

## Functional And Esthetic Rehabilitation Of Severely Worn Anterior Dentition Caused By Anterior Interferences

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### Abstract

Anterior interferences seen commonly with retroclined maxillary incisors may lead to severe attrition of the anterior teeth, anterior spacing, gingival recession or intra capsular derangement of the TMJ. These attritioned incisors are usually treated with bite opening followed by veneers and full coverage crowns. However this approach does not pay attention to correcting the inter incisal angle and hence establishing correct incisal guidance which leads to failure of the restoration. This case report documents the orthodontic and restorative treatment of destructive occlusal wear in the anterior region.

### Key words

Anterior Interference, Attritioned Teeth, Inter Incisal Angle

### INTRODUCTION

The term occlusal interference is generally understood to denote an undesirable contact between some aspect of the maxillary and mandibular dentitions, with a consequent disruption of fluid mandibular closure into maximum intercuspation, or unhindered movement of the mandible in protrusive or lateral excursive movements. Anterior interferences have been defined as: An occlusal interference on the anterior teeth, identified during unforced closure of the mandible, sometimes associated with a distalizing effect on condylar position. They are seen more commonly in cases with retroclined maxillary incisors and under torque upper central incisors. These interferences may lead to severe attrition of the anterior teeth, anterior spacing, gingival recession or intra capsular derangement of the TMJ. This case report documents the orthodontic and restorative treatment of destructive occlusal wear in the anterior region.

A 34 year old female presented with presented with a single, irregular, reddish, pedunculated 2x2 cms gingival swelling on lingual side w.r.t 47,48 (Fig.1).

### CASE REPORT:

The patient, a 46 year old male reported with a chief complaint of hypersensitivity and attrition of lower front teeth. Excessive incisal wear was noted on the mandibular central incisors.(fig 1) However, there was virtually no discernible wear on the lateral incisors, and it is quite unlikely that the effects of bruxism would be this localized without some other factor being involved. The type of excessive incisal wear noted in this example is an obvious deleterious effect of an anterior interference. The lower left lateral incisor was non vital. Molar relation was class

I, over jet was 1mm and overbite was 80%. The oral hygiene was acceptable, the probing depths were normal. Cephalometric examination revealed retroclined maxillary incisors and correctly inclined mandibular incisors. Radiological examination presented no other significant finding.



Figure 1: Pre-Treatment photographs of the patient showing retroclined incisors and severe attrition of the mandibular incisors.

### TREATMENT

Treatment plan was presented to the patient. The patient was informed regarding orthodontic bite opening procedure, correcting the axial inclination of teeth and establishing a correct interincisal angle and hence the incisal guidance. The patient understood the plan and gave his consent for the orthodontic treatment and restorative procedures.

Endodontic treatment of 32 was performed. A deprogramming splint was fabricated and adjusted for the patient. Patient was comfortable with it in 1 week. He was recalled every two weeks for 2 months. Slight bite opening was observed. Orthodontic treatment was instituted using 018 slot Roth prescription only in the upper dentition. No orthodontic intervention was done in the lower jaw. Alignment and leveling was done with round and

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later with rectangular 16 x 22 NiTi wires. This resulted in correction of inclination of upper incisors and bite opening. After bite opening with intrusion of maxillary incisors adequate overjet and over bite was achieved with consolidation of the spaces that appeared between the anterior teeth. (Fig 2).

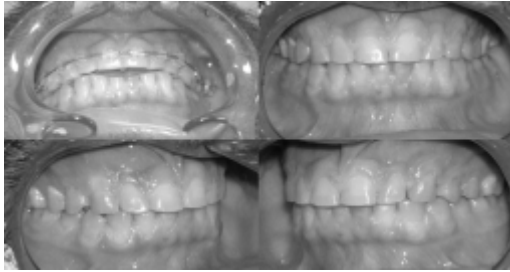


Figure 2. Photograph showing adequate overjet and over bite achieved to allow restoration of the attrited lower incisors. Filtek Z 350 (3m Unitek) was used to restore the lower anteriors.(Fig 2). A Hawley's retainer with anterior bite plane was fabricated and delivered to the patient.

### CONCLUSION

The purpose of this article was to introduce the concept of correction anterior interferences before restoring the worn off dentitions and not just restoring the teeth after raising the bite. It is of paramount importance to understand that correct axial inclination of maxillary and mandibular anteriors and not just bite opening will ensure the longevity of the restorations.

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