Why Core Build-Ups and Provisionals?


As a periodontist, one could ask, why do I care so much about restorative and not just surgery? There is no way possible when doing a perio/restorative case to correctly carry out the necessary surgical procedure without core build-ups and provisionals. The pictures below are self explanatory.


Good cases Danny. I also ask my referring dentists to do their build-ups and temporize their cases before I see them for crown lengthening, for the reasons that you posted here, and previously. By them doing this, I get a better idea of where the final crown margin will be. On cases where they are unsure if the tooth can be saved, we do a consultation before the preparation and build-up is done, so that the patient does not waste their money on a tooth that can’t be saved. Occasionally, I will do a CL [crown lengthening] before the build-up is done if a root canal is required, so that they have some tooth structure to clamp to. This is very rare however. Thanks for pointing out that pre-surgical restorative work is important to us periodontists. If everything is done in order, and properly, it is a win-win situation for us, the patients, and the restorative doctors.
This is great...but consider the situation for the restorative dentist where crown lengthening will often be necessary. For example, a patient presents with a huge amalgam with recurrent decay; as in this case:

This was a try-in for the crown on #20. Obviously the margins are unacceptable, and this was NOT cemented. The story behind this was: #20 had a huge thirty-year-old MOD amalgam restoration, and the patient came in after the buccal cusp fractured off. #18 and 19 also have huge failing amalgams. Her concern was the tooth that broke. The fracture extended about 1 mm subgingival, but recurrent decay was also present. The need for possible crown-lengthening was discussed prior to prepping #20. During the prep appointment, the extent of the decay and fracture put me WAY subgingival, as you can see. At this point, I should have immediately referred for crown lengthening on this tooth prior to taking a final impression (which didn’t turn out too well as you can see, my lab couldn’t read it)—but live and learn. I didn’t and impressed anyhow. Crown came back as is, and now I’m referring for CL [crown lengthening] prior to the final crown. But look at #19, this one’s going to be trouble as well. My only worry here with #19, Danny, is trying to do the build-up and temporize prior to the crown lengthening by my periodontist is: Can I get adequate isolation to bond in my build-up way down there, when I know I’m going to be that far subgingival? Isolation for the bonding procedure is my concern.

What do you think?


…Worst-case scenario: Take out all the fillings and cement provisional with Durelon. There is no way humanly possible for any periodontist to do a surgical procedure around those restorations and not have it fail.

Jon, talk comprehensive care. Tell the patient why doing a sextant of restorative is better than one tooth at a time. This will allow you to remove all decay and old restorations, and attempt cores. If not possible, place IRM and make a temp cemented with Durelon or Tylok. This case would be an absolute walk in the park for root re-shaping made to order, but vertical access is necessary, and the only way to get that is with temps.

Hope your periodontist does root re-shaping because it is the only way to go with old restorative.


Jon: I’ve taken Strupp’s course on this, with pictures of his and Danny’s work.

Absolutely beautiful. You clean out all the goop; do a temporary build-up with Durelon, let it harden, prep the tooth for a provisional, and send it to the periodontist for CL [crown lengthening]. He takes off provisional, does the surgery, and replaces provisional. You let it heal, then do a final BU [build-up], prep, and impression with the margins in the right place. Works great!


My thoughts exactly. Danny makes an excellent point about the impossibility of knowing where decay and/or margins are going to end, and also the need for access in these procedures. It’s been a while since anyone has sent me a case that was not built-up and provisionalized, but I vividly remember the last time someone did—specifically, I remember cursing under my breath as I prepped the tooth to get access!

In Jon’s case, I wouldn’t want to touch #20 until I was absolutely sure that #18 and #19 weren’t going to need treatment as well.

Dear Jon: I grew up in New Haven—close to you and I now practice in Manhattan. You will be amazed at how many people will accept quadrant care—when you present it, explain the reasons, and stand by your conviction. It is rare for them to say no!


A protocol for post surgery:
1. Periodontist sees patient for the first three weeks only for polishing and desensitization.
4. Week 4, restorative dentist relines or remakes temps. No re-margination and temps must be left 1 mm short of tissue to allow for continued BW [biological width] growth in a coronal direction.
5. Week 6, periodontist checks tissue to see if touch-up surgery is necessary and checks temps to make sure space remains between temps and tissue. Desensitization, if necessary.
6. Week 10, periodontist checks tissue to make sure healthy.
7. Week 12-14, final impressions.

I want to make a bold statement—Look at Jon’s x-rays. What is missing? Virtually no periodontal disease. This case is made for root re-shaping first, after cores and temps have been placed. Then see if any osseous is necessary. Remove the old margins first! I have shown several cases that the x-rays would have looked the same with minimal osseous removal.


Danny, this is great info for the restorative dentist that is striving for ideal care and has a great periodontist that is on the same page. Jon’s case brings up a good topic to discuss here...actually several good topics: When there is caries or an old, failing restoration (amalgam for this instance) that is very close or at the BW, and upon removal of the caries or failing restoration and there is a large defect in the root surface that cannot be shaped away, bone removal and/or ortho extrusion would probably be indicated.

If, upon removal of the caries or old amalgam, there is minimal root irregularity; root re-shaping would be a great alternative to traditional resective crown lengthening. In this instance the root re-shaping would effectively remove the old margin and allow a “higher” margin for the definitive restoration.

What is your feeling about materials such as Geristore to “restore” the more apical, gross irregularities, smooth and polish the root surface and “cemental graft,” and place the definitive restorative margin much further away from the BW zone? Hopefully supra-gingival? How about the case where bone removal would open a furcation or require a good bit of bone removal from the adjacent tooth or teeth? Great topic!


Geristore makes sense when there is a significant problem down on the root. External resorption per say. Big problem however, you must get a dry, decontaminated field. That is not always so easy. I try never to jeopardize adjacent teeth or furcations! That is why I do root re-shaping!


Dan, much appreciation for your tireless effort and generous sharing of information. My challenge as a periodontist is almost a catch twenty-two. Many times the restorative dentist isn’t willing to attempt a core build-up until I give him or her more crown length.

I’ve said for years that ceramic crowns were the best thing to ever happen for periodontists, I just couldn’t figure out how to make it work predictably. With all your coaching, I have a clear methodology. I’m hoping to find my referring dentists receptive to me advising on restorative technique. The potential is exciting because I work with an excellent group of dentists. I’ve run into some defeatism about the increased cost from the dentists. So far, the patients have been fairly willing.

I’m hoping I can convince you to teach a course in the northeast (PA, NJ, or NY region). I’m also pro-
moting Bill Strupp’s course in October among the GPs. Perhaps we can generate enough enthusiasm among Townies to draft you for a northeast regional course.

**Dr. Bob W. Deason | Total Posts: 1,769 | Member Since: 4/14/2000 | Location: Jacksonville, FL | Posted: 6/10/2005**

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Danny, example: Radiograph shows caries apical to a DO amalgam on #14 that is very close to bone. You remove the failing amalgam and caries and you are in the BW. There is a large defect in the distal where the old amalgam was and where you removed the caries. No way to root shape and have anything close to a normal root contour, not to mention the gaping hole in the tooth. Resective crown lengthening would open the distal tri-furcation. What would you recommend?


You know, a magician, I am not. So, I probably would have to determine the adjacent tooth. Implant? Interestingly, a lot of decay can be removed by re-shaping, but without seeing the case and from your description, I may have to recommend extraction-bridge or implant. I do not damage adjacent teeth. That is why I love root re-shaping. Far less osseous is undertaken.

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