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Learning Objectives

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

1. Discuss the multidisciplinary management of multicystic ameloblastomas.
2. Plan open-bite treatment for patients with extensive root resorption.
3. Describe the combination of an elastomeric chain with an open-coil spring for premolar derotation.
4. Use computer-aided design and manufacturing (CAD/CAM) to create esthetic provisional restorations.

Article 1

Duggal, D.; Shafer, D.; Bidra, A.; and Uribe, F.A.: *Interdisciplinary Management of a Large Multicystic Ameloblastoma in the Mandible* (pp. 87-94)

1. An ameloblastoma is a benign neoplasm of the:
 - a) outer ectoderm
 - b) odontogenic epithelium
 - c) dental lamina
 - d) hyperplastic follicle
2. Surgical removal of an ameloblastoma can potentially lead to:
 - a) malocclusion
 - b) bone resorption
 - c) an alveolar ridge discrepancy
 - d) any of the above
3. In the case shown here, immediately after removal of the teeth on the affected side and in close proximity to the tumor:
 - a) the mandible was resected and rebuilt with a reconstruction plate

- b) the mandibular corpus and angle were reconstructed with a bone graft harvested from the iliac crest

- c) dental implants were inserted in the grafted bone to support eventual restoration with a fixed partial arch

- d) all of the above

4. Long-term follow-up of such cases is crucial because:

- a) the malocclusion is likely to relapse

- b) the patient's medical condition may worsen

- c) the tumor can recur several years after it is excised

- d) orthognathic surgery may be required in the future

Article 2

Andrighetto, A.R.: *Multidisciplinary Treatment of an Anterior Open Bite in a Patient with Severe Root Resorption and TMD* (pp. 95-106)

5. Risk factors for significant root resorption after orthodontic treatment include all of the following except:

- a) extended treatment duration

- b) prolonged use of elastics

- c) use of round wires

- d) extractions

6. An open bite in a patient with widespread root resorption can be treated with:

- a) watchful waiting

- b) a combination of orthognathic surgery and orthodontics

- c) esthetic restorations

- d) any of the above

7. To account for extensive root resorption, the rate of tooth movement in this case was:

- a) reduced by 10%
- b) reduced by 50%
- c) reduced by 90%
- d) not changed

8. In a study of clear aligner treatment by Talens-Cogollos and colleagues, unplanned molar intrusion was observed in about:

- a) 75% of cases
- b) 50% of cases
- c) 25% of cases
- d) 10% of cases

Article 3

Palone, M.; Cremonini, F.; Morin, E.; and Lombardo, L.: *Use of Elastomeric Chain and Open-Coil Spring to Correct a Severely Rotated Premolar* (pp. 107-108)

9. Bonding of a severely rotated premolar is often hindered by:

- a) obstruction from adjacent teeth
- b) improper force application
- c) occlusal interference from the opposing arch
- d) placement of auxiliaries

10. Jarosz recently described the combination of elastomeric chains with open-coil springs to:

- a) derotate premolars
- b) recover impacted canines
- c) extrude impacted molars
- d) close premolar spaces

11. In the authors' technique, the elastomeric chain compresses the open-coil spring:

- a) by the width of the rotated premolar
- b) to its original length
- c) to one-third of its original length
- d) to one-eighth of its original length

12. A crimpable stop is added to the mesial end of the spring to:

- a) exert a distal force on the posterior end of the chain

b) prevent unwanted mesial rotation of the adjacent tooth

- c) keep the spring from decompressing
- d) all of the above

Article 4

Kim, J.C.; Alexander, A.; Norton, H.; Arnason, S.; and Ellis, A.: *Three-Dimensionally Printed Monolithic Riding Pontics* (pp. 115-121)

13. Disadvantages of bonding acrylic riding pontics to metal brackets include all of the following except:

- a) weak bond strength between the acrylic tooth and bracket
- b) unsuitability for growing patients
- c) lack of personalization
- d) compromised esthetics

14. To improve visibility and accuracy of the metal brackets in the scans used to design the authors' 3D-printed riding pontics:

- a) the mesiodistal and vertical dimensions can be optimized
- b) the brackets can be coated with enamelite CAD/CAM scanning spray
- c) the brackets can be placed against a red-orange background
- d) both b and c

15. In the authors' digital workflow, the pontics and brackets are digitally positioned in the edentulous sites using:

- a) Windows 3D Builder
- b) OrthoApps 3D
- c) Meshmixer
- d) Appliance Designer

16. The pontics are 3D-printed from Permanent Crown Resin, which has a flexural strength of:

- a) less than 15MPa
- b) 70MPa
- c) 116MPa
- d) 340MPa