



Lower face reduction with full-thickness marginal osteotomy of mandibular corpus-angle followed by corticectomy

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Summary *Background:* In Asian countries, many patients with a prominent mandibular angle desire its correction, because they consider it to be an unappealing feature. Reduction mandibuloplasty has been frequently performed through the intraoral approach, but an invisible mandibular angle forces the surgeon to perform blind osteotomy. In addition, the limited mobility of the oscillating saw leads to semi-vertical osteotomy, and leaves unnatural mandibular contours, such as loss of the mandibular angle.

Methods: To overcome the drawbacks of conventional procedures, we performed *en bloc* mandibular corpus-angle osteotomy using a contra-angle handpiece and subsequent corticectomy in 519 patients with prominent mandibular angles. A retractor with an endoscope was supportively used in 190 patients. A pre- and postoperative cephalogram was taken in 86 patients, and the gonial angle (GA) and the mandibular plane angle to the Frankfort horizontal plane (MPA) were measured.

Results: The majority of patients were satisfied with the aesthetic results. GA and MPA were increased by approximately 10°. GA was successfully improved to within the pre-set desired range in 84.5% and 60.0% of the female and male patients, respectively. The overall complication rate was 4.0%; all of these were minor complications, and no major complication such as malfracture or facial nerve injury was seen.

Conclusions: Our new technique allows surgeons to perform accurate, safe and reproducible osteotomies and to reshape prominent angles to more natural-looking ones with smooth osteotomised borders.

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