

## ◆017

### The influence of flowable composite lining in Class II composite restoration

Jung-Min Lee, Jeong-Won Park, Sung-Kyo Kim

Department of Conservative Dentistry, School of Dentistry, Kyungpook National University, Taegu, Korea

The purpose of this study is to investigate the influence of flowable composite lining on microleakage at gingival dentin margin in Class II composite restoration. Sixty extracted human molars were prepared as box-only Class II form on the mesial and distal surfaces. The prepared cavities were randomly assigned to six groups. Cavities were restored with Tetric Ceram®(TC) and Tetric Flow®(TF) composite resins and Prime & Bond<sup>MT</sup> using the following technique: (1) horizontal incremental filling with TC (2) oblique incremental filling with TC (3) horizontal incremental TC filling with thin TF liner (0.5-1mm) (4) oblique incremental TC filling with thin TF liner (5) horizontal incremental TC filling with thick TF liner (2-3mm) or (6) oblique incremental TC filling with thick TF liner. The specimens were thermocycled, and immersed in 2 % methylene blue solution for 12 hours. The following leakage scores were attributed: 0=no leakage; 1=dye penetration to less than half the cavity depth; 2=dye penetration to the full cavity depth; 3=dye penetration to the axial wall. Data were analyzed using chi-square test and Fisher's exact test.

The results were as follows:

Leakage was present at the gingival dentin margin in all groups.

Flowable resin liner and its thickness did not show any significant difference in dye penetration ( $p>0.05$ ).

In oblique incremental fillings, flowable resin lining groups showed statistically more leakage than without using it ( $p<0.05$ ).

In this experiment, flowable resin liner did not show improvement of marginal leakage in Class II composite restoration.