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Learning Objectives

After completion of this exercise, the participant will be able to:

1. Discuss the use of a Class II corrector as part of esthetic orthodontic treatment.
2. Describe start-to-finish virtual programming for a surgical-orthodontic patient.
3. Employ a screening method for determining the risk of lateral-incisor root resorption.
4. Avoid the risk of decalcification in patients undergoing treatment with clear aligners.

Article 1

O'Keeffe, C. and O'Keeffe, M.E.: *Class II Therapy with a Combination of Customized Lingual Appliances and the Forsus Device* (pp. 464-470)

1. In a study of the Incognito customized lingual system, Grauer and Proffit found the setup to be accurate in determining tooth position and rotation within:
 - a) 1mm and 1°, respectively
 - b) 1mm and 4°, respectively
 - c) 4mm and 1°, respectively
 - d) 4mm and 4°, respectively
2. Advantages of the Forsus Fatigue Resistant Device for Class II correction include all of the following except:
 - a) both unilateral and bilateral uses are possible
 - b) it can be used with either labial or lingual appliances
 - c) no significant patient compliance is required
 - d) all components are nickel-free
3. The authors have found that a labial bonded wire segment for mandibular Forsus anchorage is:

- a) more prone to failure than a canine bracket
 - b) less prone to failure than a canine bracket
 - c) more prone to failure than a canine cast band
 - d) both a and c
4. A controlled trial of the Forsus device showed that:
 - a) the appliance had a restraining effect on sagittal advancement of the maxilla
 - b) effects on the mandible were mainly of a dentoalveolar nature
 - c) excessive mesial movement could be avoided by using full-size finishing archwires
 - d) all of the above

Article 2

Uribe, F.; Chugh, V.K.; Janakiraman, N.; Feldman, J.; Shafer, D.; and Nanda, R.: *Treatment of Severe Facial Asymmetry Using Virtual Three-Dimensional Planning and a "Surgery First" Protocol* (pp. 471-484)

5. Three-dimensional data for the patient was acquired from:
 - a) intraoral scanning of the patient's dentition
 - b) intraoral scanning of the patient's polyvinyl siloxane impressions
 - c) cone-beam scanning of the patient's skull
 - d) both b and c
6. By using chin templates during genioplasty, more accurate results can be expected in:
 - a) the anteroposterior direction
 - b) the superoinferior direction
 - c) the pitch and yaw orientations
 - d) all of the above
7. Using today's virtual-planning tools, predictions

of surgical soft-tissue movements are:

- a) highly accurate for patients with asymmetries
 - b) not very accurate for patients with asymmetries
 - c) highly accurate for virtually all patients
 - d) not very accurate for virtually all patients
8. Oh and colleagues used the “2.5-dimensional virtual model surgery” protocol in a “surgery first” case, including all of the following diagnostic records except:
- a) two-dimensional lateral cephalograms
 - b) 2D posteroanterior cephalograms
 - c) 3D surgical planning
 - d) 3D virtual dental models

Article 3

Schindel, R.H. and Sheinis, M.R.: *Prediction of Maxillary Lateral-Incisor Root Resorption Using Sector Analysis of Potentially Impacted Canines* (pp. 490-493)

9. Eruption of an impacted permanent canine after deciduous extraction becomes less likely with a:
- a) more distal location of the permanent crown
 - b) more mesial location of the permanent crown
 - c) more palatal location of the permanent crown
 - d) more labial location of the permanent crown
10. Sector analysis of an unerupted permanent canine is performed using:
- a) a lateral cephalometric headfilm
 - b) a panoramic radiograph
 - c) cone-beam computed tomography
 - d) any of the above
11. Lindauer and colleagues’ analysis of unerupted canines determined that canines with cusp tips in sectors II through IV were destined to become impacted in as many as:
- a) 15% of cases
 - b) 23.5% of cases
 - c) 38% of cases
 - d) 78% of cases
12. The authors found the likelihood of adjacent lateral-incisor root resorption caused by a potentially impacted canine in sector I or II to be:
- a) extremely small

- b) about 21%
- c) about 50%
- d) about 89%

Article 4

Moshiri, M.; Eckhart, J.E.; McShane, P.; and German, D.S.: *Consequences of Poor Oral Hygiene During Clear Aligner Therapy* (pp. 494-498)

13. Aligners and other tray-like appliances can have deleterious effects on oral hygiene by:
- a) limiting saliva’s cleansing and remineralizing properties
 - b) preventing the cleansing activities of the lips, cheeks, and tongue
 - c) providing reservoirs where liquids can pool around the teeth
 - d) all of the above
14. Unlike most patients with fixed appliances, aligner patients with poor oral hygiene may show significant decalcification:
- a) around bonded attachments
 - b) at the incisal edges
 - c) at the gingival margins
 - d) in interproximal areas
15. The authors recommend that aligner patients with high pretreatment plaque scores should be carefully monitored and:
- a) should receive new aligners every four weeks instead of every two weeks
 - b) could use their aligners as fluoride trays
 - c) should demonstrate compliance with oral-hygiene instructions before receiving multiple sets of aligners
 - d) both b and c
16. A study found that niches and reservoirs on the irregular inside surfaces of aligners:
- a) prevented plaque from forming on the labial surfaces of the teeth
 - b) allowed bacteria and biofilm to remain even when proper oral hygiene was performed
 - c) were more easily cleaned using a “toothpaste slurry” technique
 - d) were more easily cleaned using a one-minute fluoride mouthrinse