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Reply

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Sir

Self-improvement requires continuous challenges and criticism. A letter by Drs. Baccetti and Franchi would perfectly serve this goal if it included a fair criticism. In fact, it consists of a number of inaccuracies.

Drs Baccetti and Franchi claim that our conclusions were based on the effects of appliances with various *modi operandi*, which were grouped together. This claim is not true. In the second paragraph of the Discussion section that we discuss potential predictors identified with the use of similar treatment protocols. For example, we grouped together the results of studies using RME/FM as a part of treatment protocol but we did not group together the protocols using RME/FM with those using chincup. We did tabulate (Table 2) the data from all studies because this is the most informative way of presentation of findings. However, this is not tantamount with 'grouping together' the effects of various appliances.

An analysis of measurement error was judged lower in the study by Baccetti *et al.* (2004) than in the study by Franchi *et al.* (1997) because Baccetti and associates did not assess an agreement in assignment of Cervical Vertebra Maturation (CVM) stages pre- and post-treatment, which is frequently done with kappa statistics.

Drs Baccetti and Franchi also claim that we did not include information about a validation procedure performed by the authors in 2004. However, their statement in the Result section that 'The predictive power of the selected model was tested successfully. . .' (Baccetti et al., 2004) can by no means be sufficient. A validation procedure should be clearly explained in the Material and methods section. The reader must know the sample size, gender distribution, age or maturation stage, results of validation (predicted versus observed results), etc. of the sample used for validation in order to be able to judge the quality of validation. This information was missing in the study by Baccetti et al. (2004). Therefore the validation was considered inadequate.

A problem of skeletal maturation during orthodontic treatment of Class III was raised only by Baccetti et al. (2004). Methodological shortcomings of this study (i.e. a lack of measurement error of assignment of CVM stages, end of observation at relatively early age of 15 years ±1 year 10 months) and reports suggesting poor reproducibility of the CVM method were the reasons why we did not devote attention to skeletal maturation. It does not mean that skeletal maturation does not affect prediction of treatment outcome. It simply implies that we need a high quality research supporting this claim.

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