



RESTORATIVE DENTISTRY V (D553)

Quiz #1 September 30, 2011

1. If the authors of a systematic review were looking at a question related to the effectiveness of a particular dental treatment, the strongest (potentially least biased) type of clinical study that could be included in the review is the randomized controlled trial (RCT).
2. Caries risk assessment is predicated on the principle that everyone who has teeth produces plaque, but everyone's plaque is not equally pathogenic. Circle one: ☒ T ☐ F
3. According to the paper by Featherstone and others (*Caries risk assessment and management for the prosthodontic patient*, J Prosthodont, 2010), FPDs and RPDs are risk factors for dental caries involving abutment teeth. Circle one: ☒ T ☐ F
4. The main cariostatic function of salivary lysozym and agglutinin is to promote remineralization of early lesions. Circle one: ☐ T ☒ F
5. *S. sobrinus* is included in the bacterial group called (circle one)
☒ a. MS b. acidogenic non-MS c. non-acidogenic MS d. aciduric non-MS
6. According to the "Diet Assessment of Caries Risk" tool described by TA Marshall (JADA 2009), all of the following aspects of sugar-sweetened drink consumption should be assessed: amount consumed in a day, number of exposures per day, timing of exposures (with or between meals), length of time of the typical exposure, and the mode of consumption (sip or straw)
7. Fluoride ions promote remineralization of enamel by catalyzing the formation of fluorapatite precursor molecules, which increases the rate of crystal growth and repair. Circle one: ☒ T ☐ F
8. Fluoride ions released from oral reservoirs may inhibit demineralization of enamel by suppressing essential bacterial enzymes, such as (name one) ATPase, enolase, glucosyl transferase
9. If a fissure is correctly assigned an ICDAS code 3, the probability is less than 50% that the lesion has progressed into dentin. Circle one: ☐ T ☒ F
10. Since conventional bitewing radiography tends to have lower sensitivity than specificity when used to detect early caries lesions, it is likely that BWXs would produce a higher proportion of false negative test results.
11. A recent systematic review (JD Bader and DA Shugars. JADA. 2004) concluded that the DIAGNOdent laser fluorescence device exhibits sensitivity values in testing that are almost always lower and than the specificity values. Circle one: ☐ T ☒ F
12. The study by GH Hildebrandt and others (*Maintaining mutans streptococci suppression with xylitol chewing gum*. JADA. 2000) demonstrates that _____ can reduce oral mutans streptococci levels and xylitol chewing gum can retard the re-population of those organisms. (Circle one.)
 a. Triclosan-containing toothpastes b. 10% povidone iodine solution
 c. an essential oil mouth rinse (Listerine) ☒ d. 0.12% chlorhexidine gluconate oral rinse
13. As chemical agents to *reduce the incidence of dental caries lesions*, sodium fluoride and _____ are supported by the strongest base of scientific evidence. (Circle one.)
 a. Listerine b. CPP-ACP paste ☒ c. xylitol d. .12% CHX rinse e. Triclosan

14. In his article *The use of sorbitol- and xylitol-sweetened chewing gum in caries control* (JADA, 2006), BA Burt cites evidence that new mothers can be effectively treated with xylitol gum to reduce their mutans streptococci levels, thereby reducing the risk of vertical transmission of those organisms to their newborn children. Circle one: ☒ T ☐ F

15. According to the ADA Council on Scientific Affairs (J Dent Education, 2007), two or more applications of fluoride varnish per year are effective in preventing caries lesions in high-risk populations. Circle one: ☐ T ☒ F

16. Of the following questions concerning the cariostatic effects of fluoride, which one has *NOT* yet been answered to any *reasonable scientific certainty*? (Circle one.)

- ☒ a. What is the daily topical dose of fluoride required to prevent caries lesion formation?
- b. Does systemic exposure to fluoride during tooth development provide life-long caries resistance?
- c. Can fluoride ions present in the oral cavity influence the de- and re-mineralization kinetics of enamel?

17. During an acid challenge, dental apatite crystals high in carbonate are especially susceptible to dissolution.

18. If a fissure is correctly assigned an ICDAS code 2 and surgical intervention is elected due to high caries risk, the most appropriate instrument for entering that fissure would be the #330 carbide bur. Circle one: ☐ T ☒ F

19. As stated in OLM1.6, carious enamel and peripheral carious dentin along the DEJ must be completely removed during cavity preparation, regardless of the overall lesion depth or the type of restorative material to be used. Circle one: ☒ T ☐ F

20. Which one of the following is a compelling reason to replace a large MOD amalgam restoration? (Circle one.)

- a. narrow ditching of occlusal margins
- b. corrosion of the exterior surfaces
- ☒ c. a fracture through the isthmus
- d. a single small caries lesion at an accessible margin

21. In his narrative review *Clinical diagnosis of recurrent caries* (JADA 2005), Mjor makes several statements related to the problems of resin based composite (RBC) restorations, including these (circle one):

- a. RBC accumulates more plaque than other types of restorations
- b. the presence of marginal overhangs predisposes the tooth to secondary caries lesions
- ☒ c. A and B above

22. A 17-year-old female patient has 6 detectable caries lesions at the time of examination, including two in tooth #30: a distal E1 lesion and a mesial E2 lesion (as seen on BWXs). Would it be reasonable and scientifically sound to place a conventional or invasive sealant in the occlusal surface of this tooth now, but medically manage the proximal lesions and re-evaluate in 6 months? Circle one: ☒ YES ☐ NO

23. A reasonable application of a minimally invasive surgical philosophy for Class II caries lesions would be to consider occlusal and proximal surfaces independently, and to avoid the traditional Black's outline form unless there is a compelling reason to use it. Circle one: ☒ T ☐ F

24. Minimally invasive guidelines for the treatment of Class II caries lesions are based on which of the following principles? (Circle one.)

- a. caries lesions that affect dentin cannot be arrested
- b. caries lesions visible on bitewing radiographs are always active and progressive
- ☒ c. caries lesions with an intact enamel surface may be amenable to remineralization
- d. all of the above

25. A structured statement, typically developed from one or more systematic reviews that is intended to assist practitioners and patients in arriving at decisions on appropriate management for specific healthcare problems is called a clinical practice guideline.