

COMPARISON OF EFFICACY OF QMIX, EDTA & SALINE IN SMEAR LAYER REMOVAL: A SCANNING ELECTRON MICROSCOPIC STUDY

AIM AND OBJECTIVE:

To assess the efficacy of QMix, EDTA, and saline irrigating solutions in removing the smear layer with activation using ultrasonics from the root canal dentin of mandibular premolars using a Scanning Electron Microscope.

Gutmann et al., scoring criteria were used for scoring the smear layer.

Score 1 - Little or no smear layer (25%)

Score 2 - Little to moderate or patchy mounts of smear layer(25%–50%)

Score 3-Moderate amounts of scattered or aggregated smear layer(50%–75%)

Score 4 - Heavy smear layer covering (>75%)

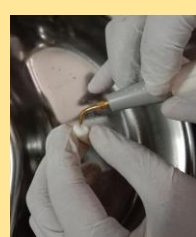
MATERIALS AND METHOD



60 extracted mandibular premolars

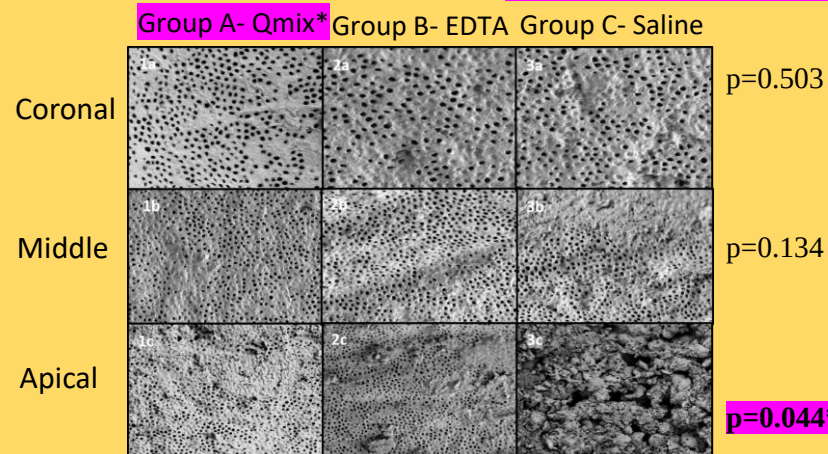


Group A- QMix
Group B- EDTA
Group C-Normal saline



RESULTS

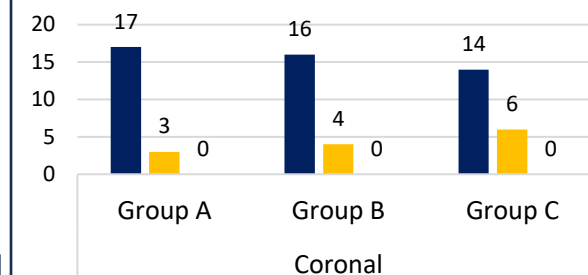
Chi-Square test p-value >0.05



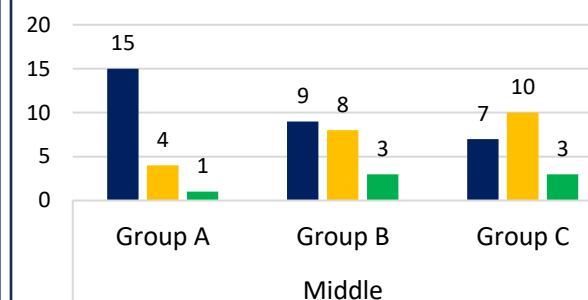
CONCLUSION:

Apical third of the root canal- QMix was statistically significantly more effective
Coronal and middle thirds- QMix, EDTA & Saline statistically performed similarly

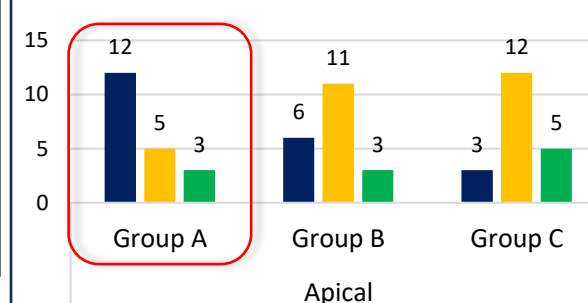
Frequency of Smear scores in the coronal third



Frequency of Smear scores in the middle third



Frequency of Smear scores in the apical third



■ Score 1 ■ Score 2 ■ Score 3