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Learning Objectives

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

1. Contrast the EtchFree Bonding system to conventional etch-and-rinse techniques.
2. Discuss the use of management methods that seem to be related to increased net income and case starts.
3. Compare various approaches to treatment of an adult with anterior open bite and multiple missing posterior teeth.
4. Review the applications of botulinum toxin (BTX) in orthodontic practice.

Article 1

Gage, C.C.: *Ormco EtchFree Bonding in Orthodontic Practice* (pp. 704-710)

1. The use of phosphoric acid etchants introduces concerns such as:
 - a) enamel damage from incorrect application
 - b) chemical burns from accidental contact with skin or oral tissues
 - c) development of white-spot lesions
 - d) all of the above
2. A self-etching primer replaces the rinsing and drying steps of conventional bonding with:
 - a) mechanical agitation to create enamel micro-porosities
 - b) chemical preparation of the tooth surface
 - c) application of a viscous gel to create a micro-porous etch pattern
 - d) ionic bonding to the calcium atoms in hydroxyapatite

3. The main difference between EtchFree Bonding and other systems is in its:

- a) bond strength
- b) color and consistency
- c) primer chemistry
- d) accuracy of bracket positioning

4. The EtchFree Bonding protocol reduces the total time required per tooth from an average 155 seconds to about:

- a) 105 seconds
- b) 70 seconds
- c) 40 seconds
- d) 20 seconds

Article 2

Kravitz, N.D.; Vogels III, D.S.; and Vogels, P.B.: *2025 JCO Orthodontic Practice Study, Part 2: Practice Success* (pp. 711-727)

5. Compared to practices with low net income, those with high net income reported a net income per case that was:

- a) significantly less
- b) about the same
- c) nearly twice as high
- d) nearly five times as high

6. The "high volume" subgroup appeared to be deriving its high net income mainly from:

- a) fees for extra services
- b) patient volume
- c) reduced overhead costs
- d) increased net income per case

7. High net income practices were notably more likely than others to use computers for:

- a) recalls
- b) patient access to own account and schedule
- c) patient access to own records
- d) all of the above

8. The practice-building category ranked as most effective by both high and moderate net income practices was:

- a) new-patient incentives
- b) internal referrals
- c) management changes
- d) expanded services

Article 3

Antelo, O.M.; Cuéllar, M.; Marchesan, C.H.; Gava, T.; and Tanaka, O.M.: *Interdisciplinary Treatment of Anterior Open Bite in an Adult Patient with Multiple Missing Teeth* (pp. 731-738)

9. In adult patients with asymmetrical missing teeth, a preparatory orthodontic phase prior to prosthetic restorations can:

- a) help limit the loss of tooth structure
- b) reduce the number of teeth that will require restoration
- c) avoid difficulty for the patient in adapting to the new occlusion
- d) all of the above

10. In the case shown here, to compensate for the lack of opposing teeth during intrusion of the upper right second premolar and first molar, anchorage was provided by:

- a) an overlay archwire
- b) a miniscrew-assisted rapid palatal expander
- c) two interradicular mini-implants, one buccal and one palatal
- d) a buccal miniplate

11. The patient's tongue-thrust habit was addressed with:

- a) myofunctional therapy
- b) speech therapy
- c) a tongue crib
- d) a glossectomy

12. Spaces for eventual prosthetic restorations were maintained using:

- a) an overlay archwire
- b) open-coil springs
- c) elastomeric chains
- d) a Nance appliance

Article 4

Hatami, A.; Ahmed, F.; and Venugopal, A.: *Botulinum Toxin in Contemporary Orthodontic Practice* (pp. 745-757)

13. BTX injection induces temporary muscular paralysis by:

- a) producing an anaerobic gram-positive bacterium
- b) inhibiting acetylcholine release from presynaptic motor neurons at the neuromuscular junction
- c) fusing synaptic vesicles with the neuronal cell membrane
- d) all of the above

14. Cumulative partial muscle atrophy is a potential adverse effect of BTX injections that should be considered:

- a) in cases of frequent dosing
- b) when treating small muscles
- c) in patients taking anticholinergic medication
- d) in patients with high blood pressure

15. When using BTX to manage a gummy smile, the injection is commonly made in the:

- a) masseter muscle
- b) temporalis muscle
- c) Yonsei point
- d) anterior belly of the digastric muscle (ABDM)

16. After mandibular advancement surgery, BTX injections into the ABDM or mylohyoid muscles can help counteract:

- a) excessive rotational forces on the condyle
- b) pain caused by muscle hyperactivity
- c) anterior and superior relapse forces
- d) inferior and posterior relapse forces