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Case Report Open Access

Bonded Functional Esthetic Prototypes (BFEPt): Review and a Case Report

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Abstract

In this review & case report we will introduce & discuss uses, indications & step by step of BFEPt this technique is considered the most applicable technique to produce effective direct composite veneers and reaches the aesthetics outcome near the indirect restoration with medium price because everyone deserve to have a beautiful smile even he hasn't much money to go for ceramic restorations

Keywords: Aesthetic dentistry; Injection flowable; Digital smile design; Wow effect; Long term Provisionals; Direct composite veneers; Bonded functional aesthetic prototypes

Introduction

As we all know convincing an aesthetic case about your treatment plane is not easy to do and depending on a lot of factors Such as

1. Patient's imagination
2. Your communication skills
3. Economic factor and patient's life priorities

So however you a are very talented clinician you cannot convince your own patient about your aesthetic point of view.

So motivational mock-up & (BFEPt) was introduced to the field of aesthetic or especially in smile makeover cases making the life of cosmetic dentist easy, not only in convincing the patient about treatment plane but also helping the clinician to do guided minimally invasive preparation and control the quality of each step in his treatment plane

Introducing this concept to our field helped us a lot and gave the patient chance to (test drive) his final restoration even before we touch his teeth & if he agreed to our treatment plane we can go through BFEPt which is considered a medium cost effective procedure.

This article will introduce in brief BFEPt concept with Case report.

Uses of BFEPt

1. Motivational mock –up
2. Temp restoration
3. Long term provisionals
4. Direct composite veneers

Indication

1. Wear or loss of vertical dimension
2. discoloration
3. Slight tilting
4. Spacing
5. Short teeth

Step by Step

We will discuss this on our case young female patient 17 years old who Chief complaint was spacing between the teeth which makes it look smaller.

Impressions & photos

Well defined impression voids free with dimensionally stable impression material is a must to maintain the accuracy of the stent We need 2 photos minimum to do DSD Frontal smiling photo and frontal retracted photo (Figure 1).

Digital smile design (DSD)

Including facial analysis (facial mid-line&horizontal line) Dento facial analysis (smile curve, width of the anteriors teeth) Dental analysis (width to length ratio, gingival curve) (Figure 2).

Wax-up follows the smile frame exactly

Send the Digital design & impressions to your lab asking him to do wax-up following the design accurately. After finishing the wax ask him to send frontal photo for the waxed design to do a quality control using DSD software to make sure the wax follows the design accurately (Figure 3).

Figure 1: 2-Digital Smile Design (DSD).

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Figure 2: Dental analysis (width to length ratio, gingival curve).

Figure 3: 3-Wax-up follows the Smile frame.

Transparent silicon fabrication

Take impression by using transparent silicon material over the waxed cast after complete setting we remove it and drill a hole over the incisal edge of each tooth that act as a tunnel through which the flowable composite will inject through it (Figure 4).

Mock-up

For visual communication, Motivation & make sure that everything follows the plane (Figures 5 and 6).

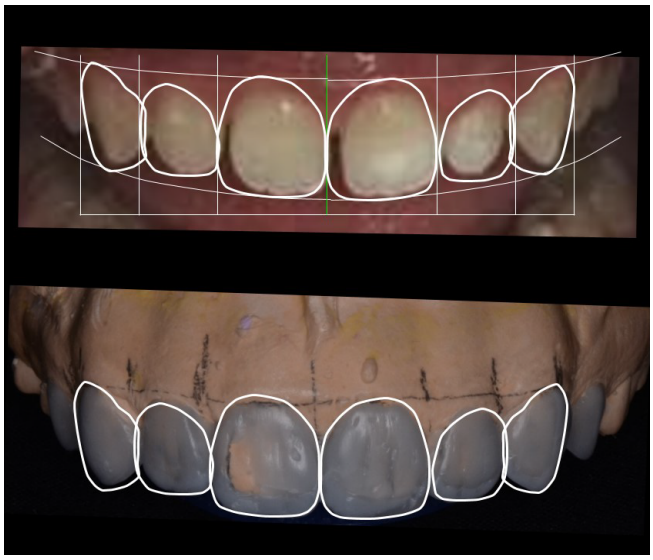

Figure 4: frontal photo for the waxed design.

Figure 5: Transparent silicon fabrication.

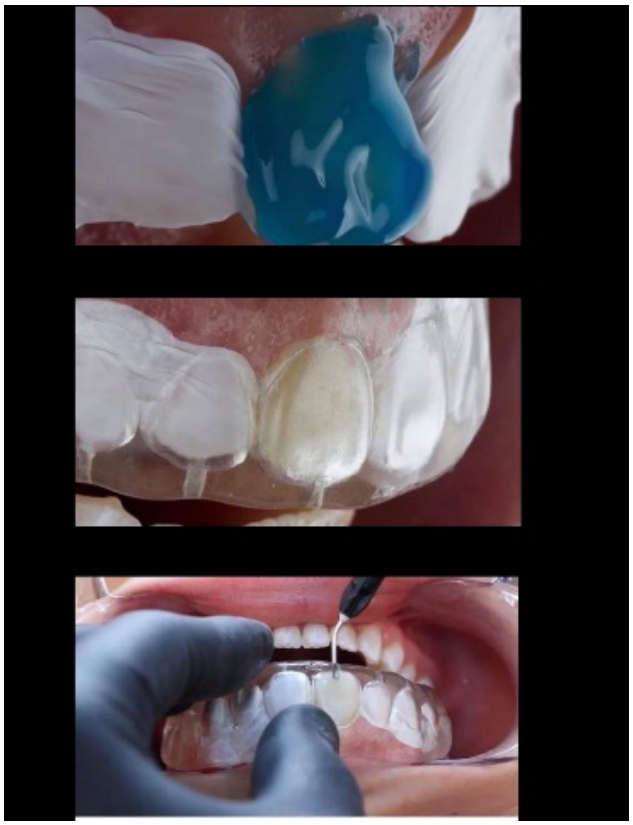

Figure 6: impression by using transparent silicon material.

Etching & bonding

Etching pattern:

1. 1-If you want your BFEPt stay weeks not more than 8 weeks
2. Only 3mm spot etch technique should be accomplished
3. 2-If you want your BFEPt stay from 8 weeks to 6 months
4. Full facial etching just before proximals &gingival margin
5. 3-If you want your BFEPt to stay more than 6 months
6. full facial etching including proximal, gingival margin & incisal edge if lengthing is done.

Tray seating

We put Teflon on the right & left adjacent teeth to avoid making a composite bridge.

Injection

Make sure that the tip of flowable composite is inserted to cervically, withdrawed slowly to avoid air bubbles entrapment.

Finishing & polishing

Using pumice and felt brush or goat hair brush (Figures 7-9).

Case no 1

Young man 24 years old has peg shape laterals, missing lower central makes spacing during smiling which bothers him (Figures 10 and 11) [1-3].

Figure 7: Injection Flowable.

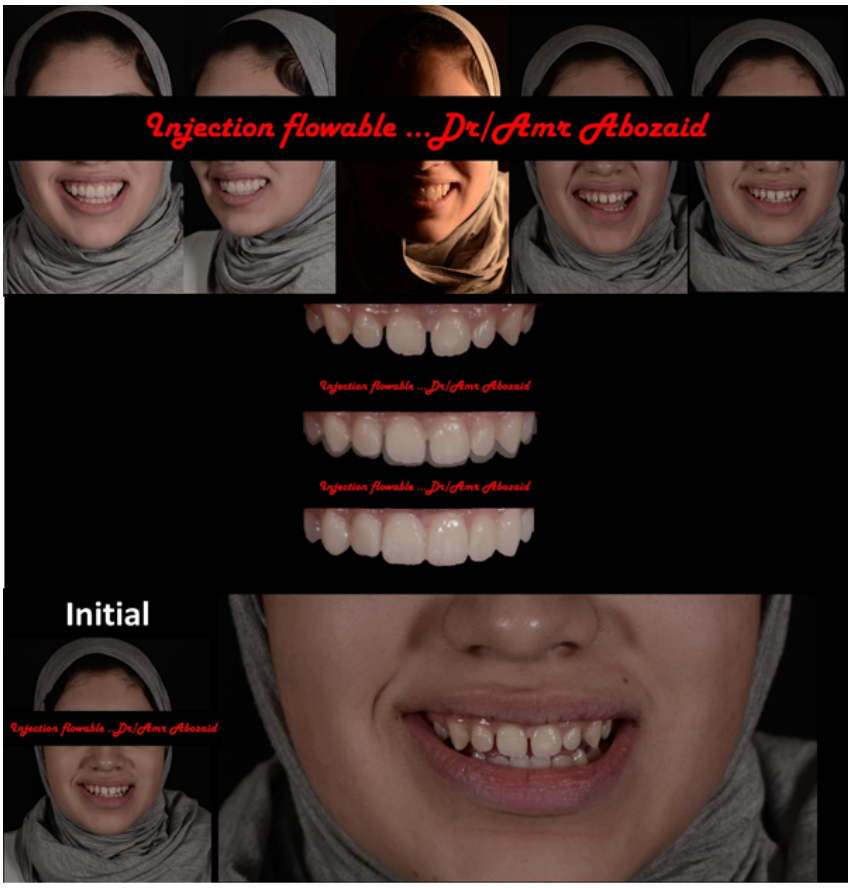

Figure 8: Initial BFEPt.

Figure 9: Final BFEPt.

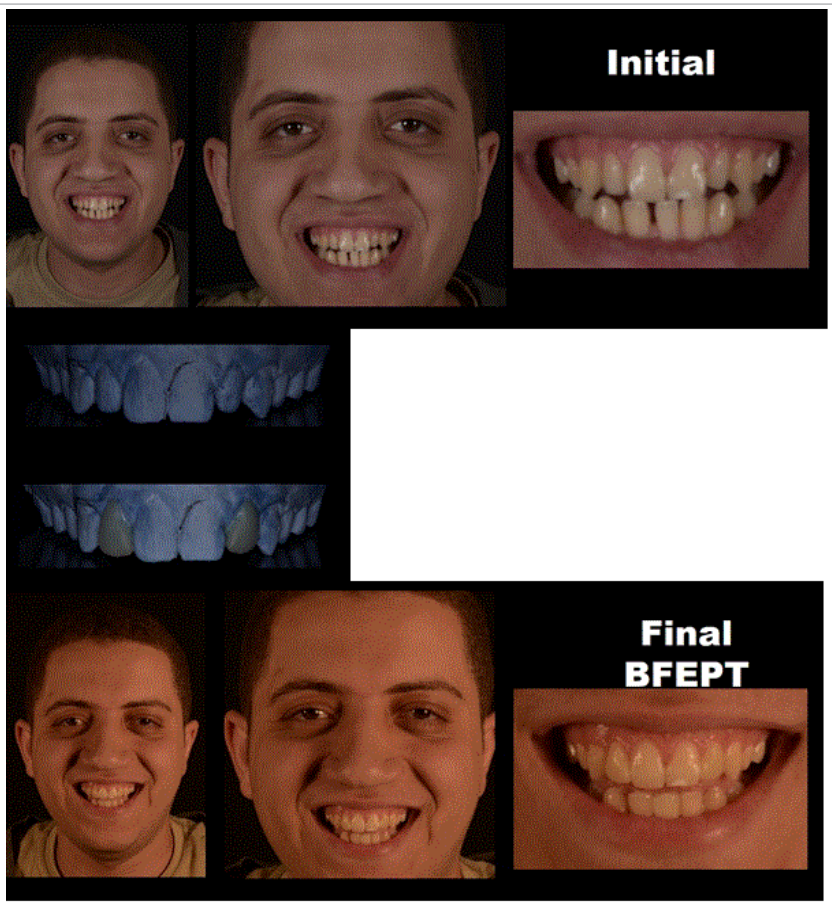

Figure 10: BFEPT for case 1.

Figure 11: After BFEPt.

Conclusion

Bonded functional aesthetic prototypes (BFEP) has many uses as Motivational mock-up, Long term Provisional to test functional load over future restoration and direct composite veneer for patient with low economical factor. Motivational Mock up is very useful in smile make over cases is very useful even to convince your patient and during your preparation Easy steps to follow and reach the ideal result only do your smile design and find a good technician to do the wax up. Reaching the wow effect helping your patient to re-arrange his priorities and make it easy to accept your treatment plane.

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