September 2022

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SEPTEMBER 2022 LEARNING OBJECTIVES

After completing this course, the participant will have:

1. An appreciation for the size, shape, and surrounding bone characteristics of lateral incisors and canines observed in patients with displaced maxillary canines.
2. Knowledge concerning the effects of treating adult orthodontic patients planned for premolar extractions with a nonextraction approach.
3. Awareness of the long-term stability of first and second premolar extraction space closure.
4. An understanding of the effect of different enamel pretreating agents on the bonding of orthodontic brackets.

Article 1: Evaluation of maxillary canine root and maxillary bone thickness and density in patients with displaced maxillary canines: A cone-beam tomography study, by Akram Al-Tawachi et al

1. This study investigated lateral incisor and canine morphology and dimensions, bone density, and volume in subjects with displaced maxillary and mandibular canines.
   1. True
   2. False

2. The volumetric accuracy of the cone-beam computed tomography scanner was evaluated by measuring the volume of 2 teeth planned for extraction from cone-beam computed tomography using Invivo software, and later after extraction, the true volume was evaluated by using the Archimedes principle for immersed objects.
   1. True
   2. False

3. The authors reported alveolar bone height differed among all groups, whereas alveolar bone width was similar among the 3 groups.
   1. True
   2. False

4. The authors concluded that the roots of the adjacent lateral incisors were of appropriate length in the palatally displaced canine group.
   1. True
   2. False

Article 2: Dental, skeletal, and soft-tissue changes in adult orthodontic patients treated with premolar extraction and nonextraction: A cross-sectional study, by Muhammad Maaz et al

5. This study evaluated the dental, skeletal, and soft-tissue changes in patients treated by premolar extraction and nonextraction.
   1. True
   2. False

6. The sample comprised 15 premolar extraction patients and 15 nonextraction patients.
   1. True
   2. False

7. The authors reported that the median American Board of Orthodontics Objective Grading System score for nonextraction patients was 16 and for the premolar extraction patients was 23.
   1. True
   2. False

8. The authors found that treating patients planned for premolar extractions in a nonextraction fashion demonstrated no substantial differences between the 2 approaches.
   1. True
   2. False

Article 3: Stability of first and second premolars extraction space closure, by Guilherme Janson et al

9. The objective of this study was to compare the stability of extraction space closure of the first and second premolars.
   1. True
   2. False

10. The first premolar extraction group 1 was evaluated with a mean long-term posttreatment time of 2.66 years, and the second premolar extraction group 2 was evaluated with a mean long-term posttreatment time of 3.17 years.
    1. True
    2. False

11. The authors reported that considering only the patients that showed completely closed extraction spaces in the final dental models, maxillary extraction space reopening was larger in the first premolar extraction group on long-term posttreatment models.
    1. True
    2. False

12. The authors concluded that first and second premolar extraction space closures present similar stability.
    1. True
    2. False

Article 4: Effect of different enamel pretreating agents on bonding efficacy and survival rates of orthodontic brackets: In vitro study and split-mouth randomized clinical trial, by Andrea Scribante et al

13. This double invitro study and randomized clinical trial aimed to investigate the bonding failure rates of orthodontic brackets after enamel pretreatment with agents showing different particle sizes.
    1. True
    2. False

14. For the randomized clinical trial, 20 quadrants were allocated to enamel pretreatment with erythritol, and 20 quadrants were allocated to enamel pretreatment with sodium bicarbonate.
    1. True
    2. False

15. The authors reported that the in vitro investigation demonstrated the highest shear bond strength values were found in group 4 (sodium bicarbonate).
    1. True
    2. False

16. The authors concluded that before orthodontic bracket bonding, enamel pretreatment with erythritol could represent a valid approach, considering the high in vitro values of shear bond strength and, clinically, a low bracket failure rate.
    1. True
    2. False