



February 2024

CE Editor: Dr Allen H. Moffitt

Instructions: This monthly CE Exam is combined with the online AJODO Clinical Companion (AJO-DO CC) CE Exam. Therefore, you must access the AJO-DO CC online journal for review of the 2 selected articles to be examined. Go to [www.ajodo-clinicalcompanion.com](http://www.ajodo-clinicalcompanion.com) and log in as a subscriber to the AJO-DO or subscribe to the AJODO CC if need be.

The articles to be examined from this monthly issue of the AJO-DO are noted in the "Contents" Section with this logo . Each of the 4 selected articles for examination have the  noted in their headline. Please review each article in preparation for the online test.

To complete the CE Exam and earn 4 hours of CE credit, go to [www.aoinfo.org](http://www.aoinfo.org) and log in as a member. Select the Education tab, then AJO-DO Tests. Purchase the current test, or the test for any issue published in the preceding 12 months. The fee for each test is \$20. You

will take the test online but can download and print a PDF version for review. Results are tabulated immediately. To earn 4 hours of CE credit, you must answer 75% of the T-F Statements correctly (18 of 24 correct answers). If you do not receive a passing score the first time, you can take the test again, free of charge, until you pass. Upon successful completion of the test, your CE credits will be added to the AAO's online CE Credit Manager, and you can use the CE Credit Manager to print a certificate.

If you are participating in the American Board of Orthodontics' (ABO) Certification Renewal program, your renewal fee to the ABO covers the cost for the required 4 CE Exams. Please go to "Renew Certification" on the ABO's web site ([www.americanboardortho.com](http://www.americanboardortho.com)). Open the section "AJO-DO Continuing Education Access Details" and follow the precise instructions for completing the required CE Exams.

### FEBRUARY 2024 LEARNING OBJECTIVES

After completing this course, the participant will have:

1. An appreciation for the skeletal and dental changes that may be observed when comparing the treatment of patients with Class II malocclusion by using either a Herbst appliance or an aligner with a mandibular advancement appliance.
2. A review of jaw bone-related pathologies that an orthodontist may observe in patients, which should be addressed by the clinician.
3. An awareness of the ability of a complex of tannic acid and cetylpyridinium chloride to effectively cleanse aligners.
4. Familiarity with the longitudinal changes that may be observed for the craniofacial and dentoalveolar regions during the third and fourth decades of life.

**Article 1: A comparison of skeletal and dental changes in patients with a Class II relationship treated with clear aligner mandibular advancement and Herbst appliance followed by comprehensive orthodontic treatment, by Hamid Reza Hosseini et al**

1. This study aimed to compare the skeletal and dental changes in patients with Class II malocclusion treated with Invisalign and mandibular advancement (MA) and fixed Herbst appliances.
  1. True
  2. False
2. Using the defined eligibility criteria for this study, 20 patients with MA and 20 with Herbst were matched in skeletal maturation, and craniofacial morphology comprised the final sample.
  1. True
  2. False

3. The authors reported that the MA group had greater mandibular incisor proclination in the pretreatment comparison during the advancement phase; the mandibular incisors were retroclined and further uprighted during the second phase of treatment.
  1. True
  2. False
4. The authors concluded that the Herbst appliance was more effective than the MA appliance in correcting the Class II malocclusion.
  1. True
  2. False

**Article 2: A review of oral pathology in orthodontics. Part 2: Pathology of the jaw bones, by Paul Hankinson et al**

5. Periapical granuloma is one of the most uncommon oral pathologies that a clinician may encounter.
  1. True
  2. False
6. Dentigerous cysts are the most common developmental cysts of the jaws in all age groups.
  1. True
  2. False
7. Ameloblastoma is the most common odontogenic tumor in adults and the second most common in children.
  1. True
  2. False

8. With respect to the staging of orthodontic treatment in relation to the enucleation of bony cysts, the authors advised the assessment for bony infill both clinically and radiographically before tooth movement.
1. True
  2. False

Article 3: The complex of tannic acid and cetylpyridinium chloride: An antibacterial and stain-removal cleaner for aligners, by Xiao Cen et al

9. The study incorporated tannic acid (TA) with cetylpyridinium chloride (CPC) to develop a new cleansing solution and investigated its antibacterial activity; ability of bacteria and stain removal; and effects on morphology, and mechanical property of thermoplastic material used for orthodontic aligners.
1. True
  2. False
10. The properties of synthesized TA and CPC (TA-CPC) were compared with the antibacterial properties of a commercial denture cleaning tablet and water.
1. True
  2. False
11. The authors reported that the TA-CPC solution showed unacceptable antibacterial activity and poor ability for bacteria and stain removal.
1. True
  2. False

12. The authors stated that the study's results suggested a promising approach on the basis of TA-CPC in disinfecting and stain-removal application for thermoplastic clear aligners.
1. True
  2. False

Article 4: Longitudinal changes of the natural craniofacial and dentoalveolar complex in the fourth decade of life, by Abdelrahman Sawafta et al

13. This study aimed to longitudinally examine the changes in craniofacial and dentoalveolar regions during the third and fourth decades of life.
1. True
  2. False
14. Dental scans were analyzed from 1985-1989, 1998-2000, and 2016-2017 records.
1. True
  2. False
15. The authors reported that all facial height measurements were found to be higher in males than in females.
1. True
  2. False
16. The authors concluded that the observed changes that occurred throughout this study indicated that the maturation and aging process is ongoing.
1. True
  2. False



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CE credit tests are available to AAO members for 1 year from the published article date.

### FEBRUARY 2024 LEARNING OBJECTIVES

5. An understanding of the treatment approach for a severe overjet Class II malocclusion with maxillary second molar extractions and bone screws for anchorage.
6. Knowledge concerning the use of camouflage orthodontic treatment for an adult skeletal Class III malocclusion patient and the 6-year follow-up outcome.

**Article 5: Class II malocclusion with severe overjet treated with maxillary second molar extractions and bone screws** by Chris H. Chang et al.

17. The authors presented a 15-year-old male patient with a full-cusp Class II molar relationship and severe overjet, yet the underlying skeletal relationship was Class I.
  1. True
  2. False
18. After 8 months of treatment, occlusal bite blocks were bonded on the maxillary first molars.
  1. True
  2. False

19. The difficult Class II malocclusion was corrected with uncommon maxillary second molar extractions and the use of orthodontic bone screws placed bilaterally in the infrazygomatic crests.

1. True
2. False

20. The maxillary left third molar had a retarded eruption, and partial appliances with surgical exposure of the third molar were used to move the tooth into occlusion.

1. True
2. False

**Article 6: Adult skeletal Class III correction with camouflage orthodontic treatment: A 6-year follow-up** by Jae Hyun Park et al.

21. Recent studies indicate that miniscrew-assisted rapid palatal expansion and conventional rapid palatal expansion have similar treatment results as well as similar negative side effects.

1. True
2. False

22. This 6-year follow-up analysis of the camouflage correction of an adult skeletal Class III patient demonstrated significant changes in the transverse inclination of the maxillary first molars from pretreatment to postretention.
  1. True
  2. False
23. The authors reported no transverse discrepancy when comparing the patient's current arch width the Yonsei transverse index measurements.
  1. True
  2. False
24. The authors examined the midpalatal suture maturation pretreatment and observed that fusion of the suture was occurring in this patient.
  1. True
  2. False