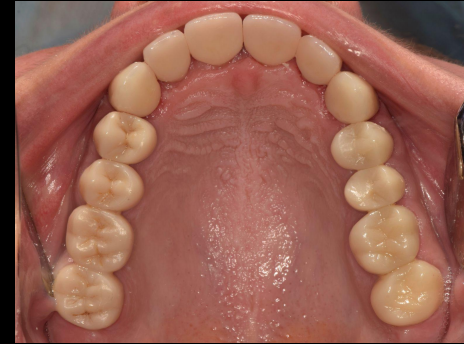
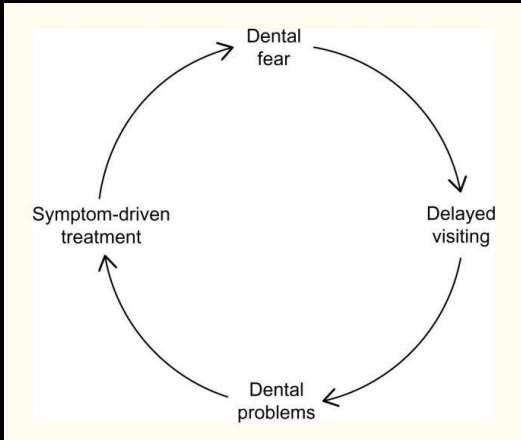


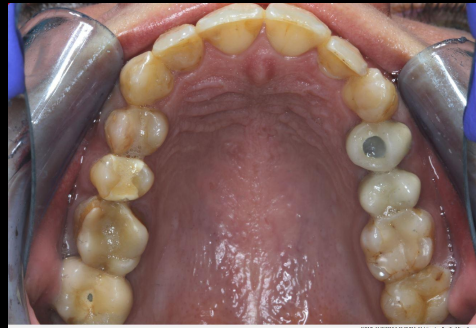
# Multidisciplinary Treatment in a Dentally Anxious Patient



Chanelle Sy, DDS 2021 Candidate  
UoP Arthur A. Dugoni School of Dentistry

# G.T.

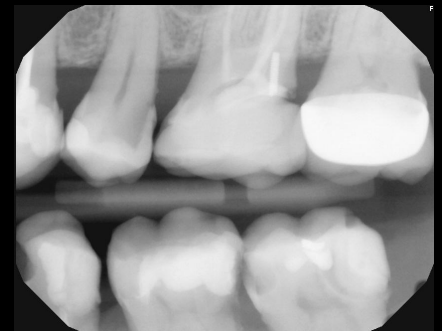
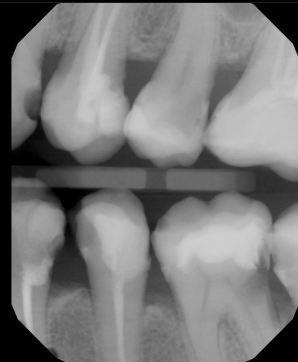
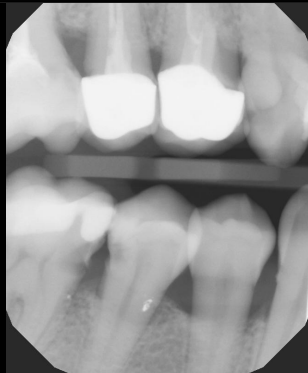
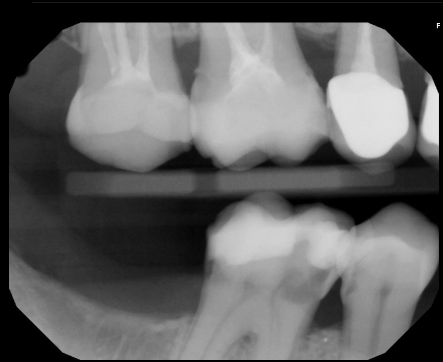
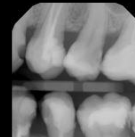
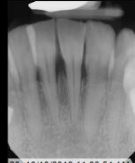
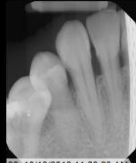
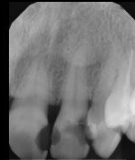
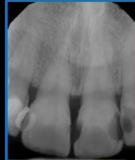
- 36-yr old Female
- **CC:** Tooth pain, wants a healthy mouth
- **Medications:** SSRI
- **Med History:** Anxiety, Depression
- **Social History:** Smoker, 5-6 cigarettes per day for 15 years, marijuana use, severe dental anxiety
- **Dental History:** Heavily restored. Moved to US 5 years ago, most dental work done in Hungary





11/7/2019

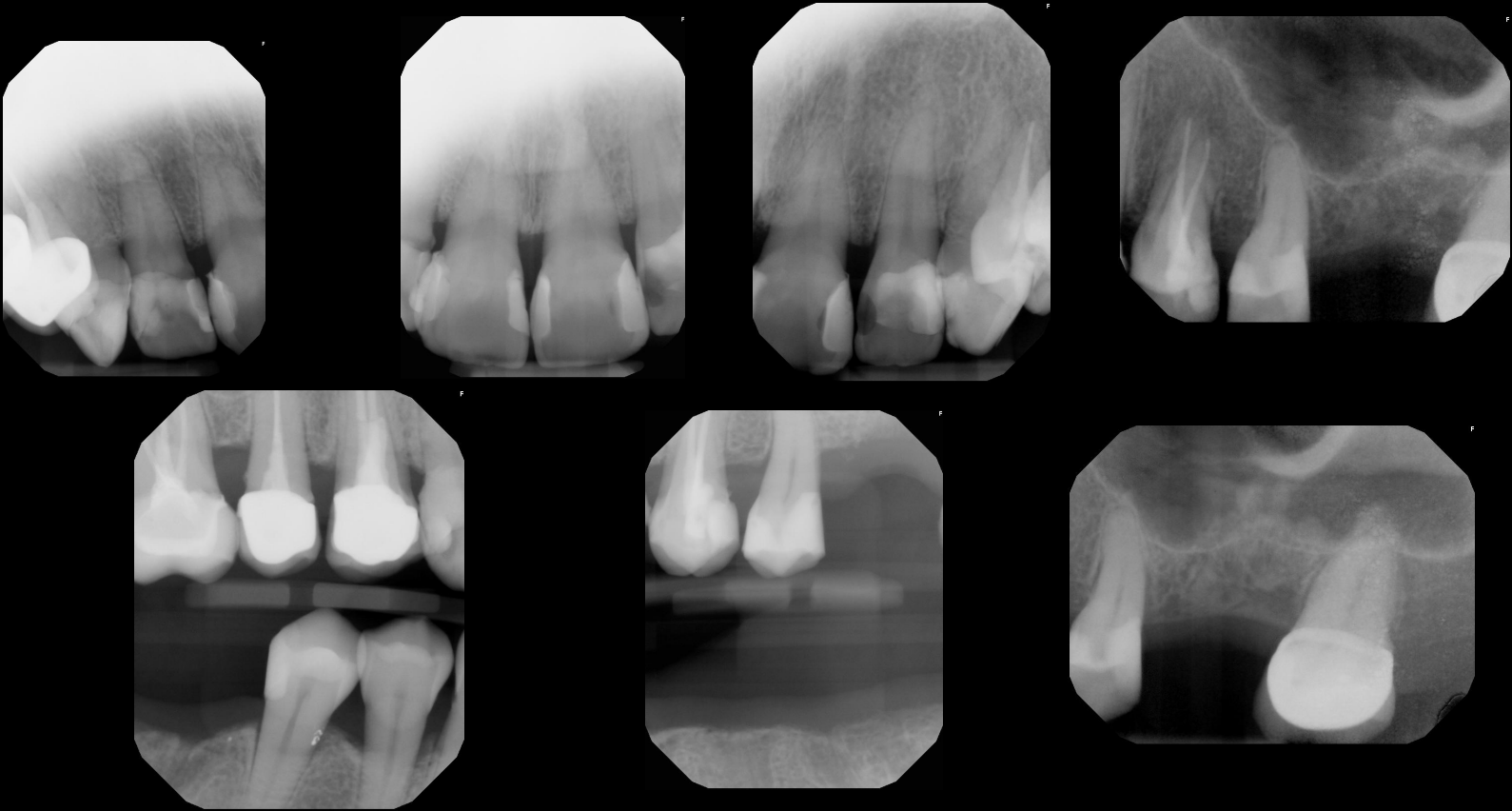
# 2018 FMX upon entering the school



10/18/2018



Radiographs as of March 2020, became my patient in July 2020





# Caries Risk Assessment

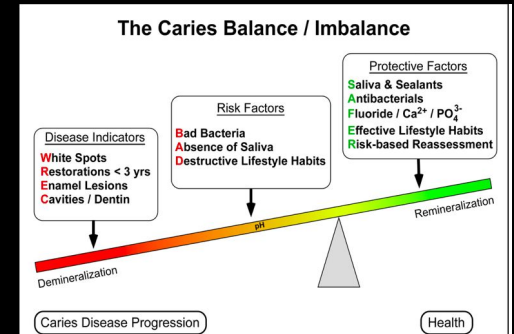
## Caries Risk: Extreme

- Disease Indicators: Restorations in past 3 years, Progressing cavitations
- Risk Factors: ATP higher than 1500, visible plaque on teeth, recreational drug use, inadequate saliva
- Protective Factors: Fluoridated toothpaste, fluoridated community
- Xerostomia. Explained importance of saliva as a pH buffer, along with xerostomic effects of marijuana and SSRI.

**Education:** Caries is a preventable disease. Used motivational interviewing techniques to inspire and put burden of change in patient's hands.

- **Establish partner role early on**

Recommend: CTX4 rinse, Carifree Boost spray, hydrate regularly, dry brushing



Young et al., 2007

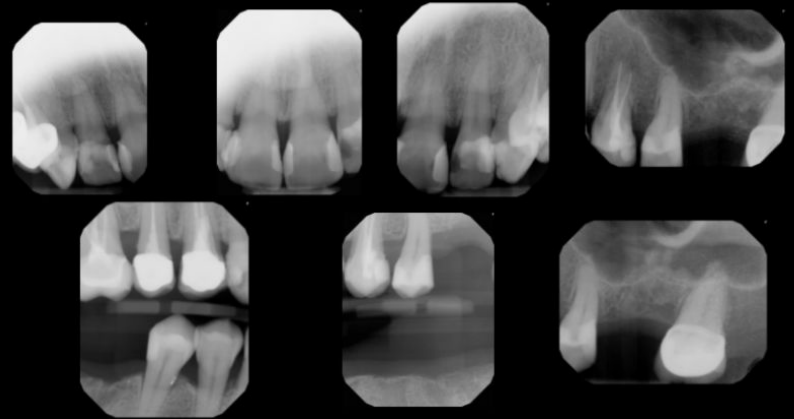


Gillam and Huda, 2019

# HTE 2020

## Findings

- #2: in temporary crown
- #3 in temporary crown
- #4 existing crown recurrent decay, open margin → needs crown
- #5 open existing crown margin → needs crown
- #6 MDL comp, DL recurrent decay → needs crown
- #7 MFDL comp, ML/DL recurrent decay → needs crown
- #8 MFDL comp, DL decay/poor contour → needs crown
- #9 MFDL comp staining, recurrent decay → needs crown
- #10 MFDL comp staining, recurrent decay → crown
- #11 MFDL comp with ML recurrent decay → needs crown
- #12 RCT, MOD, B comp with open margins → bridge abutment #12-15
- #13 in buildup → bridge abutment #12-15
- #14 missing
- #15 open margin → bridge abutment #12-15
- #24: incisal wear
- #25: incisal wear





# Treatment Plan

**Urgent Phase:** none

**Disease Control Phase:**

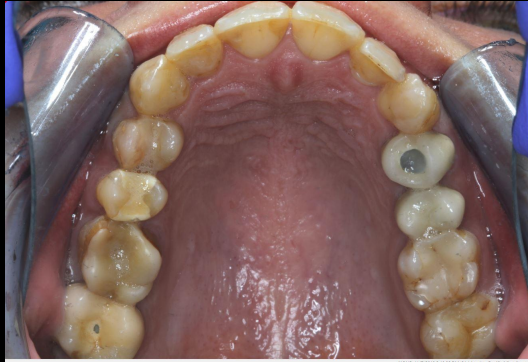
- Perio maintenance
- CAMBRA
- #2 finish crown
- #3 finish crown
- #4 buildup and crown
- #5 buildup and crown
  
- #12 buildup and bridge abutment
- #13 buildup and bridge abutment
- #14 missing
- #15 buildup and bridge abutment
  
- #6 buildup and crown
- #7 buildup and crown
- #8 buildup and crown
- #9 buildup and crown
- #10 buildup and crown
- #11 buildup and crown

**Reconstructive Phase:**

- 3 options discussed: implants, partial denture, interim stayplate

**Maintenance Phase:**

- Occlusal guard, 3 month recall with emphasis on OHI and CAMBRA



# Treatment Plan- Reconstructive Phase Options

Alternative Treatment Options	Pro	Con
Implants to restore first molar occlusion	Fixed, patient is young and implants can maintain bone level	Smoking and history of periodontitis high risk for marginal bone loss <sup>4,5</sup> , cost, likely bone graft needed
Partial Denture	Cost, insurance coverage	Removable, bilateral distal extension, requires survey crown to reposition #29, bone resorption over time <sup>6</sup> , needs occlusal guard to protect anterior teeth at night
Stayplate	Cost, insurance coverage	Only a temporary solution, poor long term stability and functionality, needs occlusal guard to protect anterior teeth at night

**Compromise:** Patient wants stayplate for the time being and has begun putting down money towards implants with the goal of placement by 2022

# Identifying and Treating the Anxious Patient

## My patient's case:

- Panicky, outburst of emotions, holding chair tightly, strong startle response, muscle tightness<sup>7</sup>

## Life impact<sup>8</sup>:

- Physiological Impact: Signs and symptoms of fright response → feelings of exhaustion after appointment
- Cognitive Impact: Negative thoughts, beliefs, fears, avoidance behaviors related to oral hygiene, self medication

## Methods to cope<sup>7</sup>:

- Semi-structured interview with open ended questions before beginning treatment.
- Preface before working on patient, even topical application has caused startling
- Breathe with patient while administering anesthesia
- Reminder of worst case scenarios and how far we have come
- Consistent encouragement
- Push but need to respect limits
- Use of anxiolytic

Table 1

Subjective assessment of anxious patients based on their psychophysiological, behavioral, and emotional responses

Psychophysiological responses	Behavioral and emotional responses
Muscle tightness	Hyperactivity
Hands unsteady	Walking or talking faster
Restlessness	In a hurry
Clearing the throat	Irritation with delays
Sweating of the palms of hands, forehead, upper lip (the palm of the hand can be assessed during handshake)	Panicky
Pulsation in the carotid and temporal arteries	Blushing
Depth and speed of respiration, Stiff posture	Getting tongue-tangled
Holding things tightly	Avoiding people
Strong startle response	Nervous habits
Frequent urination	Poor memory
	Confusion, stumbling over words
	Sitting on the edge of the chair, leaning forward
	Rapidly thumbing through magazines
	Pacing
	Inattentiveness
	Excessive worrying
	Outburst of emotions

Table 2

Psychotherapeutic interventions

Communication skills, rapport, and trust building: iatrosedative technique
Behavior-management techniques
Relaxation techniques: deep breathing, muscle relaxation
Jacobsen's progressive muscular relaxation
Brief relaxation or functional relaxation therapy
Autogenic relaxation
Ost's applied relaxation technique
Deep relaxation or diaphragmatic breathing
Relaxation response
Guided imagery
Biofeedback
Hypnotherapy
Acupuncture
Distraction
Enhancing control
"Tell-show-do", signaling
Systematic desensitization or exposure therapy
Positive reinforcement
Cognitive therapy
Cognitive behavioral therapy (CBT)

# Considerations for the Anxious Patient

## Good and bad days

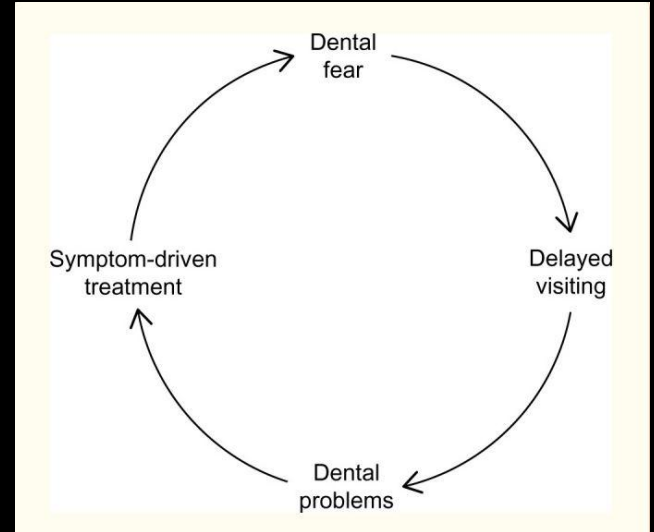
First restorative appt: CIMOE #2,3, Prep, Temp Final impression #4

Next appt: deliver #4 and work on #12-15 bridge. Patient felt tired after CIMOE and did not want to continue with bridge. Adamant on leaving

## Difficulty getting and staying numb<sup>9</sup>

Leads to cycle of pain and fear

## Necessity of understanding goals and reminding of how far we have come



Appukuttan, 2016

# Treatment Completed So Far

**1) Maxillary Crowns # 2, 3, 4 ,5** Triad record base as guide for occlusion.  
Conventional Impression

**INTERVENTION:** Cari Free Tx Rinse



**2) Maxillary Bridge #12-15** Digital Impression

**INTERVENTION:** Tell-Show-Do bridge threaders

**DISCUSSION:** “Blank slate”





# Treatment Completed So Far

## 3) Perio Maintenance and Recall

**DISCUSSION:** Reiterate goals for remaining treatment, Discuss how far we have come and progress made-posterior sensitivity is gone with caries removal and full coverage restorations. Patient now using electric toothbrush, reports brushing 2x day and flossing every night

**4) Mandibular Stayplate** Increased VDO for restorative space for anterior crowns

**DISCUSSION:** Necessity of everyday use to protect anterior teeth. Eventual occlusal guard needed following restorations

**5) ER Visit: Endodontic Treatment #9** Needed following initial caries removal, buildup and prep appointment of crown. Diagnosis: SIP/SAP

10-11-18 Perio	1-13-21 Perio
-1.2 Plq Index -10 Maxillary BOP Sites -43 Maxillary Sites PD $\geq$ 4	-0.5 Plq Index -2 Maxillary BOP Sites -8 Maxillary Sites PD $\geq$ 4



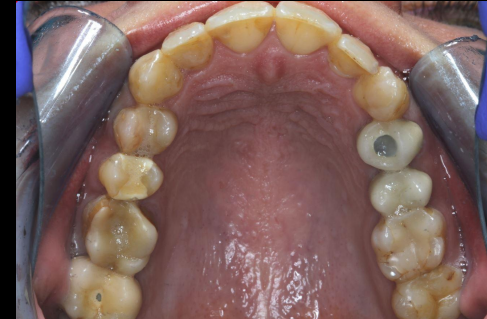
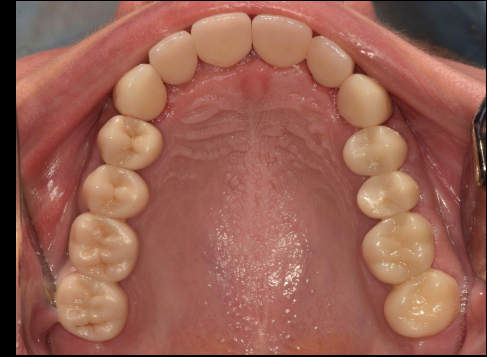
# Treatment Completed So Far

## 6) Anterior Crowns

**INTERVENTION:** 5mg Diazepam (Valium)<sup>10</sup>

“Use of anxiolytic medications to supplement anesthesia in the anxious patient is a way to reduce anxiety, fear, and perception of pain. Profound anesthesia can be accomplished more easily in a relaxed patients with diminished fear” - Feck and Goodchild, 2005

**DISCUSSION:** Noticed soda use at morning appointments. Discussed weaning off soda by diluting or at minimum, swishing with water after. Recommended dry brushing while watching TV



# Moving Forward

## 7) Occlusal Guard, Perio and Recall

## 8) Transfer to New Student Dentist

Patient would eventually like implants for her posterior mandible and is motivated to continue preventative therapy in order to stabilize her caries risk and periodontitis

**INTERVENTION:** 2nd year chosen to take over case has been assisting me since August 2020. Transition process EXTREMELY important for patient comfort and trust. Continuity of care is crucial to ensuring the long term success and stability of her mouth

# Acknowledgements

**Thank you to Dr. Nilou Nadershahi for going above and beyond in order to understand my patient's case and needs**

**Thank you to Dr. Brian Kenyon for entrusting me with this patient and supporting our decisions**

**Thank you to Carlos Correa for his assistance with planning the restorations, input on shade selection, and instruction on lab techniques to make the preparation design more successful**

# References

1. Leite FRM, Nascimento GG, Scheutz F, López R. (2018). Effect of Smoking on Periodontitis: A Systematic Review and Meta-regression. *Am J Prev Med.* 2018 Jun; 54(6):831-841
2. Young DA, Featherstone JD, Roth JR, Anderson M, Autio-Gold J, Christensen GJ, Fontana M, Kutsch VK, Peters MC, Simonsen RJ, Wolff MS.(2007). Caries management by risk assessment: implementation guidelines. *J Calif Dent Assoc.* 2007 Nov;35(11):799-805.
3. Gillam DG, Yusuf H.(2019). Brief Motivational Interviewing in Dental Practice. *Dent J (Basel).* 2019 May 1;7(2):51.
4. Bain CA.(1996). Smoking and implant failure--benefits of a smoking cessation protocol. *Int J Oral Maxillofac Implants* 1996 Nov-Dec;11(6):756-759.
5. French D, Grandin HM, Ofec R. (2019). Retrospective cohort study of 4,591 dental implants: Analysis of risk indicators for bone loss and prevalence of peri-implant mucositis and peri-implantitis. *J Periodontol.* 2019;90(7):691-700.
6. Ozan O, Orhan K, Aksoy S, Icen M, Bilecenoglu B, Sakul BU. (2013). The effect of removable partial dentures on alveolar bone resorption: a retrospective study with cone-beam computed tomography. *J Prosthodont.* 2013 Jan;22(1):42-8.
7. Appukuttan D. P. (2016). Strategies to manage patients with dental anxiety and dental phobia: literature review. *Clinical, cosmetic and investigational dentistry*, 8, 35–50.
8. Cohen SM, Fiske J, Newton JT. (2000). The impact of dental anxiety on daily living. *Br Dent J.* 2000 Oct 14;189(7):385-90.
9. Esmaili H, Malekzadeh M, Esmaili D, Nikeghbal F. (2020). Dental anxiety and the effectiveness of local anesthesia. *Braz. J. Oral Sci.* 2020Aug.14; 19:e208127.
10. Feck AS, Goodchild JH. (2005). The use of anxiolytic medications to supplement local anesthesia in the anxious patient. *Compend Contin Educ Dent.* 2005 Mar;26(3):183-6, 188, 190;