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MAY 2019 LEARNING OBJECTIVES:

After completing this course, the participant will have:

1. An understanding of the effects on the maxillary dentition and alveolar bone from unilateral surgically assisted asymmetric rapid maxillary expansion.
2. An appreciation of change in periodontal health and treatment outcomes for the anterior teeth of middle-aged compared to young adult orthodontic patients.
3. Knowledge concerning the influence that the piezocortication procedure has on the efficiency, safety, and inflammatory process in orthodontic treatment.
4. An awareness of the affect that micro-osteoperforations near the root of a tooth has on the movement of that tooth.

Article 1: Three-dimensional evaluation of surgically assisted asymmetric rapid maxillary expansion, by Gülden Karabiber et al

1. The aim of this retrospective study was to 3-dimensionally evaluate the effects of asymmetric rapid maxillary expansion combined with unilateral osteotomy.
 1. True
 2. False
2. Cone-beam computed tomographic images taken initially and 6 months after expansion were used for the assessment of changes in the study's sample.
 1. True
 2. False
3. The authors reported that the teeth and alveolar segment expanded and tipped more in the osteotomy side.
 1. True
 2. False
4. The authors concluded that the treatment mechanics did not have clinically detrimental effects on the supporting alveolar bone of the maxilla on either side.
 1. True
 2. False

Article 2: Periodontal and root changes after orthodontic treatment in middle-aged adults are similar to those in young adults, by Jihee Han et al

5. The goal of the study was to compare the outcomes and amount of changes in periodontal health of anterior teeth in young versus middle-age adults who were treated to improve anterior alignment and occlusion.
 1. True
 2. False

6. The study used the American Board of Orthodontics discrepancy index (DI) and cast-radiograph evaluation (CRE) measurement instruments and altered their format to evaluate only the anterior teeth.
 1. True
 2. False
7. The authors reported that the mean amount of root resorption after treatment was significantly higher in the middle-age adults than in the young adults.
 1. True
 2. False
8. The authors concluded that although the initial malocclusion and periodontal condition were unfavorable for the middle-age adults, the overall treatment and periodontal outcomes after orthodontic treatment of the anterior teeth were similar to those for young adults.
 1. True
 2. False

Article 3. Piezocortication-assisted orthodontic: Efficiency, safety, and long-term evaluation of the inflammatory process, by Julien Strippoli et al

9. The study's primary objectives were to evaluate the safety of piezocortication and to assess the inflammatory process, periodontal health, and soft tissue healing during the first 6 months in the patient that received piezocortication procedure.
 1. True
 2. False
10. The study's sample comprised a group of 12 orthodontic patients with piezocortication (OT-PC) procedures and a group of 12 conventional orthodontic treatment (COT) patients.
 1. True
 2. False
11. The authors reported minimal effects on periodontal parameters despite the presence of gingival scars.
 1. True
 2. False
12. The authors concluded that orthodontic patients receiving piezocortication procedures experienced a treatment time one-half the duration of the conventional orthodontic treatment patients.
 1. True
 2. False

Article 4: Effects of micro-osteoperforations on tooth movement and bone in the beagle maxilla, by Chris L. Cramer et al

13. The purpose of this study was to determine how micro-osteoperforations (MOPs) affect tooth movements, bone turnover, bone density, and bone volume.
 1. True
 2. False
14. The experimental sample comprised 7 beagle dogs that had MOPs around maxillary second premolars, and 7 beagle dogs without MOPs served as control subjects.
 1. True
 2. False
15. The authors reported that MOPs may produce a slight and temporary increase in tooth movements during the first 2 weeks, but the effects are small, of limited duration, and clinically insignificant.
 1. True
 2. False
16. The authors concluded that MOPs placed 3 mm away from teeth do not increase tooth movements and have limited and transitory effects on bone.
 1. True
 2. False