in most of the reported case is chewing of pan masala which contain areca nut as a main component and other tobacco related products. The pan masala is processed with other chemical substances which make its more harmful. It is more common in India and south East Asia. It is more commonly seen in low socioeconom group members. The cause of concern that a great majority of young people are affected due to their habit of chewing areca nut and other harmful substances. Once it is not early diagnosed it may leads to malignant transformation which not only cause disfigurement of facial profile as well as causes heavy financial loss. In countries like India and Indian subcontinent where there is shortage of good cancer centre for treating oral cancer this makes the situation more difficult.

In order to prevent the condition like OSMF a total restriction on the pan masala as well as other related products is needed. The second thing is that in rural areas a dental surgeon is must be appointed for screening and to counseling of patient about the consequences of the OSMF.
REFERENCES