THE EFFECT OF FINISHING AND POLISHING PROCEDURES ON THE SURFACE TOPOGRAPHY OF FOUR AESTHETIC RESTORA TIVE MATERIALS

Azza A. EI-Housseiny * and Hana Jamjoom **

ABSTRACT

The combination of inert particulate fillers with a relatively soft polymer matrix presents a surface that does not respond well to normal dental finishing and polishing techniques. The aim of this study was to evaluate the surface topography of four aesthetic restorative materials following finishing and polishing procedures. Different cylindrical specimens from each material (3 composites and a compomer) was finished and polished with fine diamond bur, white stone, Astropol polishing point, or sof-Iex discs. The surface topography of the specimens was examined and evaluated using the scanning electron microscope. Compared to the unpolished surfaces, the results showed that the bur and the stone produced rough surfaces, while the Astropol tips produced lesser roughness for all the materials. The sof-lex discs produced highly polished surfaces for the microfilled (Filtek) and the hybrid (Z-100) composites. The produced surface was smoother than the unpolished ones for (Filtek). All the procedures used produced roughness in the microfilled composites surfaces for the ORMOCER based (Admira) composite and compomer (F 2000). It is concluded that different esthetic materials respond differently with some finishing and polishing procedures.

* Professor in Pediatric Dentistry Department, Faculty of Dentistry, Alexandria University, Egypt

** Associate Professor, Conservative Dentistry Department, Faculty of Dentistry, King Abdulaziz University