0233

SEM Evaluation of Polishing Gel Based on Perlite and Hydroxyapatite

S. D'agostino, M. Neves Oliveira, D. Fulco, D. Tripodi, S. D'Ercole, M. Dolci
Dept of Medical, Oral and Biotechnological Sciences, University G. d'Annunzio, Chieti, Italy

Objectives To evaluate the qualitatively effect of a polishing gel based on perlite and hydroxyapatite (Reslience®) on different tooth surfaces through the Scanning Electron Microscope (SEM) and through X-ray microanalysis (EDS - Energy Dispersive X-ray Spectrometry).
Methods 4 surface chosen: a natural tooth, a tooth with composite, a tooth with ceramic crown and a tooth with amalgam. Ultrasound scaling. A notch was made to divide the crown into two surfaces (test/control). The control side was isolated with adhesive tape. The test side was treated with Resilience® gel with cup on a low speed handpiece for 20 seconds and rinsed. Samples were observed to SEM (Supra 40, Zeiss ©, Germany). Three surface roughness indices (Rq,Ra,SA) were evaluated throught Fiji software (ImageJ), the EDS microanalysis was carried out.
Results Excepting for the amalgam restoration, the tested gel led to a smoother, homogeneous surface regarding the natural tooth, composite resin and ceramic crown. The EDS analysis showed different atomic distribution according to the specific sample tested
Conclusions SEM observations and the analysis of roughness indices demonstrated the effectiveness of Resilience© in 3 out of 4 cases. This polishing gel led to a smooth and homogeneous surface and was able to occlude the dentinal tubules.