

INTRODUCTION

This case report highlights the successful management of a 72-year-old female patient who presented with porcelain fracture of multiple metal-ceramic crowns and loss of mutually protected articulation. Signs and symptoms of compromised masticatory function and discomfort prompted the need for restorative intervention.

PATIENT PRESENTATION

Extraoral examination revealed discomfort of the temporomandibular joints without signs of active disease. Intraoral exam revealed a minimally restored dentition with porcelain fracture of #18, 19, 30, and 31 PFM crowns. In addition, generalized wear faceting, blunting of the canine cusp tips, decoupling of the cuspids due to buccal displacement, as well as bilateral group function was observed. Canine guidance relies on intimate coupling of the opposing cuspids to disocclude posterior teeth during excursive movements. Therefore, lack of coupling contributed to a shallow canine guidance angle, resulting in lack of disocclusion in excursive movements, and excess lateral forces to posterior dentition in those movements.

Restoring canine guidance can be a means to manage accelerated dental wear^{2-3,5}, reduce muscle activity^{1,4}, and reduce lateral forces on posterior dentition^{1,4}. Consequently, the treatment plan centered on restoring canine guidance.

The patient declined orthodontic therapy and occlusal analysis revealed aggressive enameloplasty would be required to restore to mutually protected articulation. Instead, coupling of the canines, and thereby restoration of canine guidance, was achieved via palato-incisal veneers on #6 and 11.



CLINICAL PRESENTATION

Pre-Operative:



Post-Operative (4-mo):



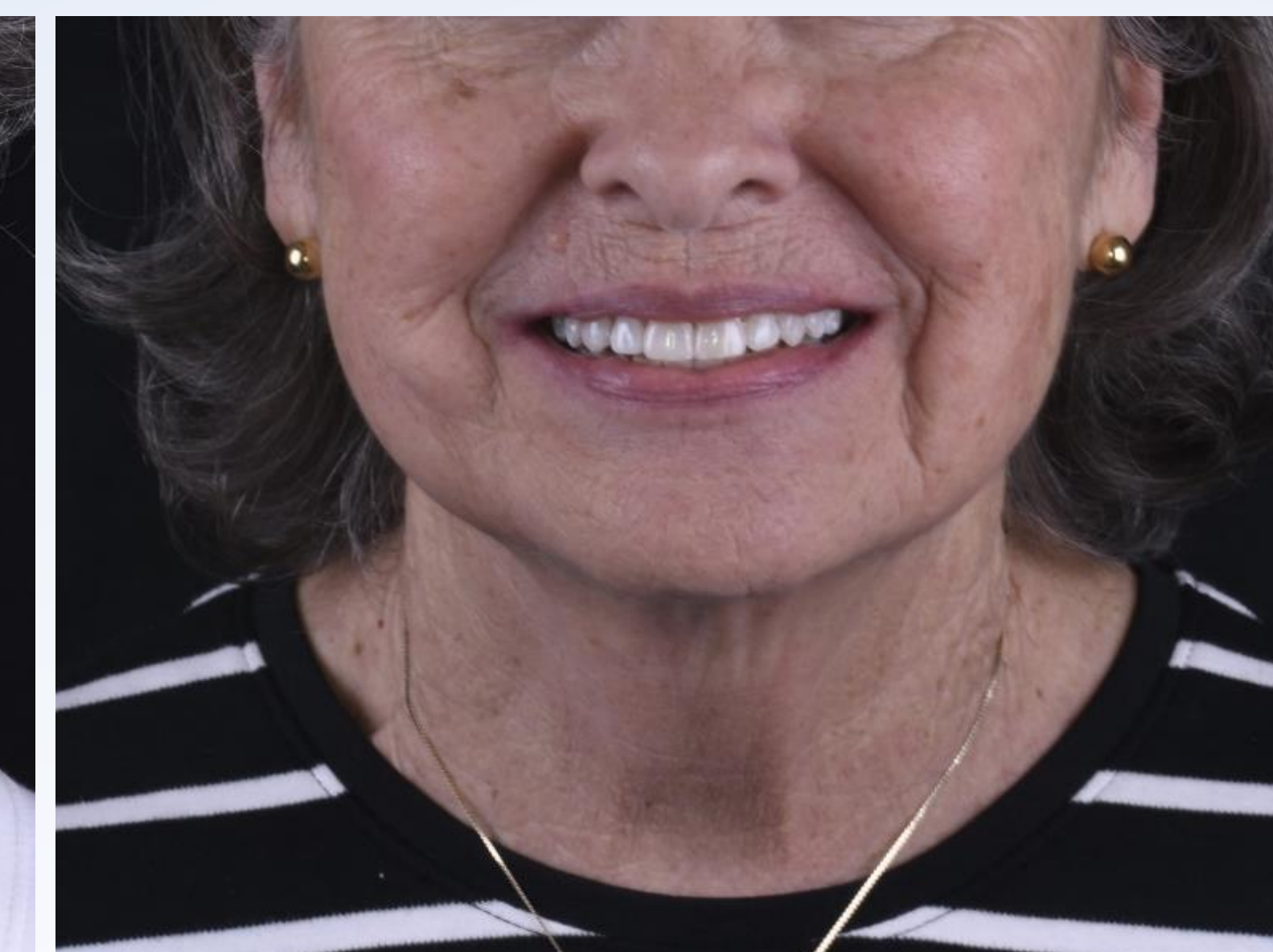
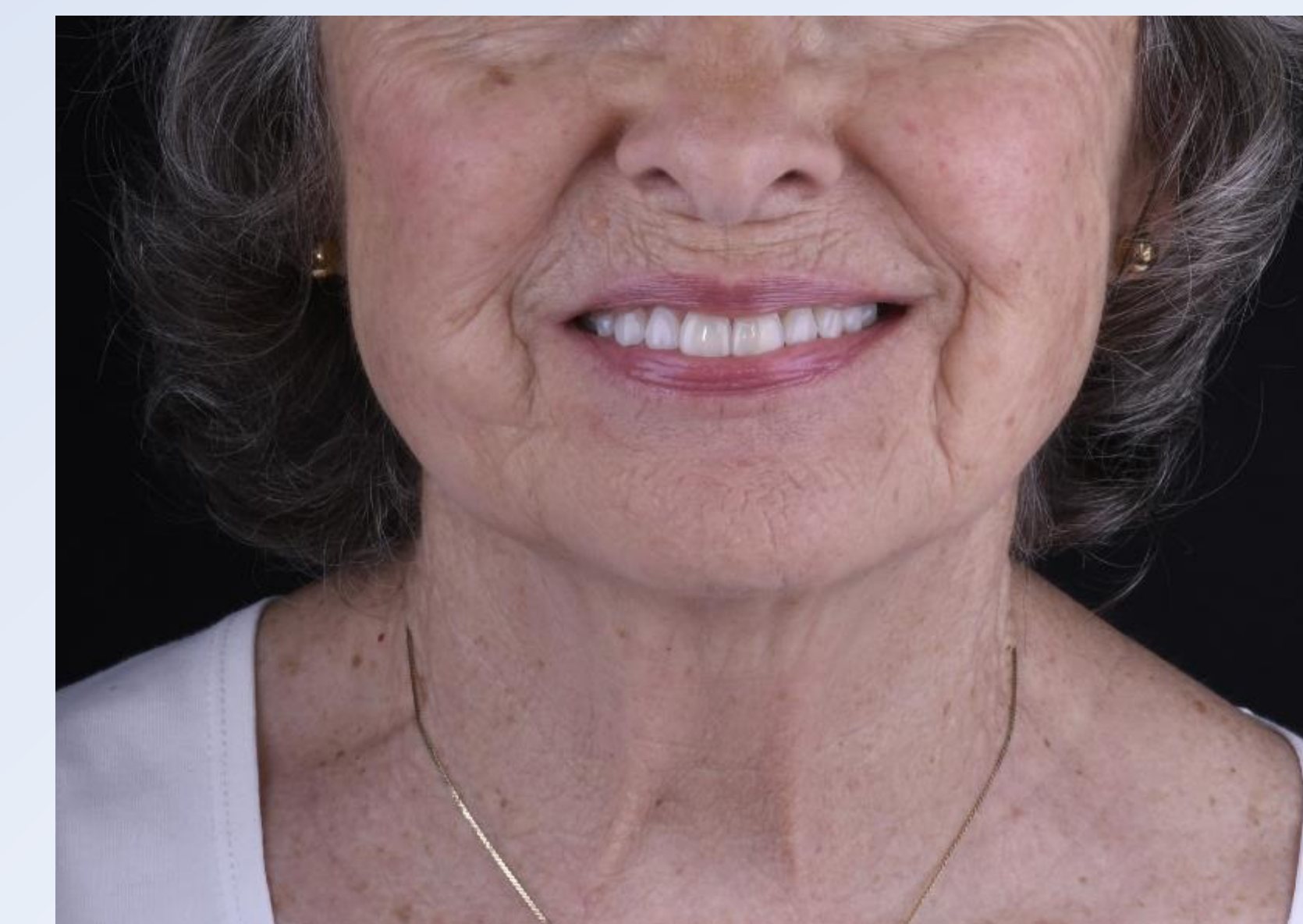
Left Laterotrusion:



Right Laterotrusion:



RESULT



Following the restorative procedures, a relief in chronic tension headaches was reported. Peri-operatively, the prescribed treatment plan provided a conservative management of the clinical findings. Post-operatively, it effectively redistributed occlusal forces, provided TMD relief, and rejuvenated the patients smile. Additional benefits include an overall reduction in treatment cost and reduced chair time. The patient is scheduled for definitive restoration of #18, 19, 30, and 31, as well as 1-mo, 3-mo and 6-mo follow-up.

CONCLUSION

This case report highlights the impact of canine guidance. It also showcases a restorative intervention which can reduce the need for aggressive management and further sequelae when not considered. Dental professionals should be cognizant of the benefits and indications for restoring canine guidance as a conservative restorative management.

References

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