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Learning Objectives

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

1. Follow a fully digital protocol for design and manufacturing of a rapid palatal expander.
2. Review popular formulations and prescription practices for "magic mouthwash."
3. Describe a virtual articulator for use in evaluating mandibular position during stabilization splint therapy.
4. Discuss the advantages of a Biocreative reverse-curve technique for molar uprighting.

Article 1

Battista, G.; Tredanari, A.; and Annarumma, F.: *Design and Manufacturing of a Fully Digital Palatal Expander Without Physical Models* (pp. 445-450)

1. In a hybrid "digital-analog" approach to manufacturing rapid palatal expanders:
    a) the appliance framework is three-dimensionally printed
    b) the technician positions the screw on a plaster cast
    c) the technician determines the distance of the screw from the teeth and palatal mucosa on a plaster cast
    d) all of the above
2. In the authors' protocol, the software program used to design the anchorage structure is:
    a) R2GATE
    b) Appliance Designer
    c) Rhinoceros
    d) TRIOS 3

3. The digital bands are joined with the connection arms and screw attachment using the command:
    a) Create Bar
    b) Modify Model/Wax Knife
    c) Combine Models
    d) Add Attachments
4. The final appliance is 3D-printed by:
    a) laser melting
    b) stereolithography
    c) fused deposition modeling
    d) multi-jet fusion

Article 2

Kravitz, N.D.; Crutchfield, W.E.; Miller, S.; and Gill, J.: *Magic Mouthwash Demystified* (pp. 462-465)

5. The generic Maalox used in this prescription contains:
    a) diphendramine hydrochloride
    b) viscous lidocaine
    c) nystatin and hydrocortisone
    d) aluminum hydroxide and magnesium hydroxide
6. Nystatin is commonly used to treat:
    a) apthous ulcers
    b) inflammation
    c) oral thrush
    d) pain
7. Kaopectate should not be substituted for Maalox because it will:
    a) solidify the mixture
    b) inhibit matrix metalloproteinases
    c) increase susceptibility to oral thrush
    d) cause systemic side effects

8. Nonprescription alternatives to magic mouthwash include:
    a) magic mouthwash lite
    b) ulcer swish
    c) saltwater mouthrinse
    d) both a and c

Article 3

Park, J.H.; Lee, K.M.; Kim, J.C.; Moon, D.N.; and Lee, G.H.: *Evaluation of Mandibular Position for Splint Therapy Using a Virtual Articulator* (pp. 466-472)

9. A stabilizing splint causes fibroses of the TMJ retrodiscal tissue, forming a:
    a) new condylar head
    b) pseudodisc
    c) superior joint capsule
    d) superior synovial cavity

10. In the authors' virtual articulator protocol, cone-beam computed tomography (CBCT) and intraoral scanning data are merged using the software program:
    a) R2GATE
    b) Appliance Designer
    c) Rhinoceros
    d) TRIOS 3

11. During stabilization splint therapy, positional changes of the condyle should be recorded at each visit so the clinician can:
    a) keep the condylar position constant
    b) reestablish protective co-contraction
    c) adjust the splint to maintain an ideal functional occlusion
    d) all of the above

12. Reevaluation of mandibular position at each visit requires taking a new:
    a) CBCT scan
    b) digital intraoral scan
    c) wax bite registration
    d) all of the above

Article 4

Ahn, H.W.; Noh, M.K.; Chung, K.R.; Kim, S.H.; and Nelson, G.: *Strategic Molar Uprighting Using the Biocreative Reverse-Curve Technique* (pp. 486-494)

13. In the Biocreative reverse-curve (BRC) technique, the I-type C-tube miniplate is placed in the:
    a) mandibular symphysis
    b) retromolar region
    c) midpalate
    d) premolar region

14. The length of the .032"-diameter brass wire connector determines the:
    a) position of the C-tube miniplate
    b) need for a distal toe-in curve
    c) magnitude of force applied to the teeth
    d) bracket prescription

15. Bonding the premolars results in:
    a) less molar intrusion
    b) more molar intrusion
    c) molar root uprighting
    d) more buccoversion of the second molars

16. Advantages of the BRC system include the:
    a) stability of the C-tube miniplate
    b) option to bond only the target teeth
    c) flexibility of vertical molar control
    d) all of the above