Press Release

Maximum treatment safety for endodontic procedures

Morita: State-of-the-art hardware and software solutions for precise diagnostics and efficient endodontic treatment methods

True to the maxim "Tooth preservation over tooth replacement", the long-standing company Morita has developed high-resolution X-ray systems, comfortable treatment units and reliable instruments to ensure effective solutions for endodontic therapies. Successful treatment is based on a precise diagnosis using state-of-the-art hardware and software, each of which fulfills the most stringent international quality and manufacturing standards. Consequently, not only diagnostic safety, but above all patient safety is the focal point – this is ensured with the sophisticated innovations developed by Morita.

For the Japanese family-owned company Morita, an endodontic therapy starts with the diagnostic procedure – and, as a matter of fact, the manufacturer of dental equipment leads in the field of X-ray diagnostics and, accordingly, offers solutions using state-of-the-art 3D imaging technology. During endodontic procedures, dentists frequently run into situations where 2D diagnostics reach their limits; for example, when there is complete bone loss in the maxillary sinus or additional root canals become evident. A high-resolution, three-dimensional representation will help make a precise diagnosis; thus, it is an elementary prerequisite. With the help of such all-rounders as Morita's Veraviewepocs 3D F40/R100 or CBCT systems such as 3D Accuitomo 170 a diagnosis can be obtained quickly and accurately as well as gently and safely for the patient. The concept of "safety" counts double for Morita in this context: As for conventional X-ray exams, there must be a justifiable indication for choosing CBCT. This is why the diverse X-ray systems are designed to guarantee maximum user and patient safety as well as a minimum effective dosage (ALARA principle: "As Low As Reasonably Achievable").

Minimal dosage and maximum precision

The combination system Veraviewepocs 3D R100 for panoramic, cephalometric and 3D scans is equipped with a unique field of view (FOV): the conventional cylindrical form is replaced by a new triangular shape (the “R” stands for “Reuleaux” triangle), which matches the shape of the dental arch. At IDS 2015, Morita presented two additional fields of view (FOV) with the volumes Ø R100 × 40mm and Ø 80 × 40mm for the system, which allow even more individual height adjustments when scanning the maxilla or mandible. This guarantees even more accurate images of the patient – with the highest possible resolution and the minimum possible radiation. With the two new fields of view, Veraviewepocs 3D R100 has altogether eight different FOV, offering users myriad possibilities of application. If even lower radiation exposure is desired, Morita’s combination systems offer a dosage reduction program or the panorama scout can be used. When the latter is chosen, the user defines the “region of interest” of the CBCT scan. Accuitomo 170, a “pure” 3D CBCT device, can be used for all indications. It scans with resolution stages (voxel sizes) from 80µm to 250µm using nine different fields of view (diameter between Ø 40mm und Ø 170mm). Moreover, the scanning procedure is detailed and particularly fast thanks to the “Hi-Speed” mode. In this mode, a 180° scan is taken in just 5.4 seconds; this is the shortest scan time possible today. And this, in turn, reduces motion artifacts and radiation dosage.

In addition to the diagnostic equipment, Morita’s intelligent software solution i-Dixel promotes consistent documentation and easy-to-handle scan management: Besides many processing options, this also includes comprehensive patient education: the diagnosis, treatment plan and complete course of the endodontic therapy can be displayed on the monitor – another step towards digitalized dental practices.

IDS novelty expands the endodontic portfolio

Since Morita’s other endodontic equipment such as, for example, the ergonomic treatment unit Soaric or the modular combination system DentaPort ZX Set OTR – comprising an apex locator (DentaPort Root ZX), preparation motor (DentaPort

TriAuto with OTR safety function) and polymerization lamp – have proven their worth in dental practices, the company is striving to establish its new Er:YAG-Laser AdvErL Evo as well. This innovative system combines thought-out engineering with a stylish design and heralds a “soft” revolution in endodontics, where AdvErL Evo can be used for root canal treatments and surgical procedures (e.g. root tip resection, removal of cysts and tumors) and is particularly effective for cleaning root canals: Studies show that therapies with Er:YAG lasers, amongst other things, remove debris more effectively than alternative methods.[1] This high-tech laser offers patients a treatment result that can barely be achieved with conventional methods: not only are minimally invasive, almost painless and vibrationless therapies possible, thermal irritations that could affect the tissue are avoided, ensuring that the treatment is a gentle and pleasant experience for the patient.

The advantages for endodontic practices can be summarized briefly as follows: Irrespective of whether state-of-the-art X-ray diagnostics, ergonomic workplaces, high-quality instruments or future-oriented laser methods are needed – Morita provides intelligent solutions for every single step in endodontic treatments. The solutions can be used individually or they can be combined to form a comprehensive concept. This underscores the holistic approach of the Japanese family-owned business and its motivation of always placing the dentist, team and patient in the center of its development efforts.

[1] Yao K, Ide A, Satake K, Ichikawa M, Watanabe S, Anjo T, Ebihara A, Kobayashi C, Suda H (2014). Er:YAG Laser-activated Irrigation for Lateral Canals. 14th World Congress for Laser Dentistry. 02.-04. Juli 2014, Paris. Abstract Nr. 64558. Online: http://www.wfld-paris2014.com/images/Abstracts%20book%20OIWC%20&%20WFLD.pdf