Thesis Title Skeletal and Soft Tissue Profile Changes after Incisor Retraction in Adult

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ABSTRACT

The purposes of this investigation were to evaluate the skeletal and soft tissue profile changes after incisor retraction in adult, and compare skeletal and soft tissue changes between males and females. In addition, the relationship between skeletodental change and soft tissue profile change and the prediction of these changes was also determined. Studied in forty one samples with class I malocclusion, which was composed of eleven males and thirty females with the average ages of 17.7 years and 16.8 years respectively. All samples were orthodontically treated by staff of the Department of Orthodontics, Faculty of Dentistry, Chiang Mai University and treated by extraction of four first premolars and Edgewise Technique. Linear measurements of hard and soft tissue profile changes were performed from pretreatment and posttreatment lateral cephalograms and analysed. The investigation revealed that

1) There was no change of point A, but there was change of point B at 0.05 significant level.

2) Soft tissue profile was reduced at 0.01 significant level.

3) There was no significant differece in skeletal and soft tissue profile changes between sexes.

4) Significant correlations were found between underlying skeletodental change and soft tissue profile change at 0.01 significant level. The prediction equations were constructed to predict skeletal and soft tissue profile changes as followed

$\Delta A = .359320\ (\Delta UIa) + .183678\ (\Delta UI) - .561220$

$\Delta B = .458056\ (\Delta LIa) + .227110\ (\Delta LI) - .570350$

$\Delta A' = .263583\ (\Delta A) + .476347\ (\Delta UL) - .279009$

$\Delta B' = .406963\ (\Delta B) + .289678\ (\Delta LL) + .252796\ (\Delta LIa) + .116281$

$\Delta UL = .614314\ (\Delta A') + .583937\ (\Delta LL) - .471666\ (\Delta LI) + .250051\ (\Delta UI) + .175263$

$\Delta LL = .547531\ (\Delta UL) + .542925\ (\Delta LI) + .298023\ (\Delta B') - .459592$

Moreover, it was found that anatomic interrelation between soft tissue of lip play an important role in soft tissue profile changes.