

Are Microscopes Only For Endo?

Glenn van As | Total Posts: 1,829 | Member Since: 4/8/2002 | Location: Deep Cove, BC, Canada | Posted: 7/5/2005 11:47:30 PM | Post 1 of 22



Hi folks: I was at work today working on this second upper right molar which needed a crown prep. I had used the laser for the troughing, and when I bumped up the magnification, I looked at the margin and thought, "Hmm...would I have seen that at low magnification?" Well, I hadn't. The calculus was easily flicked off the margin, but if I hadn't seen it there would have been a faulty margin placement. It's a little thing, but I intend over the next little while to show a few things where the microscope helped me a little during a procedure outside of endo....



senor | Total Posts: 1,061 | Member Since: 12/26/2001 | Posted: 7/6/2005 5:26:09 AM | Post 3 of 22

Glenn, this looks so obvious in these photos because they are so clear, but people need to understand actually how difficult it is to see calculus on a tooth like this without a microscope. I find it to some degree on every crown prep I do.

Matt Brink | Total Posts: 1,023 | Member Since: 4/28/2004 | Location: Wheaton, IL | Posted: 7/6/2005 6:10:55 AM | Post 4 of 22



I agree with you guys here. I wonder how many faulty margins I placed before the scope due to calculus. How about a small flash of enamel that is left at the margin after a crown prep? Do you guys ever find that? I do. It is really easy to see and remove though. Glenn, do you use the methylene blue on every case? It sure shows up a lot with you.

Glenn van As | Total Posts: 1,829 | Member Since: 4/8/2002 | Location: Deep Cove, BC, Canada | Posted: 7/6/2005 6:48:12 AM | Post 5 of 22



First off, Senor and Matt...thanks.
 Second off, I think that as I get older and more familiar with the scope I am trying to find things that are difficult to see at low magnification. Things I might have missed with only my loupes. The ergonomic benefit and the documentation benefit are by now something that I take for granted.
 As for the margins of crowns, Senor sure has some nice photos of loose enamel rods. I know that one of the things I find the scope so beneficial for is margin placement. Is it on composite, is it on tooth etc., and now that I look, I realize how many times there is calculus on the margin, despite our pretty good hygiene department, and despite our best efforts to instruct our patients on OH [oral hygiene].
 Matt, I do use the methylene blue on most cracks to show it up. I realized from a case I did last week that it doesn't show up well at 2.5x power, but at 10x power and above it really helps with the documentation of the cracks. I get mine from Vista and they come in individually packaged unidose containers.
 I will post another case in a minute from yesterday.

smluger1 | Stefan Luger | Microscope Consultant and Trainer | Total Posts: 484 | Member Since: 4/4/2003 | Location: Baltimore, MD | Posted: 7/6/2005 8:41:03 AM | Post 7 of 22

Glenn, the question shouldn't be, should I get a scope, the question should be asked, why don't I already have a scope? Your documentation is absolutely spectacular.
 Sometimes, it's so frustrating to me attempting to open the eyes and minds of those who don't use high power loupes or scopes, and can't or don't want to comprehend the benefits. To me, it's all in the name of better patient care, more predictable outcomes, body saving ergonomics, not only for the dentist but also the assistant, and along with the imaging capabilities, enormous communication advantages.

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The most fulfilling part in this process is the thanks I receive after I have installed a scope and the dentist reports the practice changing paradigm shifts that take place. Almost universally they report they should have done it years ago.

Well done Glenn. Thanks to you and others like you, the word is getting out.

Glenn van As | Total Posts: 1,829 | Member Since: 4/8/2002 | Location: Deep Cove, BC, Canada | Posted: 7/6/2005 7:52:20 PM | Post 11, 17, and 18 of 22



Back from another day at work...first off thanks to Stefan, Matt, and Senor for their comments. I don't necessarily think that a scope is needed for everyone in practice. For some the learning curve, the ability to slow down and see more and treat more precisely doesn't fit the scope (pun intended) of their practice. You know Maury taught me this when I first came onto Dentaltown. In a way, I do miss his jab and run comments against anything with technology in them. Tim (extractor) also felt that way, as do a great deal many others. I also discovered that if someone likes HMO and PPO, where the name of the game is speed and efficiency...quantity of patients and procedures, then a scope is tough to implement. If you are running between seven ops, with four assistants, and three hygienists, plugging amalgams with your thumb...it's tough to slow down.

I have found for me that the best days are those in which I see fewer patients and do more on them. Those are the most productive and fun days. The scope has allowed me to differentiate my practice (it's still evolving and may soon change drastically, but more on that later) and I have so many patients now that I have to figure an exit strategy to deal with it.

Mark Friedman, who is a wonderful clinician, a great lecturer on veneers and esthetics, and an all round gentleman from southern California told me years ago that not as many dentists cared about clinical excellence, as compared to those that cared about either improving the bottom line only without increasing overhead. He mentioned that a better angle would be the ergonomic improvements in using the scope, as compared to the improvement in precision possible. I was disheartened to think that he felt so few dentists cared about "better patient care" and "predictable outcomes," but concerned themselves only with efficiency and doing more procedures faster, etc.

I enjoy dentistry for the most part, (oh sure, I have my days and yesterday was one of them) but the scope has allowed me to handle difficult cases easier, it has made me enjoy what I do predictably with less toil to my body, and greater satisfaction with the end result. If someone else gets spurned on by photos or what I am doing, then that is wonderful, but to be honest it's my way of putting back into the community.

It was pretty darn lonely here on the DT [Dentaltown.com] microscope section when I asked Howard to moderate a board on magnification way back when, and it is very rewarding to see a few lonely people here routinely, and to see that slowly the concept of microscopes for general practice has gone from the eccentric to the slightly eccentric, but I will allow you the grace to do what you are doing. Who knows what it will be when certain schools start teaching the concept to undergraduate students like some dental schools are doing or planning on doing (Penn, U of Wash, and a few others I can't quite divulge yet)....

I will say that I have been roundly criticized by some certain groups for trying to bring microscopic dentistry to DT, as some feel that this is a group of clinicians not focused on the development of niche practices focusing on clinical excellence.

I have found that this is not the case, many here are intrigued, ask questions and the lurkers on these posts always get up into the several hundreds before the viewing dies down. It's just my way of trying through a coffee book type approach to have people say, "HUH...what the heck."

If they stop and notice the pics, and ask "how"...then my job is done.

Senor, my friend if you are still with me after my rambling, I guess at 44 I start to think about what I want to leave behind when I retire (my dad retired at 77 from dentistry last week) and I hope that a few of these cases get people to say, "Hey...that looks interesting." Your kind remarks make the putting together of them all worthwhile.

As for the SL [slim line] tips, I run them as high as I can on my mini-endo unit. They open up the enamel well, but on soft decay I need a round bur, spoon, or laser. It's tough to get into some of these preps, so I just used the SL tips as high as they will go with some water to open up the enamel a bit.

I agree with the flash and loose, sharp enamel rods. I know that MANY have seen Senor's photos of his preps (way better than mine) and remarked on the preciseness of them and I know it's the attention to the details, like flash removal with BUC-1 that makes them stand out.

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As for trying in crowns:

1. Try in [the] crown and first adjust [the] contacts. Gold crowns lightly sandblast interproximals and a small shiny spot appears on the interproximal where it is high. On porcelain crowns I almost always can see where the Glide floss leaves some wax on the interproximal and adjust there at higher magnifications. I also have taken floss and ran articulating ribbon on it to get it red or used Occlude on it and flossed the interproximals, and gotten a little red mark where the contact is tight.
2. Almost always the interproximal reduction leads to the crown going to place. No need for an explorer, just check margins with the scope at 10x magnification or more and you can visually see the crown go into place. If it is still off when the interproximal is adjusted properly, look for a small bubble on the casting (gold or PFM internal aspect) to reduce. I have had quite a few little blips of metal on the casting prevent seating.
3. Then the occlusion which is beautiful with the scope...no ruining the occlusion. Just adjust the marks. I use two layers of articulating ribbon which is the red stuff that looks like canvas, as opposed to paper. I always know when I am close because the crown gets not just red marks, but texture to the marks (texture of the ribbon on the marks) and then I know I am close. I know people will laugh and think, "oh sure," but I will show you what a crown very close to right in the bit feels like.

It's amazing how the scope helps reduce the adjustment of the crowns when it goes into place. No feeling if your margin is proper, you can visually see it go down.

Hope that helps, I have tons of photos of this if you want to see.

[Posted: 7/6/2005 10:19:28 PM]

Alright, here is the case I did just before coming home. This patient was having no pain, but when I saw the tooth I thought..."uh-oh."

Huge decay under an old amalgam with recurrent decay on the mesial marginal ridge. Opened it up and yikes, decay everywhere. Patient was surprised. I took lots of pictures to show him and explained the proximity to pulp. Patient wanted to try a large restoration.

I used the diode laser at 1.0 W CW to remove tissue under the matrix band.

I then used the Er:YAG laser at caries settings to disinfect the dentin and placed glass ionomer as a base overtop.

Finally, I completed the build-up in resin and advised the patient we will review the tooth in six weeks. I took post-op PA and told him that I doubt it will survive without endo, but in this case I couldn't see any exposure, and dragging a DG 16 felt no opening or any exposure.

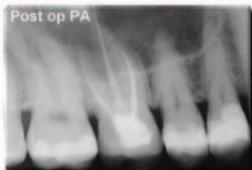
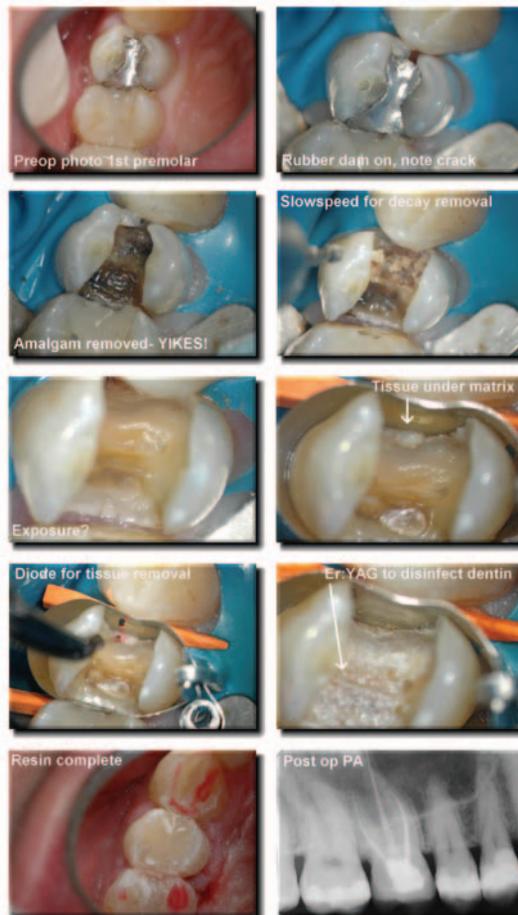
The patient's tooth tested vital before we started, and yet on the PA, to me, it looks like it may be widening of the PDL. Time will tell, and if it gets sensitive I told him he will need endo and a crown.

If he needs a crown, I would do the endo before I did the crown.

Why did I not do the endo here?

1. Running out of time.
2. Patient had no symptoms.
3. No visual or tactile signs of exposure.

Just some food for thought...on the scope for deep decay in two different cases.



[Posted: 7/8/2005 11:06:45 PM]

OK, here is one that I did yesterday where the scope helped me with two things in one quadrant.

1. It helped me to evaluate and document a severely cracked molar on the lower right (first molar), and I was able to document the crack and show the patient where the problem was and to show the dental plan why a smallish occlusal and buccal amalgam in a tooth needed to be replaced with a crown despite no decay.
2. The premolar had occlusal decay that I was able to minimally treat with a round 1/16th high speed bur (Brasseler 003), and in addition get a microbrush down the small prep and restore it with flowable (PRR) through a 27.5 gauge canula connected to the flowable made by Vista Dental. Larss makes nice small microbrushes that I didn't use here, but they are good for these small preps. The microscope helped me diagnose the case (along with the DIAGNOdent to confirm decay at 42 on the scale) and it helped me to minimally treat the case both from the prep standpoint and from the restoration standpoint.

Laser troughing was kept to a minimum by using the scope at high magnification to see exactly where I was troughing, and I was able to use a setting of 0.9 watts in pulsed mode to keep the char down.

It's not the be all and end all, but another attempt to show the merits of the scope for typical bread and butter type dentistry. ...



Find it online

This is just a sample of what's available on the Dentaltown.com message boards. To read the entire thread, go online to: <http://www.dentaltown.com/idealbb/view.asp?topicID=52520>