DMG

Affordably Restoring an Elderly Patient's Tooth

Written by Sarah Winter, DMD | August 2020

Introduction

Elderly people often take just as much pride in their smile as younger people do. Understandably, however, many are hesitant to invest in costly or highly invasive dental treatments if they have limited financial resources, or if they simply cannot justify spending a lot of money given their relatively limited life expectancy. Fortunately, for elderly patients requiring dental restorations, a semi-permanent crown and bridge material – DMG's LuxaCrown – makes it possible to create affordable, aesthetically pleasing chairside restorations that last up to five years.

Case Report

A 94-year-old female patient presented having lost a crown on tooth #9 and having been told by another dentist that the tooth would have to be extracted (Figure 1). The patient did not wish to have the tooth extracted or, given her advanced age, have to pay for an expensive permanent restoration or implant. A clinical exam revealed that most of the tooth was inside a PFM restoration with mesial and distal decay present. An X-ray revealed no periapical pathology. After consulting with the patient, we went over risks and options and decided to gain more tooth structure by doing a gingivectomy and possible crown lengthening (she had a low smile line) and to place a semi-permanent crown.

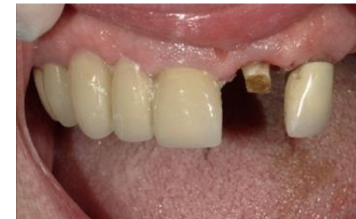

Figure 1: Patient with missing crown at tooth #8

The existing crown was put back in place and a triple tray impression was taken using an alginate alternative impression material (Status Blue; DMG) to fabricate a semi-permanent crown (Figure 2). The patient was then anesthetized. Bone sounding revealed that there was 2 more mm of tooth structure than could be gained by doing a gingivectomy. The gingival tissue was removed using a laser (Picasso Lite +; AMD), and a caries indicator was used to ensure complete removal of all carious tooth structure. Cord was then placed (Figure 3), and thin pieces of Teflon tape were placed to block out undercuts on adjacent crowns.

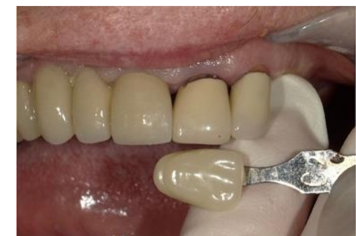

Figure 2: Original fractured crown back in mouth for impression taking and color matching

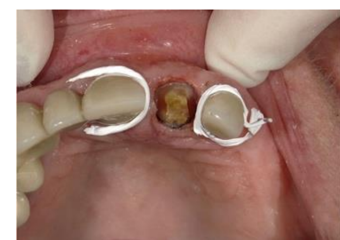

Figure 3: Cord and Teflon tape placed

The over impression was filled with a semi-permanent crown and bridge material (LuxaCown; DMG) in shade A2 (Figure 4). (LuxaCrown is a very strong material that tends to lock in more than traditional provisional materials, which is why the cord and Teflon tape were used.) The impression was seated in the patient's mouth and removed after 90 seconds. The crown was then removed from the impression and replaced in the patient's mouth.

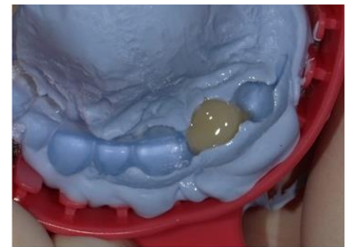
Figure 4: Matrix filled with semi-permanent crown and bridge material and placed in tooth #8

A radiopaque add-on resin (LuxaFlow Ultra; DMG) was used to fill in bubbles and add to the crown where the margin was dropped in the facial gingival area (Figure 5). The restoration was trimmed and shaped (Figure 6) and checked for occlusion. It was replaced in the patient's mouth to check for the need for any additional contouring (Figure 7). The restoration was then removed from the patient's mouth and polished. A dental lacquer (Palaseal; Kulzer) was used on the crown and light cured for 40 seconds. It was then covered with glycerin and cured for another 40 seconds. It was checked for fit again; when fit was ensured, the crown was removed and the intaglio surface was cleaned and dried. The tooth was cleaned and dried. A universal adhesive (All-Bond; Bisco) was applied to the tooth, air thinned and light cured for 10 seconds. A self-adhesive permanent cement (PermaCem 2.0; DMG) was used to fill the crown, which was placed in the mouth for final cementation. The restoration, tooth, cement and tissue were cleaned and dried. The cord was removed, and occlusion was checked again with the restoration in place.

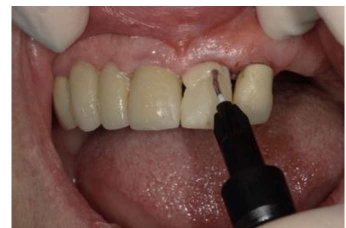
Figure 5: Flowable add-on resin used to fill bubbles and add to the crown

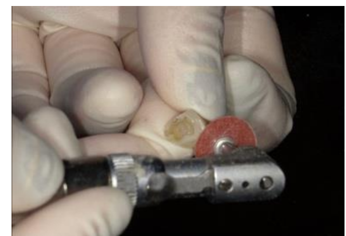
Figure 6: Restoration being trimmed and shaped prior to checking for occlusion

The patient was thrilled with the aesthetics (Figure 8), as well as with the fact that this quick, affordable solution involved no trauma or surgery.

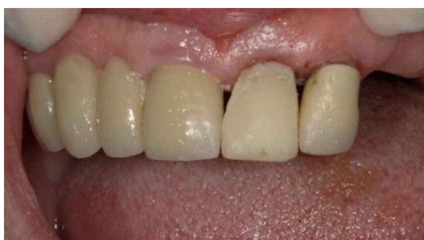
Figure 7: Restoration placed in tooth #8 and checked for occlusion and additional contouring

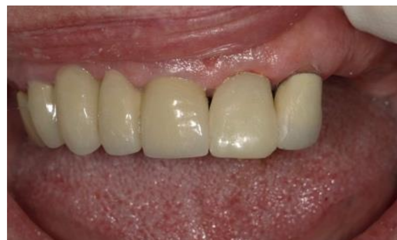
Figure 8: Final restoration

Author Bio

Sarah Winter, D.M.D., practices cosmetic and restorative dentistry at Sarah Winter Dental Clinic in La Jolla, California. She earned her undergraduate degree in education from the University of Southern California and graduated magna cum laude from the UNLV School of Dental Medicine. Dr. Winter has published several articles and maintains active academic memberships in the American Academy of Cosmetic Dentistry, Functional Aesthetics, and the Spear Faculty Club.