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Optimizing Implant Prosthesis Success in a Patient with Oligodontia: Distalization Strategies for Enhanced Bone Levels and Addressing Bolton's Tooth Size Discrepancy with Peg Lateral Buildups in Orthodontic Treatment

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OKU Sutro Excellence Day Project Cover Sheet

Project Title

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

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

Yash Sharma, Ortho 2024; Colton Kelly, DDS 2025

Project Category

Residents - Orthodontics



Enter your abstract text here (max 300 words)

Patient B.C. presented to the orthodontic clinic with the chief complaint, "I want to fix the gaps in between my teeth." The patient presented with a skeletal and dental Class I pattern with moderate U/L spacing. Patient was congenitally missing U6s and U/L7s with no previously reported family history of oligodontia. Patient also had a Bolton's Tooth size discrepancy with mandibular anterior excess and peg-shaped laterals. Since the patient has inadequate maxillary bone distal to the U6s for a future implant prosthesis, it was treatment planned to use fixed orthodontic appliances and open coiled springs to distalize U5s to allow more maxillary bone fill in the edentulous site between the U4s and U5s for a future implant prosthesis. The benefits of this would also allow the L6s to have a maxillary antagonist for good function and occlusal stability. Currently, the distalization process is complete and obtained good maxillary bone fill in the edentulous site. Towards the end of the fixed appliance therapy, the patient presented to the University of Pacific Main Clinic to restore the upper centrals and laterals to address the Bolton's Tooth Size discrepancy. The patient is currently towards the final stage of coordinating the dental arches and making finishing improvements to alignment and occlusion. After orthodontic treatment, the patient will be prescribed U/L Hawleys with an attached pontic tooth between U4s and U5s until the patient has completed growth and will be ready for a prosthetic implant.

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Orthodontic Resident: Yash Sharma; Faculty: Dr. Heesoo Oh; Dental Student: Colton Kelly

Initial Composite and Panoramic Radiograph (05/16/23)



- 14 YO Male. CC: "I want to straighten my teeth"
- CI I (Skeletal and Dental) Deep Bite, moderate spacing, peg shaped lateral incisors, congenitally missing #1, #2, #3, #14, #15, #16, #17, #18, #31, #32



Treatment Plan:

- Fixed Braces with Open Coiled Springs (OCS) between #4-#5 & #12-#13 to distalize for future premolar implant
- Composite buildups on peg lateral incisors and central incisors to enhance esthetics during finishing stage

3mo Progress



Distalization of Premolars via Open Coiled Springs

8mo Progress



Orthodontic space preparation for U2 buildups

Current Composite (04/24/24) and Progress Panoramic Radiograph (04/24/24)



- Current treatment time: 10 months
- Build-Ups and Repos completed after Progress Radiograph
- Plan: Close excess space mesial/distal to U1-2s, L4-5s. Intrude lower canines, IPR and retract lower incisors as necessary to increase OJ

