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Orthodontic Forced Rapid Extrusion to Avoid Crown Lengthening or Extraction

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OKU Sutro Excellence Day Project Cover Sheet

Project Title

Orthodontic Forced Rapid Extrusion to Avoid Crown Lengthening or Extraction

Full name(s) and class year(s) of all project collaborators

Example: Jane Smith, DDS 2022; John Smith, DDS 2022

Andre Tran Orthodontic Resident 2024, Taylor Pearn DDS 2024

Project Category

Residents - Orthodontics



Enter your abstract text here (max 300 words)

This patient reported to the orthodontic clinic looking to explore other options other than extraction for his #7. The tooth had root canal therapy in the past but a PARL was present with the crown being mobile as well during an emergency examination. Due to a poor experience at a previous extraction, the patient did not wish to extract this tooth unless there was no other possibility. The tooth had a lack of ferrule for a crown preparation.

A suck down retainer was created to orthodontically extrude #7 to create more ferrule for the restorative dentist to put a crown on the tooth rather than crown lengthening surgery. This appliance was created to minimize any side effects from extrusion of the lateral.

I would like to thank Dr. Mark Vaugahan for his diligent supervision with this case and help designing the appliance. I would also like to thank Taylor Pearl and her restorative faculty for their efforts in the fabrication of the new crown. Lastly, I would like to thank my patient, Nedim, for being incredibly compliant with his treatment and appointments – it has been a pleasure to be his treating resident.

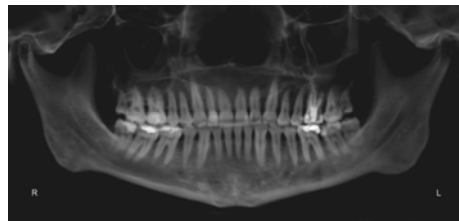
Orthodontic Forced Rapid Extrusion to Avoid Crown Lengthening or Extraction

Orthodontic Resident: Andre Tran; Faculty: Dr. Mark Vaughan; DDS Student: Taylor Pearl

Initial composite and panoramic radiograph from 4/4/2023, PA from 03/16/2022



- 43 year old male
- Patient originally went to ER clinic for sinus tract next to #14
- Examination of #7 noted a PARL as well as mobility of the crown
- Minimal tooth structure and restorability concerns



- Tx Options:
 - RCT, post/core, crown lengthening, crown
 - RCT, post/core, orthodontic extrusion, crown
 - EXT and implant
 - EXT and bridge/removable appliance

Appliance Fabrication/Delivery



Heavier elastics used after 2 months

Posterior occlusion remains unchanged

Built up #7 to create space to extrude the tooth. Suckdown splint was created and button cutouts made

6 month progress: Extrusion complete

Overextruded and bonded a temporary fixed retainer to prevent relapse while waiting for crown prep.

Fixed retainer will be replaced after crown prep on new temporary crown



Final (02/29/2024)



- Total time in treatment to date: 9 months