Could someone who does a lot of veneers please post his/her detailed cementation sequence? This is for my wife. She's cementing an eight-unit case on Friday, but hasn't done one for quite a few years and wanted me to ask my “geek” friends for some help!

We're up to knowledge as far as etching and silanating goes. We're not sure what the best technique to use is...i.e., do you cement everything at once? Do you insert mylar strips in between the teeth, while you etch and bond? Do you keep the strips in during the actual cementing? Do you not even bother with separating strips? Do you tack the veneers? What is best for clean up? Etc....you catch my drift...we are veneer novices! Thanks for your help.

Here is how I do it. When I went to see Sam and Tarun, they both do it differently, but here is how I like to do it:
1. Try-in and use water on the veneers to hold them in.
2. Anesthesia and RD [rubber dam].
3. Silane, etch, bonding agent, and cure.
4. Now, is where it varies from one to another. Some will seat all of the veneers at one time and others centrals, then laterals, canines, etc. It also depends on if the margins are sub- or supragingival. If they are supra-, then cementation is a snap. If they are sub, then you need to be careful. If you seat the veneer all the way, you may get fluid back into the veneer due to hydrostatic pressure, or blood which will discolor your veneer (Sam told me this, thanks).
5a. If they are supra-, place two centrals with cement and tack them into place and flick off any that may be on the adjacent teeth. Next, to the lateral, same way a quick hit of light or use a tacking tip, etc. until they are all in. Then go back and really cure them all. Clean up as much as you can today, and do not worry if some are slightly bonded together.
5b. If they are sub-, then you need to place the veneer supra-, quick-cure, then seat fully and quick-cure again. Somehow Sam said this will not allow fluid into the veneer. You could also pack cord and then you can do it like they were supra-.
6. Have the patient in next day for final clean up. By now they have set up, and since they have functioned on them, the interproximal cement is most likely loose and ready to be flossed out. If not, CeriSaw and final polish.

I do not polish the gingival margins, they are very thin so I leave them alone.

John, let me clarify some points a bit about the way I cement them.
[In response to post by Drjcann]: “3. Silane, etch, bonding agent, and cure.”
Actually, it's etch the veneers with phosphoric acid and rinse. This will get rid of the organic debris that may be present on the veneers from trying them in. We were told by David French of Burbank Dental to not use HF [hydrofluoric] acid, as the lab will do this for you and re-etching with HF may actually weaken your bond. Then, apply bonding agent and thin out. Finally, cure the bonding agent on the veneers. Your veneers are now ready.

Here are the veneers being prepared by my assistant. And yes, that is HF acid that you see. I don't do that anymore on the advice of David French and Burbank Dental.
Now, get your teeth ready. Etch each tooth for no more than 10-15 seconds. Do it three teeth at a time to prevent over etching. Rinse the etch. Apply your bonding agent. My choice for all indirect restorations is OptiBond Solo Plus. Not the newest, but has worked very well for me with minimal problems. It’s very thick, so make sure you thin it out. Cure the bonding agent on the teeth. Now, both veneers and teeth are ready. Rubber dam is in place and teeth are being etched three at a time.

[In response to post by Drlcann]: “…Some will seat all of the veneers at one time and others centrals, then laterals, canines, etc….”

I prefer to seat my veneers all at once. Most of the time, when I prep, I pack cord and my margins are usually about .5 mm subgingival. This allows for excellent esthetics. I place all the veneers on the teeth and seat about 90%. I do not seat all the way. I clean as much cement as possible, and then two-at-a-time seat the veneers all the way. As I seat each pair, my assistant tacks them in place. Once they are tacked they won’t move. I clean a bit more cement, but don’t go crazy with the clean up.

Bonding agent has been placed on the teeth and veneers are seated on the teeth starting with the centrals and working laterally.

All the veneers are seated about 90% and excess is cleaned.

After excess is cleaned, seat the veneers two at a time, starting with the centrals again and hold firmly. At this point, my assistant tacks the two veneers in place. My hands are covering the other restorations so that the cement does not cure while they are not seated completely.

[In response to post by Drlcann]: “…if they are supra…”

If your preps are supra-, you can seat them all the way because the tissue won’t get in the way and push your veneers when you release pressure. As the tissue unseats the veneers, there is a possibility that the sulcular fluid may get sucked between the veneer and tooth causing contamination.

[In response to post by Drlcann]: “…if they are sub…”

I agree. If you have some bonded contacts, not the end of the world. Don’t panic. If they are sub-, meaning that your prep is subgingival, seat the veneer about 90%: clean cement, seat all the way, hold and tack in place. If you seat all the way, let go, the tissue may unseat the veneer and then there may be fluid contamination. If your preps are supra-, seat all the way without worrying. And yes, pack cord if needed.

A # 12 scalpel works great to remove the interproximal cement. CeriSaw from Den-Mat is indispensible in opening bonded contacts.

I usually do a one-week check up, and open contacts if needed. CeriSaw is awesome for this.
Here is the final case. Tissue health is excellent, margins undetectable. Patient and doctor happy. 10 maxillary teeth were treated. All teeth visible in maxillary are veneers.

[In response to post by Drjcann]: “I do not polish the gingival margins…”

Agreed. Don’t remove the glaze that the lab puts on. If your margins are clean, the excess will usually flick right off. No rotary needed here. Don’t destroy the porcelain if you don’t need to.


Thanks for the responses guys. Sam, thanks so much for taking the time in posting those pictures...definitely helps with the visualization of the technique.

Sam, you aren’t silanating the veneers? That’s interesting. I’ve heard of not using HF etch because they’ve already had that done at the lab, but I thought it was still standard protocol to apply silane after the phosphoric acid has been rinsed off. Then after letting the silane sit and evaporate over a minute you would then apply bonding agent. I guess silane isn’t required then?

socalsam | Total Posts: 12,129 | Member Since: 12/13/2000 | Location: Tarzana, CA | Posted: 1/14/2004 10:01:10 PM | Post 5 of 68

Diceman, sorry, I do use silane. I just didn’t post the photo. I have heard some say that they don’t use silane, as it does not add any bond strength. But I always silane.

doctored | Total Posts: 5,321 | Member Since: 9/21/2002 | Location: Marin County, CA | Posted: 1/14/2004 10:38:15 PM | Post 7 of 68

Without a doubt, the most difficult part of veneer procedures is the bonding. If you don’t think so, you are missing the criteria for successful long-term results. To be able to make photos of the procedure demonstrates experience and confidence. Sam’s technique has been captured photographically for the rest of us to learn from. I basically use the same techniques, but I have never had the [nerve] to record the procedure on film due to the critical timing that is required during these bonding procedures. I think I hold my breath when the process is initiated. Long-term, great results (not immediate retention) require METICULOUS attention to detail. Contamination by blood, saliva, or crevicular fluid will doom the case in the long term. IMHO [in my honest/humble opinion] the long-term success is either 100 or zero percent. Veneers that are bonded without contamination will remain caries-free and without discoloration longer than we live. I have a few cases that are now 20 years old. Surface cleansing and isolation are paramount to success. Thanks for posting the great photos Sam! I hope you won’t make me feel inadequate if you tell me you find this aspect of a cosmetic case easy.


Mark, I take all my own photos. One of these days I will let my assistant take them, but I am way too anal! Lab for this case is Vincent Devaud Lab. Vincent is a Townie here.

continued on page 20
I have been placing veneers for 20 years. Just finished recalling a large number of patients who have had Cerinate porcelain veneers (one of the earliest systems) placed from 1984-1991 following a very similar procedure described. For the study, which was not formally funded, all supplies and veneers were provided at no cost by Den-Mat. We used the Den-Mat system for placing veneers, so the materials I list will be Den-Mat’s. I am using other products, most work well. The case I posted in the 19.1-year recall of a diastema closure case restoring # 7-10. My procedure used then and that I am still using:

Clean the teeth including the interproximal using a diamond strip (Brasseler Gateway, Axis, Premier CompoStrips, or Den-Mat’s CeriSander). Try-in veneers (all together) with water on the teeth to preview (I don’t like try-in pastes—I use the resin cement as my try-in and will modify as needed. Since I use a light-cure, I am not worried about time or polymerization during the try-in stage). After try-in, clean the internal surface of the veneers (they have already been etched with HF by the lab) with phosphoric acid. This cleans the surface and also acidifies the surface to activate the silane (porcelain primer). Place the ceramic primer for at least 30 seconds (this will enhance the resin bond to the porcelain through chemical adhesion—and studies have shown that the ceramic primer changes the surface energy of the etched porcelain surface to allow the resin to thoroughly wet the surface. Only increases the bond by around 15% but is very important in preventing marginal staining at the interface between resin and veneer. Dry the surface and apply resin adhesive (you don’t need a fifth generation with dentin primer, only unfilled or lightly-filled resin). Place your favorite light-cure cement (for the study I used UltraBond). Now, I am still using UltraBond (lots of flexibility with color and viscosity because it is a mix-mix system)—don’t use the dual-cure UltraBond Plus, you want a light-cure. Other resins that work well include any flowable and RelyX Veneer Cement (3M-ESPE). For most routine cases, Vita shades do the trick—with more complex esthetic cases, use of tints and opaques to provide for more tooth-like appearance can be used. Put the veneer with cement aside (cover and keep away from light). For the teeth: your basic etch, adhesive. For maxillary cases, I place two veneers at a time (start with the two maxillary centrals) for lower cases I place the four incisors at the same time. For matrix separation I use Shimstock (Almore International); Den-Mat packages Shimstock as its Matrix Strips. Place the veneers, fully seating them (after I have them in place, I use the back end of a BendaBrush to gently push the veneers in to place. Clear away excess cement (I dip a brush in adhesive and clear away the excess, and I also take a periog probe to remove the excess). Inspect to be certain the veneers are fully seated and light-cure. Finish and polish, using your fine and ultrafine diamonds (Brasseler ET Diamonds as well as its 8862 fine diamond for gingival margination). To clear the interproximals, many times you need an intraoral saw—the best is the CeriSaw (Den-Mat) an ultrathin stainless-steel saw in a mini-hacksaw handle. No magic, just hard work to achieve great-looking veneers cases.

I also have been doing veneers for a very long time. I have never had a veneer debond with this technique. After trying them on, I etch with phosphoric acid if they are moist, and then silanate the veneers. I then carefully clean the preps with a mixture of chlorhexidine soap and pumice. Following thorough rinsing, I etch all the teeth, and place bonding agent on the preps—NOT the inside of the veneer. (I do not cure the bonding agent now, but wait until the veneers are placed). Then, express the preferred luting agent into each veneer and place them securely on the teeth. It is important not to overload the veneer with cement, but use enough to just cover the internal surface. I also recommend using an alcohol-dampened gauze to help remove the excess extruded cement from the tissue margins and adjacent tooth areas (and it helps keep unwanted resin from sticking to your fingers). This helps with placement and will help keep the veneers from unwanted movement as you apply pressure to the labial of the veneers with the gauze. Following this I use the wave technique to initiate the cure for approx 10 seconds. Following this I use a 12b blade and remove interproximal flash that peels easily off, due to the lessened cure. You can, if careful, go ahead and floss interproximally as well. I then place Oxyguard on the facial margins, as well as incisal of the veneers and begin an indepth cure. Washing the Oxyguard off with copious water, I then start fine removal with the ET Brasseler kit from the lingual and then do further careful removal with the 12b. Do not try to remove flash at the margins with a bur. Final removal of all flash in the contacts can be accomplished with thin serrated strips. Polish with points and cups of choice. Hope this helps. It has worked great for me.
…Ross Nash taught using just silane and no BA [bonding agent]. He said it wasn’t needed. Frank Spear taught to use BA on the veneer without light-curing it. The less the thickness of BA the easier it is to seat. Only thin BA is placed on the teeth and then light-cured.

If you use a volatile BA like P&B NT [Prime & Bond] it may all be evaporated by the time you seat your veneer. This could create increased sensitivity and decrease bond strength. Ask me how I know this. So, I always light-cure the BA on the tooth now.

I love using SEBA [self-etch bonding agent] and wish I could without worry. I just don’t trust them yet. I haven’t heard any speakers relying on them for veneers. I did use SE P&B [self-etch Prime & Bond] for one or two cases. Then, I stopped after talking with Spear. I love using Rely-X for crowns. I don’t see why it can’t be used for veneers. It is dual-cured, but it is very easy to use and has a nice transparent cement. I hope this helps. I’ve tried them all and I’m always evolving. I wonder if lasing the tooth first will increase bond strength. How necessary is glycerin to protect the O2 inh [inhibition] layer? If you light-cure or if you use dual-cure, does the O2 inh layer exist?

teethman77 | Total Posts: 393 | Member Since: 10/13/2002 | Location: Asheville, NC | Posted: 7/26/2004 8:26:01 PM |

I know this is probably answered several times over, but let’s take a quick poll on best veneer cement. I hear a lot about Rely-X. I have always used Variolink, which works great but a lot of steps. I am in the market for a new cement.


Rely-X from 3M is great. It’s light-cured only. Appeal from Ivoclar Vivadent is also very nice.

There are many good cements. Use the ones that you like the consistency and handling of. They all pretty much work well.


After nearly 15 years of researching and using bonding agents for cementation of bonded types of restorations—I offer only the following to the great posts above.

1. If you can’t see through it—you can’t use a light-cured material with success. That’s why they make PANAVIA 21.
2. I believe whole-heartedly that there is only one silane—KHS Technologies individual compules.
3. You can’t prime too much and you can’t over-cure.
4. A definitive finish line makes mine and the laboratory artist’s job easier.
5. All bonding agents will work if you use them correctly.
6. Be consistent and technique-orientated with bonding.
7. Cement as many as you can with one mix without having setting to begin.
8. You don’t need a million colors—transparent, dark yellow, opaque white, bleach shade, and pink (we use Variolink II and Insure Pink opaque).
9. Sometimes having a dual-cure is not bad—see the recent Reality Report.
10. The better your color matching, and the better the lab, the easier your life will be.
11. It’s hard, it’s tiring, but oh so fun to see the result.
12. If you want to excite me show me a single anterior—not an eight or 10 veneer case.
13. I love this job.

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