Still looking for MB2: Endodontic nirvana

Finding the Holy Grail. Grabbing the Brass Ring. Finding the MB2 canal in maxillary molars! Pie in the sky? We think not!

With all the technological advances that have occurred in dentistry, certainly in endodontics, the biologic objectives have remained the same, those being to eliminate and/or prevent apical periodontitis. How does one do this? There is no magic wand nor is there a simple recipe to achieve this objective. However, one thing is for sure, if a general practitioner embarks on root canal treatment, whether on a tooth with relatively simple or complex anatomy, he/she should be held to the a standard that is expected of a specialist for the procedure being performed; thorough debridement of the entirety of the canal anatomy, followed by three-dimensional obturation.

To achieve endodontic success one must be skilled, understand the biologic system that one is working in and understand the objectives of the treatment. One should also employ the correct armamentarium, as long as he/she first has the tools. High magnification and the development of ultrasonics for conventional endodontics have enabled many practitioners to treat complex root canal anatomic variations more thoroughly.

Dental imaging has made leaps and bounds with the advent and use of the cone beam computed tomography (CBCT). Limited field of view images taken preoperatively will allow a three-dimensional rendering of the tooth to be treated. In essence, this will provide the practitioner with a more precise ‘road map’ with respect to the anatomic makeup of the tooth to be treated. CBCT has enlightened us to the complexity of the root canal system and thereby obliges us to 3-D disinfection and obturation.

An updated joint position statement of the American Association of Endodontists (AAE) and the American Academy of Oral and Maxillofacial Radiology is intended to provide scientifically based guidance to clinicians regarding the use of CBCT (available on AAE website).

In addition to the many recommendations that were given for the use of CBCT in endodontics, the position paper stated that ‘limited FOV (Field Of View) CBCT should be considered the imaging modality of choice for initial treatment of teeth with the potential for extra canals and suspected complex morphology, such as mandibular anterior teeth, and maxillary and mandibular premolars and molars, and dental anomalies’. Why look for an MB2 canal when it doesn’t exist and risk comprising the structural integrity of the tooth and risk perforation? After all, if it does exist then the CBCT may reveal it. That being said, one should also take the CBCT results with somewhat of a ‘pinch of salt’, as what often may appear as a lesion of endodontic origin may only be a variation of normal. A proper systematic diagnostic protocol should always be followed by, which includes but is not limited to, pulpal and periradicular testing of the tooth (teeth) in question.

So how do we reach this idyllic Endodontic Nirvana? Even with all the technological advances that we have at our fingertips, we need to provide the patient with best possible care, and the only way one can capitalise on these advances is plain old education, experience and practice, practice, practice!

Drs. Gary Glassman & Ian Watson
(Guest Editors)