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## REFERENCES

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## Condylar resorption in orthognathic surgery

To the editor:

It is with great interest that we read the article of Bouwman, Kerstens, and Tuinzing.<sup>1</sup> We fully agree with the authors that the outcome of their study has to be interpreted with care, probably with more care and for reasons other than the authors suggest.

Intermaxillary fixation is not the only variable in the process of condylar resorption in the comparison of two different groups of patients. Because initial temporomandibular joint (TMJ) symptoms, the kind of operation, and the amount of mandibular advancement seem to play an important role apart from gender and age,<sup>2</sup> it would have been correct to specify these variables for the two different groups. There seems to be initial radiographic TMJ evidence in 14 of 32 patients in Bouwman's study. In 24 patients a Le Fort I osteotomy combined with bilateral sagittal split osteotomy was performed, and in 8 patients only a bilateral sagittal split osteotomy was done. Unfortunately, the distribution of these specifics was not distinguished for the two groups. The amount of mandibular advancement is not mentioned at all. There is a possibility that the groups are not matched for these parameters, and therefore the appearance of the reducing effects of rigid internal fixation on the incidence of condylar resorption may be biased. The studies of Scheerlinck et al.<sup>3</sup> and De Clercq et al.<sup>4</sup> reported condylar resorption in patients treated for similar dentofacial disorders without applying intermaxillary fixation. They report 8 and 15 cases, mostly young female patients with mean ages of 20.9 and

21.6 years, respectively. Initial TMJ symptoms are reported in 88% of the Scheerlinck's population and 40% in De Clercq's group. The mean mandibular advancement was 7.9 and 8.3 mm, respectively.

In our opinion condylar resorption should be well defined and differentiated from condylar remodeling and spontaneous condylar atrophy.<sup>2</sup> Furthermore, a good pre-, intra-, and postoperative documentation should be warranted, with standardized cephalograms in centric relation and exact data on the amount of advancement, the amount and direction of rotation, and a uniform score of TMJ symptoms. By doing so, the hypothetical construction (Fig. 2, p. 139) could have become a realistic reconstruction of what unfortunately happens in a specific group of patients susceptible for condylar resorption. Until further investigation is able to identify the cause and pathogenesis of this phenomena, it is still debatable whether or not bilateral sagittal split osteotomies should be performed in young female patients with an Angle Class II dentofacial deformity in conjunction with a high mandibular plane angle, TMJ symptoms, and requiring a large mandibular advancement.

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In reply:

It is very stimulating to know that the phenomena of condylar resorption is subject of investigation in other research groups. Although we are aware of the fact that the amount of advancement of the mandible, age, gender, mandibular plane angle, surgical procedure, and orthodontic treatment history may influ-