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Stability of mandibular incisors following excessive proclination: a study in adults with surgically treated mandibular prognathism

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ABSTRACT

The purpose of this study was to determine if mandibular incisors could be proclined markedly without increasing the potential for relapse of crowding. Patients with surgically treated mandibular prognathism were selected. In 29 patients the mandibular incisors were proclined more than 10 degrees during the presurgical orthodontic phase. The remaining 33 patients had only minimal change in incisor inclination. A long-term follow-up examination was performed 10.0 (SD 2.3) and 11.1 (SD 3.1) years postoperatively in 26 and 24 patients, respectively. Study casts were measured before and after treatment, three years after surgery, and long-term. Cephalograms were evaluated before and after treatment, immediately before and after surgery, and three years after surgery. Prior to therapy the patients treated with presurgical proclination had less dental arch length and more retroclined and crowded mandibular incisors than the patients in the other group. No differences in parameters were observed at later intervals. Dental arch length and intercanine width decreased and incisor irregularity increased in both groups during the follow-up periods. No intergroup differences in changes were observed. Indications for proclination of mandibular incisors are discussed.

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