An interview with Dr Eduardo Mahn, Chile, on all-ceramic restorations

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Many young dentists are not familiar with working with modern ceramics when they start their careers.

What are the reasons for these errors?

It is important that clinicians always consider the biological aspects of treatment. Many errors are related to violation of the biological width, for example. Other commonly underestimated aspects are the effort and precision needed for oral rehabilitation. The clinical success of crowns or veneers depends largely on an accurate diagnosis, proper treatment selection, precise preparation and impression, lab work and clean cementation.

There are plenty of resin cements available on the market. What should clinicians consider when choosing and applying these materials?

There are many new ceramics from companies that will like experience in the production of dental materials and, therefore, clinicians can have trust in established products. It is also important to understand how these chemistry works in order to decide which material is best suited for specific indications.

My webinar is going offer some guidelines on how to choose the right product, but the main principle here is that light does not penetrate thick or opaque ceramics. Therefore, we have to use dual-curing cements such as Multilink N (Ivoclar Vivadent) for crowns, bridges, endo-crowns and onlays, as well as thick inlays and onlays. Light-curing cements are recommended for thin restorations such as all kinds of dental veneers.

Dental Tribune Asia Pacific: Your DT Study Club live webcast will be on dental ceramics. What aspects have these materials improved in recent years?

Dr Eduardo Mahn: That’s a tricky question. As dental ceramics have been developed in recent years. Probably the most significant improvement is the strength of more than 1000 MPa, for example with zirconium oxide. This made the fabrication of multi-unit bridges possible. Even more significant and even more relevant is the improvement in aspects like aesthetics, versatility and simplicity. Lithium disilicate based ceramics have become available for CAD/CAM and press technology, which means that we are now able to make monolithic crowns or veneers without any layering step. This is great news for dental technicians, as these materials help to make the fabrication process much easier and faster. In addition, dentists benefit from lower costs and more predictable clinical results.

Many clinicians however seem to ignore the potential that ceramics have to offer. What are the reasons for this?

I guess the problem starts with education. In the past five years, I have had the opportunity to visit more than 100 dental schools and in most of them all-ceramic restorations are not part of their undergraduate programmes. For this reason, many young dentists are not familiar with working with modern ceramics when they start their careers, and thus they use porcelain-fused-to-metal (PFM) crowns owing to lack of experience and information.

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Where do all-ceramics fit in with regard to the minimally invasive concept?

All-ceramic restorations are a pillar of the minimally invasive concept. They are opaque and need more time to cure, but they are much simpler to make. In addition, they are more aesthetically pleasing than PFM crowns, and more predictable clinical results. Many clinicians however seem to ignore the potential that ceramics have to offer. What are the reasons for this?

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