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## A cephalometric evaluation of nonextraction cervical headgear treatment in Class II malocclusions

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### ABSTRACT

The effects of orthodontic treatment with the use of the cervical pull facebow headgear in patients with Class II malocclusions were evaluated with special reference to the dentition, the maxillary complex, the mandible, and the facial profile. The records of 85 patients, with a mean age of  $11.3 \pm 1.7$  years, were selected from a sample of 125 patient records requested from the office of John S. Kloehn in Appleton, Wisconsin. Dr. Kloehn has used traditional cervical pull facebow therapy in his practice. Over 100 linear and angular cephalometric measurements were made from the pretreatment and posttreatment records. These measurements were used to evaluate growth and/or treatment changes. The treatment sample was divided by size of the pretreatment FMA, sex, and the age range in which treatment was started, i.e., prepubertal, circumpubertal, and postpubertal. Overall, the results showed that the changes were very close to what would occur as a result of normal growth in Class I individuals. The maxillary permanent first molars continued to progress forward, the maxilla continued to grow forward, and the cranial base showed very little change, if any. The mandibular plane angle did not increase appreciably with treatment, regardless of the size of the pretreatment mandibular plane angle. Very few significant differences were found between sexes, pretreatment age groups, or between groups based on pretreatment Frankfort mandibular plane angle.

G.W. Hubbard based this report on his Master's Thesis at the University of Oklahoma College of Dentistry, Department of Orthodontics

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**KEY WORDS:** Class II division 1 malocclusion, Nonextraction, Kloehn cervical pull, Treatment changes, Facebow headgear.