

Tissue Modification and the Anterior Laminate

By Martin Goldstein, D.M.D. – Wolcott, CT

I've been using electrosurgery several times a week for almost twenty years now. In fact, I've installed surges in every operatory. That way, no matter what I'm doing, I can reach for the e-surge handpiece as easily as I reach for my high-speed.

In the last issue, I wrote a short article for *Parkell Today* explaining how I use my electrosurge to "clarify" posterior margins before impressing. Just a few seconds with a straight wire electrode often lets me skip retraction cord yet still assure a beautifully readable finish line. (See *Parkell Today* – April '04 or www.parkell.com)

In this article, I'm going to show how electrosurgery fits into a cosmetic procedure, and perhaps offer a few hints to make the results more predictable.

According to one recent independent survey¹ approximately half of today's dentists use an electrosurge for soft tissue surgery (vs 53% scalpel and 4% laser.)

I suspect the percentage would have been substantially lower if the survey had asked if they ever use an electrosurge for purely cosmetic cases like this.

That's a shame, because a fine wire electrode allows far more precise control over tissue alteration than a scalpel. In fact, when you want to remove small amounts of tissue purely for cosmetic reasons, there are really only two tools up to the job: the electrosurge and the laser. These are the only devices that permit pressure-free excisions with simultaneous hemostasis. "Pressure-free", because you'd prefer not to distort the tissue as you cut. And "hemostasis" because you must maintain a clear field of vision to constantly evaluate the cosmetic effect of the procedure.

The hand motion for using an e-surge is almost like using a fine-tipped paintbrush - which is particularly appropriate for aesthetic procedures.

Here's what I mean.

Altered passive eruption had produced a gummy asymmetrical smile. (Fig. 1 & 2) Even world-class laminates wouldn't help



Fig. 1

(Fig. 1) Without some tissue contouring, the best laminates in the world wouldn't help this otherwise attractive patient. There are only two instruments that permit tissue modification and impressions at the same appointment.



Fig. 2

this patient if something weren't done about the gum line. Initially, I probe to see how much tissue can be safely removed. I prefer to leave at least 1mm of sulcus.

(Fig. 1) After anesthetizing the patient using Septocaine, I wet the tissue with saliva to improve conductivity. Then I simply trim the tissue using a thin straight wire electrode. First, the left (Fig. 3 & 4) ... then the right (Fig. 5).



Fig. 3



Fig. 4

(Fig. 3) After careful probing to assure an adequate sulcus, I used a fine wire electrode to re-contour the facial tissue of the left central.

I always step on the foot pedal before I touch the tissue to avoid an initial power surge. And I always have my assistant

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Fig. 5



Fig. 6

(Fig. 5) Notice the lack of blood. The entire surgical procedure required just a few additional minutes. (Fig. 6) I like to leave a least a millimeter of sulcus.

ready with the HVE to vacuum up the resultant vapor and odor.

Notice the absence of blood due to the combined effects of the anesthetic and the electrosurge's "cut/coag" mode. The entire procedure for both teeth took about five minutes per side.

I probed the centrals again to confirm the position of the attached gingiva (Fig. 6).

Following tissue contouring, I immediately prepped #6-11 for laminates (Fig. 7), and temporized the teeth (Fig. 8 & 9).

I've found from my own experience that if the preps are immediately temporized and the veneer temps follow the contours that



(Fig. 7) Completed preparations, ready for the impressing. **(Fig. 8)** Pay particular care during temporization, because the contours of the temps will serve as a template for the healing tissue. **(Fig. 9)** The provisional smile.

you've created, the tissue will essentially stay where you put it. The temporary veneers keep the tissue at bay. Needless to say, this warrants meticulous margin finishing prior to dismissing the patient.

So when you do anterior tissue sculpting, pay particular attention to the temps' gingival contour. It will serve as a guide to the healing tissue. (For a detailed laminate temporization procedure, see Goldstein – Parkell Today, May 03 or www.parkell.com)

One week later the provisional laminates were removed and the porcelain laminates were bonded using a combination of Parkell's [Touch&Bond](#) and Cosmedent's Insure.

The patient was pleased with the results (Fig. 10 & 11), and so was I.

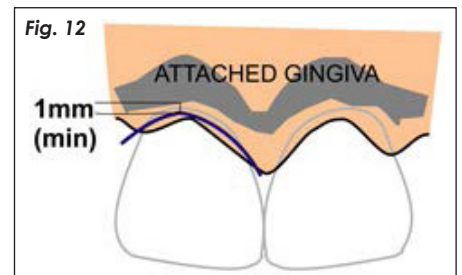
For tissue sculpting, you want to use the thinnest electrode possible. With the surge

set to "cut/coag" (fully rectified - unfiltered), a thin wire generates enough heat to stanch bleeding, but won't produce the kind of lateral heat dispersion that can affect the healing process. Combine the thin electrode with a properly contoured provisional restoration and the gingival contour after healing will be right where you want it.

By the way, even when a shallow sulcus prevents cosmetic crown lengthening, you may be able to adjust the tissue to create a more attractive (if still somewhat gummy) smile. The objective is to produce a more pleasing trigonal shape; that is, a configuration in which the most apical extent of the marginal tissue is slightly distal to the midline of the incisor. (Fig. 12) shows the problem and solution.

If you don't have an electrosurge, get one! You'll be amazed at the number of uses you'll find for it. As I mentioned, I use mine several times a week for clarifying posterior margins, removing tissue tags, gingivectomies, crown exposures, removal of fibromas, lipomas, etc.

And if you already have an electrosurge, start thinking of it as part of your cosmetic armamentarium.



(Figs. 10 & 11) The final laminates. **(Fig. 12)** When you don't have enough free gingiva for an ideal shape and crown lengthening is impossible, you can often improve the appearance with subtle tissue removal.