Occlusion Changes Upon Crown Cementation With Different Cement Space Settings

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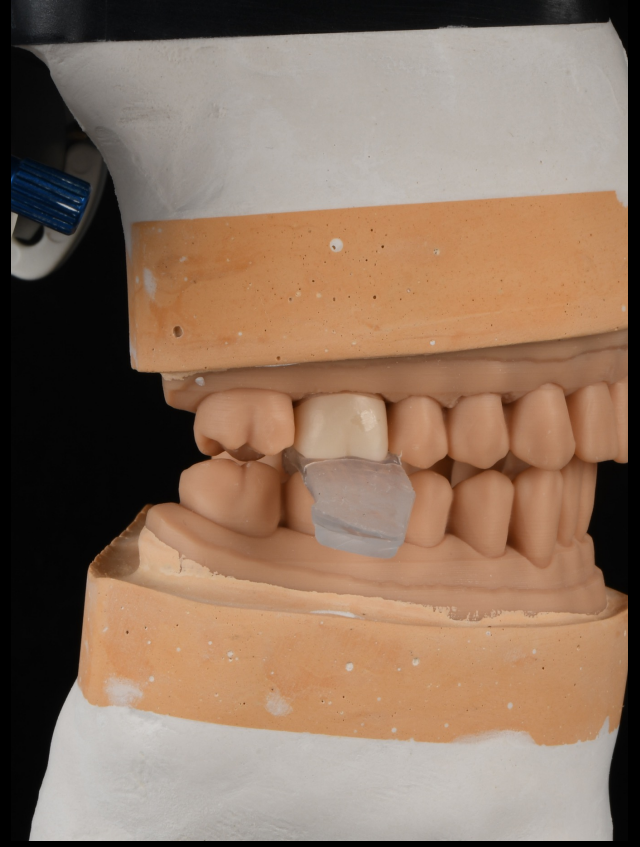
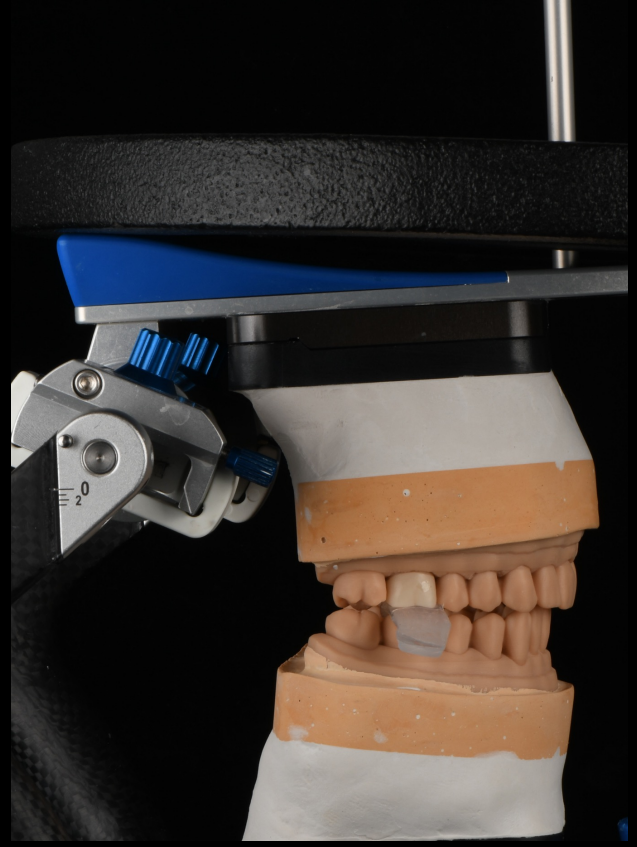
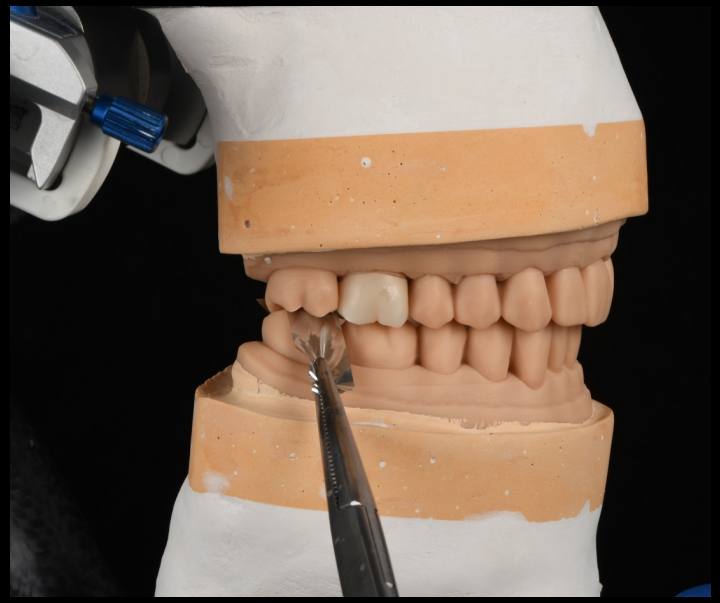
Abstract

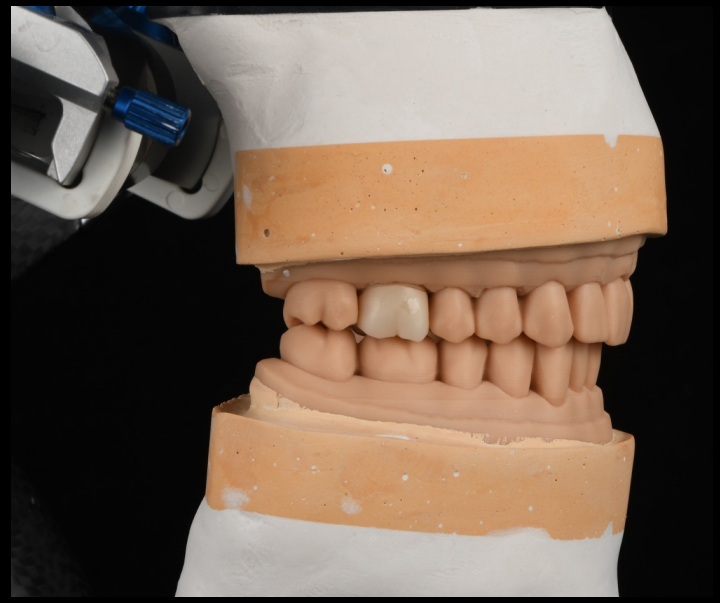
- This project investigated how different cement space settings in the fabrication of all ceramic crown (zirconia) affect occlusion before and after cementation. A photogrammetric method was used to convert conventional records to digital records for a quantitative occlusal analysis. This photogrammetric setup can provide clinician a new way of visualize and track occlusion in a timely manner. Upon evaluation of the digital record, no significant between the two sample groups were found.


Pre-Cementation Try-In

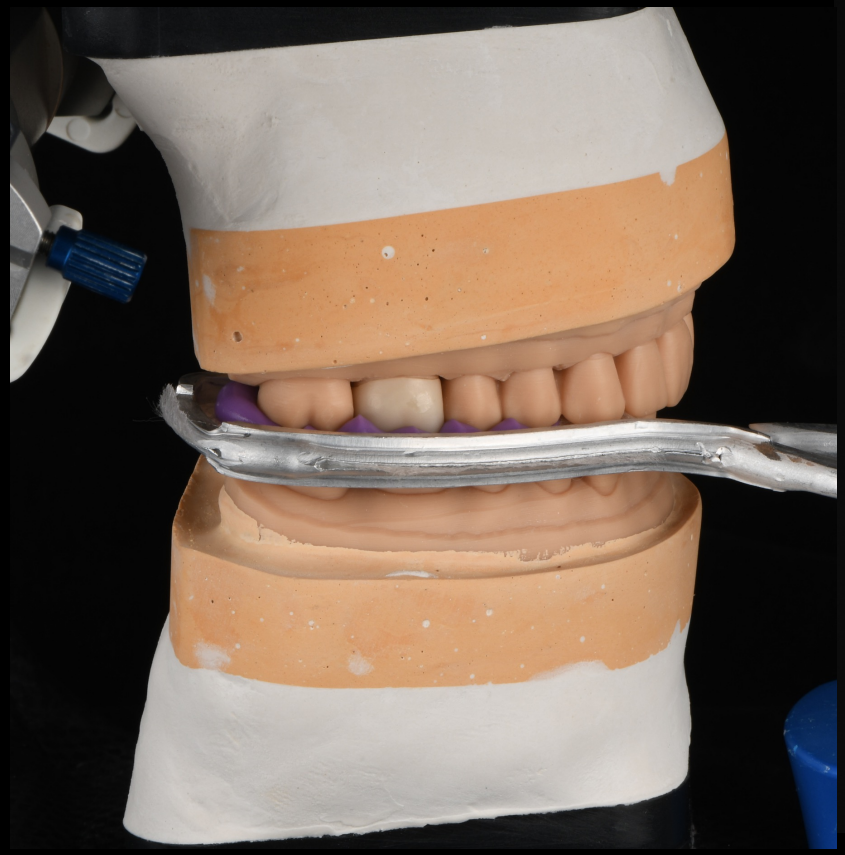
- Insertion jig was made with thermoplastic material and weighted articulator

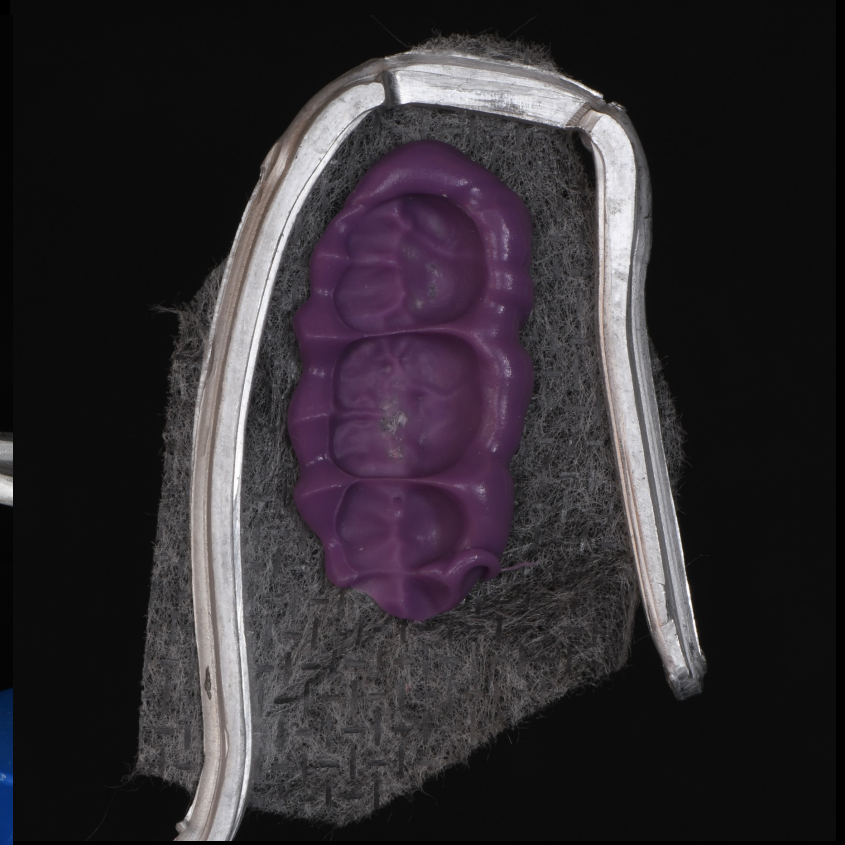




Occlusion Adjustment

- Ensure even posterior contacts



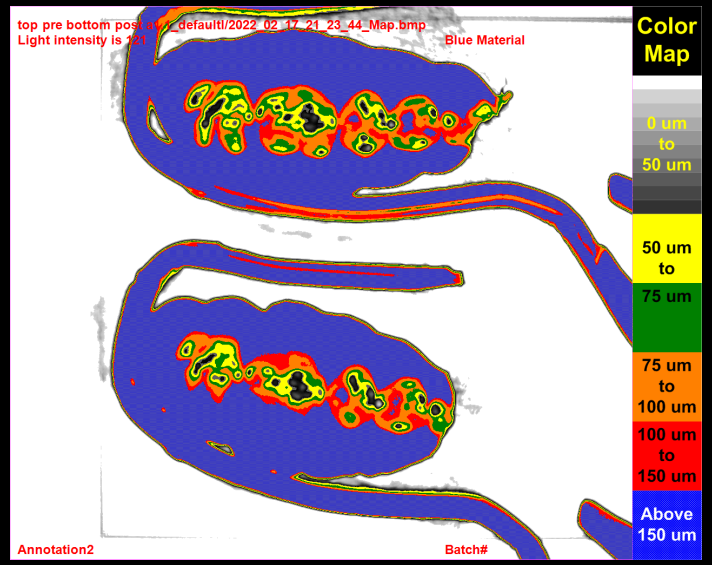


Bite Registration Records and Scan

- Pre and post cementation bite registrations of each sample were taken for analysis
  - 15 samples with 70 µm cement space
  - 15 samples with 120 µm cement space

Sample Scan

- The bite registration of pre and post cementation will be scanned and digitized for analysis.



Conclusion

- No significant difference was found between the group
  - Comparably small sample size and large SD
- The method of digitizing bite records provide clinician an efficient way of visualize occlusion in addition to conventional way.
  - Provides digital data for tracking occlusion