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Learning Objectives

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

1. Contrast the capabilities of lingual appliances with those of other preadjusted systems for controlling tip and torque in complex extraction cases.
2. Describe the use of a miniscrew-assisted rapid palatal expander to correct transverse skeletal deficiency.
3. Compare different indirect bonding tray-sectioning techniques in terms of their effect on clear aligner attachment positioning.
4. Discuss the use of posterior occlusal build-ups to prevent compensatory molar eruption.

Article 1

Albertini, E.; Albertini, P.; Lombardo, L.; and Siciliani, G.: *Tip and Torque Control in Complex Extraction Treatment with Preadjusted Lingual Appliances* (pp. 265-282)

1. In extraction treatment using lingual appliances, anterior retraction may produce a reactive tipping force caused by:
 - a) the use of sliding mechanics
 - b) differences in biomechanical force directions
 - c) complicated bends needed in the mushroom archwires
 - d) exaggerated uprighting of the incisors
2. In each case presented here, the manual setup incorporated:
 - a) tip and torque overcorrections
 - b) compensatory bends in the archwires
 - c) finishing step-in and rotation bends
 - d) root-palatal torquing curves

3. Lingual brackets can be placed close to the gingival margin because:

- a) the composite used for bonding can be thicker
 - b) compensatory bends in the archwire will limit bowing effects
 - c) buccolingual distances do not vary substantially at the gingival margin
 - d) all of the above
4. In lingual treatment of complex extraction cases, space closure should be managed using:
 - a) light forces
 - b) appropriate stainless steel archwires
 - c) compensatory bends and curves
 - d) all of the above

Article 2

Karpov, M.A. and Kuncio, D.A.: *Alternative Treatment Plan for a Multidisciplinary Transfer Case* (pp. 283-293)

5. This patient presented with all of the following except:
 - a) fixed appliances that he had worn for nearly two years
 - b) congenitally missing lower lateral incisors
 - c) an anterior open bite
 - d) maxillary constriction
6. A miniscrew-assisted rapid palatal expander was chosen over a conventional toothborne expander because of the patient's:
 - a) age
 - b) balanced profile
 - c) missing lateral incisors
 - d) constricted airway

7. A maxillary anterior corticotomy with bone grafting was recommended over orthodontic extrusion because:

- a) considerable tooth movement was indicated
- b) there was insufficient space for restorations
- c) the bone grafting could provide more upper lip support and tooth stability
- d) both a and c

8. The archwires used by the authors were:

- a) BioForce PLUS
- b) Damon Copper Ni-Ti
- c) SureSmile custom
- d) TiMolium titanium

Article 3

Chen, Z.; Nicholas, C.L.; Thalji, G.; Viana, G.; and Atsawasuwana, P.: *Evaluation of Composite Attachment Positions Using Four Indirect Bonding Tray-Sectioning Techniques* (pp. 294-304)

9. The indirect bonding template trays used in this study were made from:

- a) DRP resin
- b) Essix A+ material
- c) ProForm retainer material
- d) Invisalign tray material

10. The buccal/lingual discrepancy of aligner attachment positions was statistically affected by:

- a) bonding technique
- b) tray-sectioning method
- c) tooth location
- d) directional bias

11. In terms of mesial/distal discrepancy, all four bonding techniques were:

- a) accurate and equivalent
- b) biased in the distal direction
- c) clinically unacceptable
- d) significantly different

12. The only deviation that approached clinical significance in this study was for:

- a) buccal/lingual discrepancy of the left molars and premolars

- b) mesial/distal directional bias
- c) tip discrepancy of horizontal attachments
- d) tip discrepancy of vertical attachments

Article 4

Lim, S.H. and Park, J.H.: *Occlusal Build-Ups to Prevent Compensatory Mandibular Molar Eruption During Maxillary Molar Intrusion* (pp. 305-306)

13. The maxillary molars may need to be intruded during presurgical orthodontic treatment, especially for:

- a) surgically assisted maxillary expansion
- b) mandibular setback with backward rotation
- c) bilateral sagittal split osteotomy
- d) Le Fort I osteotomy with horizontal advancement

14. The technique described in this article can be applied not only in presurgical orthodontic treatment, but also in treatment of:

- a) anterior open bite
- b) posterior crossbite
- c) Class III malocclusion
- d) maxillary transverse deficiency

15. Composite resin is preferred over band cement for occlusal build-ups to:

- a) avoid occlusal wear
- b) make sequential additions easier
- c) prevent compensatory molar eruption
- d) both a and b

16. If there are restorations on the mandibular molars:

- a) the occlusal build-ups should still perform adequately
- b) the primer should not be applied
- c) the build-ups should be placed on the maxillary molars
- d) this technique should not be used