Abstract

The aim of this in vitro study was to evaluate the translucency of ceramic veneers cemented with light- or dual-cured resin cements after accelerated aging.

Materials and Methods:

A total of 392 specimens were made of shade A1 with 0.5- and 1.0-mm thickness. Light-cured RelyX Veneer and dual-cured Maxcem Elite and Variolink II resin cements were applied on the porcelain discs with a thickness of 0.1 mm. Translucency parameter (TP) values of the ceramic veneers after cementation and UV aging test were evaluated. Statistical analyses were done with ANOVA and Tukey's tests and paired sample t-test (p < 0.05).

Results:

All the resin cements affected the TP values of 0.5-mm-thick ceramic, while RelyX Veneer Tr (TP = 11.15; p = 0.608), Variolink II Tr (TP = 10.98; p = 0.55), and Maxcem Clear (TP = 11.81; p = 0.702) did not affect the translucency of 1-mm-thick ceramics (TP = 11.38). The aging process affected TP values of both ceramics and cemented ceramics, as the TP values decreased after aging. Among the TP values of opaque shade resin cements, there were significant differences between the "ceramic," "ceramic + RelyX Veneer WO," "ceramic + Variolink II WO," and "ceramic + Maxcem WO" variables for both 0.5 and 1 mm thicknesses (p < 0.05). There were no significant differences between "ceramic," "ceramic + RelyX Veneer Tr," "ceramic + Variolink II Tr," and "ceramic + Maxcem Clear" variables at 0.5 mm thickness, and there were no significant differences between "ceramic," "ceramic + RelyX Veneer Tr," and "ceramic + Variolink II Tr" variables after aging (p > 0.05).