Restorative dentistry has become a two-class system

An interview with Prof. John Nicolson, UK

Materials scientist
Prof. John Nicholson from London has conducted extensive research on glass ionomer cements and related materials over the last 30 years. In a presentation he recently gave at the FDI Annual World Dental Congress in Poznan in Poland he discussed whether modern dental materials can meet the world’s oral health needs, among other things. Dental Tribune spoke with him about the shortcomings of modern dental materials, restorative dentistry becoming a two-class system, and traumatic restorative treatment.

Dental Tribune: In your presentation, you argued that most modern dental materials are characterised by cosmetic rather than functional aspects. Where do they lack most in your opinion?

Prof. John Nicholson: They lack ease of use. This applies especially to composite resins. Being non-adhesive, composites have to be employed in association with bonding agents. The function of bonding agents is to alter the nature of the freshly cut tooth surface from hydrophilic to hydrophobic, and this requires careful deployment of sensitive materials in accordance with manufacturer’s instructions. Having created a surface for bonding, the composite itself must be placed. This typically requires placement in increments, with sufficient application of the curing lamp to ensure depth of cure.

All of this manipulation is difficult and requires a high level of skill on the part of the dentist. Done correctly, it works well and the resulting repair is durable and aesthetic. However, it is too complicated to be the basis of tooth repair in poorer countries, owing to the high numbers of patients, unreliable electricity supplies and fewer skilled dentists.

Most technologies seem to become cheaper over time, except dental materials. What are the reasons for this reverse trend?

In dentistry, we have emphasised appearance over performance, a feature that is not so much of a problem in countries with large numbers of dentists able to replace worn-out restorations, that is in richer communities in the developed world. The dental market therefore does not favour cheaper solutions, or simpler ones.

With state-of-the-art dental materials only affordable in rich countries and a select few in poorer countries, has modern restorative dentistry become a two-class system?

It has indeed, and that two-class system applies in richer countries too, where poorer individuals are less likely to be able to afford the best-looking repair materials. Specifically, this means amalgam repairs rather than composites.

Atraumatic restorative treatment was originally developed to provide a cost-effective treatment for patients in the world’s poorest countries. What have been the experiences with the technique so far, and can it offer an alternative for a population with no access to modern dental materials?

Reports over the last few years have shown it to be very successful. A variety of patient groups, including children, young adults and even older patients, are benefitting from what is effectively minimal intervention, low-cost dental treatment. Furthermore, the performance of the glass ionomer repair materials in the atraumatic restorative treatment technique is proving to be better than what might be expected on the basis of in vitro studies of the materials’ properties. Amalgam is still widely used, particularly in poorer countries. Are we prepared for amalgam-free dentistry, and what should be done to ensure there are proper alternatives after the phase-down has been completed?

I think we need to maintain the use of glass ionomers and perhaps see how these materials can be improved for this large and important group of patients. We also need to recognise that acquiring a proper understanding of the clinical performance of any material is a time-consuming process and that it can take years to obtain a full picture of how materials really behave in patients.

Should there be greater emphasis on the issue of dental materials in oral health campaigns and agendas around the world?

Yes, there should. We know that caries is the most widespread disease in humans, so we can see that damage to the teeth is equally widespread. Consequently, in my opinion, we should emphasise the role of appropriate repair materials just as much as we currently emphasise preventive steps.

Thank you very much for the interview.

DTI publishers discuss future strategies at annual meeting

By DTI

BERLIN, Germany: The Dental Tribune International (DTI) publishing group, which consists of about 30 publishers around the world, customarily meets once a year to present its latest products and introduce new partners. This year, the 12th Annual Publishers’ Meeting was held from 4 to 6 September at the picturesque Greater Wesersee lake in the German capital of Berlin. Over 50 people from about 20 countries, including partners from Asia, Australia, Europe, the Middle East and the US, attended.

Over the past 13 years, the DTI publishing network has grown significantly. Today, DTI reaches over 60,000 dental professionals in 23 different languages in about 90 countries around the globe. At the meeting in Berlin, the group welcomed two new partners, from Israel and Iran, who will be publishing their respective localised versions of the Dental Tribune newspaper and providing updates on their particular market on local websites on www.dental-tribune.com.

Furthermore, the publishers were introduced to one of DTI’s newest publications, the Journal of Oral Science and Rehabilitation, which was launched in 2019. It originated from the efforts of a large group of researchers involved in the advancement of implant dentistry. The aim of the journal is to promote rapid communication of scientific information. Released quarterly in March, June, September and December each year, it publishes original and high-quality research and clinical papers in the fields of periodontology, implant dentistry, prosthodontics and maxillofacial surgery.

The publishers had the opportunity to learn more about the DTI Communication Services offering. As the importance of content marketing is growing rapidly in all industries, including dentistry, DTI established this new division last year. The department aims to assist smaller and mid-sized companies. In particular, in communicating more effectively with their audiences through tailor-made targeted editorial support, video production, event organisation and publishing.

A major topic covered at the meeting was the International Dental Show (IDS), the most important trade fair in the dental industry. In collaboration with its German licensee ORMUS MEDA, DTI will be publishing a new issue of its well-established today newspaper on each of the six days, providing comprehensive coverage of the previous day’s events. For the first time, the two publishers will be setting up a lecture forum at their booth—known as the Media Lounge, a restaurant and meeting area at which leaders in dentistry conventionally gather during IDS. At the forum, which will seat up to 200 participants, DTI will be holding Dental Tribune Study Club lectures and press conferences through DTI Communication Services.

Moreover, the publishers were informed about IDS WORLD, a website that was recently launched by DTI and promises to become the most comprehensive resource in dentistry. It is a full-service digital marketplace for products, news, e-learning and practice management, and targeted at vendors, dentists, dental technicians and patients alike. Owing to its comprehensive approach, IDS WORLD has the potential to become the most important platform in dentistry and will thus help DTI secure its position in the market, as the importance of online marketplaces is growing in all industries across the world.

DTI further announced the launch of its website, www.dental-tribune.com, which is scheduled to go live with a completely new design and layout in spring next year.