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ORTHODONTIC CAMOUFLAGE MANAGEMENT OF A CLASS II MALOCCLUSION WITH IMPACTED CANINE- A CASE REPORT

Davender Kumar, Minakshi Rana, Amit Dahiya*, Rekha Sharma

Department of Orthodontics and Dentofacial Orthopedics Post Graduate Institute of Dental Sciences,
University of Health Sciences, Rohtak, Haryana 124001, India.

Corresponding Author:- **Amit dahiya**
E-mail: amitdahiya0909@gmail.com

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ABSTRACT

In orthodontic practice various treatment modalities have been presented for the treatment for the class II, div 1malocclusions.This case report presents one such case, a 15 years old growing female who has Class II div I malocclusion with sever maxillary incisor proclination, convex profile, low mandibular plane angle, incompetent lips, increased over jet& overbite, impacted lower left canine. We considered the camouflage treatment by extracting the upper left and right first premolar and left impacted canine, following the treatment, a satisfactory result was achieved with an ideal, static and a functional occlusion, facial profile, acceptable smile, competent lip and stable treatment results.

INTRODUCTION

Malocclusion compromises the health of the oral tissues and it can also lead to psychological and social problems [1]. The classical features of the class II, div 1 malocclusion include a mild to severe class II skeletal base with an Angles class- II molar relation and class II canine and incisor relations, proclined maxillary incisors and an increased over jet and it generally has a convex profile with incompetent lips [2]. Patient generally has convex profile & incompetent lip [3, 4]. This case report illustrates an adolescent male patient with angles Class II div 1malocclusion treated with extraction of upper right the first premolar and lower left impacted canine.

Report of the cases

A 15 year old female came to The Department of Orthodontics with the complaint of proclination of upper teeth. The patient had an increased visibility of the upper anterior teeth. The profile of the patient was convex, with a posterior facial divergence. The nasolabial angle was acute, with potentially competent lip. The patient showed a good range of mandibular movements and no TMJ symptoms. Intraoral examination revealed that the patient had a full Class II molar and canine relationship, a excessively proclined maxillary incisors with an overjet of 14mm, over bite of 11mm and associated palatal impingement of the lower incisors. There was a slight upper midline shift to right with spacing in upper incisor. On model analysis tooth width discrepancy was seen in both jaw, 6mm in upper arch and 5 mm in lower arch. The patient was diagnosed as a skeletal and dental class II division 1 malocclusion. Marked reduction of overjet and correction of deep bite is noticed. Treatment goal was set with an objective to improve overall hard tissue and soft tissue profile with improvement of facial aesthetics which included correction of proclined upper incisors, competent lips, flat occlusal plane, correction of midline and functional occlusion with proper intercuspation of teeth with class II molar relation and class I canine relation. The treatment plan included Extraction of the maxillary right first premolar, lower left impacted canine, Alignment and

leveling of the arches, Leveling the curve of Spe, Closing the extraction space by canine retraction followed by incisor retraction, Final consolidation of the space and Settling of the occlusion. Treatment was started with fixed appliance (pre adjusted edge wise 0.022'') in the upper and lower arches. Then anterior retraction was done with 0.019''x 0.025'' stainless steel archwire over 5months. After anterior retraction, class-II elastic was given for 6 months. After 24 months (from the time of placing full appliances) all teeth were aligned, the extraction space was closed and midline discrepancy corrected. After satisfactory inter digitation was achieved, following which the case was debonded and retainer were given.

Fig 1. Extraoral photograph shows pre-treatment resting lip posture (a), lip posture during smile (b), profile (c)

Fig 1- A Fig 1- B Fig 1- C

Fig 2. Intraoral photograph shows pre-treatment frontal view (a), left view (b) right view (c)

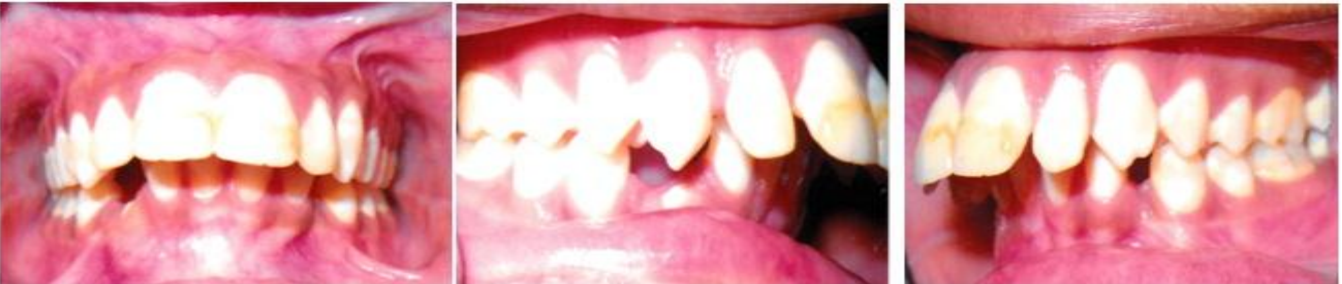
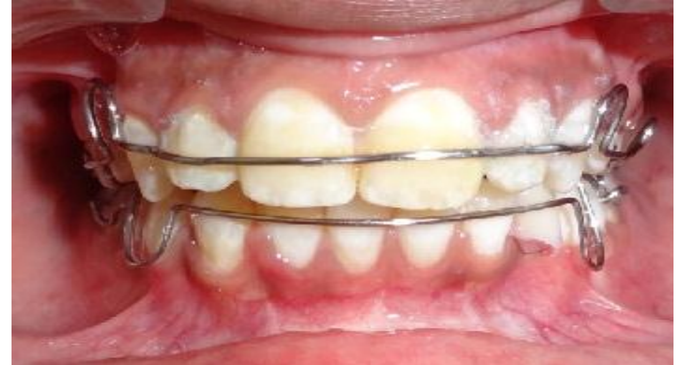


Fig 2- A Fig 2- B Fig 2- C

Fig 3. Post Treatment Photographs-Extra Oral Profiles

Fig 4. After Treatment- With Retainers



DISCUSSION

The goal of dental camouflage is to correct the skeletal relationships by orthodontically repositioning the teeth in the jaws, so that there is an acceptable dental occlusion and an aesthetic facial appearance. Considering the tooth tissue discrepancy to manage such case is an important pre-treatment consideration. The possibilities for the treatment in this patient were to displace the teeth which were relative to their supporting bone and to compensate for the underlying jaw discrepancy.

In this case, a surgical treatment was rejected by the patient and it was decided to hide the skeletal discrepancy by extracting the maxillary premolars, left impacted and deciduous canines, supernumerary tooth and

retracting the anterior teeth to improve the profile of the patient and to obtain a proper functional occlusion. This resulted in dental, skeletal and accompanying soft tissue profile changes. Treatment time was 27 months .Patients had improved smile & Profile. Upper incisors were retracted to achieve normal incisor angulations, overjet& overbite. Lips became competent and lower lip controlled upper incisors successfully, which is very important for incisor stability in class II division 1 malocclusion .The upper and lower dental midlines coincided. After 3 months follow-up, the occlusion was still same.

CONCLUSION

Dental camouflage orthodontic treatment could be a very important alternative method of managing malocclusion rather than through conventional way of approach.

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CONFLICT OF INTEREST:
The authors declare that they have no conflict of interest.

STATEMENT OF HUMAN AND ANIMAL RIGHTS

All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

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