# COMPARATIVE EVALUATION OF 0.9%NORMAL SALINE, 3%NaOCl with 3%H2O2, 17%EDTA and QMix2in1 AS ROOT CANAL IRRIGATING SOLUTIONS IN PRIMARY TEETH. -AN IN VITRO STUDY.

By

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# ABSTRACT

## BACKGROUND:

Pulpectomy in primary dentition is performed when ever there is infection of the pulp either due to caries or trauma. While instrumenting the root canals, a layer which is composed of both organic and inorganic components is formed. This layer sometimes also contains bacteria and their byproducts. It was first described by McComb and Smith as "smear layer" this layer is irregular and amorphous and varies in thickness from 2 to 5 micrometers. It can be described as superficial part and material packed into the dentinal tubules. This layer either prevents or delays the effects of intracanal medicaments or the root canal irrigants.It is assumed that the smear layer prevents the direct contact of intracanal medicaments and irrigating solutions. Its removal is considered beneficial for disinfection and to obtain a tight seal after obturation.

## AIMS AND OBJECTIVES:

To assess and compare the efficacy of root canal irrigants like 0.9%normal saline,3%NaOCl and 3%H2O2 alternatively, 17%EDTA and QMix2in1 in removing smear layer from the of root canal dentinal walls in primary anterior teeth under scanning electron microscope.

## MATERIALS AND METHODS:

The study included 60 single rooted anterior primary teeth extracted for therapeutic reasons, divided randomly into four groups of 15 teeth each. Access opening was done, canals instrumented, irrigation done during and after instrumentation, dried with paper points. It was then logitudinally split and evaluated under scanning electron microscope.

RESULTS:

Results showed the total mean value of 1.4667 for 0.9%Normal saline, 1.3 for 3%NaOCl ,3% H2O2, 0.4667 for 17%EDTA and 0.3333 for Qmix2in1.Higher the mean value lesser is the ability of smear layer removal.

CONCLUSIONS:

QMix2in1 irrigating solution had highest smear layer removal ability followed by 17%EDTA. 3%NaOCl,3%H2O2 alternative irrigation showed less smear layer removal ability, followed by 0.9% Normal saline showing lowest ability.

KEY WORDS:

Smear Layer, SEM, QMix2in1,17%EDTA,3%NaOCl,3%H2O2.