

# CONTINUING EDUCATION

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## Learning Objectives

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

1. Contrast the available options for treatment of a patient with moderate to severe lower anterior crowding and a missing lower incisor.
2. Discuss the effects of interproximal reduction on the long-term stability of lower anterior alignment.
3. Distinguish between causes of condylar hyperplasia for treatment-planning purposes.
4. Describe methods of treating an adult open-bite patient with clear aligners.

## Article 1

Antelo, O.; Meira, T.; Miyoshi, C.; Guimarães, L.; and Tanaka, O.: *Correction of Anterior Bolton Discrepancy and Crowding in Patients with Missing Lower Incisors* (pp. 9-15)

1. In a case involving agenesis of one lower central incisor and previous extractions of the upper first premolars, retreatment options for lower anterior crowding are limited because of the:
  - a) facial asymmetry
  - b) lack of anchorage
  - c) anterior tooth-size discrepancy
  - d) tendency to open the bite
2. Extraction of a single lower incisor can achieve good results in situations involving all of the following except:
  - a) a mild to moderate Class III malocclusion
  - b) a severe midline deviation
  - c) an anterior edge-to-edge occlusion or cross-bite with minor lower anterior tooth-size excess
  - d) a minimal open-bite tendency

3. The patient in this article was a good candidate for a single lower incisor extraction because:

- a) he did not have a severe overjet
- b) he did not have a deep overbite
- c) it was possible to correct the crowding and midline without affecting the profile
- d) all of the above

4. The lower premolars are acceptable for moving into the canine positions because they have:

- a) favorable anatomy and suitable mesiodistal dimensions
- b) similar crown and root sizes
- c) a greater degree of proprioception
- d) all of the above

## Article 2

AlShayea, E.; AlMaghlouth, B.; and AlBalkhi, K.: *Periodic Stripping of Lower Anterior Teeth During Retention: A 13-Year Follow-Up* (pp. 22-28)

5. Variables involved in post-retention stability include all of the following except:

- a) changes in archform
- b) continuing growth
- c) length of treatment
- d) periodontal and gingival health

6. During the first year after treatment, the study sample in this article received:

- a) interproximal reduction (IPR) at three-month intervals, with no retainers
- b) IPR after debonding, with lower fixed lingual retainers
- c) IPR at three-month intervals, with lower removable retainers
- d) no IPR, with fixed and removable retainers

7. At 13 years after treatment, the mean Irregularity Index was:

- a) significantly greater in the IPR group
- b) significantly greater in the control group
- c) slightly (but not significantly) greater in the control group
- d) about the same in both groups

8. The authors believed the post-treatment IPR would help to:

- a) equalize the forces exerted by the soft tissues and periodontium on tooth positions
- b) resist labiolingual crown displacement
- c) allow better distribution of occlusal and interdental frictional forces
- d) all of the above

### Article 3

Tripathi, T.; Srivastava, D.; Neha; and Rai, P.: *Differential Diagnosis and Treatment of Condylar Hyperplasia* (pp. 29-38)

9. Facial asymmetry can be classified as any of the following except:

- a) congenital
- b) traumatic
- c) developmental
- d) acquired

10. Important adjuncts for the diagnosis of condylar hyperplasia include:

- a) sequential study models
- b) radiography
- c) nuclear imaging
- d) all of the above

11. True condylar hyperplasia develops between:

- a) birth and puberty
- b) age 18 and 25
- c) puberty and age 18-25
- d) the cessation of growth and age 18-25

12. Condylar hyperplasia can be caused by any of the following except:

- a) excessive growth of the contralateral condyle
- b) trauma followed by excessive proliferation in the repair process
- c) increased functional loading of the TMJ
- d) hypervascularity

### Article 4

Dayan, W.; Aliaga-Del Castillo, A.; and Janson, G.: *Open-Bite Treatment with Aligners and Selective Posterior Intrusion* (pp. 39-52)

13. In an adult open-bite case, treatment mechanics should be based on the:

- a) etiology of the malocclusion
- b) vertical position of the maxillary incisors
- c) availability of posterior anchorage
- d) all of the above

14. In a hyperdivergent patient who has an anterior open bite:

- a) extrusion of anterior teeth must be avoided
- b) intrusion and vertical control of the posterior teeth are crucial
- c) counterclockwise mandibular rotation may improve the malocclusion
- d) all of the above

15. In this case, because a Class III rotation of the mandible produced a tight overjet:

- a) IPR was required in the lower anterior segment during the refinement stage
- b) no refinement stage was needed
- c) the case finished with a slight decoupling between the upper and lower right canines
- d) extrusion of the anterior teeth could not be avoided

16. The use of upper and lower aligners for retention purposes:

- a) ensures long-term stability
- b) is less reliable than skeletal anchorage
- c) provides a long-term posterior intrusive force
- d) avoids the anterior extrusion mechanics