# Complications and Redesign Considerations for Montreal Bar-Supported Implant Fixed Complete Dental Prostheses

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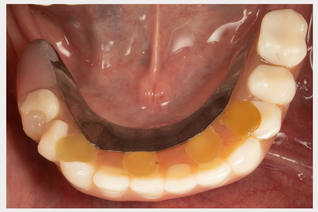
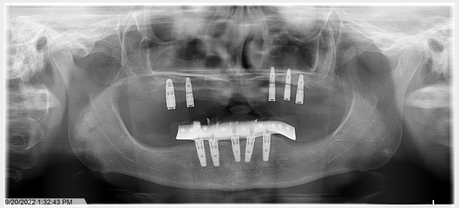
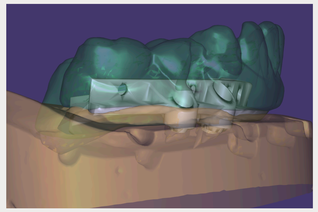
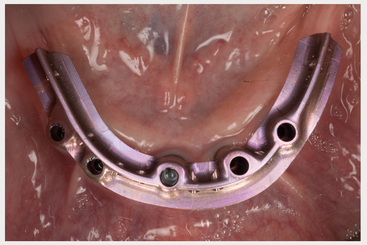
## Introduction

Implant supported fixed complete dental prosthesis has become the preferred treatment for patients facing challenges with conventional complete denture. A metal acrylic hybrid restoration provides better strength for denture like prosthesis by incorporating a metal framework and implant support. The ideal metal framework design is founded on the following principles: sufficient thickness for strength, ease of access for oral hygiene maintenance, minimal visibility of metal, and retention for denture teeth and denture base acrylic resin. Inadequate space for acrylic resin could lead to potential fracture. This patient report describes the prosthetic failure involving repeated denture tooth fracture and denture based acrylic resin fractures associated with Montreal bar. The treatment outlines the utilization of CAD/CAM software to redesign the metal framework for improving longevity of the metal acrylic implant supported fixed complete dental prostheses.

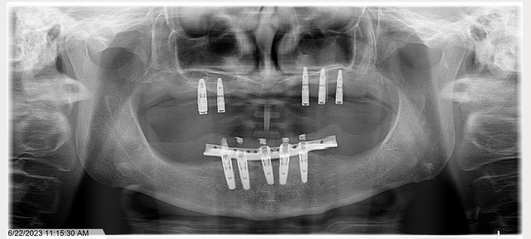







## Materials and Methods

The existing mandibular implant supported fixed complete dental prosthesis was duplicated. The metal framework was redesigned using current prosthesis as a reference, taking into consideration of occlusion of opposing complete denture. The metal framework design was altered from Montreal bar design to wraparound design, while replicating the tissue surface using CAD-CAM design and fabrication. Proper acrylic thickness was confirmed with cross section function of CAD-CAM software.




## Conclusion

Sufficient material thickness is essential for durability of dental prosthesis. CAD-CAM technology could offer predictable planning and outcome.

## References

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