

Clinical Success with 3M™ Express™ XT VPS Impression Material.

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Eighty-five percent of my practice consists of single-unit crowns. Due to decay or micro-infiltration of previous restorations, some of these procedures will be treated with a root canal therapy. The vitality of the tooth, remaining tooth structure, and the rehabilitation material will determine the ideal restoration. This case highlights a single-unit crown restoration after root canal therapy.



Fig. 1: Tooth #16 exhibited a failed inlay that led to a root canal treatment. Note the thin walls on the X-ray.



Fig. 2: Occlusal view of the adjacent teeth, with sealed amalgam restorations.



Fig. 3: Close-up of the failed restoration. Notice the porcelain inlay with thin walls on the working cusps. Composite was used to seal the root canal treatment.



Fig. 4: Anatomic reduction, a defined chamfer margin and adequate axial and occlusal reduction is necessary so the technician can build a natural anatomic crown.

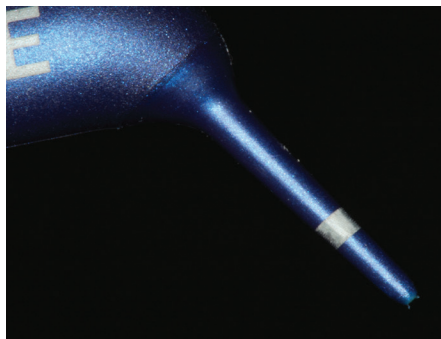


Fig. 5: 3M™ Astringent Retraction Paste was used. The rounded and 3mm marked tip allows the reliable delivery of the retraction paste into the sulcus.



Fig. 6: The retraction paste was placed around the tooth and left in situ for 2 minutes.

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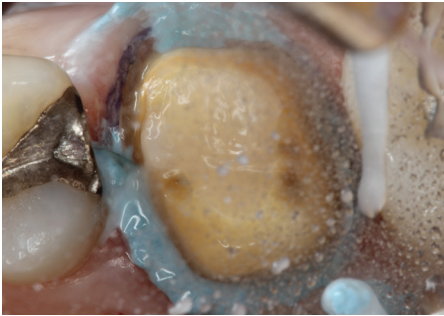


Fig. 7: The retraction paste is easily removed with an air water syringe.

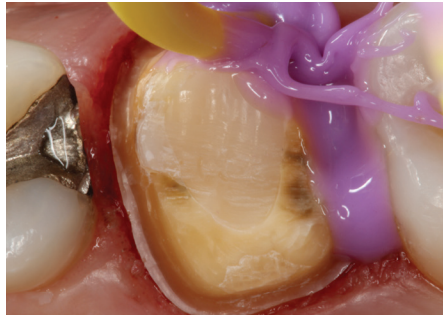


Fig. 8: 3M™ Express™ XT Light Body VPS impression material was placed slowly around the margin, avoiding air bubbles. Notice that there is no bleeding and that the gingival tissue is away from the preparation.

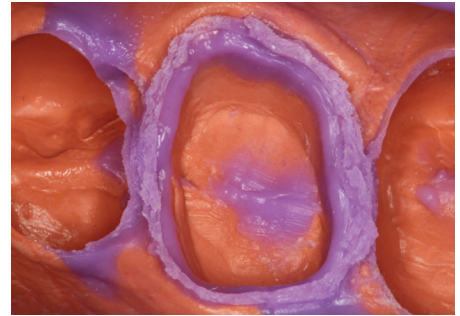


Fig. 9: Occlusal view of the impression — notice the marginal detail.

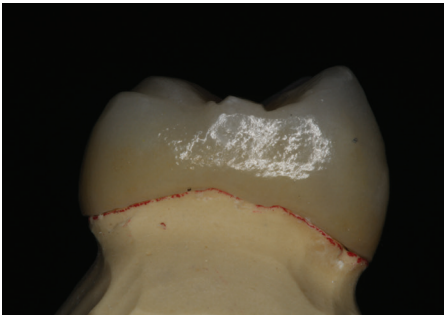


Fig. 10: The fit of the veneered zirconia restoration was checked on the die. The inner surface was sandblasted with Al_2O_3 , 50 microns at 30 PSI and then cleaned with alcohol to create microretention.

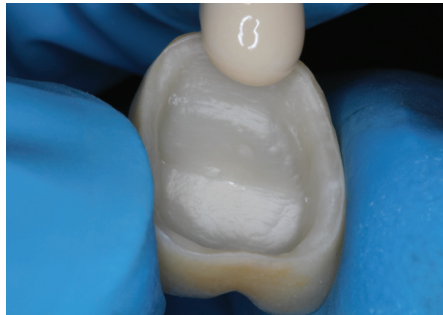


Fig. 11: 3M™ RelyX™ U200 Self-adhesive Resin Cement was used for this case, in my opinion this is the best option for zirconia restorations.



Fig. 12: After the excess resin cement was removed, the occlusion was checked.



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