

*The Relationship of Overbite, Cant of
Occlusal Plane and Incisor Inclination
in Normal & Deep bite Malocclusion:
A Cephalometric Study*

A Thesis

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Abstract

The occlusal plane and incisor inclination can affect esthetic and function in addition to their important role in diagnosis and treatment and thus should be given a special interest especially in treatment of deep bite. The aim of the present study is to find any correlation between the overbite and the cant of occlusal plane and incisor inclination and also to investigate the differences in the cant of occlusal plane and incisor inclination between normal and deep bite groups.

The sample consisted of 90 pretreatment lateral cephalometric radiographs of Iraqi adults (18-25) years of age of both sexes (35 males and 55 females) attending Orthodontic Department in College of Dentistry/Baghdad University selected according to certain criteria. The sample was divided into two groups: (13 males and 23 females) with normal overbite, normal overjet and Class I molar relationship and (22 males and 32 females) with deep bite, this group was subdivided into (11 males and 18 females) with class II div 1 malocclusion and (11 males and 14 females) with class II div 2 malocclusion. Two linear and nine angular measurements were recorded and analyzed on computer and the following results were found:

1. Cant of occlusal plane relative to cranial base was unchanged between normal bite group and deep bite groups both class II div 1 and class II div 2.
2. Cant of occlusal plane relative to mandibular plane was increased in class II div 1 malocclusion with deep bite and decreased in class II div 2 malocclusion with deep bite.
3. In class II div 1 malocclusion with deep bite, the axial inclination of maxillary incisors is unchanged relative to both cranial base and

occlusal plane while lower incisors become more proclined and the interincisal angle is decreased.

4. In class II div 2 malocclusion with deep bite both upper and lower incisors are retroclined and the interincisal angle is increased.
5. For class II div 1 malocclusion, the deep bite was negatively correlated with the axial inclination of maxillary incisors and positively correlated with the interincisal angle while for class II div 2 malocclusion, the deep bite was positively correlated with the axial inclination of mandibular incisors.