

Comparison of Mandibular Implant Supported Hybrid Protheses and Overdenture

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INTRODUCTION

Edentulous patients have traditionally been rehabilitated using conventional complete dentures, which have been considered the standard of care for decades. With the introduction of implant-supported overdentures, significant improvements in patient satisfaction, masticatory function, and overall comfort have been reported. While many patients can adapt well to maxillary complete dentures, mandibular complete dentures often present challenges, particularly regarding stability and chewing efficiency. The McGill Consensus Statement on Overdentures recommends a two-implant-supported overdenture as the first-choice treatment for the rehabilitation of the edentulous mandible.

Numerous longitudinal clinical studies, case reports, and systematic reviews have demonstrated the success of two-implant-supported overdentures (OD) in the edentulous mandible.

Niakan et al., in their cross-sectional study, reported that age and gender had no significant effect on patient satisfaction; however, patients demonstrated significantly higher satisfaction with implant-supported dentures compared with conventional complete dentures.

Goo et al., in a case report, concluded that the use of CAD/CAM technology simplified the restoration of implant-supported edentulous mandibles.

Additionally, Assunção et al. demonstrated that splinted implants connected with a bar-clip attachment improved stress distribution and enhanced the transmission of occlusal loads.

PURPOSE

The purpose of this study was to review the literature and compare the success of Hybrid Fixed Protheses (HFP) on mandible compared to Overdentures (OD)

MATERIALS AND METHODS

A systematic search using Pub MED, Ovid, Cochrane library was conducted to look for literature regarding implant supported prosthetics: OD compared to HFP; various outcomes such as prosthesis retention, patient's satisfaction, maintenance problem, peri-implantitis and any other complications.



RESULT

Twenty-one studies met the proposed criteria for systemic review. Statistically significant difference ($p > 0.05$) was observed in chewing, patient satisfaction, oral hygiene, and speech between HFP and OD. HFP demonstrated more mechanical complications, including screw loosening and framework or implant fractures. Whereas OD were more prone to attachment fractures, relining requirements, and hygiene challenges.

CONCLUSION

HFP show the best overall results. The best results with minor prosthetic maintenance were the overdenture with bar attachment system. In conclusion, it is important to choose prosthesis system based on patient anatomy, expectations and hygiene capacity.

Despite these well-documented outcomes, limited consensus exists regarding the comparative success of hybrid implant-supported protheses versus implant-supported overdentures in the edentulous mandible, indicating the need for further evaluation.

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