Thesis Title	Study of Nasopharyngeal Airway and its Relationship to Craniofacial Structures in Thai
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ABSTRACT

The purposes of this study were 1) to study adenoid and nasopharyngeal growth. 2) to determine the correlation between the nasopharyngeal airway and 35 craniofacial variables. 3) to compare the nasopharyngeal components in adults among different jaw skeletal relationship pattern and normal occlusion groups. Nasopharyngeal airway size and associated variables were assessed in lateral cephalograms of 270 healthy children aged 6.5-16.5 years which were subgrouped by two-year age interval into 5 groups , moreover the same sample were subgrouped by sex into 10 groups following first and second purposes respectively. For the third one, 180 adult lateral cephalograms among different jaw skeletal relationship pattern and normal occlusion groups were subgrouped by sex into 8 groups. All samples were collected from preorthodontic records

of healthy patients without histories of mouthbreathing, adenotonsillectomy, chronic nasorespiratory diseases, abnormal oral habits, orthodontic treatment or evidence of anterior open -bite. The trapezoid analysis according to Handleman and Osborne's method was used for quantification of nasopharynx. It was found that 1) the main growth of nasopharyngeal size was from nasopharyngeal height not from the depth 2) the growth peak of adenoid occurred at 10.5-12.5 age group and the instability of adenoid-nasopharyngeal relationship (AD/NP%) was seen up until 10.5 years, after that the concurrent increase in nasopharyngeal size and adenoid involution led to its declination. 3) with each age group in general, variables located in the nasopharyngeal area were found to have a significant correlation with the airway size ($p<0.01$). 4) some significant moderate-level correlations were found between the airway size and certain craniofacial variables other than nasopharyngeal relation (UAFH, LAFH,SN and GOGN) in some groups ($p<0.01$). 5) the adenoid and AD/NP% did not vary with the type of jaw skeletal relationships. 6)the nasopharyngeal height and sexual dimorphism participated in determining nasopharyngeal size while nasopharyngeal depth and cranial base angle seem to have less influence. 7) Only nasopharyngeal size was partly related to differences in jaw skeletal relationship. The future longitudinal studies are need to clarify the unknown reason underlying the findings here.