ABSTRACT

Background. Resin composites are becoming more popular in restorative dentistry, particularly because of their superior esthetic properties. Resin composite may suffer degradation over time, which can be predicted by microstructural changes on its surface due to acidic conditions. Purpose. Was to evaluate the microstructural changes of the surface of hybrid resin composite after immersed in acidic energy drinks of pH 3,2; 3,7; and 3,9 for 2 hours. Method. Hybrid resin composites were cured with LED light curing unit. Specimens of 2 mm depth and 7 mm diameter were divided into 3 experimentals and 1 control. Each experimental was immersed in different energy drinks with different pH respectively (pH 3,2; 3,7; 3,9) and the control was immersed in aquadest for 2 hours. Microstructural changes were evaluated under a scanning electron microscope (SEM). Results. SEM analysis showed erosion and surface degradation to all 3 hybrid resin composites after being subjected to the experimental conditions. Conclusion. The surface of hybrid resin composite undergoes noticeable microstructural changes after being immersed in energy drinks of pH 3,2, 3,7 and 3,9 for 2 hours.

Key words: surface microstructure, hybrid resin composite, acid energy drinks