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DECEMBER 2019 LEARNING OBJECTIVES:

After completing this course, the participant will have:

1. An understanding of the differences in duration of wear between maxillary Hawley versus vacuum-formed retainers.
2. Knowledge concerning the effect of bone-anchored maxillary protraction as compared with reverse-pull headgear treatment on craniofacial sutures.
3. An appreciation for the influence of labiolingual tooth dimensions on the interarch relationship of the anterior dentition.
4. An awareness of the factors that may predictably forecast the duration of treatment for forced eruption of maxillary impacted and labially displaced canines.

Article 1: Objective evaluation of compliance after orthodontic treatment using Hawley or vacuum-formed retainers: A 2-center randomized controlled trial over a 3-month period, by Georgia Vagdouti et al

1. The aim of this 2-arm parallel trial was to assess patient compliance objectively with Hawley or vacuum-formed retainers in the maxillary arch in a 3-month period after orthodontic treatment through the use of the thermosensitive microsensor TheraMon.
 1. True
 2. False
2. The TheraMon microsensor was embedded in acrylic resin and incorporated in both types of the study's appliances with a location in the right posterior palatal region.
 1. True
 2. False
3. The authors reported that the objectively assessed median daily wear time for the Hawley retainer in 3 months' retention was 15.3 hours, whereas that for the vacuum-formed appliance was 18.3 hours.
 1. True
 2. False
4. One of the authors' conclusions was that private practice settings promote better compliance with wear duration of the retainers than university settings.
 1. True
 2. False

Article 2: Deformation of zygomaticomaxillary and nasofrontal sutures during bone-anchored maxillary protraction and reverse-pull headgear treatments: An ex vivo study, by Ayman Al Dayeh et al

5. The aim of this study was to assess and compare the differences in growth observed at a circumaxillary suture (zygomaticomaxillary suture) and a facial suture (nasofrontal suture) during bone-anchored maxillary protraction (BAMP) and reverse-pull headgear (RPHG) treatments.
 1. True
 2. False
6. This was an in vivo study on 15 pigs in their late mixed and early permanent dentition development.
 1. True
 2. False
7. The authors reported that in unilateral experiments, both BAMP and RPHG resulted in tension on the ipsilateral zygomaticomaxillary suture and nasofrontal suture and compression on the contralateral side, with higher magnitude in the BAMP group.
 1. True
 2. False
8. The authors concluded that BAMP produces a more anterior translation of the midface, whereas RPHG results in upward and backward rotation of the midface (counterclockwise in right-facing orientation).
 1. True
 2. False

Article 3: The influence of labiolingual and mesiodistal anterior tooth dimensions on interarch relationships: A modified anterior Bolton analysis, by Yelena Akselrod Beygelman et al

9. The primary purpose of this study was to use 3D modeling to develop and assess a tooth size analysis that encompasses labiolingual thickness as well as mesiodistal widths of anterior teeth.
 1. True
 2. False
10. The study used as the most functional definition of maxillary incisor thickness the distance from the incisal edge to the lingual surface of the tooth at point of contact with the mandibular incisor.
 1. True
 2. False
11. The authors reported that when considering the effect on occlusion and interarch tooth ratios, larger teeth appear to be slightly more affected by variation in anterior tooth thickness than smaller teeth.
 1. True
 2. False

12. The authors concluded that tooth thickness has little effect on interarch tooth width ratios and anterior occlusion.
1. True
 2. False

Article 4: Factors affecting forced eruption duration of impacted and labially displaced canines, by Hyeonseo Shin et al

13. The purpose of this study was to identify factors that can affect the duration of forced eruption for impacted maxillary canines.
1. True
 2. False
14. The study's sample comprised 29 unilateral and 2 bilateral maxillary impacted and facially displaced canines.
1. True

2. False

15. The authors reported that more inclined canines with respect to the midsagittal plane required longer treatment durations; an additional 0.3 months may be required if the inclination is increased by 1°.
1. True
 2. False
16. The authors concluded that the inclination of canines toward the midsagittal plane was found to be a reliable predictor of the duration of forced eruption for impacted maxillary canines.
1. True
 2. False