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Comparison of two finishing and polishing systems on the surface roughness of resin composites using a non-contact profilometer

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Surface roughness evaluation of composites has been done using contact profilometer. The aim of this study was to compare the surface roughness of microhybrid, nanohybrid and the nanofilled composite resins with two finishing and polishing systems, using a non-contact profilometer. 45 specimens polymerized for 40 seconds was prepared using a metal mould and divided into three groups: Group-1 was control group, group-2 treated with Swiss flex and group-3 treated with Astropol systems. After final step surface roughness was evaluated using a non-contact profilometer. SEM images of the final finished and polished surface was taken. Data was analyzed using ANOVA and Scheffe *post hoc* test at 5% significance level. Lowest roughness was seen in controls and highest value when treated under Astropol. Microhybrid presented lowest roughness value and nanohybrid highest roughness value. All materials showed a decreasing surface roughness when finer grit instruments was applied and SEM confirmed the above findings. This *in vitro* study demonstrated differences in surface roughness of nanohybrid, microhybrid and nanofill composite resins. Two polishing systems resulted in varying surface roughness. Highest surface roughness was seen with nanohybrid composite after polishing with Astropol polishing system.

Biography

Santhosh Basavarajappa has completed his Master's degree in the field of Oral and Maxillofacial Surgery and currently pursuing PhD from University of Turku, Finland. He has published around 11 articles in ISI journals with good impact factor.

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