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Craniomandibular dysfunction following surgical correction of mandibular prognathism

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ABSTRACT

Craniomandibular function was studied in 36 adult patients in whom mandibular prognathism was corrected with a combination of surgical (vertical ramus osteotomy) and orthodontic procedures. Each patient was examined up to 1 week before surgery and again 6 months later. Mandibular mobility, impaired function of the temporomandibular joint, and pain in the masticatory muscles and temporomandibular joint were evaluated. Data were classified according to a numerical scale and patients were divided into three groups: symptom free, mild symptoms and severe symptoms.

Although there was no difference in the overall frequency of the three functional groups during the two phases of examination, 20 patients showed a change in functional status following surgery. Before surgery, decreased mandibular mobility was found in 19 patients; after surgery, four additional patients were included in this group. Temporomandibular joint function improved in 10 patients and three patients had less pain. The frequency of muscle pain did not change. Postoperative maximal interincisal opening was reduced by 5.4 mm ($p < 0.001$) but lateral excursive movements did not change significantly. No significant relationships were found between pre- and postoperative mandibular mobility, temporomandibular joint function and muscle pain. Females experienced mild or severe dysfunction more often than males at both examinations, but the difference was not statistically significant.

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