

COLTENE's everyday, high performance composite

BRILLIANT EverGlow – universally esthetic, simply strong

CLARENCE TAM, HBSC, DDS, NEWMARKET/AUCKLAND
MARCH 2015

A 33 year old female with a very minor caries history presented to my service for a restorative treatment plan relative to a progressively "darkening tooth" that she had been noticing over the past few months.

On examination, tooth 46 exhibited a stained fissure system with marked polychromaticity in the tooth, as well as the presence of cavitated occlusal caries (Fig. 1). She did not have any other carious lesions present, but did have moderate buccal cervical abrasion lesions from aggressive brushing throughout her life. Tooth 46 was planned for a single shaded direct composite restoration with a smart duo shade resin material, and the chameleon effect of the same material was to be demonstrated during restorations of 44B and 45B in the same appointment (Fig. 4).

Case Description

The use of minimally-invasive direct restorations is indicated in many clinical situations, from the replacement and/or optimisation of old restorations to dental trauma, abrasion and tooth

erosion, through the modification of shapes (conoid, peg-shaped, etc.) up to the rebalancing of the smile, both aesthetically and for the presence of rotations and discoloration.

The patient was anaesthetized using a single carpule of 4% Articaine with 1:100,000 epinephrine and the lesions isolated using rubber dam (ROEKO Flexi Dam non-latex, COLTENE). Caries was excavated from tooth 46 and caries detector dye used in two sequential washes during the removal process. The enamel margins were bevelled slightly (Fig. 2) before a selective etch procedure using ONE COAT 7 UNIVERSAL (COLTENE), a multi-mode all purpose bonding system. The restoration was constructed using increments to create each individual lobe, starting with the mesiobuccal. Buccal cusps were layered and the lingual facing surfaces stained lightly using a Pink-Orange tint (GC Optiglaze Color Kit) before constructing the lingual cusps, mesiolingual before distolingual. A single shade of the smart-colored composite BRILLIANT

EverGlow (COLTENE) was used for the entire restoration, simplifying the procedure tremendously with no compromise in either strength or esthetics (Fig. 3). The cervical abrasion lesions on 44B and 45B were isolated, an infinity bevel established and micro-air-abraded using 27 micron aluminium oxide in order to maximize surface area for bonding. The lesions were selectively etched before generous application of ONE COAT 7 UNIVERSAL, vigorous air thinning and subsequent curing. The lesions were layered with BRILLIANT EverGlow A3/D3 in alternating cervical-then-incisal increments until the full volume of the restoration was recreated (always judge required resin volume from the occlusal view) (Fig. 5).

Both restorations were finished and polished with the shine derived from the use of Comprep Plus before Composhine Plus rotary polishers with the ease of luster and polishability evident in the final result.

Material Description and Rationale for use: COLTENE has developed a product

Restoration 1 (tooth 46)



Fig. 1: Pre-operative view tooth 46. Cavitated pit and fissure caries is evident.



Fig. 2: Intra-operative view. Caries is fully removed.



Fig. 3: Single shade restoration using BRILLIANT EverGlow A3/D3. Seamless color integration.

which is aimed at simplifying both the armamentarium and lives of top-tier restorative dentists. The result is a material that can be universally-applied and features a satin-like shine right out of the box and after placement. This makes polishing a breeze. Shades for the comprehensive system have been designed using the adaptive Duo Shade concept, which covers two VITA shades simultaneously. In my practice, 80% of adult non-bleaching patients can be treated using the universal shade A3/D3 in this system. The full assortment features only 12 shades (7 universal, 2 translucent and 3 opaque shades) to cover all areas of dental application.

For me, sculptability and ease of modelling is incredibly important in the provision of direct, biomimetic composite restorations. It is a hassle when materials stick to the instrument, or when delicately modelled lobes slump into each other. This material does not do any of that, which makes me smile. It is a non-tacky material that allows easy-sculpting but at the same time wets the bonded surface very well. The strength, amazing abrasion resistance and esthetics of this material stems from a simple combination of submicron-sized barium glass fillers in combination with some pre-polymerized fillers with low overall water absorption. Each filler in turn has been surface-treated to optimize bonding strength and

quality, helping your surface stay intact longer than most, especially important in posterior restorations. Compressive strength is impressive at just under 400 MPa and puts this material in the top tier of high-performing posterior restorations. The real kicker is how easy it is to polish relative to the competition and how pretty it will look at your recall exam; if you can tell where your restoration is.

Biography

Clarence is originally from Toronto, Canada, where she completed her Doctor of Dental Surgery and General Practice Residency at the University of Western Ontario and the University of Toronto, respectively. Clarence's practice is mostly limited to cosmetic and restorative dentistry. She is well-published to both the local and international dental press, writing articles, reviewing and developing prototype products and techniques in clinical dentistry. She frequently and continually lectures throughout New Zealand and Australia. Clarence is the Chairperson of the New Zealand Academy of Cosmetic Dentistry. She is an Accreditation Candidate and Sustaining Member of the American Academy of Cosmetic Dentistry and seeks to be the first in New Zealand and Australia to gain Accredited Status with them. Clarence is an Opinion Leader for Henry Schein Shalfoon, 3M ESPE, Kuraray-Morita, GC Australasia, SDI,

COLTENE, Dentsply/Triodent/Rhondium and the only Voco Fellow in Australasia.

Clarence maintains a private practice limited to cosmetic and restorative dentistry in Newmarket, Auckland.

CONTACT

Clarence Tam, HBSc, DDS
Cosmetic and General Dentistry
18 Morrow Street
Newmarket, Auckland 1052
(09) 524-8399 (work)
(021) 833 543 (mobile)
www.clarencetam.co.nz

Chairperson New Zealand Academy of Cosmetic Dentistry www.nzacd.co.nz



Restoration 2 (teeth 44 B and 45 B)



Fig. 4: Pre-operative view teeth 44 B and 45 B.



Fig. 5: The lesions were layered with BRILLIANT EverGlow in alternating cervical-then-incisal increments until the full volume of the restoration is recreated.