



HAPPY PATIENT CAPTURING THE CHANGE ON HER iPHONE!

Dr. Fred Calavassy was a speaker at the 2009 IACA in San Francisco, CA.

DIRECT BONDED COMPOSITE RESIN “VENEERS” AS A CONSERVATIVE OPTION FOR AESTHETIC TREATMENT

The power of conservative adhesive aesthetic dentistry is very relevant in the dental arena and can be well exhibited in the treatment case below.

Despite many material choices available to us today, conservative cosmetic adhesive dentistry can achieve exceptional, long term success and also provides a means to prevent tooth loss in the future. This case demonstrates that conservative adhesive dentistry, used in the correct way, can provide excellent results and durable long term restorations. The difficulty with this treatment lies in the “creation” of such beauty, though with adequate understanding of color, shape and contour, magnificent aesthetic results can be achieved directly. It should also be noted that clinical excellence with direct bonded composite resin (whichever brand!) can be achieved in a day to day clinical setting not simply in a teaching environment with time to spare.

H I S T O R Y

The patient is a 37 year old female in good physical health. Her remaining dentition is in good health. I first met Mrs. P. C. at a function as she is in the dental industry. Despite her attractive appearance, her smile was hindered by the extent of erosion to the incisal edges due to a history of bulimia in the past.

The teeth were periodontally sound and there were no neuromuscular symptoms though some signs of occlusal disharmony. The anterior open bite was definitively conducive to an “additive” conservative aesthetic approach to care. The pre-treatment appearance of the smile and teeth are shown in this article.

T R E A T M E N T

The treatment involved direct bonding of the 13-23 with the desired effects being as follows:

- Replace eroded enamel with direct bonded composite resin
- Evening of the smile line
- Brightening of value
- Re-creation of natural tooth contour to emulate nature.

Clinical treatment involved the following steps:

Pro-operative impressions to manufacture a wax-up of the ideal contours of the teeth. A putty stent was manufactured to recreate the wax up and to be used as a template for the direct bonded composite resin.

Clinically:

1 Occlusion was checked and noted. This was to allow a mental image of the finish lines of composite resin on the lingual inclines.

2 Local anaesthetic was used as the extent of enamel loss on the palatal aspect in particular has led to severe sensitivity.

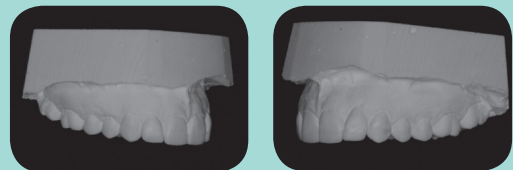
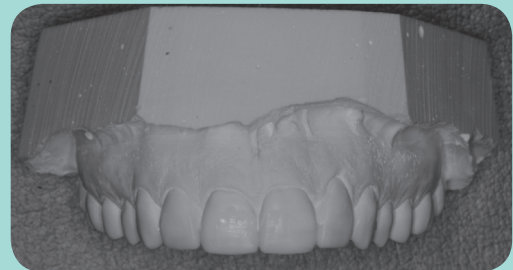
3 Shade selection was performed prior to placement of rubber dam and tooth dehydration. In this case a 3M Espe product was used ("Filtek Supreme XTE") due to its ease of placement and non-slumping characteristics as well as it's superb polishability and excellent durability. The shades chosen were WE and B1B.

4 As the patient was happy with the shape and length of the wax up done prior to treatment, a direct putty stent was made to facilitate replication of the existing shape and length of the ideal wax up.

5 The anterior segment was isolated with rubber dam to facilitate a dry operative field. It is worth noting the importance of placement of rubber dam even whilst working in the anterior segment due to high relative humidity which may affect bonding through contamination. During palatal sealing of the rubber dam with fast setting bite registration material, the putty stent was seated to allow the ability for the stent to be seated while the rubber dam is in situ and sealed.



PRE-OPERATIVE IMAGES



PRE-OPERATIVE IMAGES



RUBBER DAM ISOLATION AND
PUTTY STENT TRY-IN



PUTTY STENT SHOWING EXTENT OF PALATAL EROSION



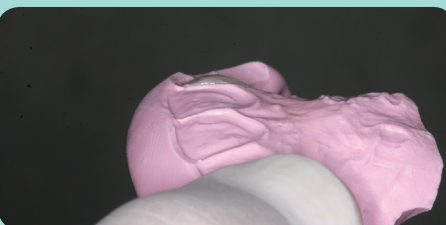
INITIAL TRANSLUCENT SHADE BUILDING UP PALATAL WALL OF TOOTH
SHADE – WE



INITIAL COMPOSITE RESIN INCREMENT PLACED ON THE PUTTY STENT APPROXIMATING THE THICKNESS OF THE DEFICIT TO MINIMIZE EXCESS



CONTINUATION OF PALATAL WALL PLACEMENT FOR EACH TOOTH
SHADE – WE



NOTE THE OVER-CONTOURED RESIN TO ENABLE EXCELLENT ADAPTATION TO THE PALATAL WALL
SHADE – WE

6 The existing teeth were “roughened” using a high speed handpiece and the teeth prepared for delivery of the new definitive restorations.

7 The teeth were etched with 37% phosphoric acid and washed as per recommendations.

8 Scotchbond Universal was used as the adhesive utilizing a wet bonding technique following total etching of the preparations.

9 Incremental build up of direct bonded composite resin was placed utilizing the stent for guidance of length and lingual wall position. An initial layer of shade WE was used followed by a second layer of B1B followed by a third layer of WE. The additions were “framed” using more opacious body shades to simulate an incisal “halo”. The teeth were separated after each palatal increment using an interproximal saw with care to not create gingival irritation or bleeding. “Filtek Supreme XTE” is exceptional at color blend and matches natural tooth translucency/opacity extremely well. The author prefers to slightly over-contour the final layer to shape through “cut back”. Some clinicians prefer “building up” sculpture rather than “cutting back”.

10 Following composite placement, the resin was grossly contoured then the rubber dam was removed.

11 Prior to final finishing, occlusion was checked for interferences and canine protected lateral excursions. Chew cycle interferences were also removed.

12 Composite resin was finished with interproximal finishing strips, “Soflex Discs” (3M), and finally with “Pogo” rubber impregnated polishing wheels (Dentsply) to create a high surface lustre.

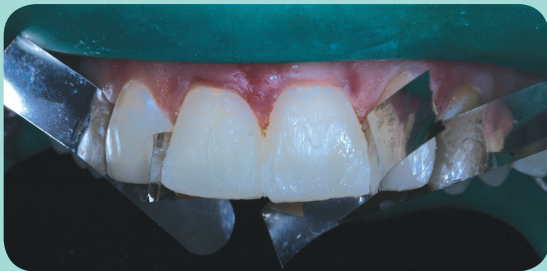
As can be seen, conservative direct bonded composite resin can achieve excellent results and maintain the integrity of the existing tooth structure if tooth position, shape and contour would like to be maintained. This result has allowed the patient to forget the problems which the past history created and, once again, I encourage all to explore the artist within and attempt the use of direct bonded composite resin anterior restorations, as materials have come a long way since their inception.



PALATAL IMAGE SHOWING FORMATION OF THE PALATAL ASPECTS OF THE 12-22 TEETH



"FRAMING" OF THE ADDITION WITH MORE OPACIOUS SHADE - B1B



FINAL LAYERS OF ENAMEL SHADE - WE



PALATAL CONTOUR SHOWING 13-23 COMPLETED



FINAL RESTORATIONS FOLLOWING POLISH AND CONTOUR



NEW LIPSTICK AND HAPPY SMILE!