

Endodontic

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PRACTICE



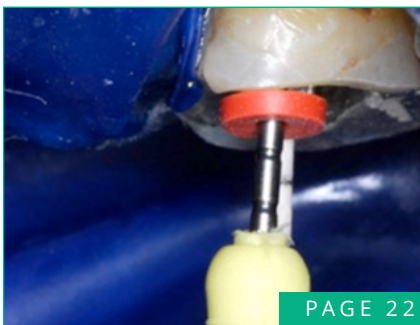
Treatment of maxillary first premolars with three root canals (case report)

By Yuriy Riznyk, Svitlana Riznyk and Khrystyna Sydorak



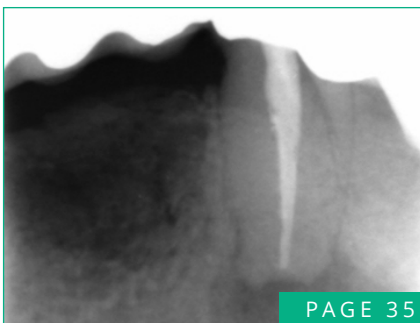
Mandibular first molar with four canals in the mesial root

By Hamed Karkehabadi, Ricardo Machado and Lucas da Fonseca Roberti Garcia



Crosslinked gutta percha core obturators

By Peet van der Vyver



A tricky case to diagnose

By guest editor James Aquilina

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Stunning CBCT images for accurate diagnosis

Dr Richard Kahan of Advanced Academy of Endodontics explains how the latest advances in CBCT technology enable the highest definition images to be taken, at the lowest possible dose

CBCT has been a total game-changer for complex endodontics and it has transformed my specialist practice completely. We have pioneered treatment modalities previously unheard of, such as targeted endodontics, guided endodontics, and the use of virtual radiographs and ultra-low dose scans for reviewing and planning cases.

I have used CBCT in my treatment planning for specialist endodontic cases for more than ten years. We have taken over 5,000 scans for our patients and the patients of other endodontists. With our experience of treating so many cases using CBCT, we can find details that cannot be seen in routine single projection periapical radiography, achieve greater accuracy in diagnosis, eliminate guesswork, and consequently provide precision treatment planning.

Both dentists and patients accept that holding on to natural teeth is the best option, where possible. With CBCT, our diagnostic capabilities are greatly advanced and we can better predict treatment success and how it can be achieved. We can also see what is likely to fail and advise when an implant is the best option.

Next generation technology

Patients are also more discerning and are aware that X-ray machines do not provide all the necessary information. The digitalisation of intra-oral radiography has been perceived as a great step forward in technology, but is gradually being seen for what it is, simply an update of an old friend. It is still an important part of dentistry, but there are better technologies available for when greater detail is needed. Patient awareness is now driving demand.

We are not far from the point where CBCT will become medico-legally mandatory before large and expensive treatment plans are formulated. The better the scanner, the more accurate the

information gleaned at the lowest possible dose. I owe it to my referring dentists and patients to make sure I work with the very best diagnostic equipment.

Since purchasing the Morita Veraviewepocs CBCT scanner 10 years ago, the in-depth technical knowledge and support from The Dental Imaging Company has been invaluable. The team has always been available and I had no hesitation in continuing

our partnership by moving ahead with a new machine. With the advent of a completely new build, not simply an upgrade, it was time for me to invest in the next generation of technology.

Artefact reduction

The new Morita Veraview X800 is beautifully engineered and exciting to use. It provides more options for significantly increasing the resolution of the scans, reducing artefacts and, at the same time, lowering the dose to the patient. As an early adopter, there is always a learning curve but I enjoy discovering how to harness its full potential. I was particularly impressed by the reduction in artefact generation with the option of full 360 degree rotation. Some of the high definition endodontic mode

The ability to tailor the scan precisely for the patient and case whilst, at the same time, reducing the radiation to the lowest possible amount, is what makes this machine stand out

results are simply stunning and give greater accuracy than I have previously seen.

Before justifying a scan, we examine existing X-rays and take clinical information from the referring dentist. This helps to choose the correct settings for each patient. Selecting the right combination is key to achieving the best and most efficient set of results.

Simple, accurate diagnosis

The Veraview X800 has a unique combination of features and technology that contribute to superior image quality. Every patient is individual, as is each clinical situation, and the wider range of available settings makes it much easier to pinpoint the problem that needs to be treated. The X800 provides 180- and 360-degree scan options with a high maximum kilovoltage, to allow better penetration of dense materials or anatomy.

It takes considerable experience to read around the flares caused by artefacts. The X800 can reduce this significantly, making accurate diagnosis simpler. The ability to tailor the scan precisely for the patient and case whilst, at the same time, reducing the radiation to the lowest possible amount, is what makes this machine stand out. The potential is exciting and I enjoy keeping ahead of the curve. ■

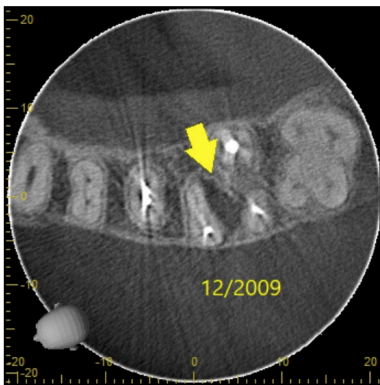


Figure 1: Taken with Veraviewepocs 3D



Figure 2: Taken with Veraview X800. The outstanding image quality produced by the Morita Veraview X800 enables the smallest detail to be seen. The arrows indicate the healing that has occurred as a result of targeted treatment of the MB2 canal of UL6. In addition to the healing, there is a significant difference in the beam hardening artefact caused by the root filling material

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