Interim Therapeutic Restoration Techniques

-GIC techniques for

Class I, II, III, V ITRs & Sealant

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Tray set-up for ITR treatment
Thanks to Hu-Friedy for supplying instruments
Debridment/Restoration of Teeth

- GICs can be expeditiously placed after minimal tooth preparation, excellent retention, caries protection
- GICs *fluoride reservoir effect* supports use with adjunctive fluoride
- Highly viscous GICs = esthetic & handling improvements expedite placement with high level of patient acceptance
- GICs ability to seal (diffusion bond to enamel & dentin) and exchange ions with tooth likely account for success of ART technique
GICs: modifying oral environment, oral biofilm

- Fluoride release/uptake/re-release well documented, biofilm modification, super-saturation not well documented
- Newly erupted permanent teeth exchange ions with GICs better than deciduous teeth & aged permanent teeth; root surfaces are protected by GICs
- Some inhibitory effect on S. mutans, but not all in vitro models support benefit
- Al+++ likely enhances F⁻ uptake/effect; adjunctive F⁻ needed
- Some inhibitory effect on biofilm adhesion, acidogenicity, but decrease in GIC surface hardness

Combine liquid/powder by depressing orange plunger then immediately place in capsule mixer and mix for 10 sec.

(3400 cps)
Does Mom cut your toenails? Today will be like cutting toenails on your teeth. If I get too close the tooth and you start to feel it, tell me.
Gain access using enamel hatchet
Explore lesion dimensions & assess sensitivity
Excavate
Apply ‘conditioner’ for up to 20 seconds

...it’s sour, keep it off the tongue

...then rinse with AWS for 5 sec, blot dry
Fill from the bottom & back out
Use press-finger technique to level the ‘over-fill’

Remove excess GIC with explorer and have patient close into maximum intercuspalation
At gel-stage of setting cement can be carved. Start with occlusal embrasures. Cervical embrasures can be shaped using Reach or Glide dental floss.
Polish at LESS THAN prophy cup speed (3000 RPM vs 1000 RPM)
Completed Class II ITR
-no anesthetic
-ART prep technique
-matrixless placement
-functionally formed occlusion
-polished 3 min after placed
Spoon excavator

“bug poop scooper”
Yellow silicone polishers are less abrasive (finer) than green.
Light cure
15 seconds
Class II ITR shown 18 months after placed
Fuji Triage (coral color, or available in contrast white) indicates this is a provisional restoration
HV GIC : Sealant placement

“Press-finger” placement
Butler Gum
Paste-free prophy cup cleans tooth
Apply conditioner for up to 20 seconds
Press-finger placement technique
G Coat+ applied, light cured after occlusion verification and polish.
GIC sealant retention, protection against caries & ability to bond in presence of moisture well established.

but, can GIC sealants modify the oral environment?

......or, is their effect simply that of blocking the fissure & potentially remineralizing the tooth?
When caries extends into dentin, tooth preparation is required!
Press-finger placement
How much caries is too much to leave behind?
Spoon excavator does not ‘ring’
Definitive Restorative Care vs Palliative Treatment

- Is the cavosurface margin clean & sound?
- Does the excavator ‘ring’ against dentin?
- Has sufficient removal of caries-affected dentin been accomplished for esthetics?
- Could you visually assess lateral extent of caries at the DEJ?
- Significantly undermined, thin layers of enamel on functioning surfaces should be removed
Petroleum jelly or Cocoa Butter coated gloved finger: press finger placement technique