Intracoronal Bleaching of Endodontically Treated Teeth

What are your trusted techniques for discolored teeth treated with endo?

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Post: 1 of 38

Does anyone have a favorite technique for this? Two patients of mine have a central incisor that has had endo done. These centrals are in perfect condition except for discolored (darkened) due to endo. The patients do not want crowns or veneers. ■

AUG 20 2006

drbean
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Post: 2 of 38

I've found that the only predictable approach is a layer of porcelain on the facial aspect of the tooth. Maybe check into the no-prep style of laminates. I'm not sure how predictable or long-lasting they are, but their opacity would be a question. ■ Jackson

AUG 20 2006

charlie22
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Post: 3 of 38

I've done fine on this by just putting some Superoxol in the access and warming the tooth with a thing made for the purpose by, I think, Brasseler. It's a sort of a beaver-tail soldering iron. I put it on the facial surface; about five minutes and it was done. Years ago I did walking bleach a few times, and that worked too. Takes a few days. Of course you have to get all of the composite off of the internal surfaces of the access. The H2O2 can't work through a plastic coating. Since you probably don't have one of those tooth-heating gizmos, something like a 7A wax spatula should work. In all I think I've done this two dozen times, and I don't remember it ever not working. ■

AUG 21 2006

flyfishdr
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I would do as Charlie says. Make sure you seal the root canal and root dentin with a bonded composite before you bleach. If you don’t, you can get resorption and then you will sure wish you did as Dr. Bean said. Incidentally you don’t have to heat the Superoxol. It just takes a bit longer. ■

AUG 21 2006

kennyt77
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Remove 2mm GP and seal with flowable resin or a cement; inject some home bleach with cotton pellet and cavitate and change every other week. ■

AUG 21 2006

Mike Hatcher
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Post: 6 of 38

I do not think that we should still use Superoxol. I’ve seen too many cases with external root resorption. I was told by my mentors in my one year AEGD that sodium perborate seems to cause less external resorption. Also, I would use a glass ionomer to seal the canals and not composite. The sodium perborate will take longer to bleach, but I think that it’s worth it in the long run. Typically, after sealing the orifices, we place the Na perborate (mixed with sterile saline) and have a follow up in two weeks. Continue until the desired value is reached. Actually, I try to talk my patients into bleaching them a little more, because

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these teeth will get a little darker over the next few months…
Hope this helps. ■ Mike Hatcher  ■

Mike, the Superoxol is fine – if you seal it. If it is not sealed you shouldn’t use it. You will get resorption as you say. The root dentin must be sealed, as with the root canal – then you’re okay the way Charlie recommends. ■

Dr. Van Haywood is an expert on bleaching and recommends carbamide peroxide, cotton pellet, cavit. ■

Just finished Barghi’s course on veneers but he went over his technique for this and showed great results. I have done one (#9) since and the patient was very pleased. Barghi removes the gutta percha above the CEJ, seals it with composite or a glass ionomer and then places Opalescence Xtra Boost into the chamber and on the buccal surface for 15 minute sessions as if it were chairside bleaching. Hope this helps. ■

If you’re going to internally bleach a tooth, patients should give thought to their overall color. If they’ve ever thought about bleaching, now is the time, before the internal bleaching of the endo tooth.

So if you’re going to bleach, such as deep bleaching and internally bleach, how do you approach it? First comes the overall bleaching. You do not want to do anything to that endo tooth externally that is different than the surrounding teeth. What you will find is that the dark endo tooth will catch up in color.

Here’s an example:

The patient might be happy with this, or might want to go further with internal bleaching. After the deep bleaching is done, it’s time to start working on the internal bleaching, if the patient still wants to. But I’d wait about three weeks or so to let the color stabilize.

And yes, seal is important. You want your seal at a level that will seal any tubules that exit the root subgingivally (not just sub-osseous – your external resorption can occur underneath the gingival margin as well as under the bone). So think about the direction of the dentin tubules. Going outward from the pulp, they travel in a slightly coronal direction. So your seal really can be slightly apical to the gingival margin.

Glass ionomer is the way to go. The bleaches penetrate incredibly well. So if you don’t have an impeccable seal, the bleach will go right past the seal. Composite goes through poly-
merization shrinkage, so you need a very good dentin bond. And if you do a dentin bond, then it’s going to get on all the other dentin in the chamber and possibly prevent the bleach from getting into the tooth. So you’d have to remove a layer of dentin everywhere in the chamber after you place your composite seal.

Glass ionomer, on the other hand, does not go through shrinkage, but instead actually expands slightly. And it is self-adhesive to the dentin, so you’ll typically get a very good seal without all the bother of the dentin bonding agent getting everywhere in the chamber.

As far as what of the various techniques to use – pretty much, they all work. Just depends on what you’re looking for.

But if you’re going to do it right, you’re again dealing with the scenario of having to let the color stabilize. So you have to sort of titrate the color over time to get right where you want, and it will take a while for the color to stabilize after all of the bleaching materials are removed from the chamber.

Another thing to think about is oxygen inhibition. We all know that composites will not cure on the surface in the presence of oxygen. In fact, we use this to our advantage when we layer composites, because this facilitates the fusion of one layer to the next but, if you’ve recently bleached the internal dentin of the tooth, then the dentin is saturated with oxygen, and it does take some time for all the excess oxygen to dissipate. If you were to try to bond a core into the tooth – seal it off permanently with composite – while there is still oxygen within the dentin, this will lessen your bond to dentin because of the oxygen inhibition that
Lenny, I’m in the Naval Dental Corps serving with the Fleet Marine Force in Okinawa, Japan. I’ve been here for two years and will heading back to the states in summer 2007.

I find a lot of “dead” teeth in the military that have darkened over the years. In the Navy we use five-year panoramic radiographs to screen apical anatomy and panos don’t always give you the sharpest image. Most of our patients are young males who are trained to pull triggers and fight (a lot of testosterone). This demographic is at a higher risk for traumatic tooth injuries. And since we’re using mainly panos to screen, it isn’t uncommon to see a sailor or Marine for an exam who has a slightly (or obviously) darker central incisor that has no response to cold and EPT (the PA usually, depending on the patient’s age when the injury occurred and the pulpal response, will show an abnormally enlarged canal, or a calcified canal, or some combination or resorptive process). They usually don’t recall specific trauma to the tooth. It is a tough call whether to do endodontic therapy on an asymptomatic non-vital tooth.

I usually opt to do the endodontic treatment and follow it with intracoronal bleach. We don’t have to charge the patient for the RCT. But I can imagine that it would be a tough “sell” for the average person. If you can treat the tooth then at least you have access to the canal system – otherwise the chamber and canal may completely calcify and if pathology does arise on the tooth, you are at a disadvantage. And with access to the canal system you can bleach the tooth internally. I’ve had a number of fair to great bleaching results that I botched by filling the access with B1 composite – it’s just not natural.

But every time I treat an asymptomatic traumatically devitalized tooth I always have this fear in the back of my mind that the tooth might become symptomatic down the road and the patient will think, “That jerk dentist – I didn’t have a problem with this tooth until he messed with it.” However, anytime a pulp is non-vital, I think you are justified in treating it.

What other opinions (anecdotal or otherwise) do other dentists have (general dentists and endodontists)? What do you do with that asymptomatic non-vital tooth? And how do you explain it to the patient? ■ Scott