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Learning Objectives

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

1. Prescribe the Invisalign First protocol for Phase I treatment in the mixed dentition.
2. Diagnose and manage a case involving a compound odontoma and an impacted canine.
3. Describe a palatally anchored system for retention of surgically assisted rapid palatal expansion and simultaneous molar distalization.
4. Use a digital design process to customize a metal-printed rapid palatal expander for attachment of a canine de-impaction spring.

Article 1

Buonocore, G.: *Clear Aligner Therapy in Children: Case Reports of Phase I Treatment* (pp. 87-100)

1. Early preventive and interceptive treatment may involve any of the following components except:
   a) orthopedic correction
   b) muscle-function adjustment
   c) molar distalization
   d) monitoring of permanent-tooth eruption
2. The author evaluated differences between pre- and post-treatment interdental widths using:
   a) OrthoCAD software
   b) Rhinoceros software
   c) Appliance Design software
   d) 3D Slicer software
3. A functional malocclusion can be distinguished from a skeletal or dental malocclusion by diagnosis of a:
   a) condylar displacement
   b) mandibular shift
   c) tongue-thrust habit
   d) vertical deficiency
4. In Phase I treatment of an open-bite patient, the vertical skeletal relationship can be controlled in the ClinCheck plan by:
   a) avoiding extrusion of the first molars during expansion
   b) adding occlusal attachments on the lower molars
   c) increasing the thickness of the aligners
   d) both a and b

Article 2

Kumar, M.; Goyal, M.; Kaur, A.; Jain, A.D.; and Maheshwari, A.: *Orthodontic Management after Unilateral Extraction of a Compound Odontoma and an Impacted Canine* (pp. 101-109)

5. Radiologically, a compound odontoma will appear as:
   a) an odontogenic neoplasia
   b) a radiotransparent halo with radiodense zones representing small denticles
   c) an irregular mass with no resemblance to tooth structures
   d) a well-circumscribed radiolucency resembling a dentigerous cyst
6. Sixty-one percent of compound odontomas occur in the:
   a) anterior maxillary arch
   b) anterior mandibular arch
   c) posterior maxillary arch
   d) posterior mandibular arch
7. In addition to the removal of a compound odontoma and impacted canine, this case involved extraction of:
   a) all four first premolars

b) the upper first and lower second premolars
c) both lower first premolars and one upper first premolar
d) a single lower first premolar

8. If the crown of an impacted canine lies mesial to the mesial height of contour of the adjacent lateral incisor crown and root, then the:
a) canine is considered to be in sector II
b) canine is a good candidate for transplantation
c) prognosis for traction is unfavorable
d) prognosis for traction is favorable

Article 3

Okuhashi, S.; Papademetriou, M.; Tai, K.; and Park, J.H.: *Anchor-Lock System Double-Y for Post-SARPE Retention and Simultaneous Molar Distalization* (pp. 110-118)

9. The use of rapid palatal expansion after the pubertal growth peak results in:
a) more orthopedic than dental expansion
b) more dental than skeletal expansion
c) buccal tipping of the molars
d) both b and c

10. Surgically assisted rapid palatal expansion (SARPE) has become the primary method of treatment for adults who require more than:
a) 2mm of maxillary expansion
b) 5mm of maxillary expansion
c) 10mm of maxillary expansion
d) 60% skeletal expansion

11. The Anchor-Lock System Double-Y (ALSD-Y) is anchored by:
a) two palatal miniscrews
b) two buccal miniscrews
c) four palatal miniscrews
d) two buccal and two palatal miniscrews

12. Placement of the ALSD-Y immediately after SARPE allows:
a) molar distalization or protraction to be initiated without delay
b) maxillary expansion to be continued
c) a Le Fort I segmental osteotomy to be carried out
d) all of the above

Article 4

Luzi, C.; Szabò, E.; and Carletti, P.: *CAD/CAM Sheath for Attaching a Cantilever Spring to a Metal-Printed Rapid Palatal Expander* (pp. 119-120)

13. In the first step of this technique, a 10mm expansion screw is positioned on the patient's virtual model using:
a) OrthoCAD software
b) Rhinoceros software
c) Appliance Design software
d) 3D Slicer software

14. The dimensions of the rectangular lingual sheath attached to the expander are:
a) .012" × .016"
b) .018" × .025"
c) .025" × .036"
d) .036" × .072"

15. To reduce the load/deflection rate and force magnitude of the de-impaction spring:
a) a smaller cantilever wire can be used
b) an intermediate single or double loop can be bent into the cantilever
c) a ligature wire can be connected to the impacted canine
d) the expansion screw can be reactivated

16. The cantilever wire cannot be metal-printed because it:
a) must be flexible
b) must be stainless steel
c) is not digitally designed
d) must be removed for reactivation