

Accepted Manuscript

Title: The effect of instrument lubricant on the diametral tensile strength and water uptake of posterior composite restorative material

Author: Jaymit Patel Clare Granger Dr Sandra Parker Dr Mangala Patel



PII: S0300-5712(16)30208-1
DOI: <http://dx.doi.org/doi:10.1016/j.jdent.2016.10.006>
Reference: JJOD 2683

To appear in: *Journal of Dentistry*

Received date: 30-5-2016
Revised date: 19-9-2016
Accepted date: 11-10-2016

Please cite this article as: Patel Jaymit, Granger Clare, Parker Sandra, Patel Mangala. The effect of instrument lubricant on the diametral tensile strength and water uptake of posterior composite restorative material. *Journal of Dentistry* <http://dx.doi.org/10.1016/j.jdent.2016.10.006>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

The effect of instrument lubricant on the diametral tensile strength and water uptake of posterior composite restorative material

Mr Jaymit Patel ^{a,*1}, Miss Clare Granger ^a, Dr Sandra Parker ^a, Dr Mangala Patel ^a

^a Barts & the London School of Medicine and Dentistry Dental Physical Sciences, Institute of Dentistry Francis Bancroft Building Queen Mary, University of London Mile End Road London E1 4NS United Kingdom

* Corresponding author: Tel.; +44 7523 914629
Email address; jaymit.patel@nhs.net

Abstract

Objectives

This in-vitro study investigated the effect of ‘instrument lubricants’ used during placement of composite restorative material, on the diametral tensile strength (DTS) and water uptake of composite specimens.

Methods

300 posterior composite cylindrical specimens were manufactured: 60 with each instrument lubricant (ethanol, 3-step, 2-step and 1-step ‘bonding agent’) and 60 with no lubricant (controls). Each set of 60 specimens was evenly allocated to one of the following test groups (n=100/group): Group 1 - tested for DTS immediately after manufacture; Groups 2 and 3 - tested for DTS after immersion in phosphate-buffered saline (PBS) for 1 and 12-weeks respectively, using a Universal Instron machine. Water uptake was assessed gravimetrically. Data were statistically analysed with two-way ANOVA and Tukey's post hoc test ($\alpha = 0.05$).

Download English Version:

<https://daneshyari.com/en/article/5640671>

Download Persian Version:

<https://daneshyari.com/article/5640671>

[Daneshyari.com](https://daneshyari.com)