AAO Foundation Award Final Report

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Secondary Investigators	
Award Type	Biomedical Research
Project Title	Outcome of mandibular distraction in adult orthodontic patients
Project Year	1999
Institution	University of Illinois at Chicago
Summary/Abstract	In our proposed study, we were planning to enroll 16 patients; however, as this study was a prospective randomized clinical trial, we could recruit only ten patients. Those patients were seeking treatment for their mandibular retrognathism, Angle Class II dental malocclusions, and improvement of facial profiles was included. Custom-made distraction devices were customized for each patient according to his/her clinical problem. Patients were tested for inferior alveolar nerve sensation before and after distraction procedure. Data was recorded for each patient, before treatment, immediately after distraction, at completion of orthodontic treatment, and after one year of retention. Results indicated that patients had improvement in facial profile, increased lower arch length, increased mandibular body length, and resolution of their malocclusions. Inferior alveolar nerve sensation showed no change. Study results demonstrated the value of incorporating bone anchors in the design of the tooth-borne distraction devices in cases where significant linear lengthening is indicated. A manuscript is being prepared to be submitted to the American Journal of Orthodontics soon. We will acknowledge the contribution of the AAOF to this study.