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Learning Objectives

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

1. Prescribe an appliance for simultaneous distalization and mesialization in the same arch.
2. Describe movement of multiple ankylosed teeth by means of corticotomies with a piezosurgical device.
3. Analyze trends in orthodontic economics and practice administration over the past two years.
4. Discuss the treatment of adult patients with Crouzon syndrome.

Article 1

Wilmes, B.; Nanda, R.; Nienkemper, M.; Ludwig, B.; and Drescher, D.: *Correction of Upper-Arch Asymmetries Using the Mesial-Distalslider* (pp. 648-655)

1. When miniscrews are inserted buccally in the path of moving teeth, mesiodistal correction is limited to about:
 - a) 1mm
 - b) 3mm
 - c) 5mm
 - d) 10mm
2. For optimum stability, the authors recommend using miniscrews with a diameter of:
 - a) 1.2mm or 1.6mm
 - b) 1.6mm or 2mm
 - c) 2mm or 2.3mm
 - d) 2.3mm or 3mm
3. The Mesial-Distalslider should be used:
 - a) before brackets are bonded
 - b) at the same time as aligners

- c) at the same time as bonded brackets
 - d) either a or c
4. To prevent mesial tipping of the canines and premolars on the mesialization side:
 - a) intermaxillary elastics should be worn
 - b) Benetubes can be bonded directly to the lingual surfaces of one or more teeth
 - c) Benetubes should be bent away from the palate
 - d) the Mesial-Distalslider can be combined with a Herbst appliance

Article 2

Bertossi, D.; Farronato, G.; Picozzi, V.; Lucchese, A.; Gherlone, E.; Bissolotti, G.; Faccioni, F.; and Nocini, P.F.: *Treatment of Multiple Ankylosed Teeth Using a Piezoelectric Device* (pp. 656-660)

5. Factors contributing to the development of ankylosis may include any of the following except:
 - a) genetics
 - b) inadequate eruptive force
 - c) trauma to the periodontal ligament (PDL)
 - d) resorption of neighboring teeth
6. Piezoelectric orthodontic microsurgery speeds up dental movement by means of:
 - a) replacement resorption
 - b) the regional acceleratory phenomenon
 - c) rehabilitation of the PDL
 - d) all of the above
7. In cases of ankylosis with extensive damage to the PDL, resorption will progress until:
 - a) the root surface has repopulated with new PDL cells
 - b) the root surface has repopulated with osteo-

clasts from the adjacent bone marrow

c) the root substance is totally remodeled to bone

d) the PDL is completely obliterated

8. Magnusson and Kjellberg advised against extraction of an ankylosed second molar with no further intervention, due to:

a) the possibility of damage to the alveolar bone

b) the potential for periodontal damage

c) the poor prognosis for eruption of the third molar into a favorable position

d) the likelihood of root resorption of neighboring teeth

Article 3

Keim, R.G.; Gottlieb, E.L.; Nelson, A.H.; and Vogels, D.S. III: *2013 JCO Orthodontic Practice Study* (pp. 661-671)

9. Compared to the 2011 Study, median net income increased by:

a) 2%

b) 16%

c) 22%

d) 28%

10. The greatest percentage increase in the use of a management method over the previous survey was found for:

a) written practice budget

b) practice promotion plan

c) measurement of staff productivity

d) dental management consultant

11. Practice-building methods rated good or better in effectiveness included all of the following except:

a) on-time case finishing

b) cosmetic/laser treatment

c) improve case presentation

d) no-charge initial visit

12. The highest median percentage of referrals was attributed to:

a) general dentists

b) personal contacts

c) patients

d) the Internet

Article 4

Mohadeb, J.V.N.; Lu, Y.Q.; Aldowaji, A.K.; Gu, X.; Zhang, Q.; Xu, P.; and Yang, C.: *Management of Crouzon Syndrome in an Adult Patient* (pp. 673-680)

13. Crouzon syndrome is characterized by:

a) premature closure of the cranial sutures

b) midfacial hypoplasia

c) exophthalmia

d) all of the above

14. A skeletal Class III relationship in a Crouzon case is the result of:

a) a prognathic mandible

b) sagittal maxillary hypoplasia

c) anteroposterior flattening of the acrocranium

d) an anteriorly tipped palatal plane

15. Treatment of Crouzon syndrome should ideally begin:

a) at birth

b) at the beginning of peak growth

c) after peak growth

d) after maturation

16. The young adult shown here was treated without a presurgical-orthodontic phase because:

a) she wanted the exophthalmia to be addressed as soon as possible

b) she had completed growth

c) a conventional osteotomy was inadvisable

d) her severe open bite contraindicated rapid maxillary expansion