Dental Students attempting Aesthetic Dentistry

By: Lili Szabo, Brittany Vacura, Jean Calvo, Stephanie Cruz, and Sepi Shafa

Know Your Options

- Composite Veneers
- Porcelain Veneers
- Full Coverage Crowns**
- Implants
- Bridges**
- Orthodontics
- Periodontic Surgery
- No treatment (if your patient has unrealistic expectations, this may be best)...

Understand the Patient's Goals

- What color do they want the teeth?
- How straight do they want the teeth?
- What size and shape do they want the teeth?
- Removable vs Fixed
- Long term vs Short term
- Inexpensive vs Expensive
- Discuss RBA's of all options to determine the best for the patient

Case 1

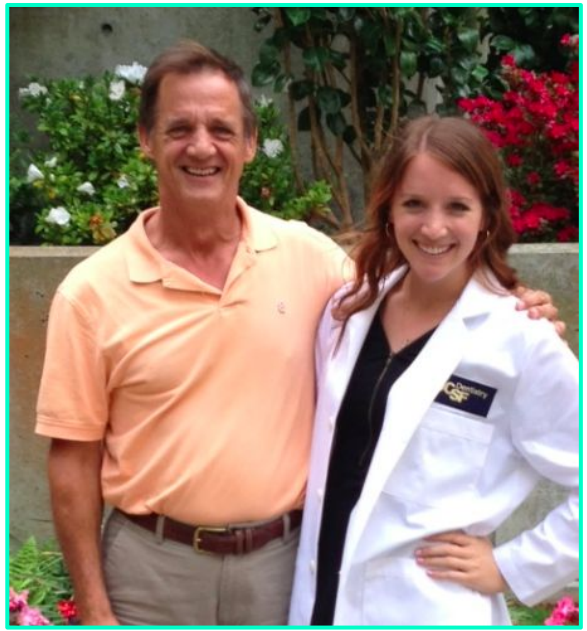
Brittany

56-year-old Male

CC: “I want to do something to my front teeth, they’re ugly.”

What bothers you about your teeth?

“The broken edges, the darkness by the gums, the crowdedness.”

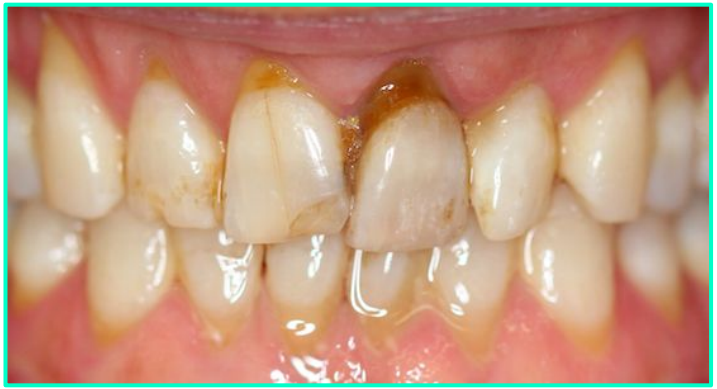


Discussion and proposed Treatment

- The discussion and the understanding of your patient’s goals is the most important part of deciding your next step.

Discussion and proposed Treatment

- How much time do you want to spend fixing your teeth? “Not very long, maybe 1-2 months.”
  - This eliminates orthodontics and perio gum grafting.
- Are you happy with the color of your teeth? “Yes, I don’t want them to look fake like a movie star.”
  - This eliminates whitening products.



Know your options

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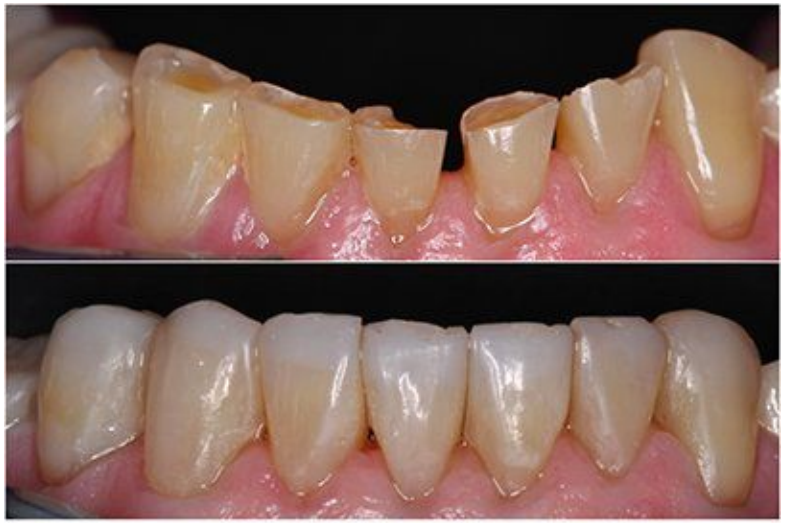
- ~~Periodontic Surgery~~



jm
dr. james malouf
cosmetic and implant dentistry

Composite Veneers vs. Porcelain Veneers

- How long is the patient expecting them to last?
- What are the patient's dietary and social habits? (smoking, drinking wine or coffee, etc)
- How much is the patient looking to spend?
- Does the patient grind or clench? If so, will they cooperate in wearing a night guard?




Our patient

- Nocturnal Bruxism (doesn’t wear night guard)
- Drinks coffee every day
- Smokes cigarettes
- Wants his treatment to last more than 5 years

~~Composite Veneers~~

Know your options

- ~~Composite Veneers~~
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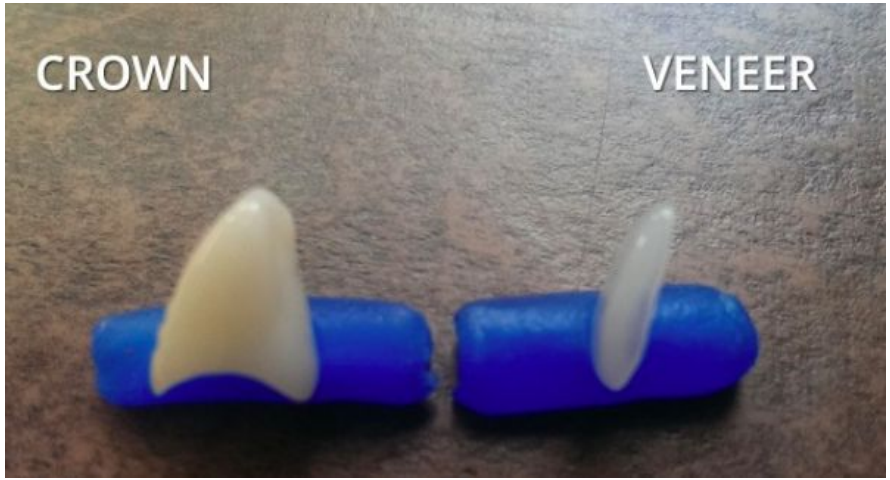
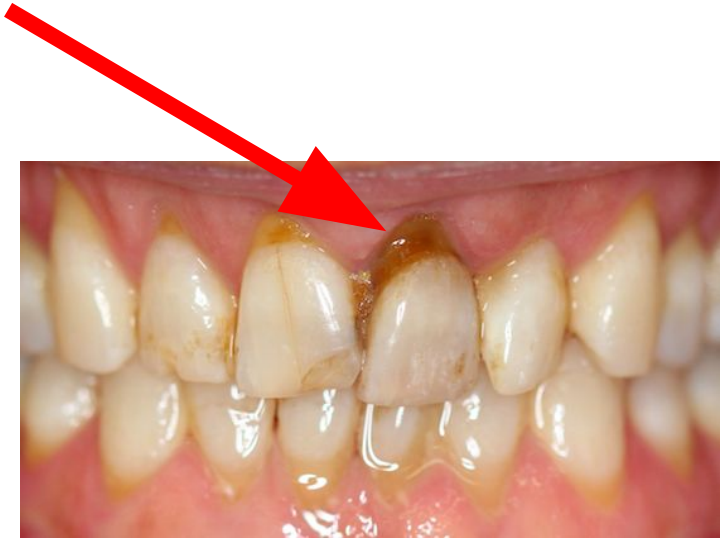


Veneers

- Why do dentists choose veneers?
  - More **conservative** than crowns!
- How does a veneer adhere to the tooth?
  - Bonding between the veneer and the enamel.
- Can we do veneers on our patient?
  - No. Because of the patient's gingival recession, the veneer prep would be in dentin and the veneer would not fully bond to the tooth. This would eventually cause leakage and failure.



KNOW YOUR OPTIONS

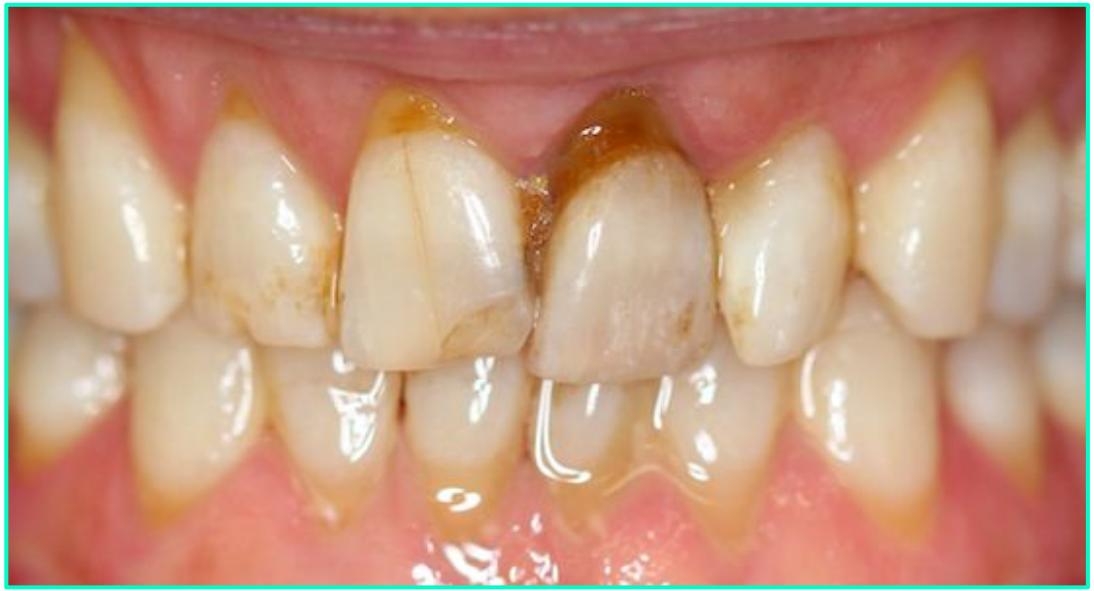
- ~~Composite Veneers~~
- ~~Porcelain Veneers~~
- **Full Coverage Crowns**
- ~~Implants~~
- ~~Bridges~~
- ~~Orthodontics~~
- ~~Periodontic Surgery~~

More questions:
How many crowns?
What kind of crowns?

Discussion and proposed Treatment

#9 had been Endo treated and was much darker than the rest of the teeth

Patient's CC

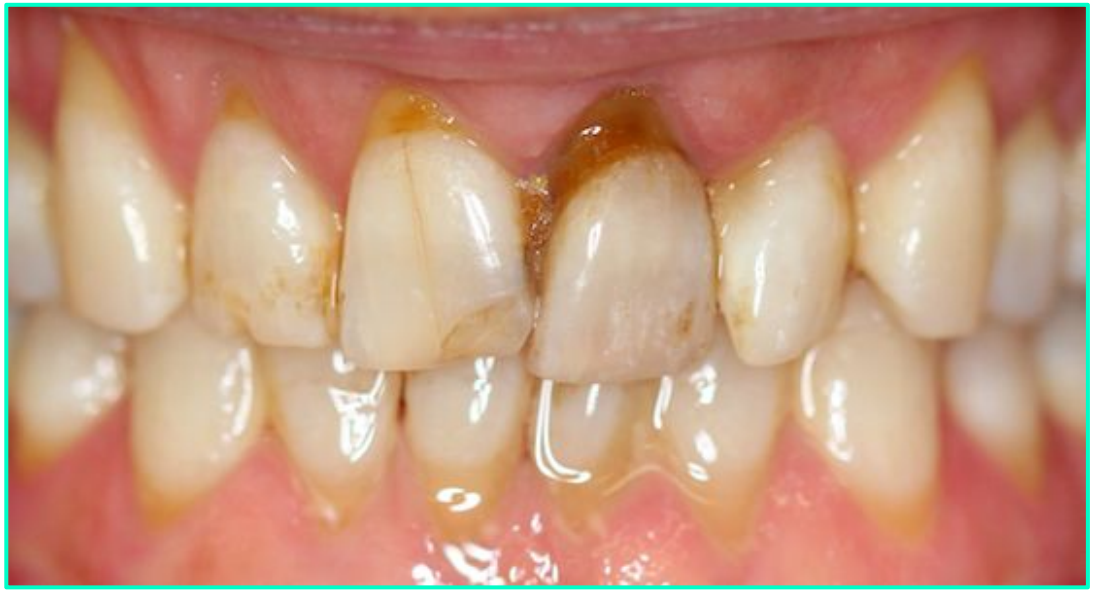


The only option that would mask the color would be PFM.

Discussion and proposed Treatment

How many crowns??

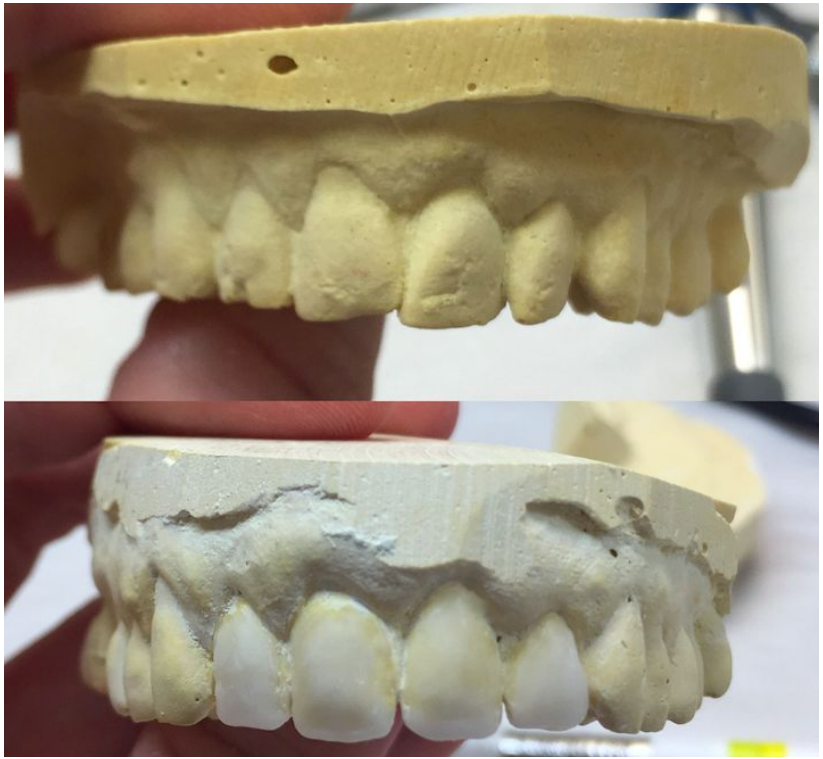
Patient's finances are important.



The patient decided between 2 and 4 crowns.

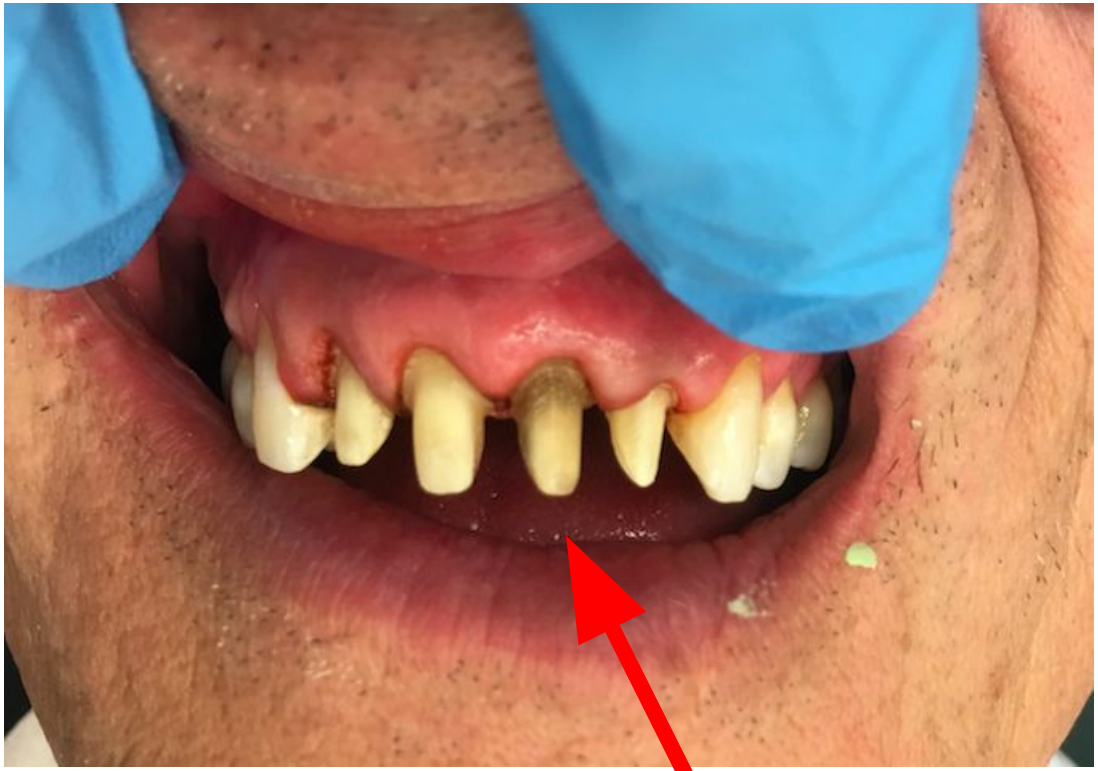
He chose to go with #7-#10.

Waxing to help patients visualize



- Providing multiple options for the patient to compare to their original teeth can help the lab in fabricating the ideal crowns for your patient.
- You can use your wax-up as a matrix for your temporary crowns.

Final Prep & Impression

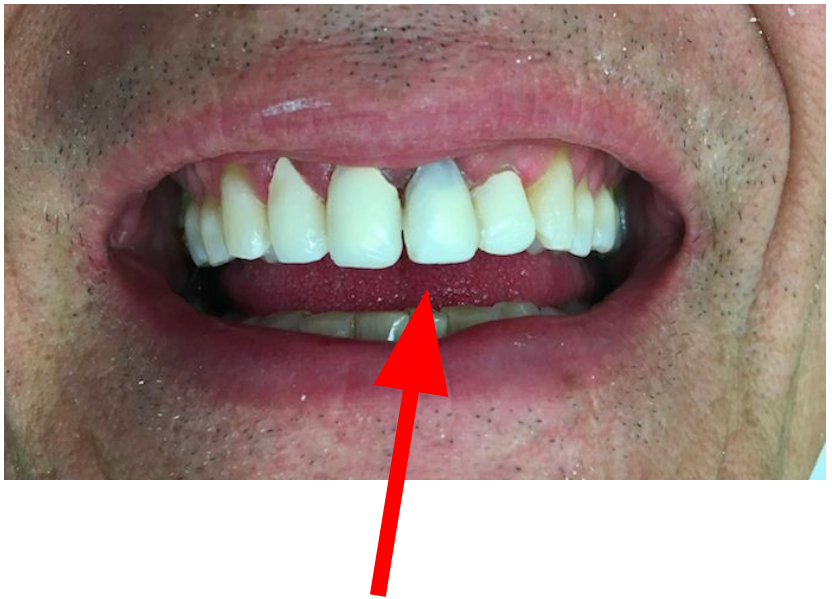


Even after being prepped, the tooth is still dark.

Temporary Crowns

- It can be beneficial to let the patient have a trial run with their temporary crowns before having the lab fabricate the final restorations.
- Letting the patient get adjusted to looking at their teeth in the mirror for up to 2 weeks can mentally prepare them for the final crowns.

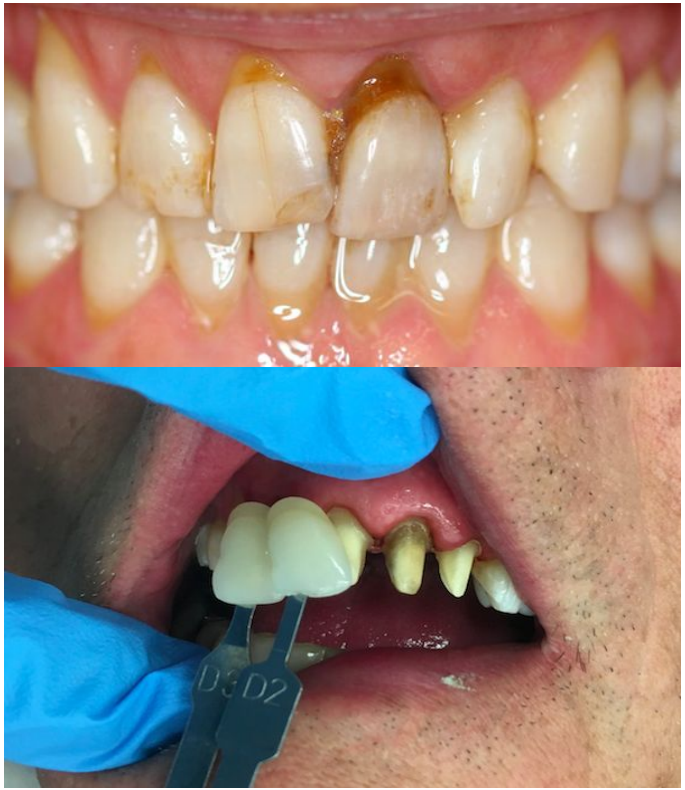
Did you remove the cord?



Dark show-through even with the temporary crown.

Shade Selection

- Matching 4 anterior PFM crowns to natural teeth can be a challenge.
- Try to match the color pattern of the natural teeth.
- In this case, we selected D3 for the cervical ⅓ and D2 for the incisal ⅔ . This matched the pattern of #6 and #11.
- A gradient is more natural-looking than a solid color.



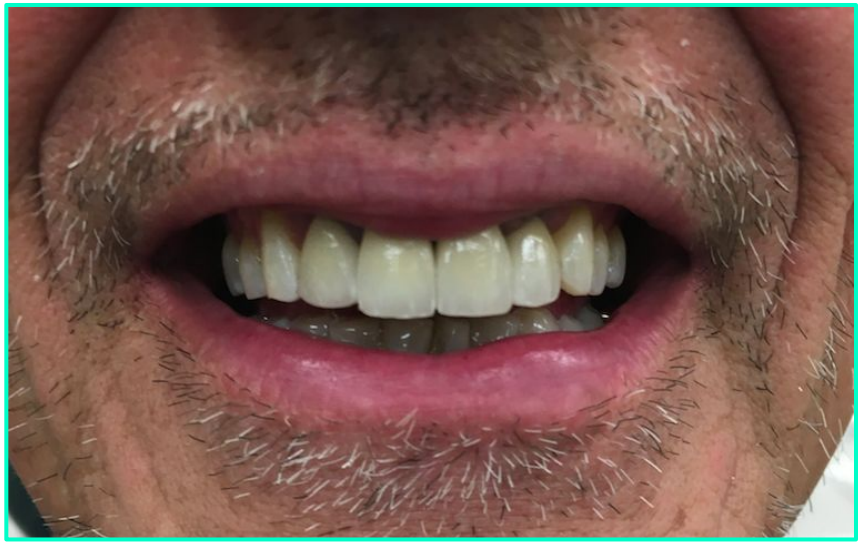
Two weeks later…

Evaluate the Lab's work

- Are you happy with the results?
- Do you believe this is what your patient is expecting?

Try it in

- Do the crowns fit?
- PAs to confirm full seating and sealed margins.
- Is the patient happy with the aesthetics?
- How is the color match?

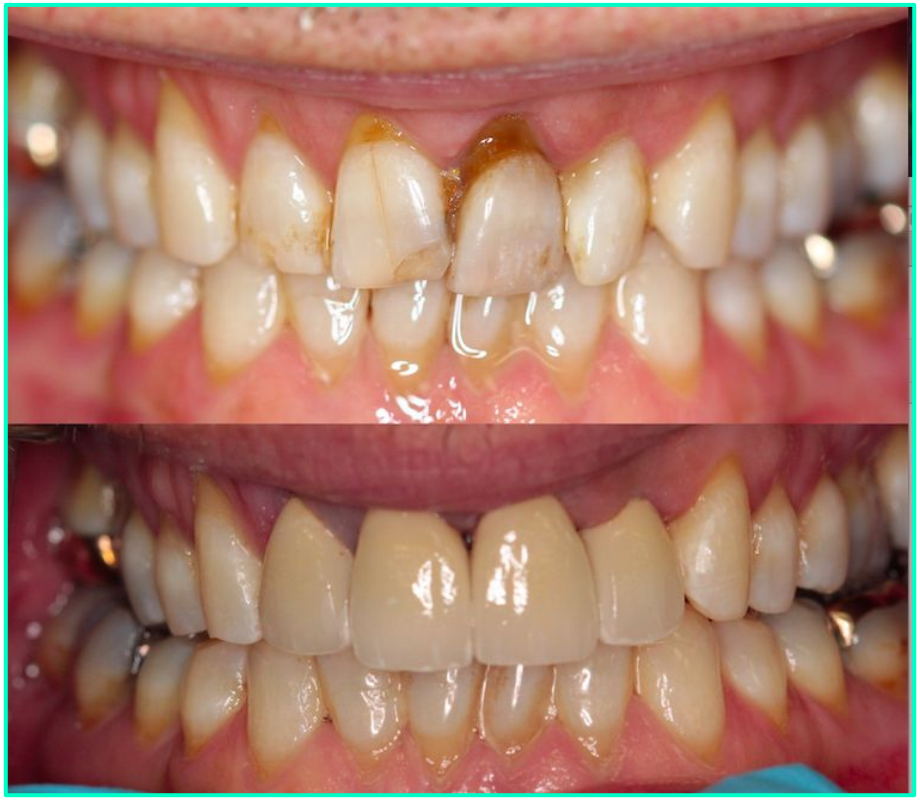


If yes to all, cement them!

Cementation process

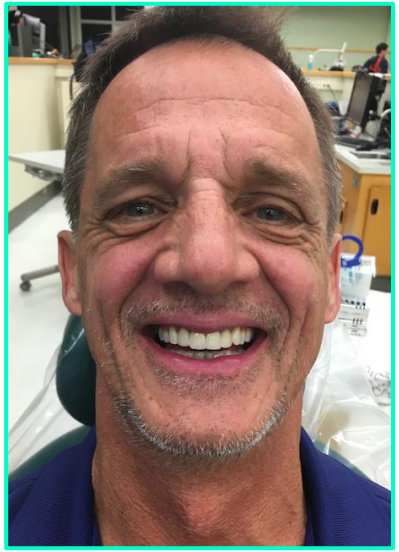
- Cement the crowns in the order that you tried them in to ensure proper seating and fit.
- This process can sometimes be a puzzle.
- For this patient, we cemented 8 and 9 simultaneously and held with firm pressure for 3-5 minutes.
- After cleaning the excess cement, we cemented 7 and 10 with firm pressure for 3-5 minutes.
- All excess cement was removed.

Final Results



In Conclusion...

- The patient's goals and finances can help you determine the best option for their treatment.
- Given the patient's circumstances, PFM crowns were the only options to yield the cosmetic results he was looking for even if optimal shade match was compromised.
- Financially the patient chose to have 4 crowns even though it could also compromise aesthetics.
- Patient was satisfied with the final result.



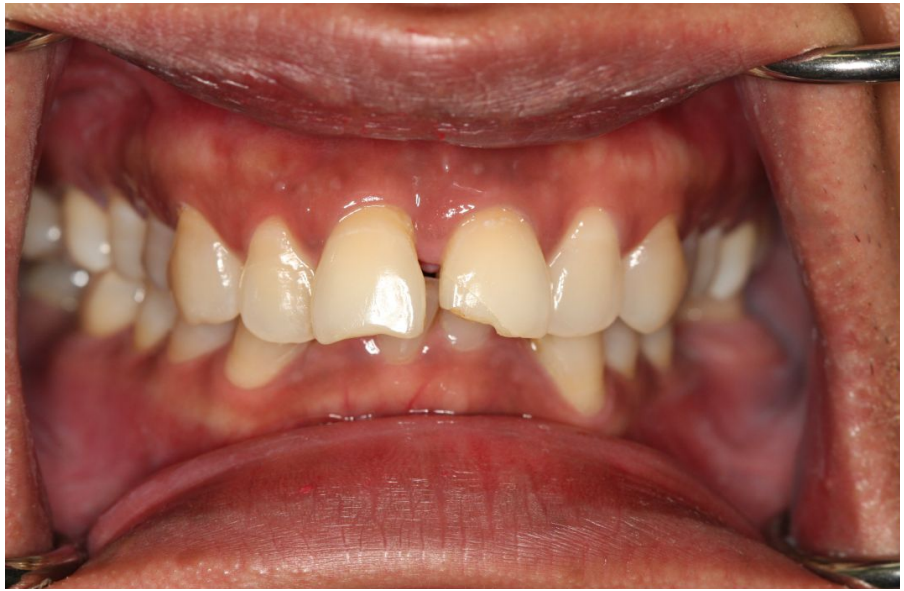
Case 2

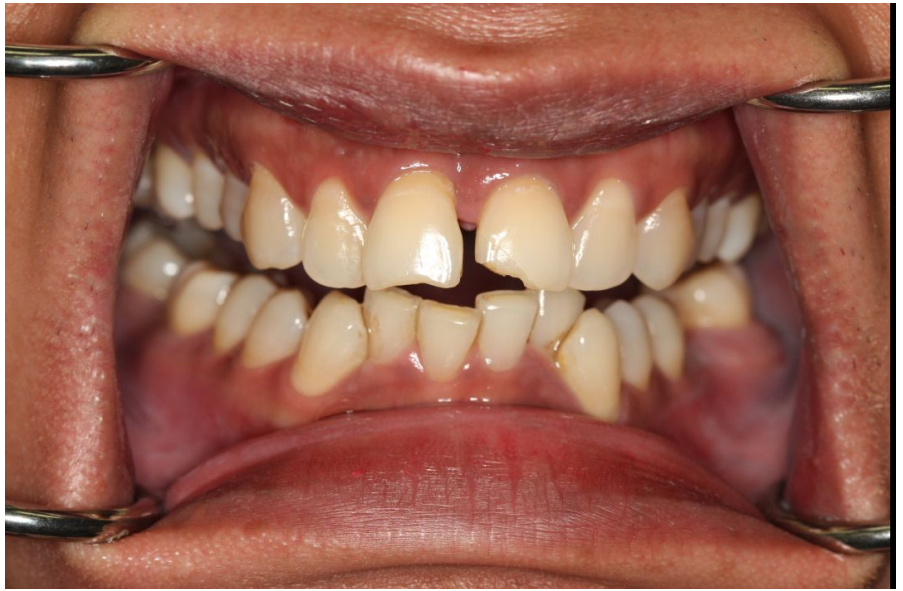
Lili

30-year-old Female

Patient presents for COE

CC: “I don’t like the way my front teeth look. I want to fix them.”

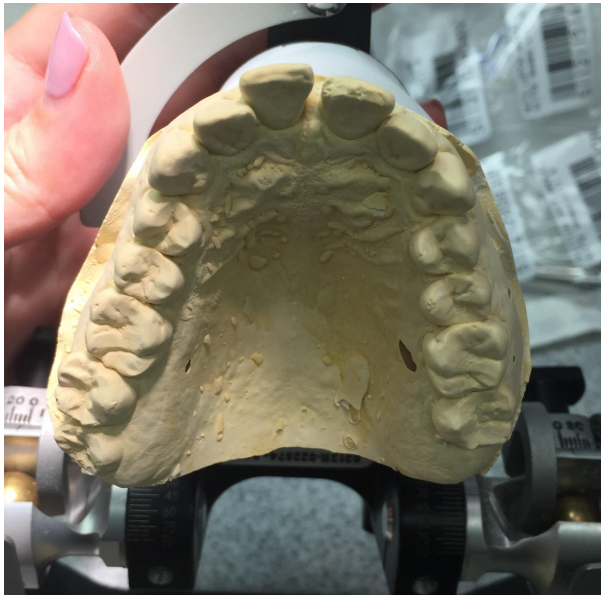




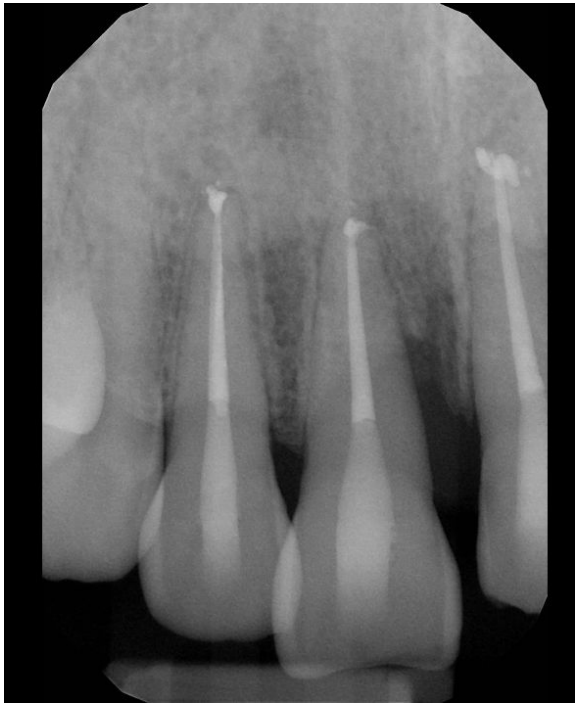
History of Present Illness

- In 2013 the pt fell down a flight of stairs, hitting maxillary anterior dentition on stairs.
- Avulsion of #8
- Concussion of #7 and 9
- The teeth were originally treated with splinting and RCT in 2013 in the UCSF PG Endo clinic.

Presentation at COE



- 10 mm pocket on tooth #8
- Class III mobility of tooth #8
- Tooth #8 is displaced facially
- Ellis class I fracture of tooth #9



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KT																													
FURCA																													
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BLEED																													
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GM-CEJ	-1	-1	-1	-1	-1	-1	-1	1	0	0	0	0	0	0	0	1	0	0	2	0	0	2	2		0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	-1		
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GM-CEJ	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	-1		
CAL	4	1	4	5	2	5	5	3	5	4	2	2	2	1	3	3	1	1	2	2	3	4	5	6	3	2	4	3	2	3	3	1	3	3	3	3	4	3	3	3	2	4	6	2	4		
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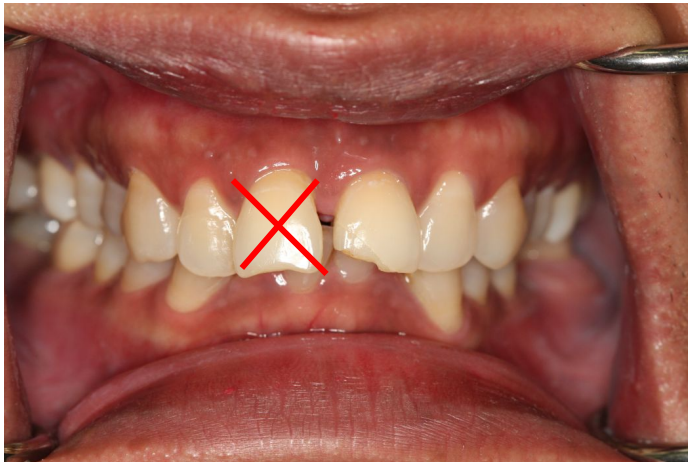
PROGNS																																														

Prognosis

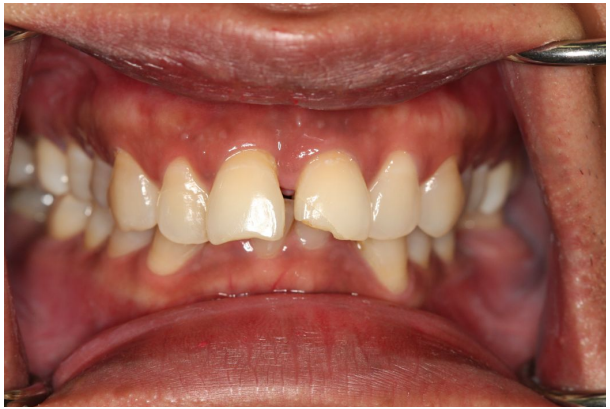
Prognosis of tooth #8 is poor due to perio pockets, mobility and previous endo treatment. In order to restore the aesthetics of the patient's smile, tooth #8 will have to be extracted.



Options for Restoration

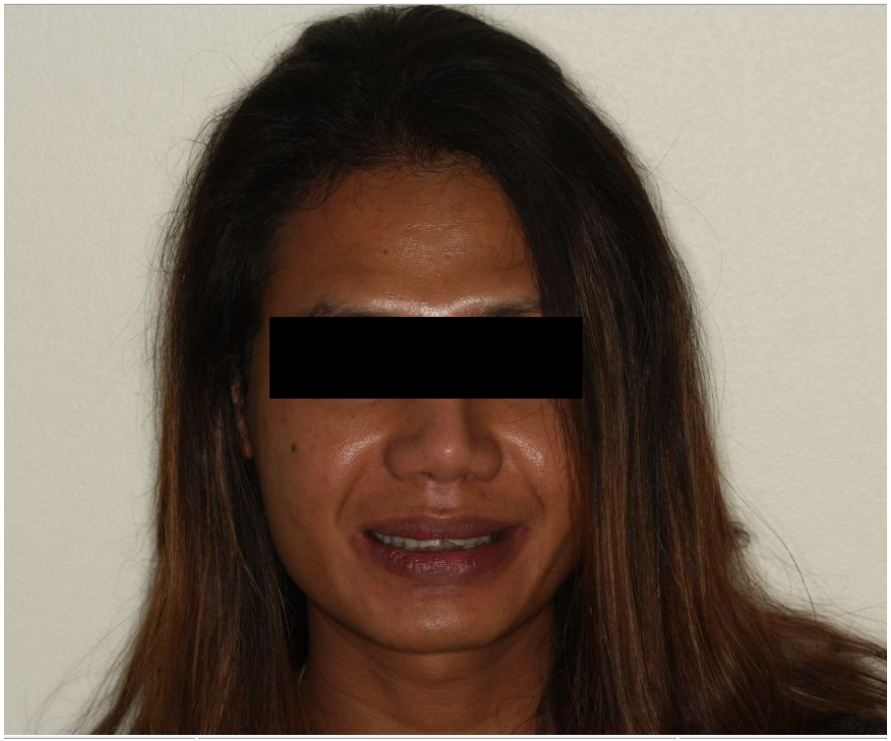
1. Implant in the area of #8 and crown #9
2. Bridge from #7-9. With optional veneer or crown on tooth #10 to maximize aesthetics.

Because of patient's desire to have the case completed as soon as possible we opted to do a bridge.



Plan

- Anticipated bone loss in the area of #8 after EXT due to already limited buccal bone.
- Restorative material? Zirconia



Restorative Plan

Appointment #1:

Prep teeth #7 and 9, EXT #8 and send the pt home with temporary bridge to allow extraction site to heal for 6 weeks.

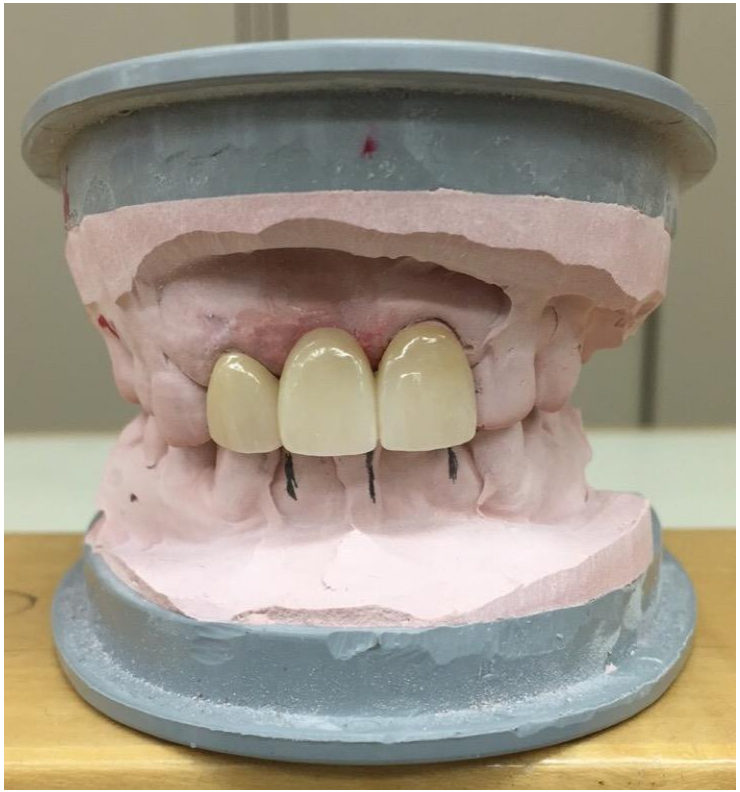
Appointment #2:

Refine preparations and take final impressions.

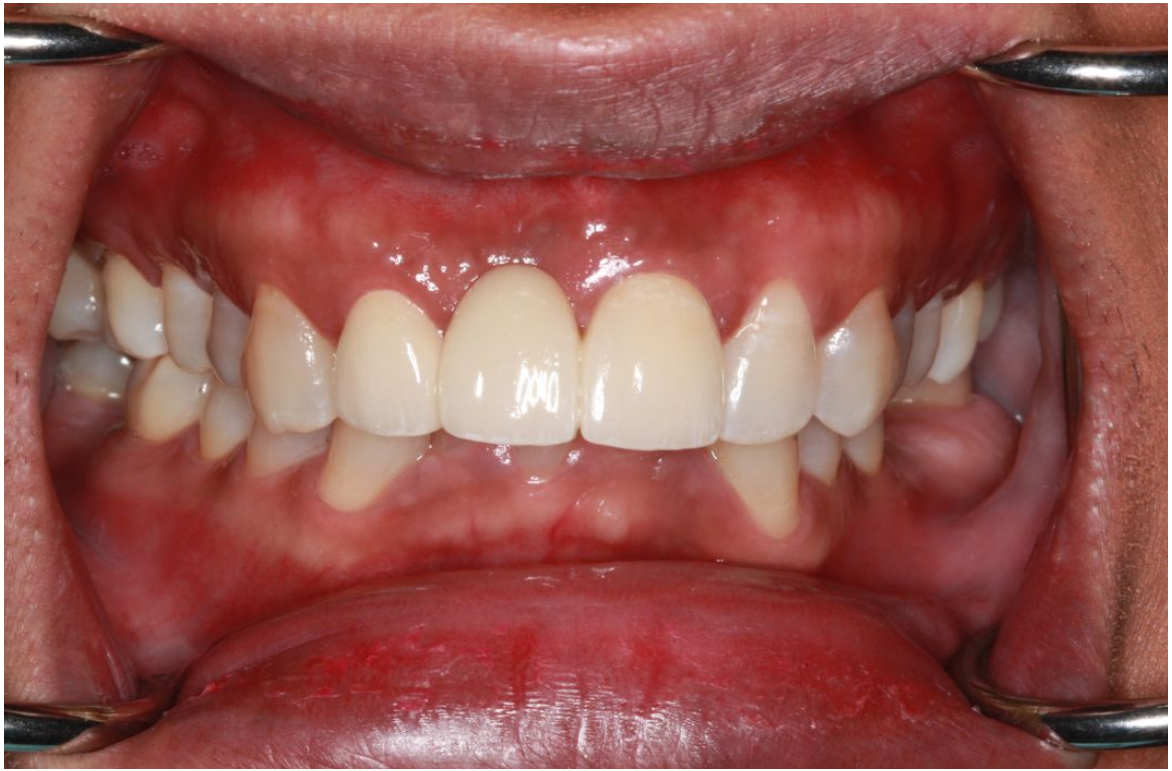
Appointment #3:

Deliver final restoration.

Lab Work



Final Results



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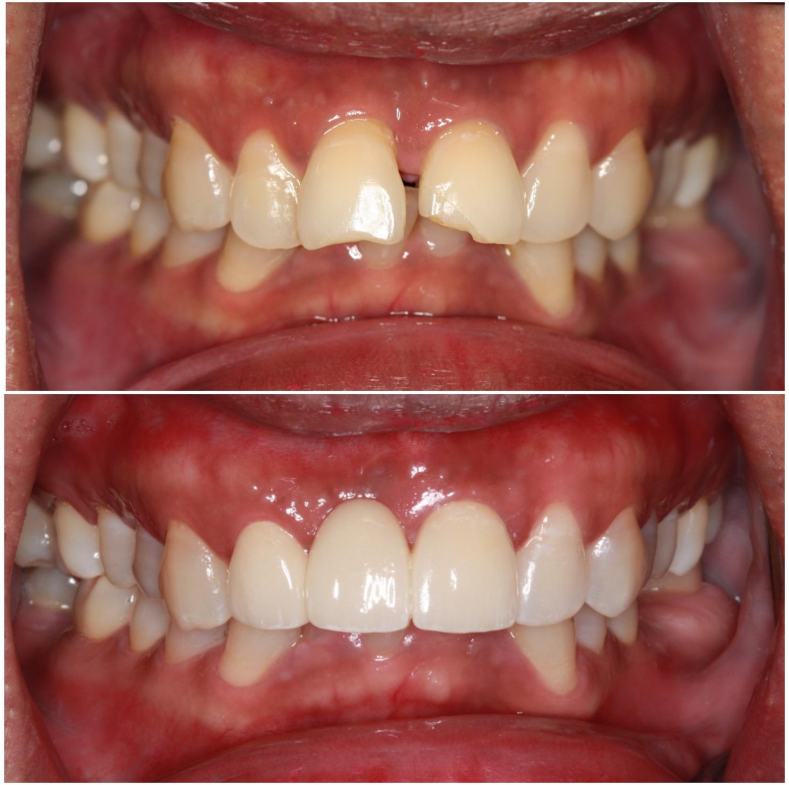
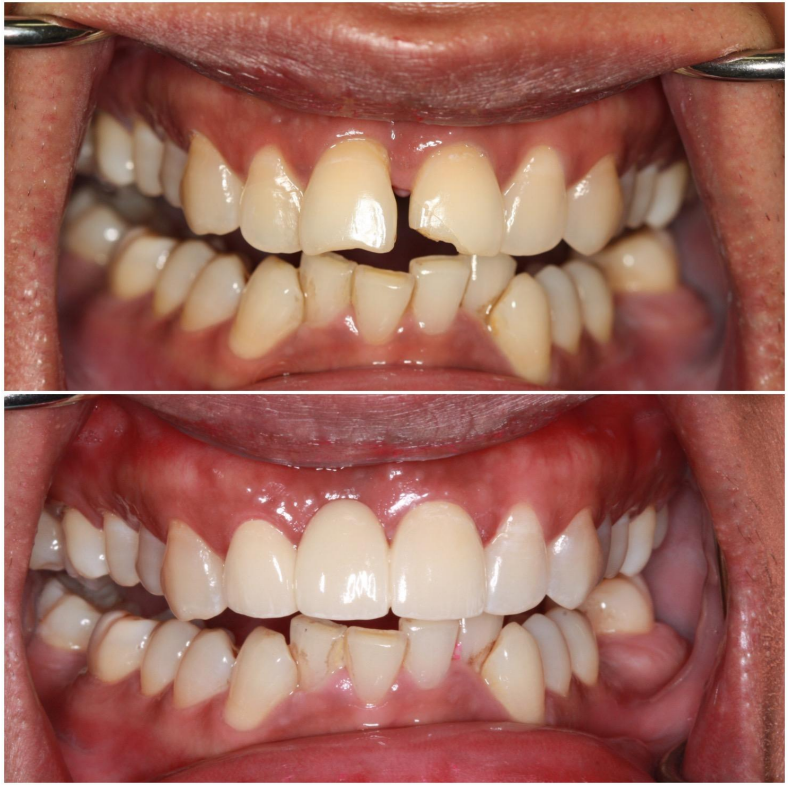




Case 3

Stephanie

34-year-old Female

Patient presents to ER

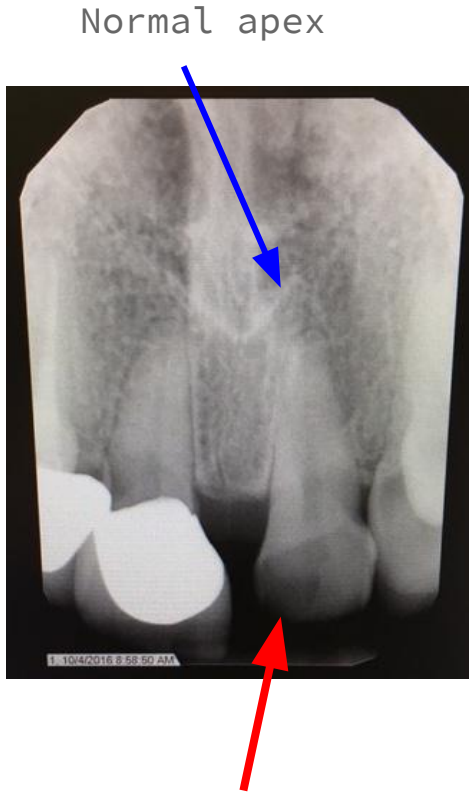
CC: “My front veneer is fractured and I want to fix the tooth with a crown.”

Hx of Present illness:

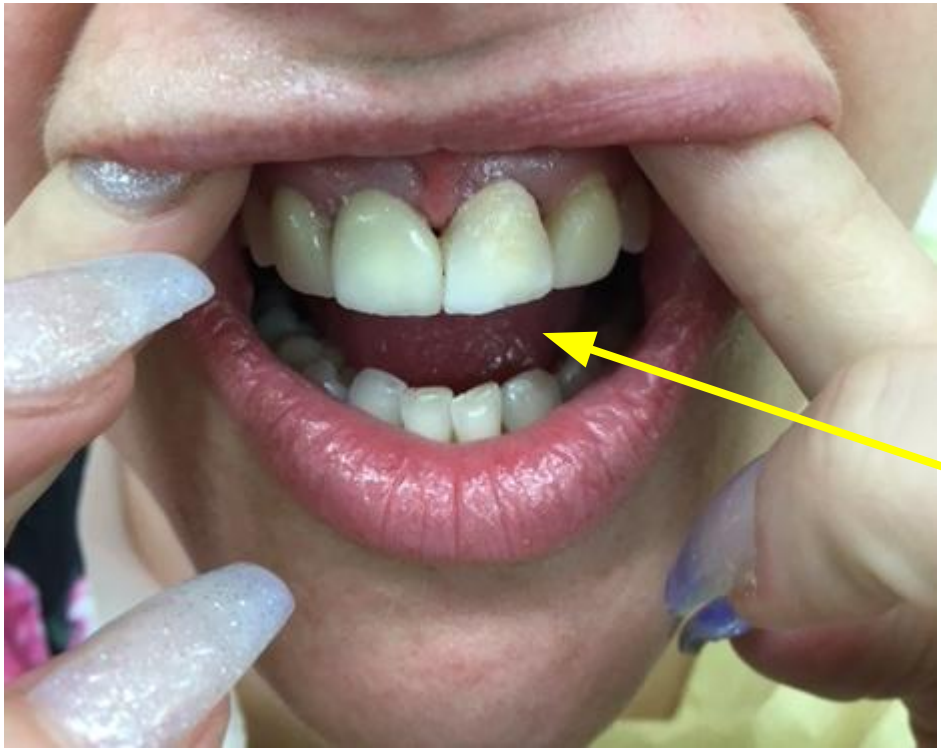
Patient was in a hit and run accident July 2017 and #9 veneer fractured upon impact.

Managing ER Visit

- Pulp vitality testing #9
  - Percussion -
  - Palpation -
  - Cold ++ Lingering 20 seconds (It was possible this was a false positive due to dentin being exposed)
- Fabricated a temporary composite veneer and re-tested #9 at POE.



Temporary Composite Veneer



Not too bad for a free hand composite buildup! Could've used more polishing...

Next steps

- Bring patient in for POE
- Discuss replacement options for #9
  - Another Veneer
  - PFM Crown
  - Emax Crown
- Obtain dental history of anterior cosmetic work
- Re-test #9 for pulp vitality
- Complete treatment plan and discuss risks, benefits, costs, alternatives

POE Visit

- **EO/IO:** WNL
- **CRA:** Moderate
- **Perio:** Generalized gingivitis w/ localized moderate chronic periodontitis #30 and #31
- **Radiographs:** Incipient lesions noted on #31 Mesial and Distal, no bone loss, no pathology, no bone pattern
- **Clinical exam:** #9 Temporary Composite Veneer, #7 and #10 Veneers, #8 PFM crown, multiple posterior composite and amalgam restorations, #14 distal decalcification, #20 buccal abfraction.
    - Pulp testing #9
        - Percussion -
        - Palpation -
        - Cold + normal

Tested vital!

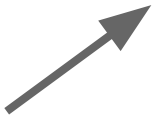
POE Visit continued…

- **Tx plan:**
  - Prophy and #9 PFM Crown
  - In this case, a full coverage crown was beneficial over a veneer for #9 due to the exposed dentin from the fractured veneer.
    - With exposed dentin the veneer will not bond well, as veneers bond to enamel.
  - In addition, #8 had history of a veneer that broke off and was replaced with a PFM crown.
  - Decided to also do a PFM crown on #9 to match the aesthetics of #8 (Vs. an Emax crown)
  - Discussed with patient and consented to treatment

#9 Crown Prep and Delivery

- Anterior PFM Crown prep completed with no complications
- Final impression taken with light and heavy body
- Shade 2R 1.5 Vita 3D confirmed with patient approval (**HOWEVER, informed patient that it may not match perfectly to #8 PFM even though it's the same color choice.**)
- At 1st delivery color match and incisal length of crown was not aesthetic and the crown was under contoured. It was returned to the lab to fabricate a new crown.

Walter Haechler of course....



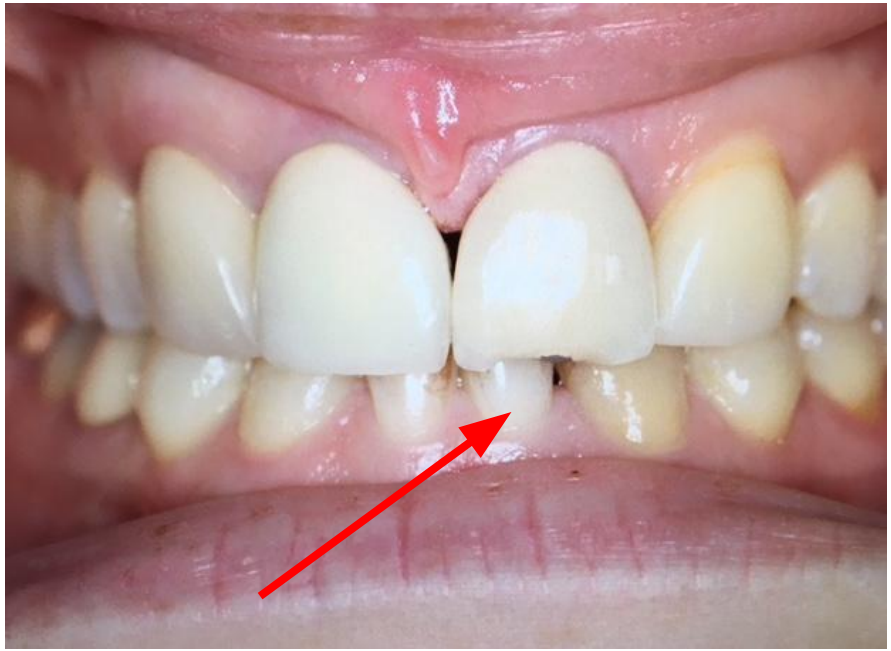
#9 Crown Prep and Delivery

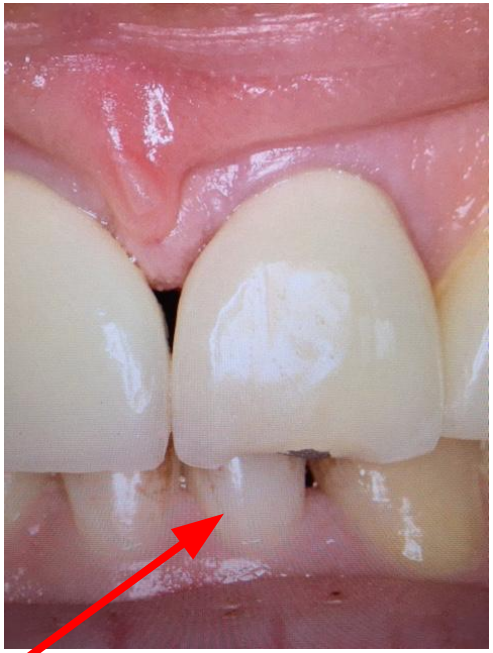
- At 2nd delivery adjusted the distal contact slightly and adjusted the lingual **multiple** times. Once finished, showed patient the crown and she was VERY pleased with the aesthetics.
- Cemented #9 PFM crown with Ketac cement
- Checked occlusion and protrusive movements and patient was ***still*** hitting #9
- Adjusted the crown for about 20 more minutes!!!
- Finally patient stated the crown felt normal and the articulating paper indicated she was not hitting #9
- Patient left the clinic pleased! *Sorry no picture :(*

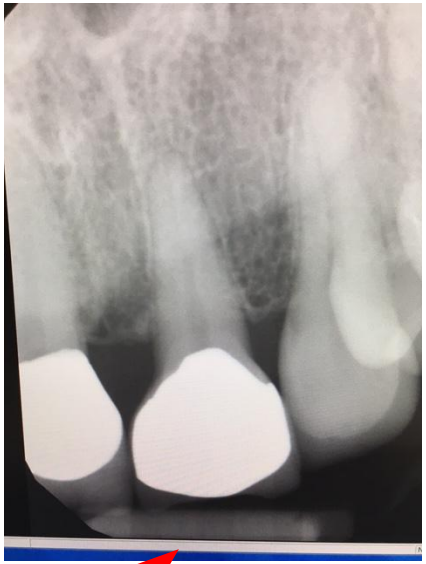
3 months later...

Patient presents to ER

CC: “A piece of my front tooth crown fell off this morning.”







Managing 2nd ER visit

- A very competent and skilled 3rd year saw my patient at this ER visit
- 3 options were given to the patient that day:
  - 1- Do nothing
  - 2- Place composite to replace the missing incisal edge
  - 3- Attempt to bond the broken porcelain piece to the crown
- Patient elected for a new composite incisal edge
- A porcelain fracture repair was completed and the occlusion was adjusted until pt was not biting on #9. Pt was pleased with the aesthetic outcome this day

Re-evaluating #9 with Primary provider

- #9 repair was still in tact
- Checked occlusion and protrusive movements and unfortunately, the patient was still hitting #9
- Patient has a 60% overbite
- High risk of #9 fracturing again
- Referred patient to ortho for consult due to the deep overbite
- It is possible ortho can adjust the bite then we can deliver a new crown on #9

After ortho consult was completed...

- No ortho required
- Referred to PG Prosth for consult

Learning from mistakes

- Check occlusion! Re-check occlusion! And re-check occlusion!
- Consider fabricating a night guard for patients with numerous anterior aesthetic restorations.
- **Always** check for heavy occlusion and areas of wear prior to treatment planning anterior work.
- If a patient has an edge to edge bite or cross-bite discuss the possibility of fractures in anterior restorations.
- Take more pictures of anterior aesthetic work. For successes and for failures!

References

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