

January 2023 Continuing Education

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JANUARY 2023 LEARNING OBJECTIVES:

After completing this course, the participant will have:

1. Knowledge concerning the viability and ease of use for 3-dimensional voxel-based maxillary superimposition technique.
2. Familiarity with the potential exacerbation of alveolar bone dehiscences and fenestrations in adults who have experienced nonextraction aligner therapy.
3. Awareness of the predictability of arch expansion with the Invisalign aligner treatment approach.
4. An appreciation for the published evidence on the efficacy of adjuncts or alternatives to traditional orthodontic retainers.

Article 1: Comparison of two 3-dimensional user-friendly voxel-based maxillary and 2-dimensional superimposition methods, by Shelby Sheeran et al

1. The null hypothesis of this study is that there is no difference between the proposed 3-dimensional maxillary superimposition and the 2-dimensional method recommended by the American Board of Orthodontics (ABO) in evaluating the maxillary dental change that occurred because of growth or treatment.
 1. True
 2. False
2. Researchers examined time 1 to time 2 changes in the maxillary right central incisor inclination and vertical position and the vertical changes in the maxillary right first molar for all 3 superimposition techniques.
 1. True
 2. False
3. The authors reported a clinically significant difference in the vertical change observed in the maxillary central incisor when comparing the two 3-dimensional superimposition techniques with the ABO superimposition technique.
 1. True
 2. False
4. The authors concluded that the 3-dimensional voxel-based maxillary superimpositions showed similar results to conventional ABO-recommended 2-dimensional superimpositions.
 1. True
 2. False

Article 2: Association between nonextraction clear aligner therapy and alveolar bone dehiscences and fenestrations in adults with mild-to-moderate crowding, by Daa Ossama Allahham et al

5. This study aimed to assess the association between nonextraction clear aligner therapy and the presence of alveolar bone dehiscences (ABDs) and fenestrations (ABFs) in adults with moderate-to-severe crowding.
 1. True
 2. False
6. The study's sample comprised 22 adult patients treated with nonextraction clear aligner therapy.
 1. True
 2. False
7. The authors reported an increase in the presence of ABDs and ABFs with clear aligner treatment at most root surfaces.
 1. True
 2. False
8. From a clinical standpoint, the authors recommended that nonextraction clear aligner treatment in adults with crowded dentitions may be performed without worsening preexisting ABDs and ABFs.
 1. True
 2. False

Article 3: The predictability of expansion with Invisalign: A retrospective cohort study, by Richard Tien et al

9. This study aimed to (1) quantify the percentage accuracy of expansion with Invisalign Smart Track material using software caliper measurements and (2) compare caliper data with data obtained using a new method on the basis of the calculation of the centroid.
 1. True
 2. False
10. The study group comprised 775 patients.
 1. True
 2. False
11. The authors reported that the caliper accuracy was the most reliable measurement tool, with centroid-based measurements proving to be highly unreliable.
 1. True
 2. False
12. The authors concluded from their analysis in this study that the absolute recommendations of overcorrection based on expansion inaccuracies must be met with caution.
 1. True
 2. False

Article 4: The effectiveness of adjuncts or alternatives to the use of orthodontic retainers in preserving posttreatment outcomes: A systematic review, by Dalya Al-Moghrabi et al

13. This systematic review aimed to assess the effectiveness of adjuncts or alternatives to using orthodontic retainers in preserving post-treatment outcomes.
 1. True
 2. False
14. The systematic review ultimately used 7 published trials that met the selection criteria.
 1. True
 2. False
15. There is sound evidence supporting circumferential supracrestal fiberotomy to improve stability outcomes.
 1. True
 2. False
16. The authors concluded that adjuncts and alternatives to mechanical retention have promise, but based on the existing evidence, the reliance on mechanical retention cannot be reduced.
 1. True
 2. False