

# LASER: Shaping the future of cosmetic dentistry

**Dr Cohan Rajan is the principal dental surgeon at dental-Spa in central London. Here he tells us about a new development in cosmetic dentistry that he is absolutely passionate about**



When I was a newly qualified dentist back in the Nineties, I was working in a mixed practice in East Dulwich. A well informed patient of mine said that she had heard about a dentist that was providing same day crowns using CAD/CAM. I was unaware of this technology but intrigued.

Two years later, having completed my Masters degree, I was able to finally purchase my CEREC machine from Sirona the German dental company and go on the very intensive training. Since then many of my colleagues have also adopted this fantastic technology to provide our patients with beautiful all-ceramic crowns, inlays and veneers. CEREC restorations also have great track record with the first CEREC restorations having been put in the early Eighties.

Fast forward ten years, and the dental profession is on the cusp of another technological breakthrough, Waterlase MD Laser Dentistry. The MD is the most advanced all tissue laser

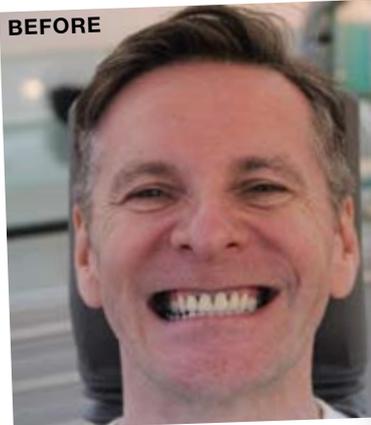
that is produced by a company called Biolase which is based in California.

I have taken the time to attend several symposia and specialist Master classes run by the World Clinical Laser Institute (WCLI) in America and have been enthused by the infectious

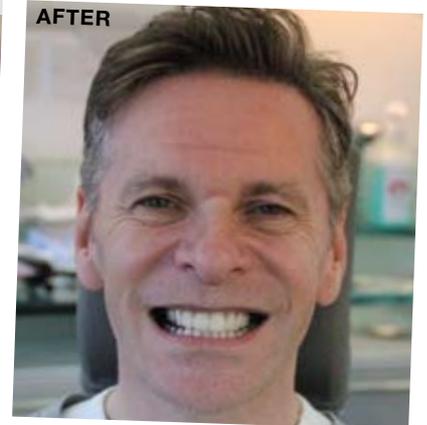
passion that Waterlase MD Dentists have for the benefits it brings to our patients. The Americans have been using this technology for several years now, and I am very excited to be at the forefront of providing Waterlase MD Dentistry here in the UK.

“ **Waterlase MD dentistry is something I feel passionately about and I think it will change the way dentistry is performed** ”

BEFORE



AFTER



### A work in progress

This experience of the patient below helps explain the amazing advancement that Waterlase MD Dentistry brings to my practice. The patient is in his late forties, but had discoloured natural teeth along with very small upper front metal-ceramic crowns. The existing crowns were not straight and were also an unsuitable shape near the gum with black triangles between the teeth, giving him a very ageing appearance that he wanted corrected. Furthermore, when he was smiling he was showing too much gum that was discoloured.

The plan we agreed on was that he would have Deep Bleaching Protocol to bring his natural teeth to their maximum whiteness, followed by some laser assisted crown lengthening and same-day smile makeover replacing the failing upper front four crowns. This was all completed in six hours.

The blue line in image one shows where the gum line was uneven and why we needed to carry out crown lengthening to make the gum line even to achieve a superior aesthetic. Crown lengthening is a surgical procedure where by gum and bone is removed to expose more of the visible crown of the tooth.

### Surgery vs laser

Traditionally, this is done surgically by cutting a flap of gum and then removing the bone with a drill and suturing the gum back together requiring six to twelve weeks of healing before any veneers or crowns can be placed. This is not the most comfortable procedure.

With Waterlase MD Dentistry, I was able to remove the gum to the desired level, using a surgical guide showing what we wanted the final crowns to look



**Image 1. Gum lengthening is needed to achieve the best result**



**Image 2. The gumline has been made more even with no bleeding or scarring**



**Image 3. The final outcome at the one-week review**

like as shown in image two. Note the complete lack of bleeding where the gum has been removed. The required amount of bone was then also removed with the Waterlase MD.

This then allowed me to place four CEREC CAD/CAM cosmetic crowns that were characterized and glazed to be placed as the definitive restorations. Image three shows the patient at a one-week review appointment where we can see the final results.

The benefits of Waterlase dentistry for this patient was that this was a same-day solution versus the traditional surgery which would have required multiple visits, anaesthetic

injections and less predictability.

The reason for the last point is that when a scalpel is used, it is approximately 30 gum cells wide. This triggers a response from the body, making the area inflamed that takes longer to heal and can lead to scarring. The scarring often pulls the gum away from the desired position. With Waterlase MD, approximately eight gum cells are disturbed. Because this is much less traumatic for the body, everything heals quicker because the inflammatory process is not triggered. This means that the likelihood of scarring is minimal, as can be seen from image three.

### Other benefits of laser assisted periodontics

I also use the Waterlase MD to provide laser assisted Deep Pocket Therapy to treat severe gum disease. This again is an alternative to a traditional surgical approach. The Waterlase MD allows for a much better cleaning of the root surface following traditional scaling and this ability to clean the surfaces of the teeth so thoroughly is another amazing benefit of Waterlase MD.

### Welcome to 22nd century cosmetic dentistry

As you can probably tell, Waterlase MD dentistry is something I feel passionately about and I think it will change the way dentistry is performed. I look forward to further advances that allow us to provide better treatment through technology for our patients.

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For more information on Dr Rajan and dental-Spa visit [www.dental-spa.co.uk](http://www.dental-spa.co.uk) or call 020 7631 3199