

Reinforcing composites

Private Dentistry talks to **Andrew Whittome** and **Nicola Farnfield** from **Lifelike Dental Ceramics** about offering metal-free all-ceramic solutions, keeping abreast of the latest techniques and products and their ideas on best value and aesthetics for the dentist and patient

Lifelike Dental Ceramics is owned by Andrew Whittome who has 27 years' experience as a dental technician, and he is supported by his business partner Nicola Farnfield and another technician, Scott Chennells.

Having only been introduced to the industry four years ago, Nicola states: 'The dental industry, like most medical-based industries, is rapidly advancing and developing technologically with new products coming to the market claiming to offer better results. However, like us, many other dental laboratories and practices are relatively small employers. This means we all have to run efficient and effective lean organisations with little time to spare on keeping up with the new technology that we are faced with. I am sure if we all responded to every advertisement or representative that came our way we actually wouldn't have time to do our "day job".'

'However, change in today's market and economic climate is critical to ensure that we remain at the leading edge, so it's our job to decide what is and isn't important to our growth and future. One of the things we like to do at Lifelike Dental Ceramics is share information with our competitors and clients, this enables us to teach and learn. One of the problems some dental practices and laboratories have is deciding which of the "new" products on the market are worth investing in.

'Lifelike Dental Ceramics focus on metal-free restorations and therefore investment in and knowledge of new products is a must. Recent innovations in techniques, including CAD/CAM, allow laboratories to achieve best results and satisfy the optimum aesthetic expectations of both clinician and patient alike. We are always looking for ways to realise greater efficiency and productivity whilst keeping a close eye on profitability in these difficult economic times'.

Proprietor Andrew Whittome goes on to say: 'We all have to absorb information on new techniques, and the more information we receive the better the choices we can make. Our dentists rely on us at Lifelike Dental Ceramics to keep up with new products available from a technical perspective and offer them as part of our services. However, sometimes a solution comes our way that makes us as a laboratory more efficient, and improves the service we can offer to our clients and their patients with justified investment'. The discussion moves on to composites and fibre re-enforcement materials.



Figure 1: Nicola and Andrew in the lab

Andrew says: 'In the past, most composites on the market did not meet our requirements from a strength and aesthetic perspective, but products have advanced over the years and we now use the high strength micro-hybrid composite system GC Gradia, which has so many benefits that it is now widely used by our client base, increasing in popularity year on year. When looking at new restorative solutions, it is important that it is easy for the laboratory to work with as well as giving the clinician and patient brilliant results. 'When using Gradia you do need to invest in the correct equipment, some laboratories fail to do this, which results in inadequate substandard restorations that can sometimes give the product a bad name. Lifelike Dental Ceramics invested in a GC Step Light and a GC Labolight.



Figure 2: Crown/inlay/pontic/inlay
by A Whittome of Lifelike Dental



Figure 3: Wing/pontic/wing by
A Whittome of Lifelike Dental

We find the product easy to work with mainly because the composite build-up procedure and irradiation/curing times are efficient. The positives for the clinician and patient include its high mechanical strength, its wear resistance, it is kind to the opposing teeth and the finished results have a brightness, translucency and warmth that are second to none. Furthermore, the costs compared to many metal-free solutions on the marketplace are extremely competitive'.

As Neil Clark from GC UK Limited states: 'Combining Gradia with fibre re-inforcement material is a popular restoration, these minimally invasive procedures are cost effective to the dentist and patient compared with CAD/CAM frameworks but has high aesthetics due to the high chroma and translucency and many effect colours including many gingival colours in the system.

'Gradia indirect gives a high flexural strength with minimum abrasion to the opposing dentition as it is a 75% porcelain filled composite, whereas higher filled composites have higher porcelain content, which makes the composite both brittle and non-flexible. The material also has high polishability that reduces the risk of discolouration'.

'Liquid Diamond is an added benefit,' Andrew says. Liquid Diamond, which is otherwise known as G-Coat plus from GC, is a protective glazed coating for Gradia that increases strength, wear resistance and colour stability, and is used directly by the clinician once in situ. 'Repairs can also be made in the mouth using direct composite and it has the added advantage of being strong, giving stability but the flexibility of the material lessens the risk of de-bonding particularly with relation to wing/pontic/wing bridges,' says Andrew.

Nicola adds: 'Once we had established a good customer base for Gradia, we then decided to look at various fibre re-enforcement systems to enable us to prepare bridges and splints. We were then introduced to Dentapreg, which is a pliable light curing strip of extremely high strength. The strong and rigid aerospace grade glass fibres give the strips its strength whilst the resin protects fibres during handling and after curing. Also, it was re-assuring that Dentapreg is protected under US patent and is CE approved'.

Benefits of using Dentapreg

- It is compatible with most composite materials, i.e. Gradia
- Extremely cost effective
- No special scissors or tools required to cut Dentapreg
- It has a good shelf life of 18 months plus
- Very soft and flexible, making it easier to manipulate than other materials without compromising on strength
- Efficient to use
- Non-abrasive and kind to opposing teeth
- Can be used directly or indirectly
- 0.3mm thick so easy to build in to the composite
- No specialist equipment required e.g. suitable for use with GC Step Light.

Overall benefits to the dentist of using GC Gradia and Dentapreg

- Metal-free
- Biocompatible
- Can use directly or indirectly
- Cost effective
- Easy to work with
- Very kind to opposing teeth
- Wear resistant
- Can be added to
- Outstanding aesthetics
- Wear resistant
- Colour stability
- Strong and flexible preventing de-bonding. PD

For more information visit the Lifelike Dental Ceramics website at www.lifelikedental.co.uk or email lifelike@btinternet.com. Alternatively, call 01525 240824 quoting L4723 for a 30% discount on your first case of Gradia or Dentapreg. Lifelike Dental Ceramics offers demonstrations to dentists, which will award free verifiable CPD points.