

CONTINUING EDUCATION

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Learning Objectives

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

1. Describe the history and philosophy of the Damon System.
2. Plan multiple tooth movements using palatal mini-implant anchorage.
3. Discuss orthodontic and periodontal concerns in treating an impacted lower canine.
4. List factors involved in the retention of various thermoformed aligners.

Article 1

Keim, R.G.: *JCO Interviews Dwight Damon, DDS, MSD* (pp. 667-678)

1. Torque is best controlled with the Damon System by:
 - a) filling the archwire slot with large-dimension rectangular archwires
 - b) custom bending edgewise archwires
 - c) using high- or low-torque anterior brackets
 - d) both a and c
2. Torquing couples:
 - a) express torque gradually during archwire progression
 - b) allow as much as 24° of play between archwire and bracket
 - c) require a large-dimension rectangular wire to fill the slot
 - d) produce the equivalent of “round-wire orthodontics”
3. In Dr. Damon’s experience, compared with orthodontic extraction, arch development has a positive impact on:

- a) the midface and facial profile
 - b) the periodontium
 - c) tongue position and airway
 - d) all of the above
4. Dr. Damon attributes the effectiveness of passive self-ligation to:
 - a) the development of flexible bracket clips
 - b) the availability of high-technology archwires
 - c) the smaller slot lumen of passive brackets
 - d) improved torque control from higher friction

Article 2

Nienkemper, M.; Pauls, A.; Ludwig, B.; Wilmes, B.; and Drescher, D.: *Multifunctional Use of Palatal Mini-Implants* (pp. 679-686)

5. Higher survival rates and stability have been associated with miniscrews of:
 - a) 2-2.3mm diameter and 9-11mm length
 - b) 2-2.3mm diameter and 6-8mm length
 - c) 1.8-2mm diameter and 9-11mm length
 - d) 1.8-2mm diameter and 6-8mm length
6. When replacing one palatally anchored appliance with another, the authors recommend:
 - a) stabilizing the mini-implant with a counter clamp to prevent it from loosening
 - b) placing an additional mini-implant
 - c) allowing the mini-implant to restabilize before applying new forces
 - d) joining two mini-implants with a Beneplate
7. The authors efficiently treated a palatal-anchorage case requiring both palatal expansion and molar distalization using:
 - a) combination mechanics with simultaneous tooth movement

b) combination mechanics with sequential tooth movement

c) simple mechanics with sequential tooth movement using different appliances

d) simple mechanics using the same appliance for different types of tooth movement

8. Treatment planning for multiple tooth movements using palatal anchorage should take into account:

a) direct or indirect anchorage requirements

b) the bulkiness of the appliance or appliances

c) the potential for success using simultaneous tooth movement

d) all of the above

Article 3

Wintner, M.S.: *Interdisciplinary Treatment of a Severely Displaced Mandibular Canine: A Long-Term Follow-Up* (pp. 687-692)

9. Exposure of a severely impacted tooth beyond its cemento-enamel junction:

a) is necessary for evaluation of the tooth's proximity to surrounding structures

b) may result in a loss of periodontal attachment

c) may result in a loss of bony support

d) does not affect the tooth significantly

10. Repositioning of the displaced canine was chosen because:

a) the attached gingiva at the site was too thin

b) extraction of the tooth could have risked damaging the lower incisors

c) extraction of the tooth could have caused bony trauma in the region

d) both b and c

11. The treatment plan for this patient required all of the following except:

a) minimization of lower-incisor flaring

b) free gingival grafts to protect the canine

c) immediate extraction of the retained deciduous canine

d) placement of a lower lingual archwire to preserve arch integrity during movement of the impacted tooth

12. Anchorage for initial traction of the exposed canine was supplied by a:

a) buccal miniscrew inserted between the

lower right first and second premolars

b) removable lower plate with an integrated loop bent distal to the canine and extended inferiorly

c) crimped retraction hook on the lower arch-wire mesial to the canine site

d) modified Bull loop bent in the lower arch-wire and extended anteriorly

Article 4

Cowley, D.P.; Mah, J.; and O'Toole, B.: *The Effect of Gingival-Margin Design on the Retention of Thermoformed Aligners* (pp. 697-702)

13. Increased flexibility at the gingival margins of a thermoformed aligner impedes the aligner's ability to produce:

a) torquing movements

b) translative movements

c) controlled tipping

d) all of the above

14. Overall, the most retentive aligner type was fabricated from Invisacryl A with a:

a) scalloped gingival margin and first-premolar attachments

b) straight cut 2mm above the gingival margin and attachments

c) scalloped gingival margin and no first-premolar attachments

d) straight cut 2mm above the gingival margin and no attachments

15. Among the Invisacryl A aligners, the lowest pull-off force was found among aligners with a:

a) scalloped gingival margin and first-premolar attachments

b) straight cut 2mm above the gingival margin and attachments

c) scalloped gingival margin and no first-premolar attachments

d) straight cut 2mm above the gingival margin and no attachments

16. The polymer used to produce the Invisacryl A aligner material is:

a) polypropylene

b) ethylene-vinyl acetate

c) copolyester

d) polyethylene