

# CONTINUING EDUCATION

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## Learning Objectives

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

1. Outline trends in economics and practice administration over the 20 biennial JCO Orthodontic Practice Studies.
2. Contrast a torque-correcting appliance with other methods of resolving improper maxillary molar root angulation.
3. Compare potential extraction patterns for adult patients with ectopically impacted maxillary canines.
4. Discuss the possibility of bone formation during orthodontic retreatment of patients with gingival recession.

## Article 1

Keim, R.G.; Vogels, D.S. III; and Vogels, P.B.: *2019 JCO Orthodontic Practice Study* (pp. 569-587)

1. In this survey, the median number of active cases was:
  - a) the highest recorded in any JCO Study
  - b) lower than in the 2017 Study
  - c) nearly 4% higher than in the 2017 Study
  - d) both a and c
2. The differential between child and adult case fees was about:
  - a) 0%
  - b) 6%
  - c) 10%
  - d) 16%
3. Among the expanded services, respondents considered the most effective practice-building method to be:

- a) expand practice hours
  - b) open a satellite office
  - c) treat adult patients
  - d) cosmetic/laser treatment
4. Respondents considered the most effective practice-building category to be:
    - a) internal referrals
    - b) new-patient incentives
    - c) external referrals
    - d) paid advertising

## Article 2

Yoon, A.; Noh, M.K.; Moon, H.W.; Chung, K.R.; and Kim, S.H.: *Correcting Maxillary Molar Root Angulation with the Biocreative System* (pp. 588-601)

5. The Biocreative torque-correcting appliance (C-TCA) is a multiloop cantilever fabricated from:
  - a) 8mm temporary anchorage devices
  - b) .036" round stainless steel wire
  - c) .017" x .025" stainless steel wire
  - d) elastic power thread
6. The primary effect of the C-TCA on the target molar is:
  - a) palatal crown intrusion
  - b) buccal crown intrusion
  - c) palatal crown extrusion
  - d) buccal crown extrusion
7. If an upper molar exhibits severe crown-buccal angulation:
  - a) any buccal root torque will be impossible to achieve without unwanted side effects
  - b) the palatal cusps will become excessively prominent

- c) the heavy balancing side contacts may interfere with chewing
  - d) both b and c
8. The C-TCA can achieve buccal root torque without the need for accessories because:
- a) it produces symmetrical buccal crown moments on the molars
  - b) it exerts an extrusive force on the target molar's buccal cusp
  - c) the force vector passes through the center of resistance of the molars
  - d) all of the above

**Article 3**

Al Shhab, M.K.; Mansour, E.E.; El-Beialy, A.R.; and Mostafa, Y.A.: *Unusual Extraction Combinations in Patients with Impacted Maxillary Canines* (pp. 603-610)

9. The proportion of upper canine impactions occurring on the palatal side is:
- a) 85%
  - b) 45%
  - c) 15%
  - d) 1.7%
10. Surgical removal of an impacted upper canine should be considered if the impacted tooth:
- a) is ankylosed
  - b) shows internal or external root resorption
  - c) would impede orthodontic tooth movement
  - d) any of the above
11. If an impacted canine must be extracted, viable alternatives for substitution include all of the following except:
- a) prosthetic replacement
  - b) autotransplantation
  - c) the adjacent lateral incisor
  - d) the adjacent premolar

12. Space closure after extraction of first permanent molars is best achieved in:
- a) young children
  - b) children and young adults
  - c) mature adults
  - d) elderly patients

**Article 4**

Lenza, E.B.; Lenza, M.A.; and Janson, G.: *Bone Formation and Gingival Improvement After Correction of Orthodontic Relapse* (pp. 615-619)

13. Accidental debonding and consequent activation of a bonded lingual retainer can cause any of the following effects except:
- a) tooth inclination
  - b) root or crown torque
  - c) abscess
  - d) gingival recession
14. In the case shown here, after orthodontic re-treatment, the periodontist decided to perform:
- a) a frenectomy
  - b) a gingival graft
  - c) a root canal
  - d) ultrasonic scaling
15. Improper tooth positioning within the alveolar bone has been shown to lead to:
- a) dehiscence
  - b) abscess
  - c) gingival recession
  - d) both a and c
16. Orthodontic correction of this patient's relapsed buccal root torque promoted:
- a) arch expansion
  - b) buccal bone regeneration
  - c) palatal bone regeneration
  - d) all of the above