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Learning Objectives

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

1. Contrast various treatment options for growing children with missing incisors.
2. Discuss the use of clear aligners for orthodontic treatment in a “surgery first” protocol.
3. Compare the effects of a four-implant-supported maxillary expander with those of a conventional bonded expander.
4. Take steps to prevent embezzlement.

Article 1

Alobeid, A.; Korkis, R.; Popat, H.; and El-Bialy, T.: *Unilateral Upper Central Incisor Space Closure Using Palatal Mini-Implants* (pp. 77-88)

1. Common alternatives for treatment of growing children with missing central incisors include all of the following except:
 - a) reimplantation of the avulsed tooth
 - b) autotransplantation
 - c) orthognathic surgery
 - d) substitution by the lateral incisor after orthodontic space closure
2. Disadvantages of the space-closure method include:
 - a) inadequate anchorage
 - b) increased functional load on first premolars
 - c) vertical changes in tooth positions
 - d) all of the above
3. Studies of patients with implant-supported crowns replacing upper incisors have found:
 - a) progressive loss of bone support
 - b) progressive reduction of the marginal bone

level at the adjacent teeth

- c) esthetic problems from vertical changes in neighboring tooth positions
 - d) all of the above
4. Palatal mini-implants have been shown to have a mean failure rate of:
 - a) 6%
 - b) 13.5%
 - c) 26.1%
 - d) 33.3%

Article 2

Banankhah, S.; Wang, D.; Kwon, T.; Steinbacher, D.; and Uribe, F.: *“Surgery First” Maxillary Segmental and Mandibular Osteotomies with Invisalign Therapy* (pp. 89-95)

5. Challenges of a “surgery first” approach involving orthodontic treatment with clear aligners include all of the following except:
 - a) inability to address the dentofacial deformity early in treatment
 - b) transfer of the surgical plan to the operatory without fixed appliances
 - c) postsurgical transition to aligners
 - d) provision of intermaxillary fixation
6. The surgery described here involved:
 - a) three-piece Le Fort I osteotomy
 - b) Le Fort II osteotomy
 - c) bilateral sagittal split osteotomy with mandibular advancement
 - d) both a and c
7. Intermaxillary fixation was provided by:
 - a) fixed orthodontic appliances
 - b) surgical hooks

- c) intermaxillary screws
 - d) intermaxillary elastics
8. Until the clear aligners could be delivered, the patient's surgical expansion was maintained with:
- a) orthodontic archwires
 - b) an Essix retainer
 - c) intermaxillary screws
 - d) intermaxillary elastics

Article 3

Manoharan, S.; Krishnaraj, R.; Duraisamy, S.; Arumugam, E.; and Ravi, K.: *Changes in Skeletal, Dental, and Upper-Airway Parameters after Implant-Supported Rapid Maxillary Expansion* (pp. 96-111)

9. The etiology of maxillary constriction can include any of the following except:
- a) oral habits
 - b) temporomandibular dysfunction
 - c) improper tongue posture
 - d) inflamed tonsils
10. In this study, the implant-supported maxillary expander was anchored by four miniscrews in the:
- a) palatal aspect of the alveolar slopes
 - b) midpalate
 - c) retromolar regions
 - d) buccal shelves
11. In contrast to the implant-supported expander group, the transverse skeletal expansion in the conventional bonded expander group was greater in the:
- a) anterior region
 - b) posterior region
 - c) canine and premolar regions
 - d) palatal region
12. The lesser degree of buccal tipping in the

implant-supported expander group was attributed to the:

- a) stronger anchorage
- b) lack of dental involvement in the appliance
- c) shorter distance between the force application and center of resistance of the teeth
- d) all of the above

Article 4

Askins, W.: *Embezzlement in Orthodontic Practices* (pp. 117-120)

13. The most consistent predictor of embezzlement is:
- a) high accounts receivable
 - b) unusual credit-card payments
 - c) employee behavior
 - d) lack of supervision
14. The most common preconditions for white-collar crime include all of the following except:
- a) pressure
 - b) motivation
 - c) opportunity
 - d) rationalization
15. The form of payment usually targeted first by embezzlers is:
- a) cash
 - b) checks
 - c) credit cards
 - d) electronic funds transfers
16. Monthly reviews to prevent or reduce embezzlement should include:
- a) reconciliation
 - b) adjustment report
 - c) audit trail
 - d) all of the above