

# A Case Report

## Smile Transformations : Principle & Protocols

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**A**s I write this article during the covid times I think about a world where dentistry is much more than wearing face shields , PPE kits and providing pain relief however as we are forced to adapt to the new normal every day , we can only prepare ourselves to be better when smile makeovers can be a part of daily practice again! What helps me keep positive is that according to a recent AACD SURVEY when asked what is the most common thing that we notice about a person , most of them say their smile(45%) , speech(25%) , clothes (9%) and smell (8%) . This proves that we shall be back doing what we love most sooner than we realize that is transforming a smile and infact positively impacting our patient's lives as well!

Here I present to you a case from the archives which has everything going wrong and honestly without a lab made mockup and interdisciplinary approach I would have no idea whatsoever where to begin and how to reach my target smile.

A female patient in her early 20s , she came to me looking for something that would help her feel confident while interacting with peers and smiling uninhibited. Upon examination we noticed she had a high smile line , the teeth were protruding , were malaligned , the axial inclination of teeth was incorrect and the gingival zeniths were inappropriate . There was only one clarity at the time of her initial consultation and check up that the gingival band that was showing was the most unattractive part of the smile along with the discoloured 21 .

### Initial Consultation

We took some photographs of the full face, smile and retracted views and made impressions to make two sets of casts : one for the diagnostic mock up and test drive other as a control model to make the patient appreciate our starting point and compare both simultaneously in real time.

### Pre Operative Photography

It is extremely important to capture a smile in both posed and dynamic situations to help ascertain how many teeth are shown and what is the incisal display on smiling . This helps us place the teeth and smile in

positions that can bring about central dominance , balance , symmetry while maintaining teeth proportions in a smile.

### Mock Up

We use digital tools and wax mock ups both for patient conversions and so far we have had 98 % success rate . This gives them a peep into the expected end result and gives a positive direction to the treatment with the patient being able to visualize the end result and become a part of the decision making process.

### Gingival Contouring & Aesthetic Prototype Technique

At her next appointment we started with her gingival contouring facilitated by a stent and bleeding points were ascertained there on. In addition to gingival contouring we had to incorporate some osseous contouring to ensure the distance from the gingival crest to bone crest is 3 mm and we have no encroachment of biological width. Sutures were placed palatally so that it would not look unsightly. At this appointment itself we made the temporaries to run a test drive aesthetically and phonetically . This was a long appointment only possible due to the patience of the dentists involved and the patient herself.

### Re Evaluation of Aesthetics And Phonetics & Occlusion

She returns in 48 hours and we evaluate what we do not like . We check her phonetics with F, V, M, S and E and make changes accordingly . We check the occlusion in anterior and canine guidance and ensure that the shim stock seamlessly passes without holding on. That is the end

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of the appointment and she returns in a week for suture removal and gingival health check.

### Gingival Maturation And Impression Making

We wait for 7 weeks to see her again. The temporaries are holding up well and the gingiva looks healthy. We decide to go ahead with impressions following the APT Technique and conscious shaping to keep enamel for bonding well. The 21 is discoloured and we give additional 0.3 mm space to accommodate the colorchange. Stump shade is taken at this stage. We temporise her again at this stage.

### Final Veneers And Cementation

We receive the work back from the lab in about a week and check the veneers on the cast and schedule a trial. If all works well, we can cement them at this appointment. TRY - IN can be done with a KY Jelly or Try in pastes available with Ivoclar Vivadent.

### Veneer Intaglio Surface

I use 5% Hydrofluoric acid for cementation for 20 seconds cleaning with water and air dry, followed by silane coupling agent for 90 to 120 seconds (till it evaporates) followed by scrubbing a bonding agent (3M UNIVERSAL) for 20 sec but do not cure, only air dry. This is covered with an amber cover to prevent light curing.

### Tooth Surface

Rubber dam isolation followed by phosphoric acid etch for 15 seconds complete cleaning with water and air dry followed by scrubbing bond on tooth surface for 20 seconds with air dry and no light curing.

### Veneer Cement

I have used the 3 M RELYX Veneer cement (Translucent

TR) which polymerises by light curing only for this case. I like the working time this allows the operator as opposed to a dual cure cement. However this is a personal preference and can be changed as per your experience and skill.

The veneers are spot cured for a couple seconds at the cervical area to remove the excess at the margin and interproximally. A #12 BLADE is the best tool in my opinion to do this predictably and in all the areas with great accessibility.

Now a water soluble jelly (K Y Jelly) is used to create a OXYGEN INHIBITION ZONE and cure the veneers buccally and palatally for 40 seconds each.

The rubber dam is removed by cutting the septae interproximally and the veneers are adjusted occlusally if any changes are needed. EVE TWISTS from Ivoclar can be used to polish these areas post operatively.

### Follow Up

We check occlusion, phonetics and gingival overhangs at this appointment. We also take post operative photographs for records. This case was done 3 years ago and the patient has not reported back with any complaints.

### CONCLUSION

Ceramic veneers with Gingival crown lengthening procedures can greatly enhance appearance in a High smile line case. A great adjunct to this would have been a botox/filler therapy for the upper lip motility but the patient did not wish to go for that. The treatment plan is greatly influenced by the smile line and teeth display during a spontaneous smile. A video of the patient talking and having a candid conversation can help this process greatly making the outcome predictable.



1 to 5 : Pre operative situation



6 : Pre operative spontaneous smile

7. Pre operative 12 clock position.

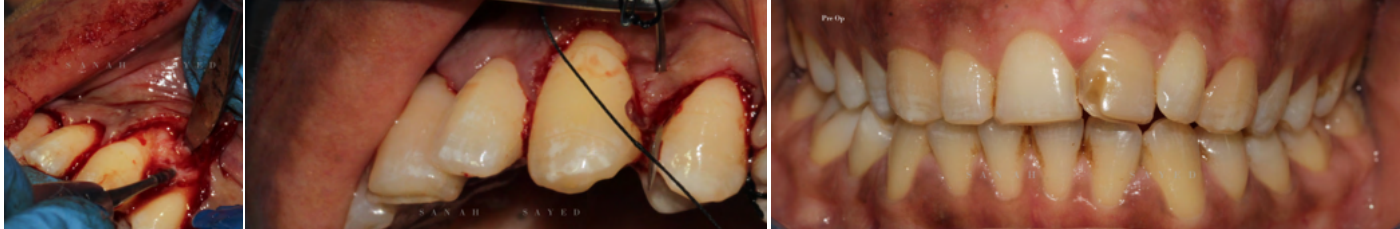
8. Pre operative monochrome smile to evaluate value.





9: Marking bleeding points for gingival recontouring

10, 11, 12 : Gingival recontouring and removal of excess gingival tissue.



13.Osseous Recontouring to maintain biological depth .

14. Suturing with knots on the palatal side.

15. Post Gingival contouring and suturing.



16. Determining Incisal positions on basis of phonetics : F and V

17 : Incisal display at repose . Pronunciation of M or EMMA

18. Marking the excess to reduce the incisal show in accordance to phonetics and patient desire.



19. 12 clock position to check protruding teeth and incisal position

20. Smile with temporary veneers



21 & 22 Final veneers in Emax (Lithium disilicate layered)

23 : Post operative smile



24. Post operative 12 clock position

25: Post operative monochrome for value

26.Smile transition in the patient( Pooja FULL FACE)