

# Multidisciplinary Treatment of a Patient with Hypodontia: Utilising Multiple Approaches for Space Management

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## Introduction

**Presenting Complaint:** A 19 year old female presented with aesthetic concerns in relation to her missing teeth.

**Social History:** Miss X is a student, with good motivation and attendance. She is a non-smoker.

**Relevant Medical History:** Fit and well with no known drug allergies.

## Diagnoses

1. Plaque-induced gingivitis.
2. Class II division 2 malocclusion on a mild skeletal 2 base with decreased vertical proportions.
3. Hypodontia with developmental absence of UL4, LL5, LR45.
4. Retained LLE and LRE.
5. Microdontia of the UR2.

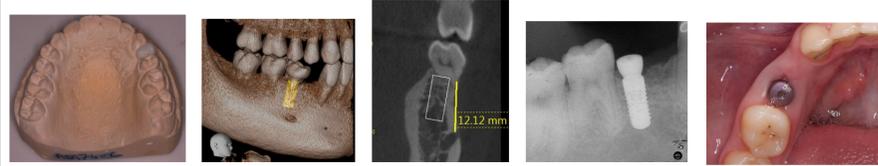
## Treatment Plan

1. Oral hygiene instructions, supra- and sub-gingival scaling.
2. Orthodontic treatment to optimise spaces.
3. **LLE** → Extraction and orthodontic space closure.
4. Restorative pre-debond assessment of spaces.
5. Missing **UL4** → Resin-bonded bridge (planned due to convergent roots of adjacent teeth).
6. **LRE** → Extraction and immediate implant placement.
7. Missing **LR45** → Cantilever implant-retained bridge.
8. **UL2** and **UR2** → Composite resin build-ups.
9. Long-term retention provided by fixed and ESSIX retainers.
10. Long term maintenance.

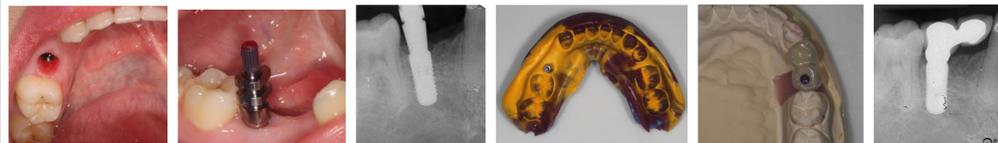
## Post-Orthodontic Clinical Photographs



## Operative Clinical Photographs



A diagnostic wax-up of the UL4, LR45, UL2 and UR2 was fabricated on articulated study casts. A CT scan was carried out to assess bone dimensions and anatomy before a 4.1x10mm implant was placed.



Fabrication of a cantilever implant-retained bridge using a conventional workflow



A Bis-acryl composite resin try-in was carried out using a silicone index. This allowed for a predictable aesthetic outcome of the composite resin build-ups and resin-retained bridge.

## Post-Operative Clinical Photographs



## Reflection

- This care plan addressed aesthetic concerns caused by hypodontia and highlights the importance of multidisciplinary care for patients presenting with hypodontia, especially with regards to decision making to close or optimise spaces.
- A pre-debond check by the restorative team prior to removal of orthodontic appliances is an essential step in the process.
- The combined orthodontic and restorative reconstruction with a combination of composite resin build-up, resin-bonded and implant-retained bridges has provided the patient with a good aesthetic outcome.