

A Clinical Study to Evaluate the Efficiency of Two Different Types of Apex Locators

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Abstract:

The purpose of this study was to evaluate the clinical accuracy of two different types of apex locators in different intracanal contents .

In this in vivo study ,forty lower first premolars were used . The sample was divided equally in two major groups :

- 1) Group A which had been tested by the Root ZX apex locator .
- 2) Group B which had been tested by the EndoAnalyzer apex locator .

After obtaining the readings with these two apex locators , the teeth were extracted . The apical portion of each tooth was grinded longitudinally under the stereo-microscope to locate the cementodentinal junction , the length to this position was considered as a control .

The statistical analysis showed that , there was no significant difference between the obtained readings in different intracanal contents for the Root ZX apex locator .The statistical analysis showed that , there was a significant difference between the obtained readings in different intracanal contents for the EndoAnalyzer apex locator . The reading was more accurate in a dry rather than in a wet field .

From the obtained results , the clinical accuracy of the Root ZX apex locator was better in different intracanal media , due to that the Root ZX a frequency –dependent type which works accurately in a dry or a wet canal . While for the EndoAnalyzer the clinical accuracy was better in a dry canal , due to that it's a resistance type which works accurately in a dry canal .

Therefore Root ZX has a high clinical accuracy ,hence it can used as an adjunct to the traditional X-ray procedures .