

CONTINUING EDUCATION

The University of Southern California School of Dentistry Orthodontic Alumni Association will award 3 hours of Continuing Education credit for reading this issue of JCO and answering at least 12 of the following 16 questions correctly. Take this test online at www.jco-online.com (click on Continuing Education); payment of \$25 is required by VISA or MasterCard. The test may be retaken once if not passed on the first attempt. Correct answers will be supplied immediately, along with a printable certificate. Tests will be accessible on the JCO website for 12 months after publication. A subscription to JCO is not required to earn C.E. credits. For information, contact Dr. Robert Keim, (213) 740-0410; e-mail: editor@jco-online.com. CER No. 08-2006-14007.

Learning Objectives

1. Discuss alternatives for treating adults with unilateral missing premolars.
2. Describe the fabrication and placement of temporary pontics for replacement of missing teeth in growing patients.
3. Prescribe an expander with differential opening for patients with either cleft deformities or unusual archforms.
4. Apply additional resin to reinforce molar tubes in direct bonding.

Article 1

Tai, K. and Park, J.H.: *Orthodontic Treatment of an Adult Patient with Severe Crowding and Unilateral Missing Premolars* (pp. 405-414)

1. Viable options for restoring the space of unilateral missing premolars include all of the following except:
 - a) partial space closure followed by placement of a single dental implant
 - b) partial space closure followed by autotransplantation of another tooth
 - c) partial space closure followed by transposition of an adjacent tooth
 - d) full space closure by orthodontic tooth movement
2. Potential risks of molar protraction through an atrophic ridge include:
 - a) dehiscence
 - b) loss of attachment
 - c) root resorption
 - d) all of the above
3. According to a study by Tallgren, the mean

reduction in mandibular anterior alveolar ridge height after extractions is approximately:

- a) four times the reduction in maxillary anterior alveolar ridge height
 - b) twice the reduction in maxillary anterior alveolar ridge height
 - c) the same as the reduction that occurs after extraction of the entire dentition for denture replacement
 - d) 60-65% of the reduction in mandibular anterior alveolar ridge width
4. Dehiscences and fenestrations may be properly evaluated by means of:
 - a) dental probing
 - b) panoramic radiographs
 - c) cone-beam computed tomography
 - d) any of the above

Article 2

Wilmes, B.; Nienkemper, M.; Renger, S.; and Drescher, D.: *Mini-Implant-Supported Temporary Pontics* (pp. 422-429)

5. A dental implant should not be placed in a patient younger than 18 because:
 - a) it may end up in supraposition
 - b) it may be overtaken by alveolar growth
 - c) it may loosen over time
 - d) the local bone may atrophy
6. In the authors' technique, the temporary crown is attached by:
 - a) screwing it to the abutment
 - b) bonding it to the abutment
 - c) bonding it over the mini-implant
 - d) either a or c

7. To prevent a stainless steel abutment from shining through the crown:
- only resin abutments should be used
 - an opaquer should be used on the pontic
 - the abutment should be ground and adapted
 - the pontic should not be screwed directly to the abutment
8. The mini-implant should be large enough to ensure stability and small enough to avoid:
- interference with alveolar growth
 - interference with the occlusion
 - the risk of fracture
 - osseointegration

Article 3

Garib, D.G.; Garcia, L.C.; Pereira, V.; Lauris, R.C.M.C.; and Yen, S.: *A Rapid Maxillary Expander with Differential Opening* (pp. 430-435)

9. This expander incorporates pivoting corner screws to allow:
- use of a fan-shaped design
 - use in non-cleft patients
 - different amounts of anterior and posterior expansion
 - different amounts of transverse and sagittal expansion
10. The goal of maxillary expansion in children with complete cleft lip and palate (CLP) is to:
- coordinate the archform before an alveolar bone graft is performed
 - reduce the intercanine width more than the intermolar width
 - prevent collapse of the cleft segment
 - stabilize the maxillary dentition
11. Conventional expansion in a CLP patient can result in:
- overexpansion of the intermolar width
 - buccal crossbite
 - long-term periodontal damage
 - all of the above
12. The authors recommend their expander for

any of the following situations except:

- patients with complete CLP
- non-cleft patients with mild-to-moderate maxillary constriction
- non-cleft patients with differences in anterior and posterior arch width
- adult patients prior to surgically assisted rapid maxillary expansion

Article 4

Vale e Nascimento, A.E.G.; Bramante, F.S.; Pinzan-Vercelino, C.R.M.; Pinzan, A.; and Gurgel, J.A.: *Resin Reinforcement: An Alternative Approach for Direct Bonding of Molar Tubes* (pp. 436-440)

13. Bond failures of molar tubes have been attributed to all of the following except:
- difficulty of maintaining adequate isolation
 - excessive masticatory forces
 - insufficient mechanical preparation of the enamel
 - individual variations in enamel composition
14. This study showed a significant difference in bond failures according to:
- the use of resin reinforcement
 - patient age
 - the dental arch
 - all of the above
15. The potential efficacy of resin reinforcement is based on the theory of:
- split-mouth design
 - material resistance
 - survival curves
 - rupture tension
16. In this study, the addition of an adhesive layer:
- increased the contact area between the molar and tube
 - distributed the applied force over a greater surface area
 - resulted in significantly fewer bond failures
 - all of the above