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Learning Objectives

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

1. Review current standards for the diagnosis and treatment of patients with facial asymmetry.
2. Discuss the effects of microvibration on tooth movement during the orthodontic leveling and alignment phase.
3. Compare the Biofunctional technique to other orthodontic methods of camouflaging a skeletal Class III discrepancy.
4. Describe the cephalometric analysis used in the Biocreative Strategy.

Article 1

Veeranki, S.; Park, J.H.; Pruzansky, D.; Takagi, M.; and Tai, K.: *A Current Review of Asymmetry* (pp. 325-341)

1. Single-photon emission computed tomography has improved the clinician's ability to detect:
 - a) asymmetrical development of the pharynx and larynx
 - b) the cessation of growth
 - c) skeletal deviations masked by the soft tissues
 - d) all of the above
2. In contrast with hemimandibular elongation of the condyle, hemimandibular hyperplasia is marked by:
 - a) a vertical excess of the mandibular ramus
 - b) a horizontal excess of the mandibular body
 - c) horizontal displacement of the mandible and chin toward the unaffected side
 - d) crossbite on the unaffected side due to excessive lateral mandibular growth
3. A functional asymmetry will present with a

discrepancy between maximum intercuspal position and:

- a) occlusal cant
 - b) Proffit's envelope
 - c) centric occlusion
 - d) centric relation
4. The surgical procedure of choice for active cases of condylar hyperplasia is:
 - a) distraction osteogenesis
 - b) high condylectomy
 - c) condylar shaving
 - d) mandibular setback

Article 2

Miles, P.: *Does Microvibration Accelerate Leveling and Alignment? A Randomized Controlled Trial* (pp. 342-345)

5. One retrospective and unblinded clinical trial of the AcceleDent appliance during orthodontic leveling and alignment reported:
 - a) a 10% increase in the rate of tooth movement
 - b) a 20% increase in the rate of tooth movement
 - c) a 30% increase in the rate of tooth movement
 - d) no difference in the rate of tooth movement
6. The present randomized controlled trial of AcceleDent during leveling and alignment agreed with another, similar study in finding:
 - a) a 10% increase in the rate of tooth movement
 - b) a 20% increase in the rate of tooth movement
 - c) a 30% increase in the rate of tooth movement
 - d) no difference in the rate of tooth movement
7. The median number of days required to reach the working wire stage for the AcceleDent group in the present study was:
 - a) 143

- b) 175
- c) 186
- d) 201

8. The author surmised that the most important determinant of the time needed to reach the working wire was the:

- a) decision of when to change the archwire
- b) size and type of the initial archwire
- c) use of microvibration to accelerate treatment
- d) cooperation of the patient

Article 3

Valarelli, F.P.; Nascimento, F.E.C.; Batista, D.M.; Freitas, K.M.S.; and Cançado, R.H.: *Class III Camouflage Treatment with the Biofunctional Technique* (pp. 351-358)

9. Skeletal Class III anteroposterior discrepancies in adult patients are generally managed either by orthodontic camouflage treatment or by:

- a) orthopedic therapy
- b) TMJ therapy
- c) distraction osteogenesis
- d) surgical-orthodontic therapy

10. In Class III camouflage treatment, the Biofunctional bracket prescription features:

- a) added tip for the upper incisor brackets
- b) differential torque for the incisor brackets
- c) added torque for the canine brackets
- d) negative torque for the premolar brackets

11. Class III elastics tend to produce:

- a) protrusion of the upper incisors
- b) extrusion of the lower incisors
- c) distal tipping of the lower molars
- d) all of the above

12. In this case, repositioning of the upper molars

caused all of the following effects except:

- a) counterclockwise rotation of the occlusal plane
- b) clockwise rotation of the mandible
- c) increased concavity of the profile
- d) increased lower facial height

Article 4

Kim, S.H.; Ahn, H.W.; Chung, K.R.; and Nelson, G.: *The Biocreative Strategy, Part 2* (pp. 359-371)

13. The Tweemac facial analysis incorporates all of the following except the:

- a) McNamara analysis
- b) Tweed-Merrifield triangle
- c) Chung transverse analysis
- d) Alexander cast analysis

14. The primary horizontal reference plane in the Tweemac analysis is the:

- a) palatal plane
- b) occlusal plane
- c) ANS-PNS line
- d) mandibular plane

15. The lower esthetic angle depicts the relationship of the lower incisor position to the:

- a) palatal plane
- b) symphysis outline
- c) palatal plane-occlusal plane angle
- d) midsagittal reference plane

16. The main horizontal reference plane in Tweemac analysis of the frontal cephalogram is the:

- a) palatal plane
- b) ANS-PNS line
- c) latero-orbitale line
- d) midsagittal plane of the maxillomandibular complex