By DTI

MANCHESTER, UK: After the congress of the British Dental Association in May, the city of Manchester will see its second dental highlight this year when the British Orthodontic Conference opens for orthodontists and affiliated professionals on 14 September at the Central Convention Complex in the heart of the city. Being held for only the second time in one of the north’s most dynamic powerhouses during the last 30 years, it promises to be a conference to remember, according to conference chair Dr Richard Jones, who told Dental Tribune that the organisation is expecting over 1,000 delegates for the event.

“Our first conference in Manchester in 2015 was already one of the best-attended conferences we ever had, and with the Central Convention Centre, we also have a very modern and contemporary venue that proved very popular among the conference-goers four years ago,” he said. “Manchester itself is a great city. All the amenities and attractions are very central. The conference hotel, for example, is located right next to the congress venue and the nearby Gothic-inspired town hall will be a great backdrop for our social events.”

Social is indeed the key, according to Jones, who said: “We spent a lot on our social programme in 2016 in Brighton, and it was very well received. Therefore, we are continuing with that format this year.”

He also stated the conference will be offering something for everyone in the orthodontic team. In addition to the annual conference of the Orthodontic Technicians Association, which will run parallel to the main congress in the same venue, there will be full-day sessions for affiliated professionals including practice support staff, nurses and orthodontic therapists.

“We expect around a third of attendees to be non-orthodontists, so we are offering three days of parallel programmes and a whole day of lectures on important things like business development, management and other non-clinical skills,” Jones said.

In addition to traditional topics in this year’s clinical programme, he said that there will be emphasis on recent developments, such as lingual orthodontics, which will be the focus of this year’s Northcroft memorial lecture. Also in the spotlight will be digitalisation, the pros and cons of which will be discussed in detail during a special session on the second day of the conference.

“There are some questions about some of the technologies in terms of how they actually enhance the patient experience,” he explained. “Some early adopters of digital technology argue that the new workflow eliminates impressions and speeds up the manufacturing of appliances, offering some advantage in the outcomes of treatment. There are other people on the spectrum however who argue that this trend is actually driven mainly by the manufacturers, as they are making a lot more money out of digitally designed appliances than of traditional appliances.”

“There isn’t a lot of research yet to support the assertion that digital technologies actually enhance the patient experience or improve results. That is why we have structured the session as a debate to have both sides of the story,” Jones added.

Plans are in the making to use the congress as a platform to raise awareness among the general public and dentists of the importance of retention. A nationwide campaign is scheduled to be launched in Manchester.

More information and news from this year’s conference are available at the official congress website, and www.dental-tribune.co.uk.

Dr Richard Jones

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The Midland Hotel (left) and Town Hall (right) are close to the conference centre.
Technology, the ageing population, regulation: Pondering the future of orthodontics

By Chris Barrow, UK

One of my blogging heroes, Seth Godin, once commented ‘don’t write about what you know, write about what fascinates you’. Yet many of the writing assignments we are given request that we tackle the former and let the readers know how much we know about a given subject. At this year’s British Orthodontic Society conference, I will be speaking on marketing for the orthodontic practice, what works, what does not and how to get the best return on investment from your marketing. It would be simple enough to recreate that content here so that those unable to attend can obtain the knowledge—but I have the devil in me this morning, half way through a week of project work at my desk, and want to do something different. So, I have decided to write about what fascinates me in the world of orthodontics right now, observing from the perspective of helping clients to grow successful businesses and maintain a decent balance between their personal and professional lives. Here are my top 10 current ponderings.

1. I wonder for how much longer goodwill values will stay at their historically high level. The figures are astonishing and only an institutional investor speculating on a four-year turnaround or an insurance company looking to cross-sell products and services can really swallow the crazy multiples of earnings now quoted.

2. I wonder how many principals over the age of 50 are going to stick around for much longer. It is becoming more difficult to run a dental business and it takes more energy every year to stay connected with all that is happening in business and in the profession. The juxtaposition of an ageing population of owners and the aforementioned high goodwill values creates an environment in which now is a good time to go.

3. I wonder who is going to buy the practices left to sell. Are the institutions still prepared to speculate given the macro-economic situation in the UK? Are younger dentists (with or without family money) prepared to take part in a gold rush that is beginning to sound like history and not current affairs? It was the late Sir James Goldsmith who said, ‘if you can see a bandwagon, it’s too late to get on it’.

4. I wonder when the regulatory backlash will hit those general dental practitioners and specialists who have been flogging short-term orthodontics like hot cakes. There are early signs of patients whose expectations have been raised beyond the capacity of a system or a clinician to deliver—patients who are disappointed, savvy and motivated to litigate. Dentists should be cautioned by this environment or by those who are training them.

5. I wonder how many more systems will appear in the marketplace offering either ‘cheaper’ or ‘quicker’ as their unique selling proposition. To cite Godin again, the greatest danger in a race to the bottom is winning. We have already seen the spectacular demise of some dental businesses offering orthodontics at deep discount (and I have been involved in belatedly rescuing others who followed the same fool’s gold).

6. I wonder for how much longer orthodontic associates will be able to make a decent living. As the profit margins on dental work erode and the number of dental care professionals increases, ever more downward pressure on associate remuneration is created. Is orthodontics still a viable career choice?

7. I wonder how technology will affect the delivery of dentistry in the future, as well as the patient experience and business systems. Digital dentistry has become a buzz phrase in recent years. As Apple prepares to launch iOS 11 and introduce ARKit (augmented reality systems) into iPhones and iPads, the worlds of e-commerce and social media are poised to undergo an augmented reality revolution that will be as culturally influential as the industrial, technology and information revolutions that heralded the last two centuries. Technology must affect the clinical delivery of orthodontics, as well as the patient experience.

8. I wonder what skill set will be required of the practice/business manager in the next five years. With the advent of responsibilities in financial analysis, branding, marketing, user experience, treatment coordination, governance, compliance, operations and human resources, will the future manager be of MBA standard?

9. I wonder how dental teams will develop in orthodontics. Will you still be able to hire telephonists, receptionists, nurses and administrative staff at relatively low wages, on the basis that support people are disposable and replaceable, or will you have to take a different view that people are an asset on your balance sheet and not an overhead on your profit and loss statement? Will the savvy principal realise that customer service is how you differentiate yourself from the corporate/retail competition and from price wars and that customer service requires a significant investment in your people?

10. Finally, I wonder what our patients will look like in five years. We live in an age in which not just augmented reality is about to change the landscape. Say hello to wearables, to fibretronics, to predictive (not preventative) health care. Our patients are already living an average of 25 years longer than their grandparents, a bonus 25 years in which they are exploring the world around them and their inner selves. That bonus period is going to extend. Some predict that there are individuals in our current generation of children who will live good lives until the age of 135. Dental health and appearance are a part of that extended lifespan and the profession will have to adapt and adopt new techniques.

Is it not all just fascinating? I cannot wait to see what happens, who the winners will be and what they do to win.

Chris Barrow is the founder of Coach Barrow consultancy practice. An active consultant, a trainer and a coach to the UK dental profession, he regularly contributes to the dental press, social media and online. Chris Barrow can be contacted at coachbarrow@me.com.
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By DTI

SHEFFIELD, UK: In Western countries like the UK, between 10 and 20 per cent of adolescents undergo orthodontic measures in some form. A recent meta-analysis conducted by researchers at the University of Sheffield’s School of Clinical Dentistry has indicated that treatment in those younger years may have a measurable impact on a person’s oral health-related quality of life (OHRQoL). In their review, they found that levels of emotional and social well-being concerning OHRQoL improved moderately in patients who were treated orthodontically before they were 18 years old. The findings are relevant, because, until now, there has been little evidence that treatment actually improves OHRQoL.

The researchers included data from over a dozen studies reporting outcomes before and after orthodontic treatment that were conducted within the last ten years in countries like Australia, Brazil, Canada, China, Italy, the UK and the US. Of these, four were finally selected for using similar questionnaires to measure what young people thought about their teeth and how their dental appearance affected their life, before and after orthodontic treatment. All showed measurable and moderately large improvement in the areas of emotional and social well-being, according to the researchers.

“As practicing orthodontists we are constantly being told by our patients that they are pleased they had their teeth straightened and that they are no longer embarrassed to smile or to be photographed,” explained co-author Prof. Philip Benson, who is also Director of Research at the British Orthodontic Society. “We wanted to find all the research that has tried to measure this effect with young people.”

While the findings are a first step to establishing a platform for exploring this issue further, Benson admitted that the number of participants included in the studies was small and that higher-quality data is needed to substantiate the conclusions. A follow-up study investigating OHRQoL in the under-18 age group under the supervision of co-author and student Hanieh Javidi as part of her doctoral research project is underway at the School of Clinical Dentistry.

The study, titled “Does orthodontic treatment before the age of 18 years improve oral health-related quality of life?” was published in the American Journal of Orthodontics and Dentofacial Orthopedics.
My professional journey has no end or destination. If I ever felt satisfied by one system and I applied it in the same way without acquiring new knowledge or discovering more advanced technologies and materials, I would consider myself ready for retirement, which I am certainly not.

My voyage through digital technology, however, has just reached a natural conclusion. I realised recently that I had progressed through all aspects of digital technology as it relates to orthodontic treatment and I had completed a circle.

My journey started with photography some years ago, but the process accelerated, and in recent years, everything has gone digital, including radiography, record-taking, treatment planning, and the manufacture of brackets and wires.

Over the course of my digital conversion, I have tried several different systems, all of which have delivered important benefits. The system I have used most as I completed the digital circle over the last two years is suremile (OraMetrix). It is a treatment management system and among its benefits is that I am able to provide a highly customised service in a shorter space of time, saving on average six months of treatment time per patient.

I have had a digital scanner for some time, but this month I acquired an updated jshape TRiOS scanner. It is extremely fast and allows my team to take completely accurate and detailed records of patients’ upper and lower arches. In the past, the process took half an hour, but now it is immediate.

Adult patients are particularly grateful not to have impressions taken, and the orthodontic nurses are delighted to avoid this most trying aspect of record-taking. It was invariably messy. Being impression-free has brought more value to the team than going paperless.

It goes without saying that a key benefit of digital technology is the integration of the orthodontic processes and records. For instance, a scan of the patient’s teeth can be superimposed on to a photograph, which I can in turn integrate with a grid. I can relate the tooth positions to facial planes and check that the dental midline is centrally located. I can show the patient his or her teeth and bite and I can provide him or her with a visual simulation of the difference that treatment will make. The patient can then ask questions. My vision for the finished result may not be the patient’s vision and being able to manipulate the outcome on screen means one can be absolutely sure the patient understands the treatment planning. The patient can influence the treatment if he or she wishes, and if he or she changes his or her mind towards the end, the technology allows for last-minute nancings.

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In order to convey how this approach differs from other treatments on offer, I compare it to the difference between an off-the-peg suit and going to a tailor in Savile Row. Many of the patients I treat at my practice are referred by leading dentists. Their expectations are high. Sometimes orthodontic treatment is just one part of an interdisciplinary treatment that in its entirety will cost in excess of £20,000. Patients expect perfection—in so far as it is possible in an ageing dentition—and they expect a high level of service. SureSmile allows me to deliver both. Rightly for a West End practice, many of the benefits of sureSmile relate to communication and the care of patients with high expectations. But there are also personal benefits for the clinician.

In my case, there is one that surpasses all others. Bending archwires at the end of treatment is almost always inevitable and it is an aspect I dread. Why am I so hung up on this? The reason is that, if one bends a wire on one tooth, one orthodontic journey continues and I suspect a few more digital revolutions await.
Use of diode laser in the treatment of gingival enlargement during orthodontic treatment: Case report

Prof. Carlo Fornaini, Drs Aldo Oppici, Luigi Cella & Elisabetta Merigo, Italy

In recent decades, we have witnessed the substantial development and expansion of the use of fixed orthodontic appliances. While their application has many advantages, several problems related to the health of the soft tissue may sometimes appear during treatment. In fact, the use of fixed orthodontic appliances may provoke labial desquamation, erythema multiforme, gingivitis and gingival enlargement.

Gingival enlargement is a very common complication during orthodontic treatment, but fortunately, it seems to be transitory and generally resolves after orthodontic therapy, even if sometimes incompletely. Gingival overgrowth induced by orthodontic treatment shows a specific fibrous and thickened gingival appearance, different from fragile gingiva with marginal gingival redness common in allergic or inflammatory gingival lesions.

Several clinical studies suggest that orthodontic treatment may be associated with a decrease in periodontal health, causing a hypertrophic form of gingivitis. However, the actual pathogenesis of gingival enlargement is not yet completely understood, although probably involves increased production by fibroblasts of amorphous ground substance with a high level of glycosaminoglycans. Increases in mRNA expression of Type I collagens and upregulation of keratinocyte growth factor receptor could play an important role in excessive proliferation of epithelial cells and increased development of gingival enlargement, on the basis of some studies, in cases of poor oral hygiene status. However, there is no clear definition on its aetiology, although it is probably associated with the inflammatory response induced by the corrosion of orthodontic appliances, particularly those of nickel, linked to an inflammatory response considered a Type IV hypersensitivity and manifested as nickel-induced allergic contact stomatitis, even if its aetiology has not yet clearly been defined.

The treatment of these conditions is surgical. Histological and histochemical studies have demonstrated that the removal of the gingival papilla can promote the formation of normal connective tissue. Because the classic intervention performed by scalpel has some disadvantages, mainly linked to the discomfort for the patient (e.g. anesthesia by injection and suctions), there has been great interest in the utilisation of laser technology.

Case report

A 14-year-old female patient was referred to our department by the orthodontics unit because, at the end of fixed orthodontic treatment, she had developed gingival enlargement in the upper arch (Fig. 3), probably related to the fast closure of the spaces associated with very poor oral hygiene due to bleaching during toothbrushing. Just after the removal of the appliance, a topical anaesthetic (EMLA, AstraZeneca) was applied to the gingiva (Fig. 2) and a gingivectomy was performed using a diode laser (XD-2, Fotona) according to the technique of removal of the interden- tal papillae (Fig. 3). The parameters used were as follows: a wavelength of 808 nm, 3 W in continuous wave, a 320 μm fibre in contact mode. The intervention had a duration of 375 seconds, and the patient did not feel any pain (Fig. 4). After the intervention, the patient did not take any kind of pain medication, and the healing process was completed in five days (Fig. 5).

Discussion

The first laser appliance was built by Maiman in 1960, and some years later, it was successfully employed in medicine and in oral surgery with several advantages. It may provide excellent incision performance with sealing of small blood and lymphatic vessels, resulting in haemostasis and reduced postoperative oedema. Furthermore, target tissues are disinfected as a result of local heating and production of an eschar layer, which results in a decreased amount of scarring owing to decreased post-operative tissue shrinkage, allowing one to avoid the use of sutures.

Diodes, the last generation of laser used in dentistry, have several advantages, such as reduced cost and size, and offer the operator the possibility to work both in continuous and chopped mode. Based on our experience, we can confirm that this technology may represent a new approach to the resolution of gingival enlargement during orthodontic treatment, with better comfort for the patient during and after surgery.

Editorial note: A list of references is available from the publisher. This article was originally published in the Ortho magazine No.2/2017.
**4th Orthocaps Symposium in Munich**

International user’s meeting addresses current innovations and gives an overview of future developments concerning the Orthocaps Aligner system.

The Orthocaps Symposium is held every other year in Munich. The next event is planned on 1 and 2 December 2017. The venue will take place at the Kempinski Four Seasons Hotel. The two days will bring together Orthocaps system users from many countries from all over the world. The event will also feature a diverse programme with renowned speakers from France, Spain, Italy, the UK and Germany. The speakers will present current innovations concerning the proven Aligner system and its future prospects. The lecture series will be opened on Friday by Prof. Olivier Sorel of France. Sorel will talk about the importance of “Smile Design”. Dr Wajeeh Khan (Germany), the founder of the system, will talk about different class II treatment modalities with Orthocaps. Prof. Benedict Wilmes (Germany) will demonstrate skeletal anchorage and how the aligner therapy can be supplemented with temporary anchorage devices (TADs), and Dr Wajeeh Khan will highlight the advantages and possibilities of the new Orthocaps Hybrid Aligner treatment (HAT). Dr Sonil Kalia (UK) will present a very important aspect in any aligner approach, namely the basic bio-mechanical principles. Lastly, the two-day event will end with an outlook from the founder of the system on the future developments that are being researched to improve the Orthocaps System.

All lectures will be held in English, an optional French translation will also be available for international participants. Please contact us for further information and registration.
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