

INTISARI

Kebocoran tepi merupakan celah antara permukaan preparasi gigi dan bahan fissure sealant akibat pengerutan bahan sealant karena dehidrasi. Pencegahan kebocoran tepi ini bisa dilakukan dengan aplikasi bahan pelapis. Tujuan penelitian ini untuk mengetahui perbedaan kebocoran tepi fissure sealant bahan semen ionomer kaca dengan pelapis varnish dan pelapis cocoa butter.

Delapan belas gigi premolar satu atas yang telah dicabut dilakukan fissure sealant dengan bahan semen ionomer kaca tipe IV sesuai instruksi pabrik, kemudian dibagi dua kelompok. Kelompok 1 diberi pelapis varnish dan kelompok 2 diberi pelapis cocoa butter, selanjutnya direndam dalam saliva buatan pada suhu 37 derajat Celcius dan dilakukan metode pH cycling 4,5 dan 7, masing-masing 3 dan 20 jam tiap hari selama 5 hari, kemudian di rendam dalam methylene blue 2%. Gigi dipotong melintang pada arah bukopalatal. Kebocoran tepi ditandai dengan adanya garis biru antara gigi dan bahan fissure sealant diamati dengan mikroskop stereo perbesaran 8 kali dan diukur dengan aplikasi Optilab versi 4. Data dianalisis dengan uji T program SPSS.

Rerata kebocoran tepi kelompok cocoa butter lebih tinggi dibandingkan kelompok varnish, masing-masing sebesar $(0,88 \pm 0,10)$ dan $(0,55 \pm 0,06)$. Perbedaan tersebut bermakna dengan $t = -7,83$ ($p < 0,05$). Disimpulkan bahwa kebocoran tepi pelapis cocoa butter lebih tinggi dibandingkan pelapis varnish.

Kata kunci: kebocoran tepi, fissure sealant, pelapis varnish, pelapis cocoa butter

ABSTRACT

Microleakage is a gap between the fissure sealing material and tooth surface due to dehydration which results in material shrinkage. It might be minimized by application with covering material. This research's aim was to determine the difference of fissure sealing microleakage with covering varnish and covering cocoa butter.

Eighteen extracted upper first premolars were divided into 2 treatment groups, group 1 was covered with varnish and group 2 was covered with cocoa butter after they fissure sealed with glass ionomer cement as the manufacturing instruction. Then, they were immersed in artificial saliva with pH 4,5 and pH 7 alternately in a pH cycling method for 3 and 20 hours each in one day for 5 days. The next was immersed in 2% methylene blue. The teeth were cut bucco-palatally, the blue line along the tooth and material sealant was measured as the microleakage. A stereo microscope which connected Optilab version 4 with 8 times magnification was used for these measurements. For comparing the mean between the two groups was used t- test SPSS program for Windows.

Microleakage mean of the varnish group was lower ($0,55 \pm 0,06$ mm) than the cocoa butter group ($0,88 \pm 0,10$ mm). The differences was significant with $t = -7,83$ ($p < 0.050$). It may be concluded that microleakage in cocoa butter group is higher than varnish group.

Keywords: fissure sealant microleakage, varnish covering , cocoa butter covering