

Dear Doctor & Staff:

No one wants to receive news from their patient that their crown broke. Whether it was a crown that was placed one week ago or one year ago, still becomes a problem. What happened? Anytime someone adjusts an all-ceramic crown with a diamond or carbide bur after it was glazed will create micro-defects. High speed hand pieces and course diamonds create chipping and heat which causes micro fractures. This phenomenon is called subcritical crack growth which refers to a continuous fracture process in all-ceramics subjected to static and/or dynamic stress; where by this micro defect may grow at a certain rate, until it results in a complete failure. I'm sure you have seen this same effect when you get a chip on your windshield from a rock traveling at high speed creating a small crack in the glass which keeps getting bigger and bigger. To eliminate, or at least minimize this fracture process, it is always necessary to use water if using a fine diamond or carbide when adjusting a crown.

If using a blue diamond impregnated wheel or point to make adjustments and then using a gray wheel or point for the high shine and polish, water is not necessary, thus eliminating these defects. These items can be purchased from Komet or Brassler and usually have a long service life.

Adjust & Polish All-Ceramic Materials
(Porcelain, Emax, Zirconia, Etc.)

1. Adjust with fine diamond, green stone or blue diamond impregnated wheel or point. High shine polish use gray wheel/point or diamond paste with felt wheel.

(Always use water if using diamonds or carbides to adjust crowns)

As always, I want to personally thank you for your continued business and if there is anything I can do to make your experience with Authentic Lab better, please let me know.

Yours For Better Dentistry,



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