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Dear Professor Behrents

Kilinc 2023 Comparison of the effectiveness of piezocision and microosteoperforation in leveling mandibular anterior teeth

The authors conclude that 'leveling of mandibular anterior teeth was accelerated by piezocision over 16 weeks, predominantly in the first 12 weeks'. This is based on the piezocision group participants having 1.7mm more change in their incisor irregularity over 12 weeks compared with the control group participants (6.7mm v 5mm). However, the incisor irregularity in the piezocision group was 1.2mm higher than control at baseline (8.2mm v 7.0mm) so it not surprising that they achieved more movement. In fact, there were no statistically (or clinically) significant differences in the incisor irregularity between the piezocision and control groups after one month (mean difference 0.2mm), 2 months (mean difference 0.1mm), 3 months (0.5mm) or 4 months (mean difference 0.4mm). So, the participants in the two groups had the same number of visits, to achieve the same end result, in the same amount of time. One wonders if the participants in the piezocision group would consider the extra time and expense of the additional procedure to be worth it.

Future research in this area needs to follow patients for the whole length of orthodontic treatment and we need to find out from patients what reduction in their overall orthodontic treatment time they would consider to be worth the extra costs of any additional procedures claiming to speed up treatment. I would suggest at least a 4-month or possibly a 6-month reduction.

The investigators chose to use OHIP-14 to assess the impact of treatment; however, OHIP-14 was never developed to assess the impact of treatment on an individual, but rather the impact of oral conditions. If investigators are interested in orthodontic pain and discomfort then there is a validated questionnaire (Iwasaki 2014 <https://doi.org/10.2319/110812-859.1>) or there is a newly developed questionnaire to assess the impact of orthodontic treatment (Benson 2022 <https://doi.org/10.1016/j.ajodo.2022.06.018>).

Yours sincerely

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