
Aesthetic Management of Grossly Mutilated Anterior Teeth in a patient with Oral Sub mucous Fibrosis

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Abstract:

This case report presents the Endodontic & Post Endodontic management of a patient diagnosed with oral submucous fibrosis (OSMF), and with a reduced mouth opening of 18 mm. The patient presented with grossly mutilated upper anteriors. Endodontic Treatment was initiated followed by cast post & core fabrication and restored with crown. The article discusses in brief the Etio-pathogenesis of OSMF with endodontic & post endodontic management of such patients.

Keywords: Betel nut chewing, oral submucous fibrosis, Post Endodontic management

I. Introduction

Oral sub-mucous fibrosis (OSMF) is a pre-neoplastic condition of the oral cavity that causes significant loss of mouth function, because of reduced mouth opening.¹ The condition is characterized by burning sensation to spicy foods, and progressive trismus with/without difficulty in protrusion of tongue.² Patients with OSMF often present with compromised oral hygiene.

Due to reduced mouth opening, it is very difficult for a clinician to perform dental procedures. The condition can get even worse in Endodontic & Post endodontic treatment of such patients. Hence it is difficult to manage anterior teeth and is extremely difficult to manage posterior teeth in OSMF patients with compromised mouth opening.

The following case report describes Endodontic & Post Endodontic management of grossly mutilated anterior teeth in patient with OSMF.

II. Case Report

A 42-year-old man came to our department and presented with disfigured upper front teeth and he wanted the replacement of those teeth. On elaborating the history, he had this complaint for past 3 years & that was progressive in nature. He also added that he had the habit of areca nut chewing for 15 years and he completely stopped that habit 6 months before. On examination, there was a reduction in the mouth opening (inter-incisal opening -18 mm). (Fig 1).

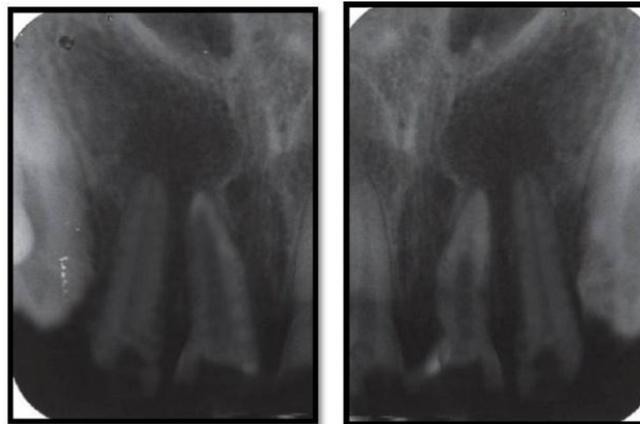


Figure 1

Intra-oral examination revealed blanching of oral mucosa and tongue. Thick fibrous bands were palpable on the buccal mucosa of both sides. Oral hygiene status was poor. All the upper anterior teeth except right canine were grossly mutilated. Right canine was carious with pulpal involvement with sufficient tooth structure. (Fig 2a & 2b).



Figure 2a



11 to 13

21 to 23

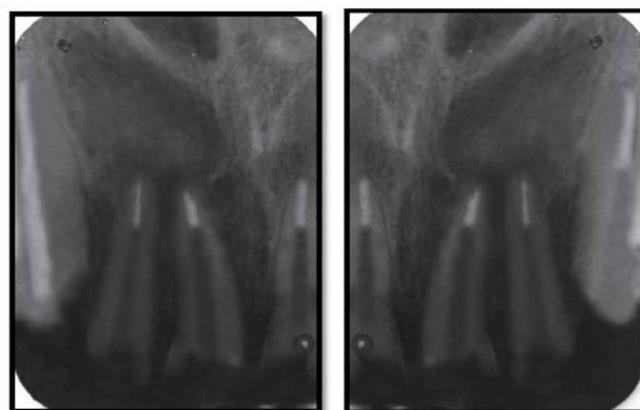
Figure 2b

After extensive clinical and radiographic examination, it was decided to go for Root canal treatment for all the upper anteriors followed by Custom made cast post for 12,11,21,22 and 23 & Root canal treatment and light cure composite core-build up for upper right canine followed by restoration with the crowns.

III. Clinical Procedure

Rubber dam application is not feasible due to extensive caries & reduced mouth opening. Hence Root canal treatment was performed under meticulous cotton roll isolation for all the upper Anteriors.

Floss tied Hand Files were bent for accessibility during Biomechanical preparation. Normal saline and chlorhexidine (but not Sodium Hypochlorite) was used as irrigants. Sectional Obturation was done with Gutta Percha and Zinc Oxide Eugenol Sealer (Fig 3).



11 to 13

21 to 23

Figure 3

Direct cast post wax pattern was taken in the tooth no. 12, 11, 21, 22. Cast post was fabricated and luted with Zinc Phosphate cement. Since there is severe restriction in mouth opening indirect cast post wax pattern was taken in 23.

Intracanal impression was taken in 23 with rubber base impression material (Aquasil, Dentsply) in anterior sectional dual tray and cast was poured. (Fig 4).

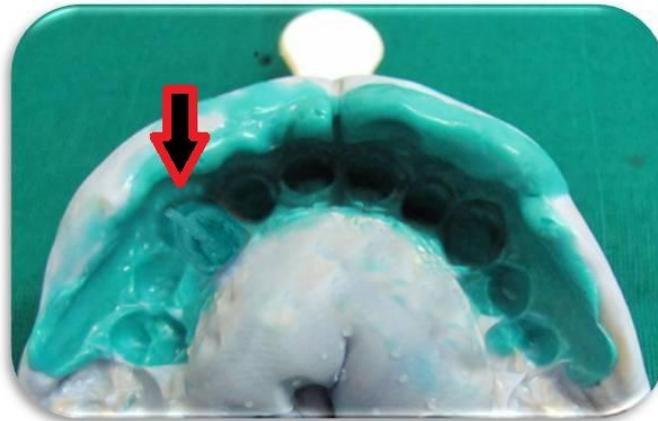
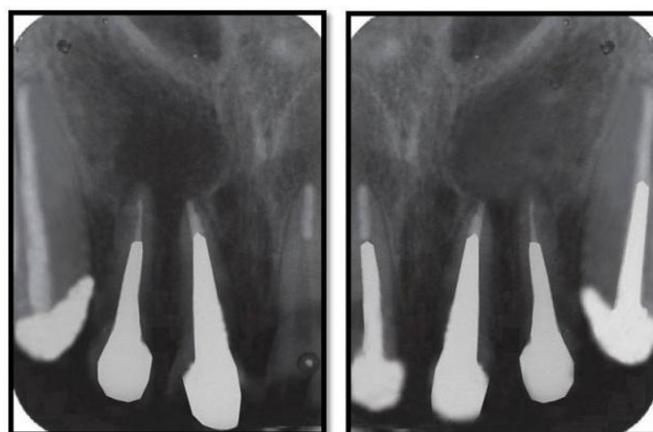


Figure 4

Wax pattern was fabricated in the cast and then cast post was fabricated and luted in 23. Light cure composite (Tetric-N-Ceram) core buildup was done for upper right canine. One week later cast metal posts were tried-in and inserted. (Fig 5a & 5b)



Figure 5a



11 to 13

21 to 23

Figure 5b

Then all the teeth were restored with full crown. (Fig 6) Occlusal interference was checked & patient was kept under periodic recall.



Figure 6

IV. Results

After 6 months recall, clinically gingival tissues were healthy & appeared highly esthetic. Pre-operative & 6 months Post operative picture of this case is shown. (Fig 7)



Figure 7

V. Discussion

Oral submucous fibrosis was first described by Schwartz as “atrophiaidiopathica (tropica) mucosae oris”.³ Joshi in 1953 termed it as oral submucous fibrosis (OSMF). It is generally characterized by hyalinization of connective tissue fibres of lamina propria due to up-regulation of lysyl oxidase activity. In subsequent stages, there is formation of thick fibrous bands leading to progressive reduction in mouth opening.⁴ Due to reduced mouth opening, the patients of OSMF often face the detrimental effects of poor oral hygiene.

Since patient needed immediate esthetic correction, Esthetic management was started with restricted mouth opening of 18 mm. Treatment for mouth opening also carried out simultaneously in the Department of Oral Medicine & Radiology.

In the present case, it was very difficult to perform endodontic therapy. Rubber dam placement was also not feasible. Root canal treatment, Post space preparation & direct wax pattern fabrication was very difficult. Especially to manage posterior teeth the use of conventional standard sized instrument was not feasible. Hence the stainless steel hand instruments were bent to perform endodontic therapy⁵. The indirect wax pattern technique can be used in such cases for cast post fabrication.

During Root canal treatment, Fresh instruments were used and caution should be taken not to use the same instrument multiple number of times. Minimal filing with gentle force should be given to prevent its fracture. It is mandatory that the K-files, H files & finger plungers should get tied with a dental floss to prevent aspiration.

In the Present case, since it was anterior teeth the reduced inter-incisal opening was manageable with conventional instruments to perform endodontic therapy. Direct wax pattern fabrication was somehow managed in all the incisors. Due to restricted mouth opening as proceeding posteriorly, it was impossible to manage canine with direct wax pattern. Hence indirect wax pattern technique was used to fabricate cast post in 23.

VI. Conclusion

OSMF patients are a great challenge for Endodontic & Post endodontic therapy. It also has a strong correlation with euplastic transformation. The patients of OSMF should be strictly advised to stop all oral tobacco/betel nut chewing habits and should be kept on a periodic follow-up.

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