To be held for the first time in South-East Asia, the seventh CAD/CAM & Computerized Dentistry International Conference in Singapore in October will offer a detailed overview of the latest CAD/CAM technologies that are aimed at helping dentists achieve aesthetic and long-lasting all-ceramic restorations chairside. During a presentation in Cape Town, South Africa, Dental Tribune Asia Pacific had the opportunity to speak with Ivoclar Vivadent’s Dr Michael Dieter, head of the International Center for Dental Education, who will be hosting the lecture theatre together with Jörg Vogt, international CEREC trainer for Sirona.

Dental Tribune Asia Pacific: Dr Dieter, your joint presentation with Mr Vogt in Singapore will be held in form of a lecture theatre. What is behind this concept?

Dr Michael Dieter: Jörg Vogt and I developed this concept two years ago. When the organizer’s managing director, Dr Dobrina Mollova, saw our performance at the sixth CAD/CAM & Computerized Dentistry International Conference in Dubai last year, she named it “a lecture theatre” because of its truly interactive nature. Jörg and I present in continuous dialogue with each other, which makes the lecture more interesting, not only for the audience but also for us.

Additionally, case demonstrations with the CEREC AC will be performed live on stage.

Primarily, our lecture is aimed at dentists who are interested in minimally invasive aesthetic treatment solutions who simply want to get into dental CAD/CAM technology. Our goal is to provide a guideline clinical treatment sequence for predictable treatment using chairside CAD/CAM technology. However, the lecture is also suitable for any dentist who is interested in all-ceramics as a modern restorative treatment option.

From my experience, I can say that many Dentists still have little knowledge of what all-ceramic material they are supposed to use for various clinical situations. With our lecture theatre, we aim to demonstrate the main differences in terms of aesthetics, particularly for use in the anterior dentition, and the physical properties or strength of the various all-ceramic systems.

What do you think the reason is for this lack of knowledge?

The main indications are inlays, onlays, partial crowns, fixed bridges and veneers. In addition, up to four unit posterior bridges are now possible, either as a temporary solution with polymer blocks (e.g. Telio CAD, Ivoclar Vivadent) or as a permanent restoration with a high-strength zirconium dioxide/lithium disilicate material (e.g. IPS e.max CAD-on, Ivoclar Vivadent).

What are the aesthetic limitations of chairside CAD/CAM?

Generally, posterior restorations like inlays, onlays and crowns can be realised with good aesthetic results. With anterior restorations like crowns and veneers, the aesthetic outcome largely depends on the adjacent teeth that we have to match intra-orally. Highly aesthetic colour gradients for CEREC restorations can be achieved with polychromatic blocks (e.g. IPS Empress CAD Multi, Ivoclar Vivadent) or by shading and staining monochromatic lithium disilicate (e.g. IPS e.max CAD, Ivoclar Vivadent).

All this can be carried out by the dentist chairside. If the adjacent teeth show visible internal structures like mamelons, dentists need the support of dental technicians to achieve aesthetic restorations.

...cementation is a very important factor and still underestimated by many dentists...

The central idea is to bond the ceramic by the correct cementation. All these questions will be answered in detail during the lecture.

Many speak of CAD/CAM technologies as the next revolution in dentistry. Do you agree?

I would say that the revolution will continue. I am still fascinated by the materials and the manufacturing process. All-ceramic restorations are not only aesthetically pleasing but also minimally invasive. Therefore, patients benefit not only from better looking teeth, but also from the fact that much less natural tooth substance has to be removed compared to traditional restorative techniques and materials.

The next few years will show what CAD/CAM manufacturers have kept in reserve, both chairside and labside. Material manufacturers like Ivoclar Vivadent will continue to develop highly aesthetic and user-friendly all-ceramic systems that aim to further reduce the minimum material thickness—requiring even less invasive tooth preparations—to the benefit of the patient.

Thank you very much for this interview.

Dr Michael Dieter

An interview with Dr Michael Dieter, Ivoclar Vivadent, Liechtenstein