**Visual information and imaging technology in endodontics**

By Prof. Hideaki Suda & Dr. Toshihiko Yoshikawa, Japan

In addition to intra-oral and panoramic radiographs, various visual techniques are available for endodontic treatment today. Above all, information obtained through the dental microscope has become essential.

"See better, do better" is a slogan in modern endodontics. The dental microscope is a wonderful tool for problem-solving in endodontics, for instance for the removal of broken instruments and root-filling materials, finding missed canals, perforation repair, diagnosis of tooth fractures, evaluation of marginal integrity of restorations, precise manipulation in periapical surgery and deep dental caries, and confirmation of root-canal cleanliness. Yoshikawa et al. (2002), for example, reported that the rate of detection of root-canal orifices under a microscope was significantly higher than the number detected with the naked eye. It was also found that surgical loupes were relatively ineffective compared with the microscope.

In addition, computed tomography (CT) is becoming increasingly popular among endodontists, particularly in the assessment of difficult cases and for problem-solving in endodontic treatment. Higher use (54.2 per cent) of CBCT was demonstrated by a recent web-based survey of active members of the American Association of Endodontists in the US and Canada (Dailey et al. 2010). Owing to its high radiation dosage, however, careful consideration is needed before taking CT images. Consequently, a project team from the Japanese Association for Dental Science presented a report in 2010 on the use of CT in dentistry, and a joint position statement by the American Association of Endodontists and American Academy of Oral and Maxillofacial Radiology was issued in February 2011. The combined use of the dental microscope and CT for apicectomy was approved as an advanced dental technology by the Ministry of Health, Labor and Welfare in Japan in 2007, and seven Japanese dental hospitals have been using the technology since 1 February 2015.

Optical coherence tomography (OCT) is a high-resolution imaging technique that allows micro-metre-scale imaging of biological tissues over small distances. It was introduced in 1991 and uses infrared light waves that are reflected from the internal microstructure within the biological tissues (Shemesh et al. 2008). There have been reports on its use for intra-canal imaging, diagnosis of vertical root fracture (Yoshikawa et al. 2015) and perforations. Since OCT is non-invasive and free of radiation, this technology may be very useful for endodontic diagnosis and treatment (Figs. 1a–2).

**Continuous Education is a top priority for us, first proof is our new Training Centers**

By Dental Tribune Middle East & Africa

Dubai, UAE: After the inauguration of the FKG Dentaire Training Centre in November 2013, Dental Tribune Middle East & Africa catches up with Alexandre Mulhauser, Middle East & Africa Director to get an update on the decision to set up in Dubai as the regional hub. We visited Alexandre Mulhauser at the Training Centre in JLT in Dubai.

DTMEA: Can you introduce us FKG Dentaire?

Alexandre Mulhauser: Founded in 1951 in the heart of the watch valley, FKG Dentaire is a Swiss company internationally renowned for its high quality products for dentists, Endodontists and laboratories. This Swiss High Tech company is led by two visionaries Jean Claude Rouiller (Chairman) and his son Thierry Rouiller (CEO) who have a mission to always push Endo forward for the benefit of both the dentists and patients. This is possible thanks to the creation of one of the most modern Endo factories and the close collaboration between the Research & Development, Sales, Marketing and a team of General Practitioners and Endodontists globally.

FKG inaugurated its Regional Office and Training Centre around 6 months ago in Dubai. What were the reasons for this setup?

I joined the FKG team almost four years ago to build up a new strategy which to develop FKG Dentaire in the Middle East and Africa Region. When I started this new challenge the FKG Dentaire name was known but the distribution network in the MEA region was not working properly and the sales were below average sales in other regions. We are pleased to see that in a few years we were able to level up from the few countries where we were represented to over 50 countries today and continue to increase monthly. It has been possible thanks to a new positioning, a complete reorganization of the distribution channels, selection and training of serious Distributors that share our vision of quality and service to customers. It has been a success also thanks to the reactivity and flexibility of the structure and a fluidity of information together with fast decision processes with our CEO, Thierry Rouiller. Even with all the effort and dedication, we believed that being in the core of this market and tighten the links with our customers will be the key of success. The decision was finalized in December 2012 and already in June 2013 the subsidiary was created and we moved to Dubai. Has the decision been good to choose UAE as your regional hub?

Companies that open a regional HQ in the ME-A Region usually open it either in Egypt, Jordan, Lebanon or United Arab Emirates. Due to the number of meetings we have around the region, installing the ME-A office less than 45 minutes road of two major airports (Dubai and Abu Dhabi) was the best choice to manage efficiently our travels. We decided to create the first MEA Endo Training Center owned by an Endo manufacturer and fully equipped with microscopes. The UAE training center receives groups from Middle East, Africa but also now India and is open to all other countries. Dentists who would like to come for a training do not have time to lose in connections between airports and these two hubs and their great number of connections are very useful for us to organize trainings. In addition, many love to enjoy Dubai and the other Emirates while coming for the training. In all cases the decision was the perfect choice.

What are the plans for 2014 and the Training Centre?

FKG Dentaire is already collaborating with international speakers (Dr. Gilberto De Berardinis, Dr. Martin Tropo, Dr. Bertrand Khayat and others). We are currently finalizing a team of highly skilled clini-
How does FKG separate itself from its competitors?

The Swiss Venture Club awarded FKG ‘Western Switzerland Company of the Year 2012’, a reward for the company’s dynamism, high product quality, and its continuing innovation. Race files is a real revolution in the Endodontic world, these files are opposite to most of the products on the market and it does not screw thanks to an alternating cutting edge design. This allows the dentist to be more confident using a precise file he controls. It also features the SMD (SafetyMemoDisk), a patented daisy on all the instruments which is the only user friendly system allowing the clinicians to know exactly how many times a file has been used and help to monitor the file stress to reduce risk of file separation.

FKG Dentaire has developed a sequence of scouting files years before any company on the market, the SQuidRace 10.02 is still todays smallest rotary file and now a new generation of tips is available with six blades (Available on BT-Race). It is able to drill and follow the way in the canals without stressing the root unlike big tapered files. FKG Dentaire is not ruled and led by marketing and sales figures but by passion of precision, quality and pride of happiness of dentists and patients.

How important is Continual Medical Education for FKG and its clients?

Continual Education is a top priority for us, first proof is our Training Centers in UAE, Switzerland and Norway, the second is the organization of trainings with CME providers such as CAPP and partnerships with private and public hospitals and clinics asking us to train their teams all throughout the year. We have also recently announce the start a partnership with the Dental College in Lebanon, Prof Roger Rebeiz and his team will use FKG Dentaire MEA Training Center in Dubai for its Educational Program.

Where do you see FKG in a year from now?

In the hands of all dentists and Endodontist wishing to share their experience and knowledge. Dentists are eager to test our technologies and we may increase the number of trainings in the UAE Office and around the ME-A Region. Regarding the training center, thanks to the growing number of top products in the FKG Dentaire range, along with partnerships with other companies we plan to also diversify the subjects. This might be linked with the organization of trainings with partners managing high level Continuous Education Programs. Depending of your level, your points of interests or the skills you want to improve you will have a portfolio of dates and subjects to choose in. Following the success of the last months we also plan to increase the size of the FKG UAE training center to answer to the demand.

The FKG Dentaire ME-A team is growing and we plan to focus on emerging markets where FKG has had a very small presence until now but with high demand from dentists that have had the opportunity to try our range during international conferences or that could read evidence based articles about Race. FKG ME-A Division is currently opening Pakistan and now also in charge of India, a great and exciting new challenge for us. On the product side, 2015 has been a great year for FKG Dentaire and we are accelerating in 2014 and 2015.

We have developed a new generation of Endo Motor called Rooter together with dentists, Endodontists and a French partner. These motors are the first wireless motors to come with a detachable and sterilizable LED Light. Rooter is extremely well balanced for the comfort of the Dentists and the programmable speed ranges from 250 to 1200 RPM to fit with all of rotary files needed by clinicians. Rooter should be available in the coming weeks in our distribution network throughout the ME-A region. We are currently launching FKG Dentaire BT-Race (a new single use and sterile 5 files sequence with a revolutionary tip) and TotalFill BC Sealer, a user friendly Hydrophilic Bioceramic filler that has already a lot of articles stating its fantastic results. The TotalFill range is completed with TotalFill RRM putty (Bioceramic Root Repair Material).

The FKG Dentaire team has been working hard on the different states of the Nickel Ti sequence with a revolutionary Auto-reverse disengage mode. This allows the clinician to know exactly how many times a file has been used and help to monitor the file stress to reduce risk of file separation. FKG Dentaire has developed a sequence of scouting files years before any company on the market, the SQuidRace 10.02 is still today’s smallest rotary file and now a new generation of tips is available with six blades (Available on BT-Race). It is able to drill and follow the way in the canals without stressing the root unlike big tapered files. FKG Dentaire is not ruled and led by marketing and sales figures but by passion of precision, quality and pride of happiness of dentists and patients.

In United Arab Emirates we are present in most of the important conferences in the region (Dental Facial Cosmetic Int’l Conference, AEEDC, APDC, and even the CAD/CAM & Digital Dentistry Int’l Conference through our distributor Dubai Medical Equipment) and we have been really active at the Pan Arab Endo Conference in Lebanon this year bringing Dr. Gavin Williams, a very experienced South African Endodontist and Prof Roger Rebeiz, Lebanon who provide live retreatment with FKG Files D-Race and iRace. We are also represented in most of the congress and shows in the region with our distributors and partners.

You are a member of MEMA Association, can you tell us about it?

MEMA (Middle East Managers Association) has been created few years ago in Lebanon. Today it gathers over 70 Middle East Managers of Top Dental companies. The goal of this association is to grow the dental market through the network and expertise of this team of skilled professionals. I believe all Dental Industry Middle East Managers that are not already part of MEMA should join; it is a very respectful and friendly environment with great perspectives.

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