Apex locator more precise than CBCT

Electronic length determination has become the gold standard over the last few years. The Deutsche Gesellschaft für Zahn-, Mund- und Kieferheilkunde (German association for dental, oral and maxillofacial surgery) confirmed in a statement that this technique is superior to working length determination with a conventional radiograph. However, 3-D radiography (CBCT) provides an additional method for determining the endodontic working length.

A study conducted at the University of Granada in Spain evaluated the accuracy of working length determination based on these modern methods. For this purpose, 150 extracted teeth were randomly divided into five groups. The working length was determined electronically with the RAYPEX 6 apex locator in four groups, under dry conditions or in the presence of three different irrigating solutions. The working length of the fifth group was determined radiologically with a CBCT scan. Measuring points were the major foramen and the apical constriction.

The results obtained by electronic measurement were more reliable than by CBCT scan, in particular regarding the determination of the major foramen. The study therefore confirmed that RAYPEX 6 measures the working length with more accuracy and reliability than CBCT does.

The study and a complete list of references are available online at http://onlinelibrary.wiley.com/doi/10.1111/iej.12140/abstract.

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