EFFICACY OF DIFFERENT REMINERALIZING AGENTS ON ARTFICIALLY CREATED WHITE SPOT LESIONS: AN IN-VITRO STUDY.

AIM: The aim of the study is to evaluate the efficacy of different remineralizing agents on artificially created white spot lesions using SEM (Scanning Electron Microscope) and EDAX(Energy Dispersive Spectroscopy).

MATERIALS AND METHODS: Fifty caries free human first premolar teeth were extracted and then stored in formalin solution till the experimental procedure. They were subjected to artificial white spot lesion formation by immersing them in demineralizing solution and kept in an incubator at 37 degree C for a period of 10 days. After demineralization, the samples were analysed with the (HRSEM) High resolution Scanning Electron Microscope and quantitative assessment is done by (EDAX)ie. Energy Dispersive Spectroscopy. After demineralization,samples were divided into two groups for remineralization procedure.

GROUP A: Remineraliizng agent I.

GROUP B: Remineralizing agent II.

All the test groups were exposed to the remineralizing agents , they were applied for 3 mins for every 12 hours for 10 days and they were stored in artificial saliva, maintained at 37 degree C for a period of 10 days in an incubator. After 10 days, the entire test groups were evaluated with the (HRSEM) High resolution Scanning Electron Microscope and quantitative assessment is done by (EDAX) ie. Energy Dispersive Spectroscopy.

RESULTS: The results were analysed with paired t test and independent sample test.Intra group and intergroup findings were done.The statistical analysis for intergroup comparison reveals that

there is no statistical significant difference between Ca and P ions in remineralizing agents I &II and statistical significant difference is seen in F ions in remineralizing agents I & II.

CONCLUSION: Group A remineralizing agent (SHY-NM) was considered to be an effective remineralizing agent when compared to Group B remineralizing agent (Remin Pro) in treating white spot lesions.

KEY WORDS: Demineralization, Remineralization, Remineralizing agents, Scanning Electron Microscope (SEM) and EDAX(Energy Dispersive Spectroscopy).