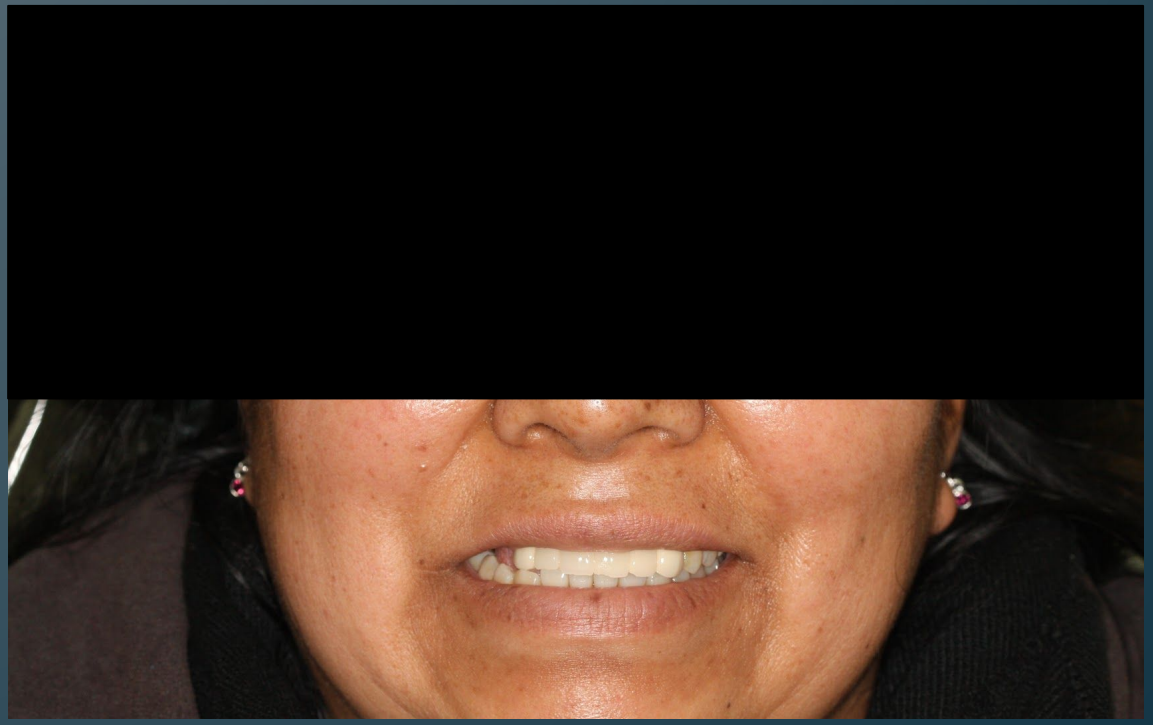
PATIENT MANAGEMENT AND RISK MANAGEMENT FOR THE FABRICATION OF AN 8-UNIT KEYWAY BRIDGE

Kathleen Marcelo
Manliu Yang
Gordon Goldstine
Tasha Vo

Case Presentation

- 43 y/o female
- CC: Uncomfortable bite & chipped anterior bridge



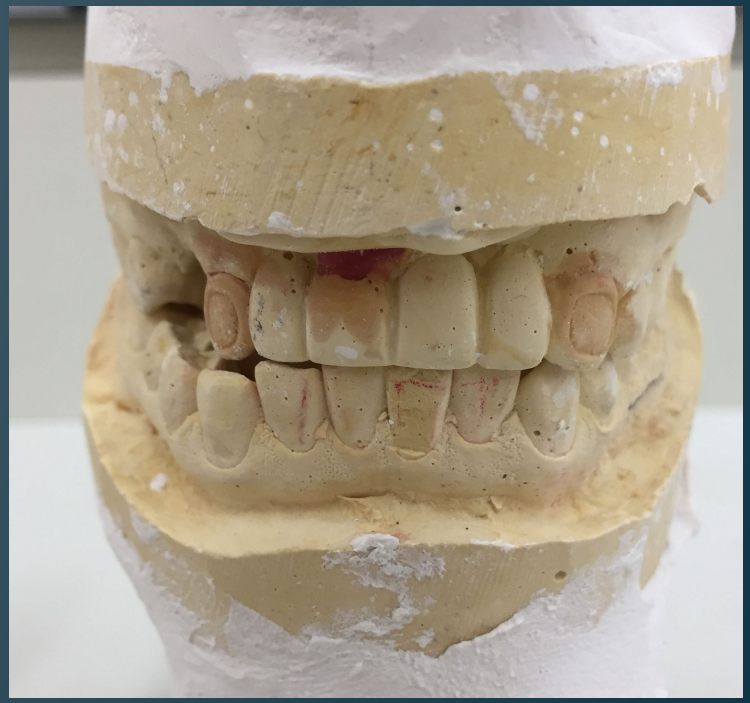
Case Presentation

- Med hx: Non-contributory
- Meds: None
- Allergies: NKDA
- Social hx: No hx of drinking or smoking
- Occupation: House-keeper
- Dental hx:
  - Irregular dental care
  - Nocturnal Bruxism
  - High Caries Risk

Dental Hx

- Hx of two #6-11 Bridges
- 1) Window Bridge (?)
  - Lasted for ~20 years
    - Caries on #11
    - Replaced in 2015 at UCSF Pre-Doctoral Clinic

- 2) PFM Metal-occlusal Bridge (2015)



How did this turn into a Risk Management Case?

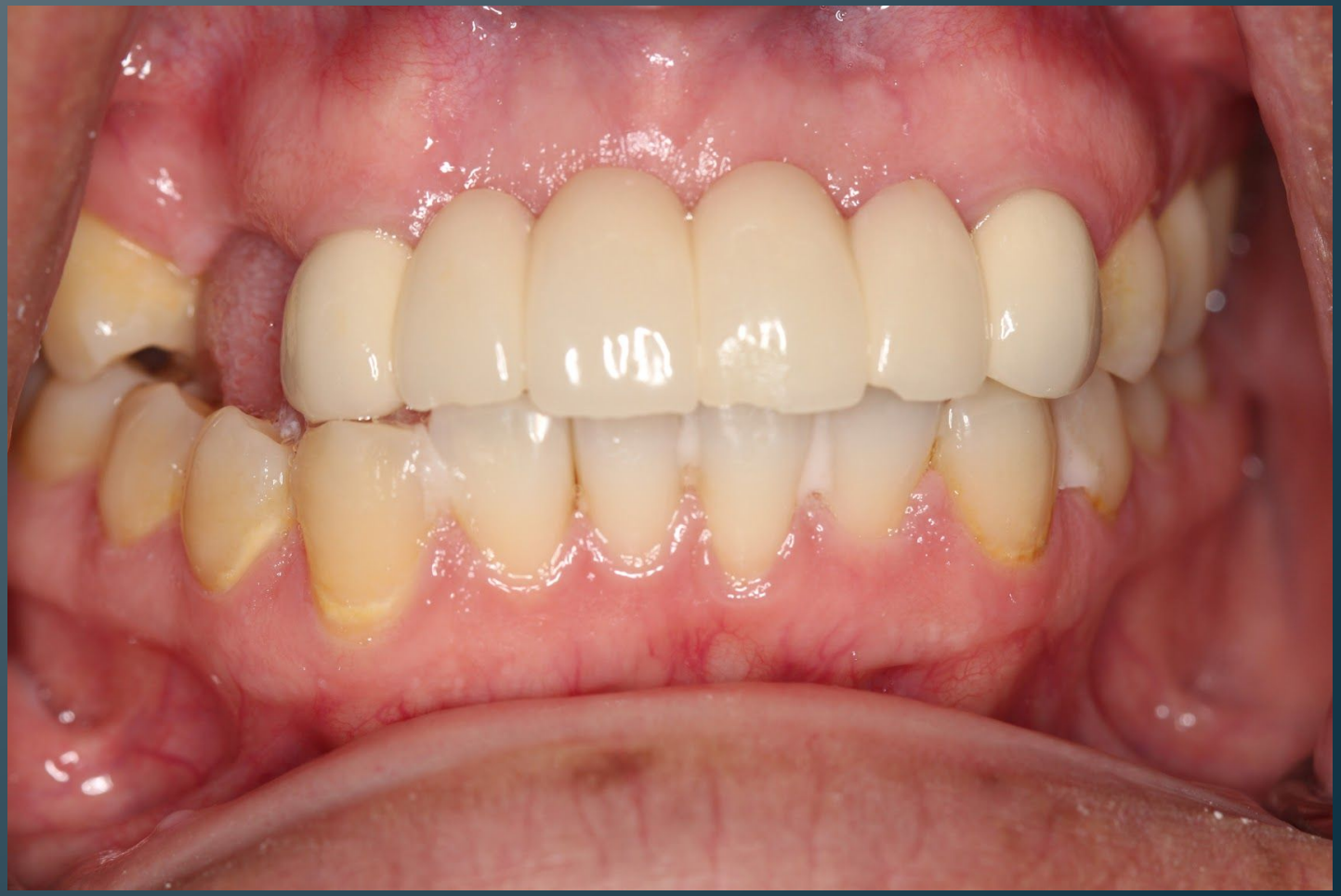
How is this risk management?

1. Pt complaint of uncomfortable bite
2. Inappropriate comments made in regards to outcome of existing bridge from faculty
3. Evidence of chipping

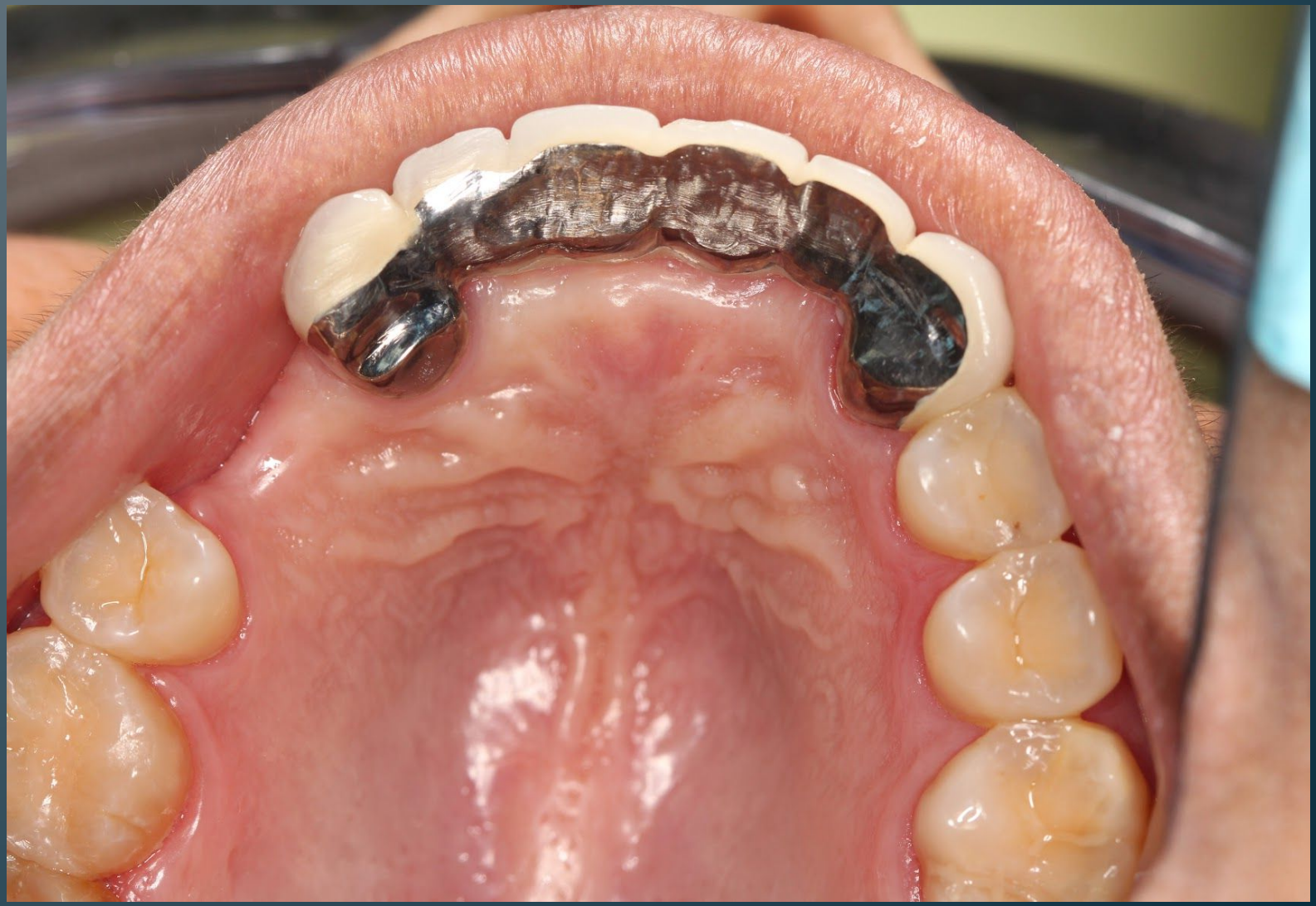
How do we resolve this issue?

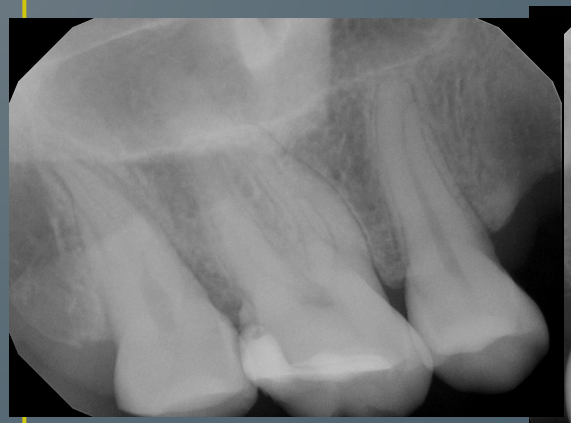
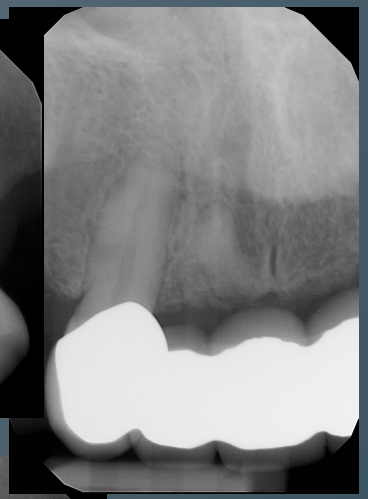
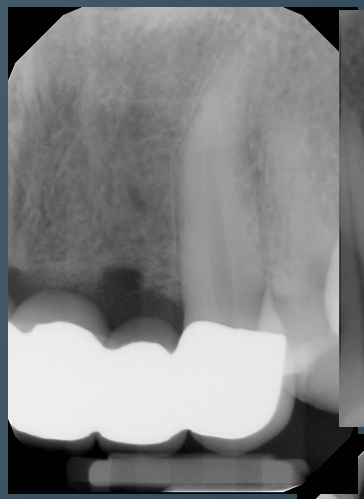
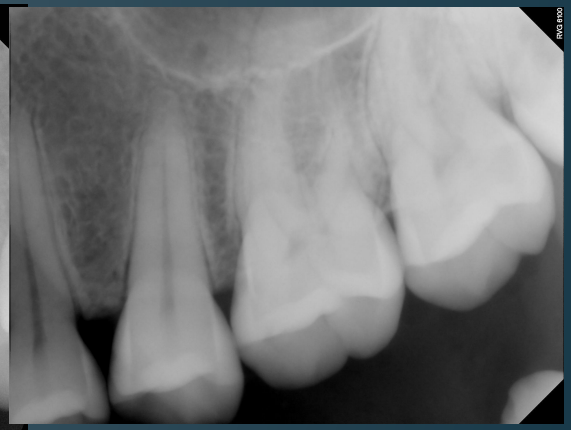
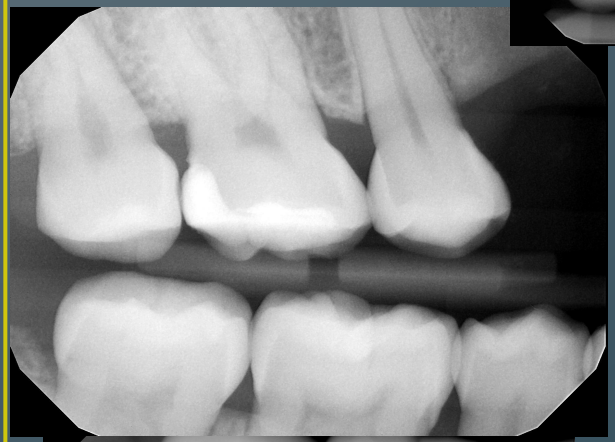
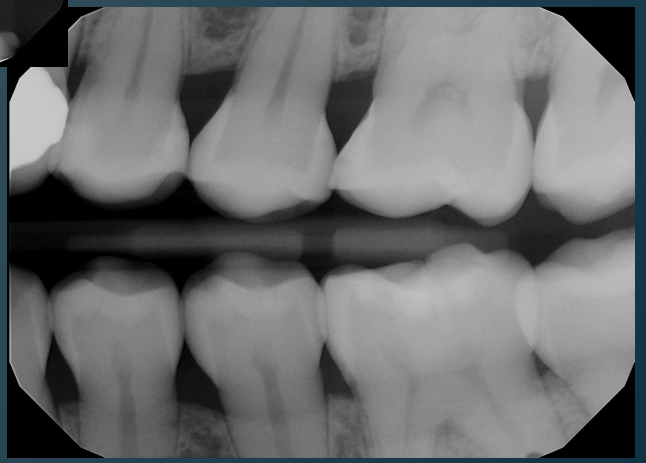
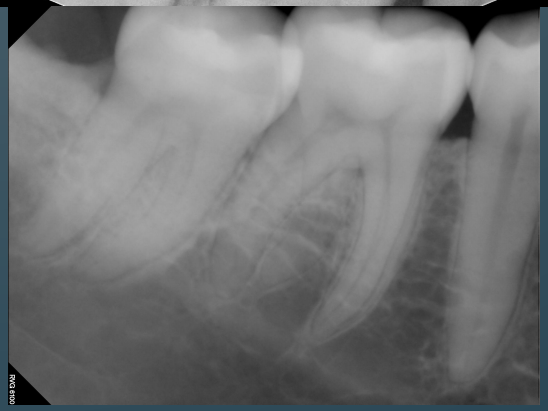
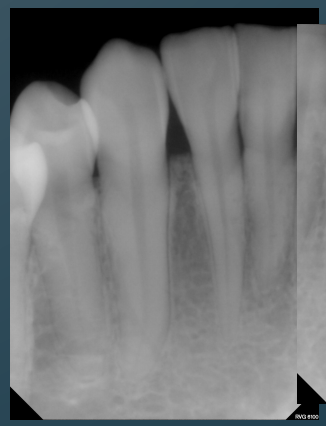
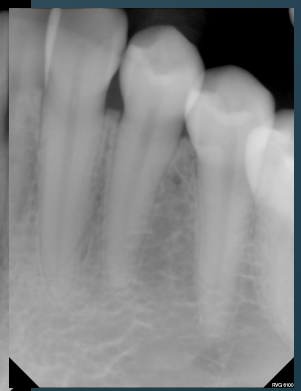
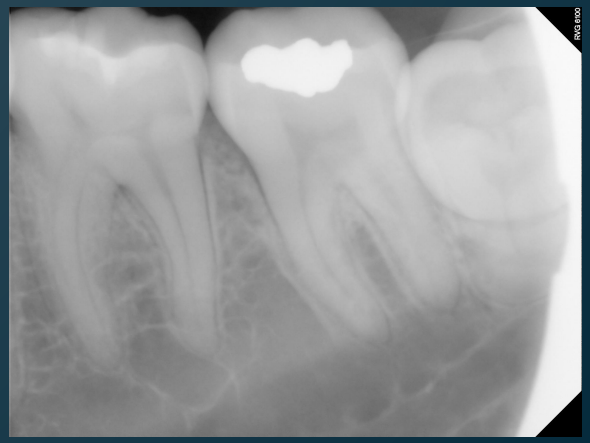
In order to look out for the patient's well-being, the UCSF Pre-Doctoral Clinic authorized a re-do of her #6-11 bridge as a courtesy to correct the issue.

Extra-oral photos



Intra-oral photos



Radiographic/Clinical Findings

- #3 DO-cp
- #5 missing
- #6-11 PFM
- #8 Root tip
- #12/14 DO-cp
- #18/19/30/31 O-cp
- Anterior cross bite with #6
- #23-26 supra-errupted
- Crowding of lower arch

Treatment Options

- RBACs discussed for treatment options:
  - 1. Orthodontics
  - 2. RPD + Crown #6,11
  - 3. Implant #5
  - 4. Hard occlusal guard > soft occlusal guard
  - 5. No tx

Patient elected for ...

- 6-unit bridge + hard occlusal guard
- Denied ortho treatment

Set patient expectations:

- Strongly emphasized that ideal results may not be achieved
  - Occlusion
  - Esthetics

Can I have 8 units instead?

- Patient wants to extend bridge from #4-11
- Complications:
  - Treatment for 8-unit bridge cannot be determined until day of #6-11 Bridge sectioning
  - Authorization for re-do of #6-11 at no cost
  - Who pays for #4 & #5?

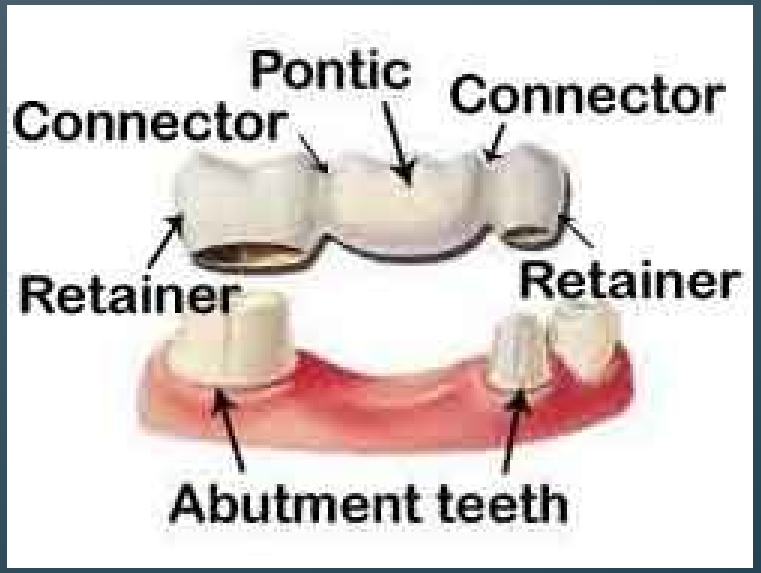
Which connector should I choose?

Rigid connector:

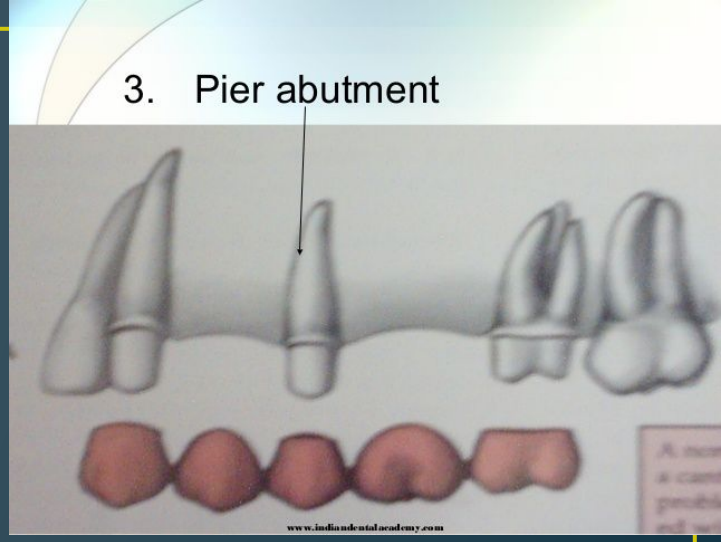
- Commonly used, ideal for short span FPD
- Fused union between retainer and pontic

Non-rigid connector:

- Used for long span FPDs
- Allows limited movement independent members of FPD

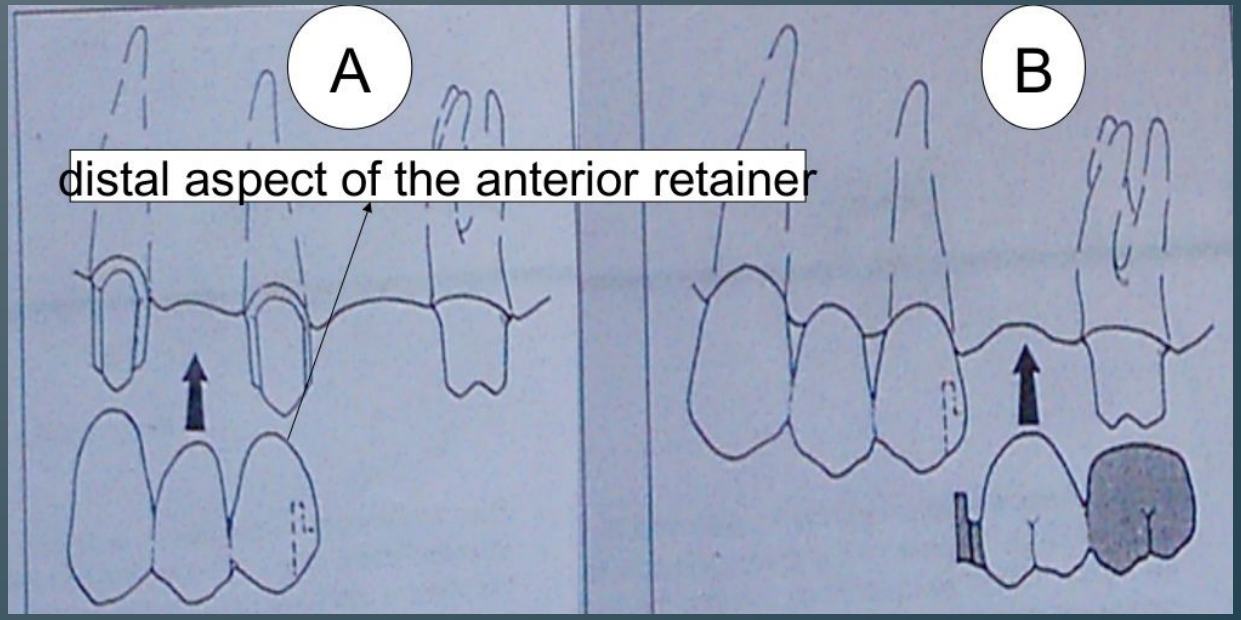


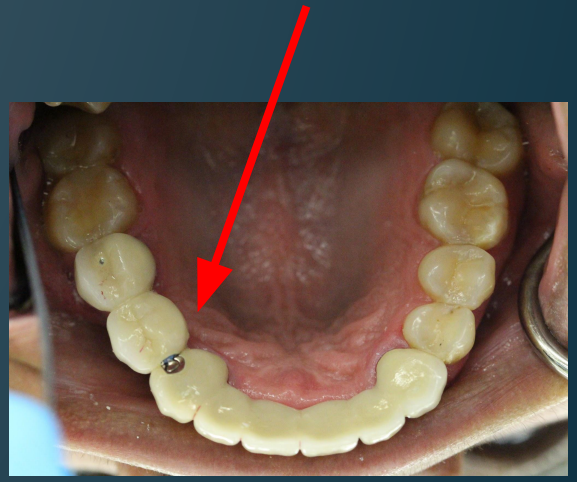
Non-Rigid Connector



- Indications for use of NRC:
  - Relieve stress by transmitting stresses to supporting bone rather than concentrating them to connectors
  - Existence of pier abutment (tooth #6)
  - Not possible to prepare 2 abutments with a common path of insertion
  - Long span FPDs (esp FPDs with ant and post segments) - segmenting large FPDs into shorter components will allow easier repair and replacement

Non-Rigid Connector: Keyway





A - Keyway (female) cemented first

B - Key (male) cemented immediately after

Disadvantages of NRC

- More tooth reduction of pier abutment
- Increased laboratory time and expense
- Key have been observed to lift off from keyway

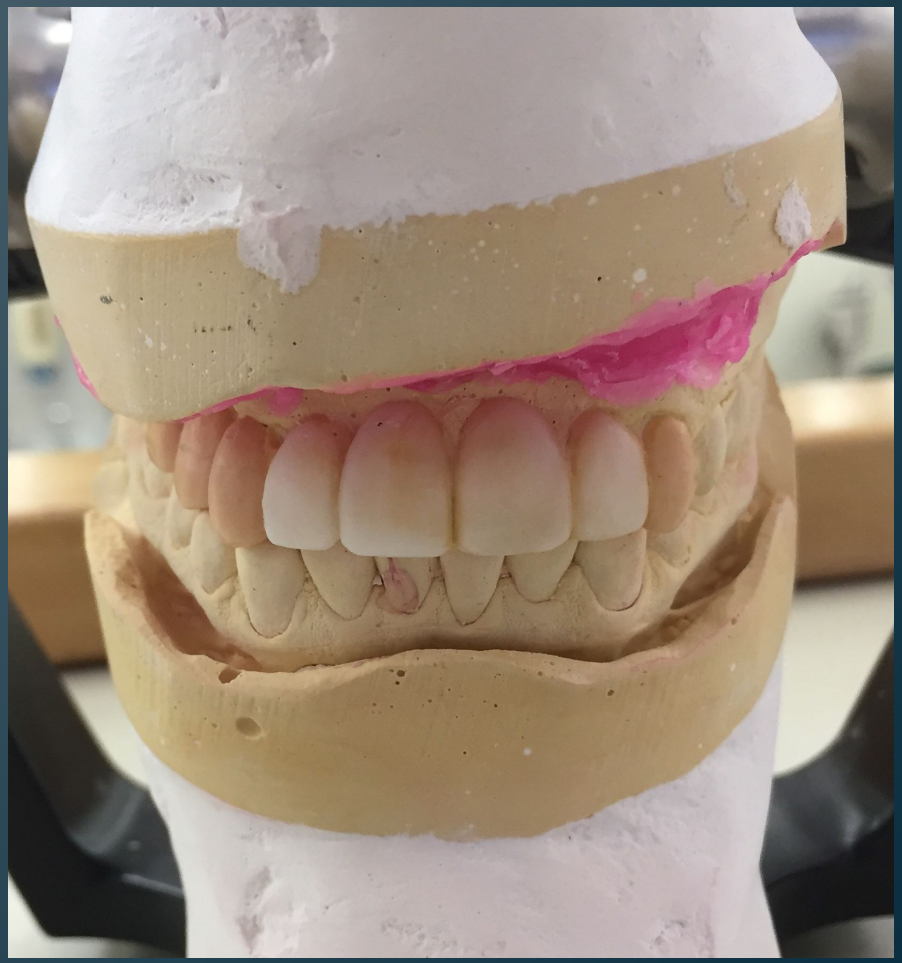
Appointment Sequence

1. Section Bridge & Crown Prep #4 (1x)
2. Refine Crown preparations & Master Impression (2x)
3. Diagnostic Wax (2x)
4. Metal Framework Try-In (1x)
5. Delivery (2x)

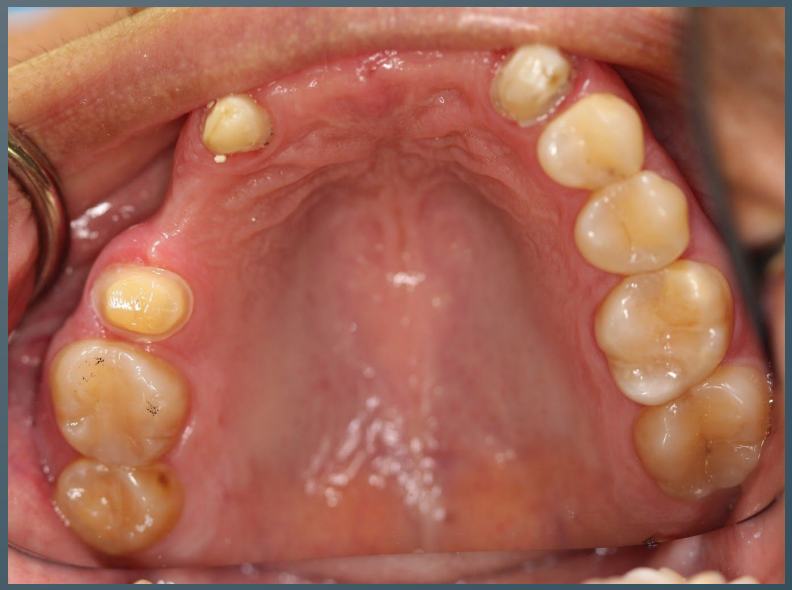
8 appointments resulted in 23 total

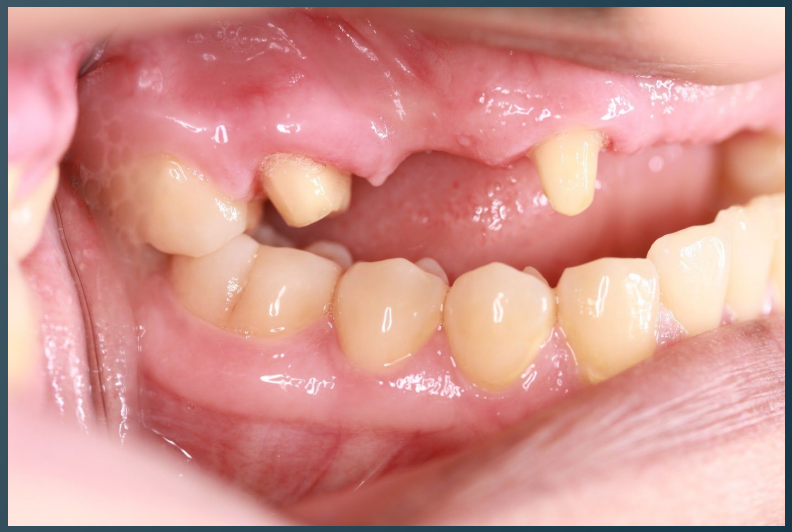
Diagnostic Wax-up to “Ideal”

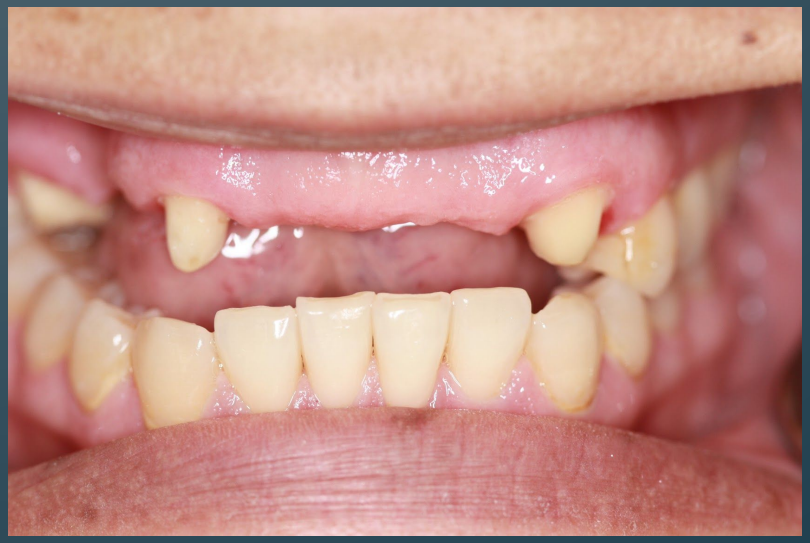
Diagnostic cast made
Wax-up to give pt a general idea of esthetics

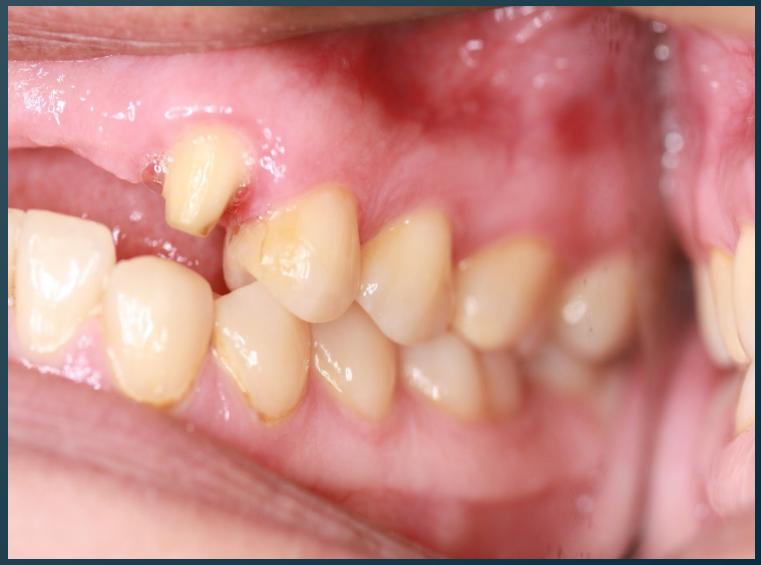


1. Section Bridge + Crown Prep #4









Provisional

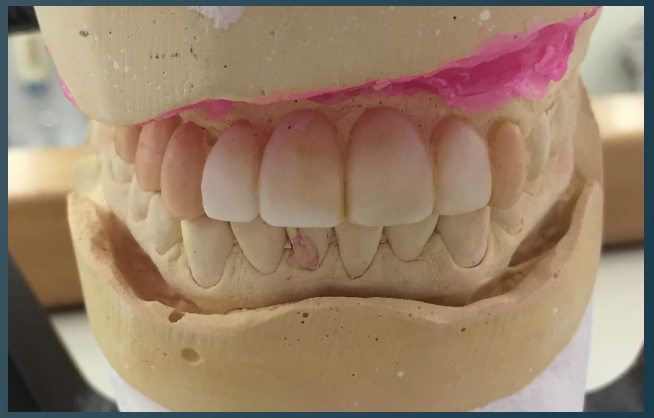
- 2 provisionals made for #4 & #6-11

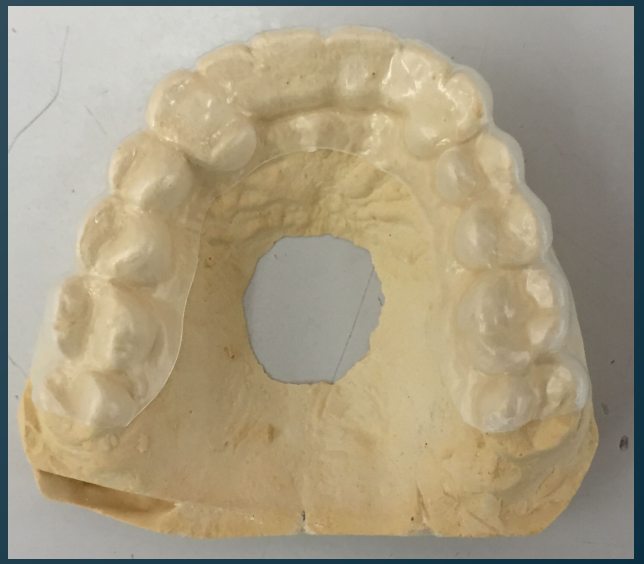
- Two different methods for provisionalizing:

1) Putty taken on diagnostic wax up

OR

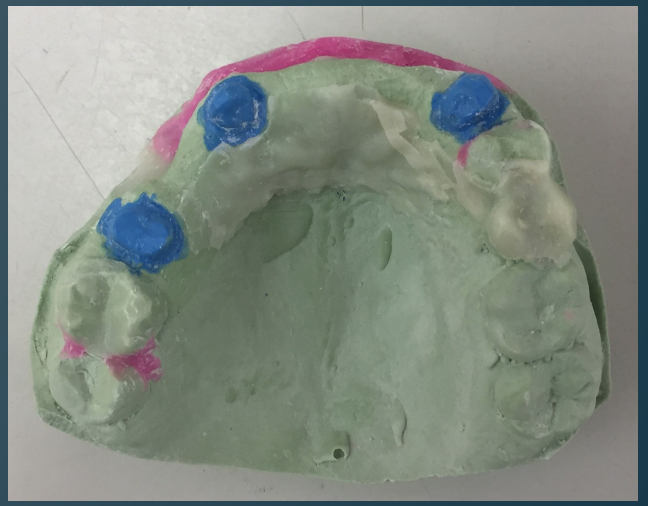
2) Suck-down of impression of diagnostic wax-up

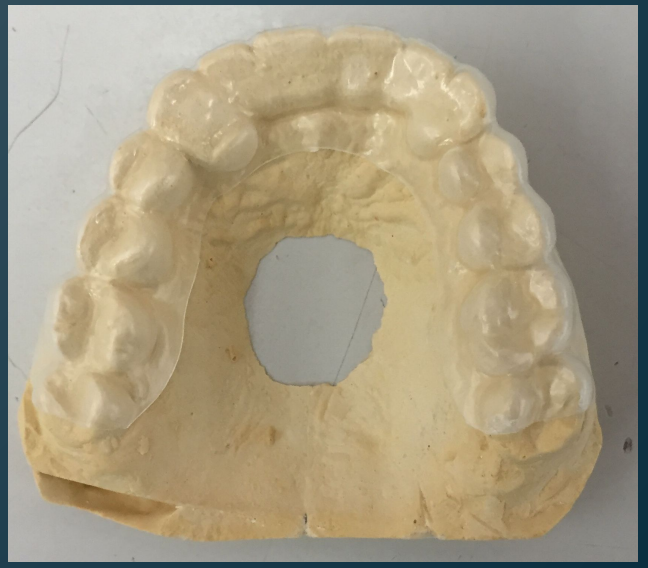




Preparing for Next Appointment

- Shell created via:
  - Full arch impression poured in green stone
  - Used existing suck-down to fabricate a shell on green cast

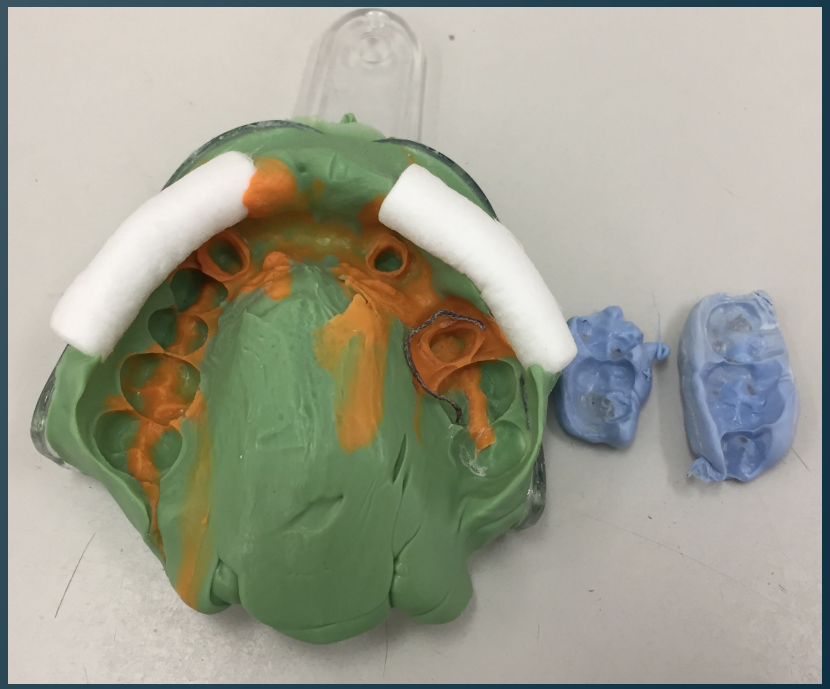




2) Refined Crown preparations + Master Impression

- Refined crown preps #4, 6, 11 with adequate draw
- Provisional from #4-11

Patient demanded for faculty treatment and not a student after 3rd attempt



Multiple ER Visits & Complaints Since #4-11 Provisional

Multiple visits to ER Services & w/ primary provider

- Constant need for attention and primary provider's chair time
  - True emergency/urgency?
- Are there *really* problems with the temporary?
  - Yes. Relined w/ Duralay (3x)
  - Yes. Temporary fell out (3x)
  - No. Temporary was well cemented (2-3x)
  - No. Patient pulled out her own provisional to purposely have it recemented (2x)
  - No. Bite is "high" when the temporary is out of occlusion (every appointment)
- Questionable complaints:
  - Uncomfortable bite when out of occlusion
  - Sudden roughness of natural tooth structure
  - #11 completely came out while #4 & 6 were fully cemented

Multiple ER Visits & Complaints Since #4-11 Provisional

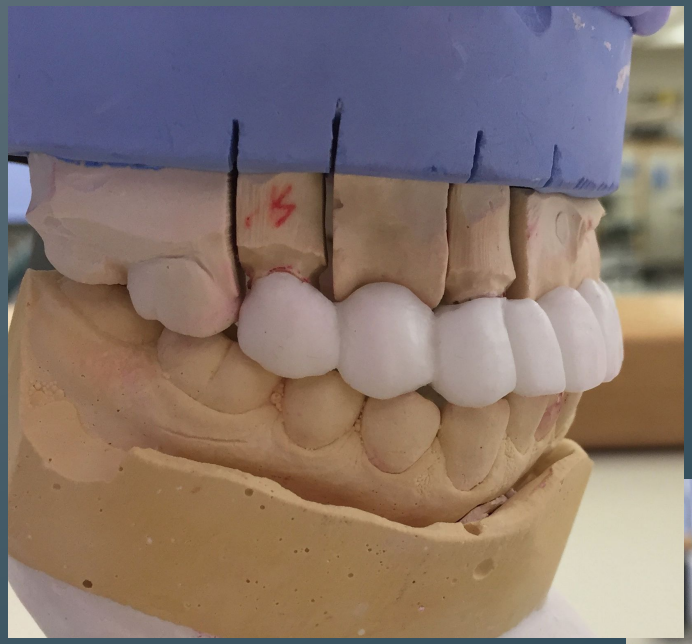
- Limited understanding resulted in repeated conversations
- Unrealistic expectations
  - Dissatisfied w/ esthetics
- Takes advantage of ER students
  - Uses ER Services in Pre-Doctoral Clinic to seek treatment by faculty, not by students
- Pt frustration directed to primary provider
  - Blamed student for her losing her job
  - Blamed student for not successfully addressing her unrealistic expectations
  - Upset with student for refusing to treat her w/o direct faculty supervision
- Loss of patient rapport resulted in:
  - Patient's loss of confidence in students' clinical skills
  - Unwillingness to listen to students; only faculty
  - Demanded to be treated by faculty ONLY
  - Directs treatment

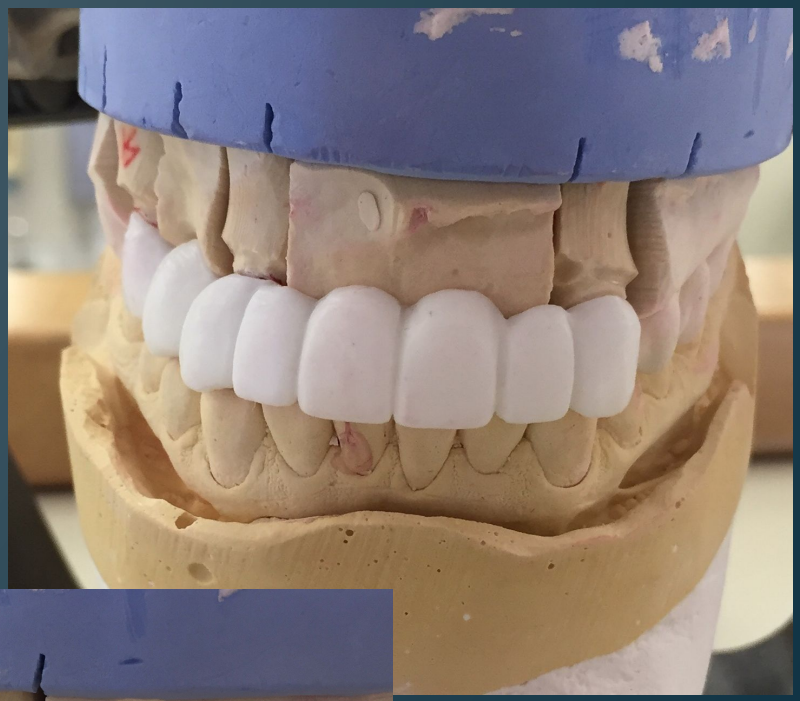
Multiple ER Visits & Complaints Since #4-11 Provisional

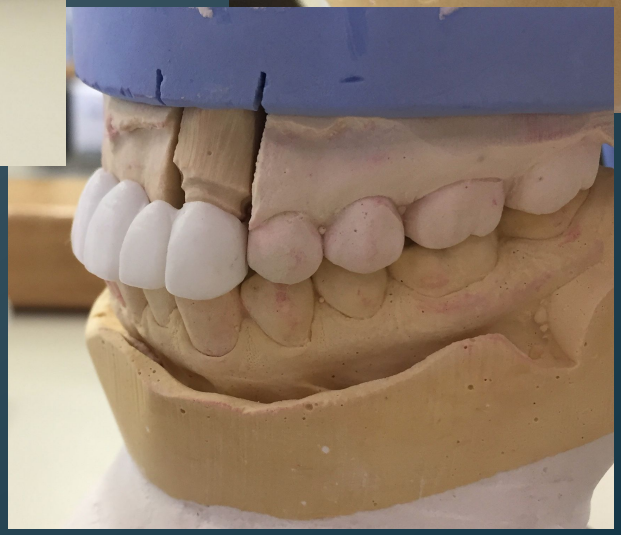
Examples of inappropriate patient behavior

- Pt interferes with treatment by covering her mouth
- Pt attempted to seat her own provisional
- Pt believes that she has more knowledge about how treatment should be rendered

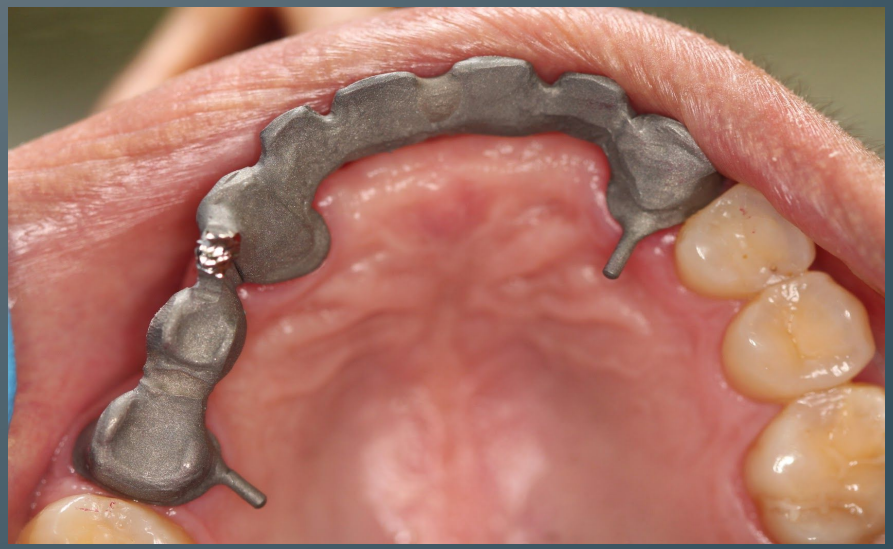
3) Diagnostic Wax up

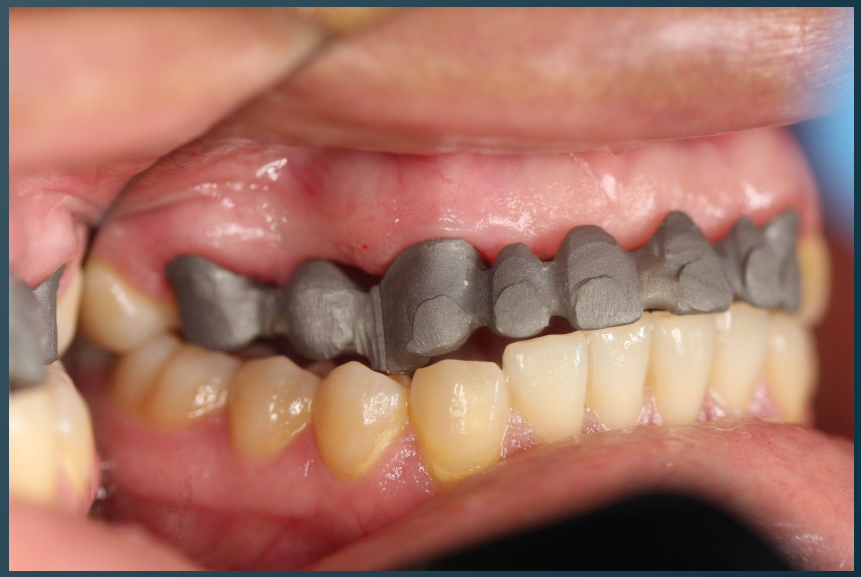


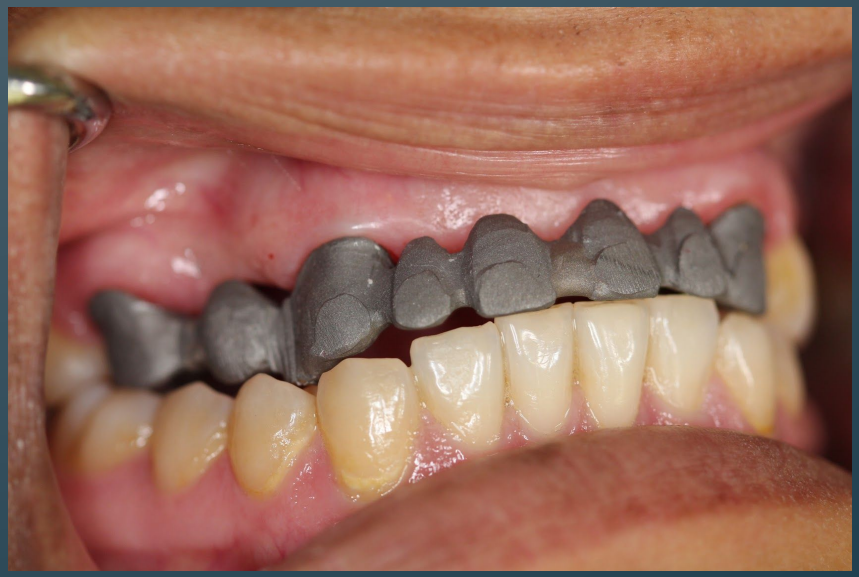




4) Metal framework Try-In







New Patient Complaint

Pt complained that bridge was loose after metal try in.

Discussed that:

1. No porcelain present → no contacts
2. Metal framework is not cemented
3. Adequate space needed for cement

Special Informed Consent Drafted

- Pt changed her mind and elected for no occlusal guard.
  - “I’m afraid that if I pay for it, I won’t use it.”

- Highlights of Special Consent:
  - Satisfactory esthetics & occlusion
  - RBACs of occlusal guard vs. no treatment
  - Pt responsibility for any future damage to bridge if she elects for no occlusal guard

Informed consent was signed after all adjustments were made before permanent cementation.

Translated with Spanish Interpretor

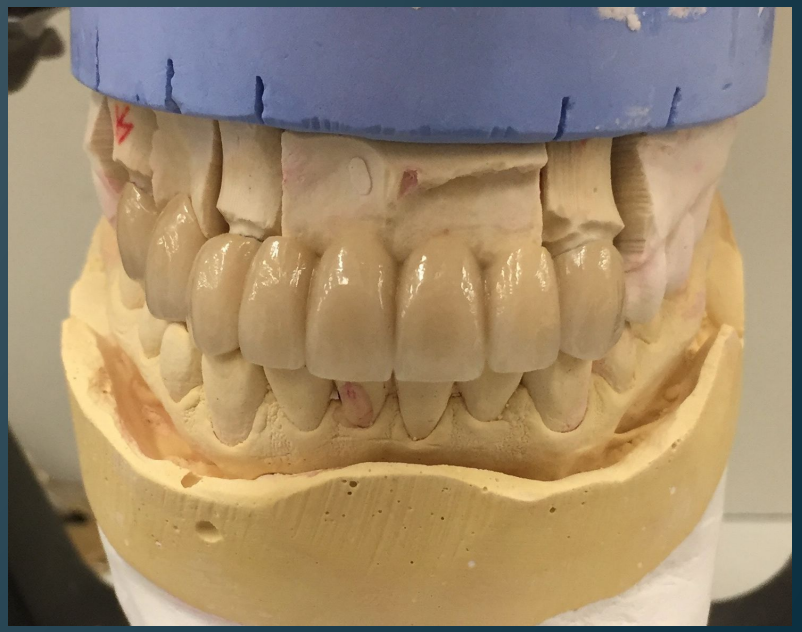
Let's Deliver!

- … but WAIT! I have *no* money!
- Unethical to withhold treatment mid-way by leaving patient in temporary.

5) Delivery

- Evaluate esthetics

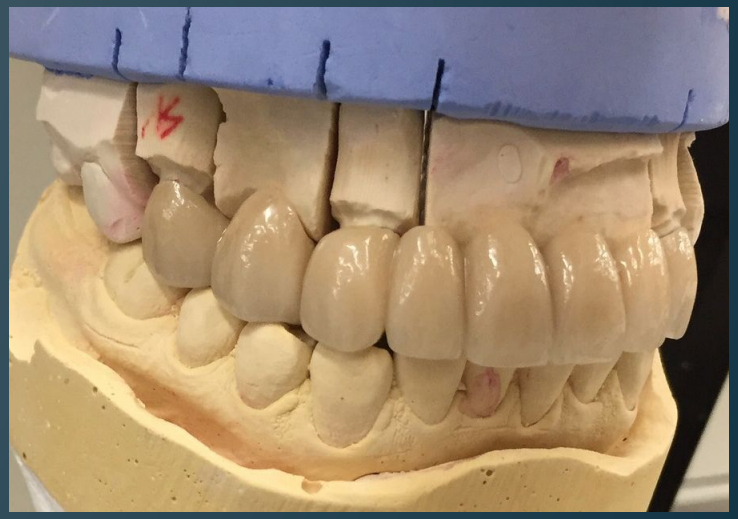
- Refused to try in bridge or look at color under natural light until after faculty involvement

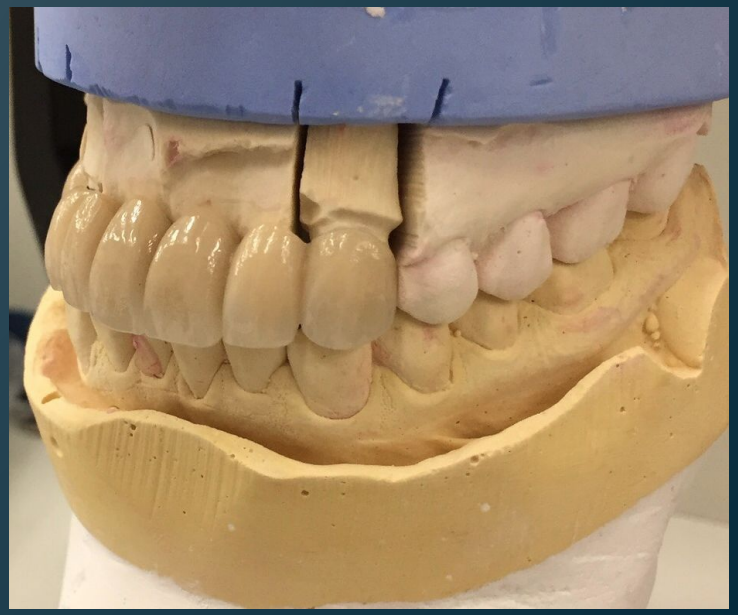


Patient was satisfied afterwards.

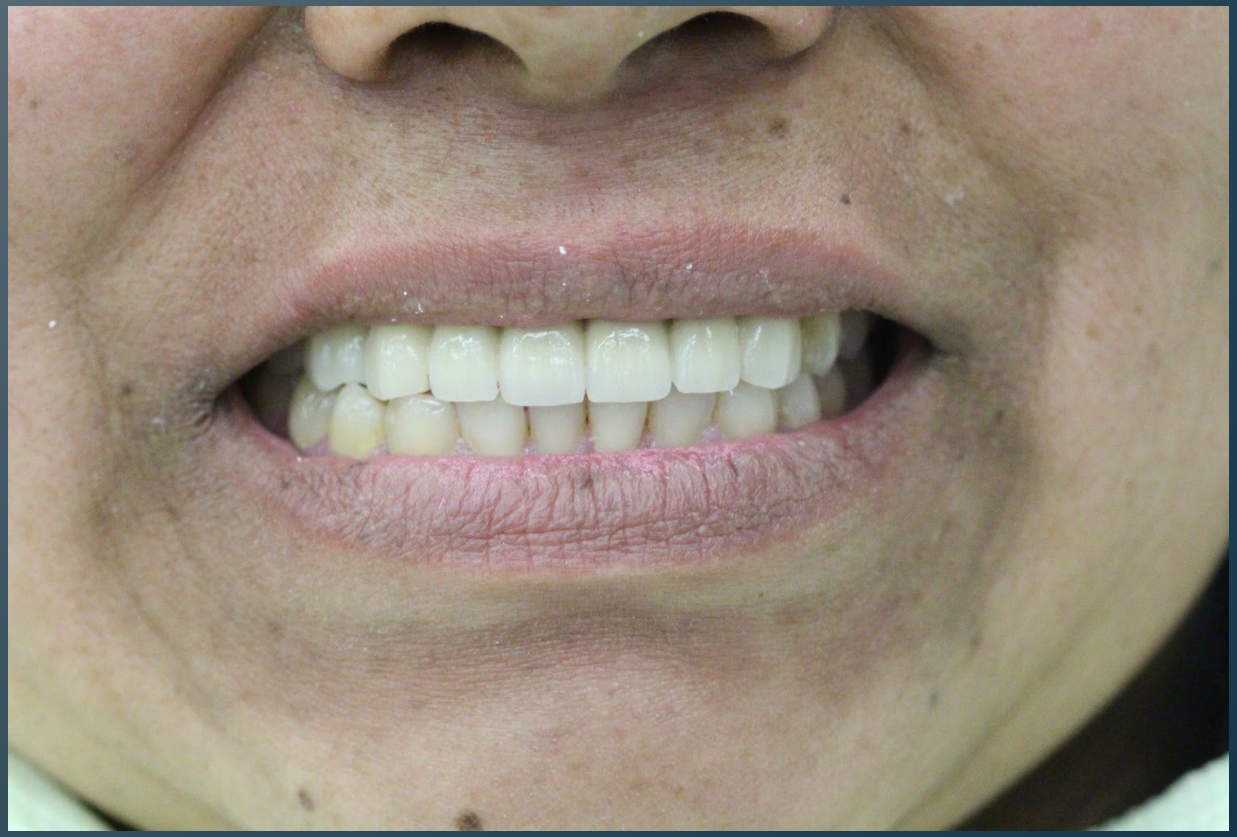
5) Delivery

- Enamelplasty on lower anteriors to remove interferences
- 2 step cementation w/ Fuji Plus
  - Female attachment #6-11
  - Male attachment #4-5

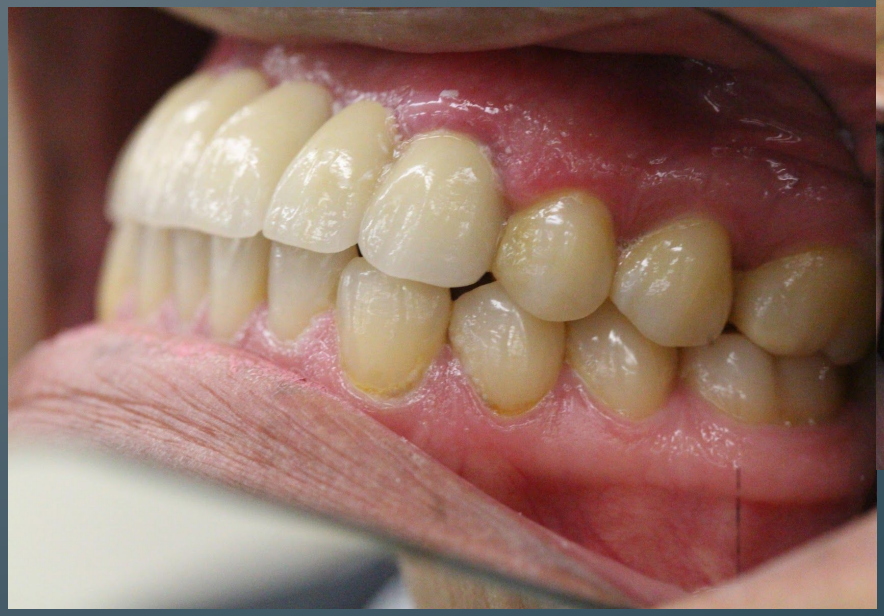


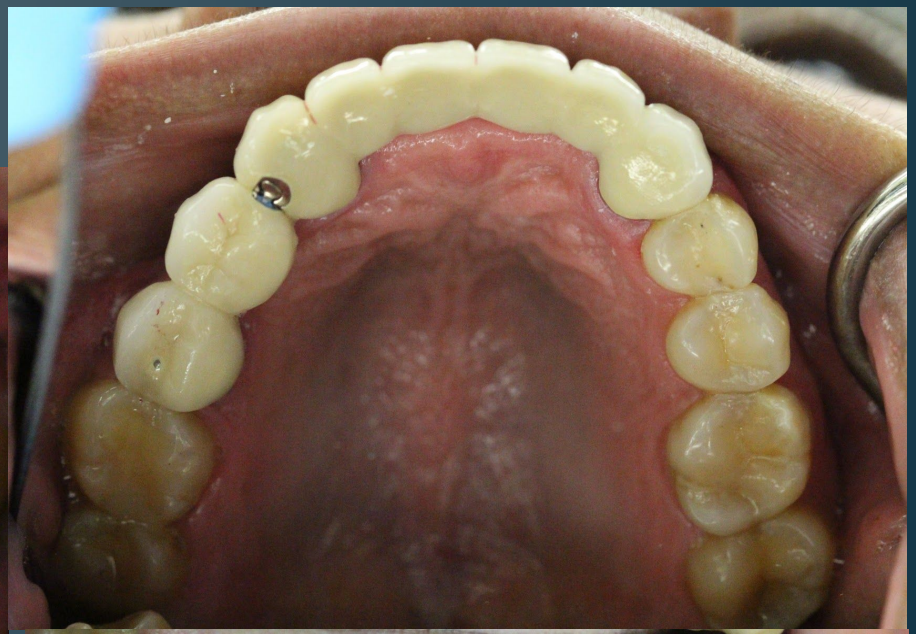


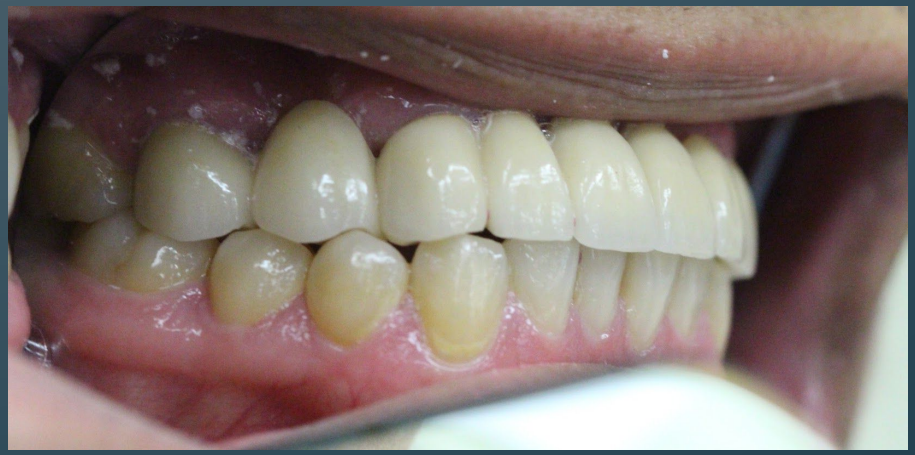
Results

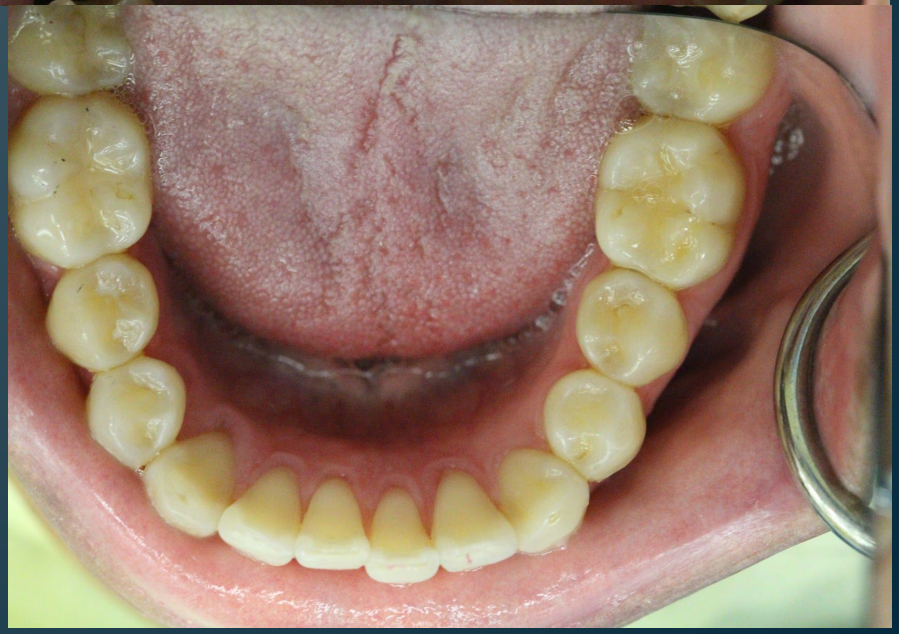


Results



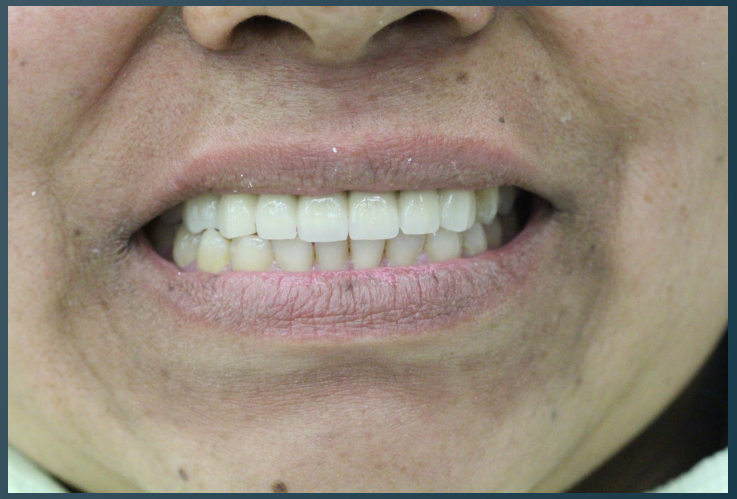






More Complaints

- Dark color
- Bridge is “loose”
- Uncomfortable bite



Follow-up appointment with minimal adjustments.

Patient still dissatisfied.

Patient Management Red Flags

Patient repeatedly asked same questions.

Patient unable to stick with treatment decisions.

Failed to establish good faith relationship.

Inconsistency regarding complaints.

Additional Key Points:

- Documentation is key
- Avoid texting
- Informed consent in patient's primary language and English

What's next?

- Pt was evaluated by Dr. Centore
- Discontinued
- Pt can only be seen in ER with authorization from Clinic Director while on waitlist for a local FQHC

Lessons Learned

1. Lower expectations
2. Set firm boundaries of acceptable behavior
3. Importance of continuity of care

Special thank you to:

- Dr. Mong
- Dr. Centore
- Dr. Shek
- Coaching Group B

References

- Centore, Linda. “Approach to Common Behavior Issues in Dentistry.” Lecture
- Centore, Linda. “The Psychological Evaluation of Dental Patients”. Lecture
- Pomm, HA, E. Shahady, and RM Poem. "The CALMER approach: Teaching learners six steps to serenity when dealing with difficult patients." *Family Medicine* 36.7 (2004): 467-9.
- Akulwar, Ravikumar Suryakanth, and Ashwin Kodgi. “Non-Rigid Connector for Managing Pier Abutment in FPD: A Case Report.” Journal of Clinical and Diagnostic Research: JCDR8.8 (2014): ZD12-ZD13.PMC.Web.7 May 2017