Bond strength of self-adhesive luting composites after chemical curing

a) Materials and methods

The respective restorative material was embedded in a temporary crown and bridge material and ground flat. According to the respective working instructions, the surface of the restorative material was etched with VITA ADIVA CERA-ETCH (5 % hydrofluoric acid gel, HF) or sandblasted with Al_2O_3 (50 µm, 2 bar) and then the appropriate primer was applied.

Light-curing composite Harvard Restore (Harvard Dental International) was used to produce cylindrical test specimen (Ø approx. 4 mm, h max. 5 mm). The respective luting composite was applied to the base of the cylinder and the cylinder was placed on the prepared surface of the restorative material (12 mm x 14 mm).

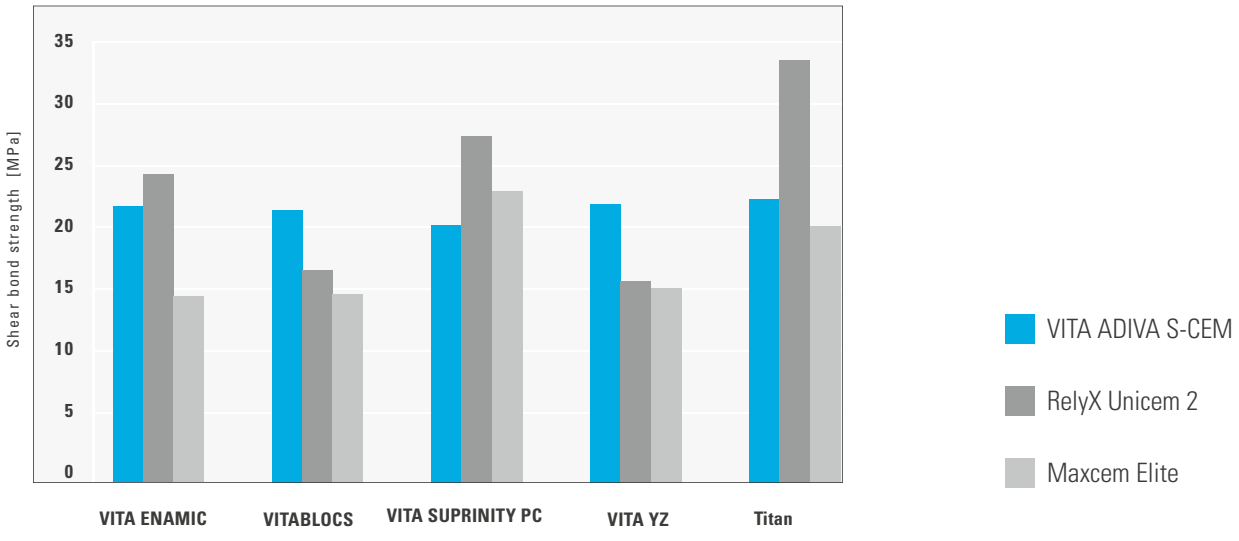
The samples were stored in a dry place at room temperature (23°C) for 10 minutes and then immersed in water at 37°C for 24 hours.

In the shear bond strength test with a mechanical testing machine and a feed rate of 0.5 mm/min, the maximum force was determined until the test cylinder sheared off and the bond strength relating to the bonding area was also calculated. Each value is based on five measurements.

b) Source

Harvard Dental International GmbH, Dr. Dierk Lübbers, Scientific Affairs Manager, Hoppegarten, Report: 11/2016

c) Result



d) Conclusion

The self-adhesive luting composite VITA ADIVA S-CEM demonstrated excellent adhesion to all restorative materials tested.

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