



Unique Journal of Medical and Dental Sciences

Available online: www.ujconline.net

Case Report

MANAGING DENTAL FLUOROSIS – CASE REPORTS

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Received: 16-08-2013; Revised: 14-09-2013; Accepted: 19-10-2013

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ABSTRACT

Dental fluorosis is a disturbance affecting the enamel formation related to excessive ingestion of fluoride during the time of enamel mineralization. Fluorotic enamel is hypomineralized and porous and, following eruption extensive mechanical breakdown of the surface enamel and secondary staining of the underlying hard tissues will occur in a severely affected dentition. Therefore, severe form of fluorosis not only disturbs enamel significantly, but also affects esthetics quite adversely and can cause physiological distress to the affected person.

Dental fluorosis can be managed by bleaching, veneers and even full coverage restorations like metal ceramic or all-ceramic restorations.

This article presents two case reports managed by bleaching and porcelain veneers.

Keywords: Bleaching, Dental Fluorosis, Porcelain Veneers.

INTRODUCTION

There has been an increase in the ability of the patients to understand dental problems and their solutions through various media particularly through internet; one of the main areas that patients are seeking information is esthetic dentistry. Esthetic dentistry includes many treatment modalities to change the appearance of the teeth. These treatments range from the routine placement of composite resin restorations, porcelain veneers, tooth whitening, all-ceramic full and partial coverage restorations, porcelain-metal restorations, implants etc.

This article presents two case reports of dental fluorosis managed by Bleaching and indirect porcelain veneers.

CASE REPORT 1

A 23 year old man was referred to the department of conservative dentistry for management of front teeth discoloration (fig.1). The patient was examined and diagnosed as mild dental fluorosis. Treatment plan was decided to do at-home bleaching (tray technique) with 15% carbamide peroxide. Impressions were taken for the patient and tray was fabricated in the laboratory. The patient was instructed to wear initially for 2 hours per day for one week, increased to 4 hours per day the next week, 6 hours per day for the next week. The patient was instructed to come for review every week. After 4

weeks the discoloration was reduced drastically. The patient was instructed to report immediately if any sensitivity occurs. The patient was very happy with the results. If any sensitivity had been reported, it could have been managed by any of the desensitizing tooth pastes.

Vital tooth bleaching has become a well accepted and successful procedure in dental practices. Professionally dispensed bleaching peroxides have demonstrated safety and effectiveness of teeth whitening products¹⁻⁴.



Figure 1



Figure 2

CASE REPORT 2

A 20 year old man came to the department, with generalized brownish discoloration involving all the teeth. It was diagnosed as severe dental fluorosis (Fig. 3). Since the condition cannot be managed by either bleaching as the severity of discoloration is more^{5,6}, and cannot be managed by direct composite veneers as they discolor and wear over time

and often chips and debonds⁷, it was decided to go for porcelain indirect veneers from canine to canine in both upper and lower quadrants as glazed porcelain retains its color and is wear resistant and biocompatible^{8,9}. In addition, these veneers involve conservative preparations, unlike full crowns¹⁰.



Figure 3



Figure 4



Figure 5

DISCUSSION

Vital tooth bleaching and veneers are two effective treatment modalities that can significantly change the appearance of teeth. Patient satisfaction has been demonstrated after use of both treatment options. Based on the clinical results reported with professional vital tooth bleaching, it is a viable, esthetic treatment for the discolored dentition⁽¹¹⁾. Its conservative nature and little, if any, risks makes it an important part of an esthetic treatment plan.

Porcelain veneer, if properly constructed and placed, has the potential to survive at least as long as any other dental restorations. Karlsson et al⁽¹²⁾ reported satisfactory results with Porcelain veneer restorations regarding surface, color, margin integrity, fracture rate and gingival tissues.

CONCLUSION

In recent years, esthetic dentistry has geometrically expanded in their treatment options. Increased patient demands for esthetics coupled with the desire by the profession for

conservative treatment have fueled this expansion. Because of the documented success, both the options are carried out without any dilemmas.

Although the most successful cosmetic dental treatment is the result of a thorough analysis & accurate interpretation of age, sex & personality we have to remember that there is no “right” or “wrong”. There is only esthetic interpretation in the final analysis and the patient must be satisfied.

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Source of support: Nil, Conflict of interest: None Declared