

40. **A.C.B. Ramos, C.P. Eduardo, E. Y. Tanji, D.M. Zezell***

Department of Restorative Dentistry, School of Dentistry, University of Sao Paulo, Brazil*

Instituto de Pesquisas Energética e Nuclear de Sao Paulo*

**Microleakage in class V restorations prepared with the Er:YAG laser.
An in vitro study**

Due to limited information available about the quality of the restoration when the cavity is prepared and etched with laser, in this in vitro pilot study we decided to examine the microleakage in class V composite resin restoration prepared conventionally and with Er:YAG Laser. Twelve human premolar teeth, recently extracted, were divided equally into three groups. Group I was prepared with a conventional high-speed drill and acid etched with 35% phosphoric acid. Group II was prepared with Er:YAG Laser and acid etched with 35% phosphoric acid and Group III was prepared and etched with Er:YAG Laser. Dentin adhesive system was applied and the cavity restored with photo-activated composite resin. After restoration, the specimens were stored for 7 days in distilled water. Afterwards, all the restorations were polished. Subsequently the specimens were thermally stressed and immersed for 8 hours in a 50% silver nitrate solution. They were sectioned and observed under optic microscopy. Leakage was observed in the groups I, II and III. The results were analyzed with Kruskal-Wallis and their comparison showed no significant differences among the three groups.