Utilising laser technology

Obtaining better clinical results and creating better patient experiences

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If your patients are like the majority of our patients, they are always in a rush and seeking the quickest way to accomplish the dentistry they need or desire. We live in a world of instant gratification and everyone is seeking convenience, speed, cost savings and a better end result. It is rare to find a product or device that makes our clinical success easier and more predictable and saves time.

Laser-assisted dentistry offers the clinician all of the above. Today, we are performing old procedures in new ways and obtaining equal or better results in a minimally invasive manner. Who would have thought that procedures such as gingival recontouring, frenectomies and restorative dentistry could even be attempted without local anaesthesia? Today, in the hands of a trained and competent dentist, these procedures are becoming routine and an increasing number of patients are hearing of the positive experiences of their friends who have undergone laser dentistry.

Few dentists will pass up any technology that can differentiate their practice from all the rest and that offers undeniable benefits to their patients. Clinical dental lasers are just that type of technology. I encourage everyone to ask questions and take the time to deliberate the investment, but be open-minded enough to recognise the enormous benefits for your patients and your dental office.

Fig. 1. Pre-op situation.
A 25-year-old patient desired elimination of a “gummy smile” and bulbous areas of her teeth in an effort to obtain a more mature appearance. Orthodontic correction had been completed one year prior to consultation. The patient desired “rock star” white teeth (value) and a new smile to harmonise with her facial features and skin tone. She specifically requested porcelain veneers.
The patient has a beautiful natural smile. The options presented to the patient were: 1) whitening; 2) gingival recontouring and enameoplasty to recontour existing bulbous cervical areas that were of concern to the patient; and 3) porcelain veneers with gingival recontouring and osseous crown lengthening in areas in which biological width would have to be violated in order to obtain correct gingival zenith heights determined during smile design.

Figs. 3a & b: Gingival zeniths are marked and raised with the Waterlase MD Er,Cr:YSGG laser system. Osseous correction is accomplished over teeth #7 to 10 utilising a closed technique to modify the bone architecture between the line angles and not encroaching into the interproximal area.

Fig. 4: Temporary restorations are placed and gingival tissue is evaluated for the desired aesthetic outcome. Once the patient is satisfied with the corrections, the fabrication of the final porcelain restorations proceeds.

Figs. 5a & b: Porcelain restorations prior to try-in and evaluation.
The following is a case I would like to share that illustrates the typical patient seeking cosmetic care in our office. By utilising laser technology, we were able to accomplish a complex treatment in a short period, while obtaining excellent tissue health and a nice cosmetic result that yielded an advocate for our office and for laser technology.

At our first consultation, the patient elected just whitening. One year later, she returned and elected to proceed with the porcelain veneers and laser gingival recontouring and crown lengthening as needed to design the smile she desired.

This case illustrates that our conservative approach to treatment can be achieved by utilising minimally invasive tools such as the Waterlase MD. There are many ways to accomplish any given dental task and no one uses the same bur for every preparation or the same hand instrument for every task. With that in mind, consider the Waterlase MD another tool that can be utilised and added to your clinical “tool-box”. When presented with daily tasks such as crown lengthening and gingival recontouring, remember that there may be many ways to accomplish the same task and today they involve minimally invasive techniques that eliminate scalpel and/or other mechanical methods. A positive patient experience is a powerful tool that you can utilise to expand your practice. It is an exciting time in dentistry and every visit is an opportunity to show our patients the reason that they should be excited as well!

Figs. 6a–d: Final bonded restorations and finial tissue contours four weeks after initial preparation. Note tissue contour stability and health.

Fig. 7: The patient is satisfied that her aesthetic goals were accomplished and pleasantly surprised that a complete solution was possible in such a short period (three weeks).

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