

PURPOSE OF STUDY

CHAPTER 3

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3.1 Aim

To evaluate calcium hydroxide root canal dressing in apexification procedure using different intracanal placement methods and types of vehicles.

3.2 Objectives

The objectives of this study are:

1. To compare the radiographic quality of three methods of intracanal placement of calcium hydroxide, namely:-
 - a. syringe
 - b. syringe followed by lentulo spiral
 - c. lentulo spiral
2. To compare the radiographic quality of filling of two types of vehicle of calcium hydroxide, namely:-
 - a. aqueous suspension calcium hydroxide (Pulpdent® Tempcanal™)
 - b. oil suspension calcium hydroxide (Vitapex™)
3. To compare the quality of filling using three methods of intracanal placement of calcium hydroxide mentioned above at two different cross-sectional levels.
4. To compare the quality of filling of two types of vehicle of calcium hydroxide mentioned above at two different cross-sectional levels.
5. To examine the presence of significant interactions between method of placement and vehicles of calcium hydroxide for quality of filling.

3.3 Research Questions

3.3.1 Test of main effects

- Are there mean differences in the placement effectiveness of calcium hydroxide measured in terms of :-
 - a) quality of filling from the radiographs, associated with differences in intracanal placement methods (syringe, syringe and followed by lentulo spiral and lentulo spiral)?

- b) quality of filling from the radiographs, associated with differences in types of vehicle of calcium hydroxide (Pulpdent® Tempcanal™, Vitapex™) ?
- c) surface area at two different levels, associated with differences in intracanal placement methods (syringe, syringe and followed by lentulo spiral and lentulo spiral)?
- d) surface area at two different levels, associated with differences in types of calcium hydroxide (Pulpdent® Tempcanal™, Vitapex™)?

3.3.2 Test of interactions

- Is the placement effectiveness of calcium hydroxide as a result of use of different types of intracanal placement methods the same when used with different types of vehicles of calcium hydroxide?