

Assessment of Profile of 45 Cases of Overdenture Patients: A Retrospective Study

Priyanka Priyadarshni^{1*} D. K. Singh² Mukesh Yadav³

¹Tutor, Department of Prosthodontics, Patna Dental College and Hospital, Patna, Bihar, India.

²Professor and Head, Department of Prosthodontics, Patna Dental College and Hospital, Patna, Bihar, India.

³Reader, Department of Prosthodontics, Sarjug Dental College & Hospital, Darbhanga, Bihar, India.

ABSTRACT

Background: Old age was for long considered inevitably accompanied by the loss of teeth. Overdenture treatment has been available for decades, but its use was limited when the treatment relied on retained teeth as overdenture abutments. Hence; the present study was undertaken for assessing the profile of patients with overdenture.

Materials & methods: A total of 50 patients who underwent prosthetic rehabilitation for missing teeth by overdenture were enrolled in the present study. Complete demographic details of all the patients were obtained. A master-chart was prepared for assessing the clinical and follow-up details of the overdenture patients. All the results were recorded in Microsoft excel sheet and were analysed by SPSS software.

Results: Among these 50 patients, 29 were of implant supported overdenture while the remaining 21 were of tooth supported overdenture. Out of 29 cases of implant supported overdenture, failure occurred in 2 patients, while in tooth supported overdenture, failure occurred in one patient. On comparing the success rate between implant supported overdenture and tooth supported overdenture, non-significant results were obtained.

Conclusion: Both tooth supported overdenture and implant supported overdenture have comparable long term success rate.

Keywords: Over denture, Profile.

INTRODUCTION

Old age was for long considered inevitably accompanied by the loss of teeth. The prevalence of edentulism is also strongly associated with ageing although it is now well known that teeth can be kept all the life in many individuals. The rate of edentulousness differs much between countries and it has declined dramatically during the last few decades in most countries.¹ Until the introduction of osseointegrated implant-supported prostheses, complete dentures were the only available treatment for edentulous patients. Mandibular complete overdenture treatment has been available for decades, but its use was limited when the

treatment relied on retained teeth as overdenture abutments.²⁻⁴ This treatment, however, is currently experiencing more popularity than ever before. In fact, dentistry may be experiencing a philosophical shift, in which mandibular implant overdenture treatment may become the new standard of care for the treatment of the edentulous mandible.^{5, 6} The presence of a healthy periodontal ligament maintains alveolar ridge morphology, whereas a diseased periodontal ligament, or its absence, is associated with variable but inevitable time-dependent reduction in residual ridge dimensions.⁷

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*Correspondence Dr. Priyanka Priyadarshni.

Department of Prosthodontics, Patna Dental College and Hospital, Patna, Bihar, India.

Email: Not Disclosed

Hence; the present study was undertaken for assessing the profile of patients with overdenture.

MATERIALS & METHODS

The present study was conducted with the aim of assessing the profile of over-denture patients. Ethical approval was obtained from institutional ethical committee and written consent was obtained from all the patients after explaining in detail the entire research protocol. A total of 50 patients who underwent prosthetic rehabilitation for missing teeth by over-denture were enrolled in the present study. Complete demographic details of all the patents were obtained. A master-chart was prepared for assessing the clinical and follow-p details of the over-denture patients. All the results were recorded in Microsoft excel sheet and were analysed by SPSS software. Chi- square test was used for assessment of level of significance.

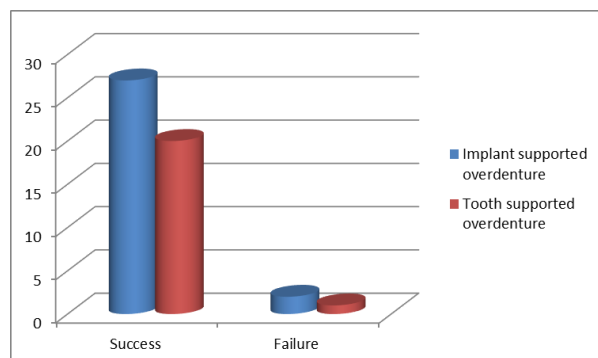
Table 1: Demographic details

Parameter	Value
Mean age (years)	53.5 years
Males	32
Females	18

Table 2: Prognosis of patients according to type of denture

Type of overdenture	Success	Failure	Total	p-value
Implant supported overdenture	27	2	29	0.48
Tooth supported overdenture	20	1	21	

Graph 1: Prognosis of overdenture



RESULTS

A total of 50 patients of over-denture were enrolled in the present study. Mean age of the patients of the present study was 53.5 years. Out of these 50 patients, 32 were males while remaining 18 were females. Among these 50 patients, 29 were of implant supported over-denture while the remaining 21 were of tooth supported over-denture. Out of 29 cases of implant supported overdenture, failure occurred in 2 patients, while in tooth supported overdenture, failure occurred in one patient. On comparing the success rate between implant supported overdenture and tooth supported overdenture, non-significant results were obtained.

DISCUSSION

Overdenture treatment uses a removable complete denture that overlies retained teeth, tooth roots, or dental implants. This treatment is not a new concept and practitioners have successfully employed existing tooth structures or retained roots to assist with complete denture treatment for more than a century. Implant overdentures in maxilla have not been as success as in mandible because the maxillary implant ODs had been made as a rescue treatment while constant prosthesis has failed. The recommended procedure is to apply four or extra implants splinted with a bar machine, it may be a success choice. A mandibular implant overdenture on two implants is a well-established and powerful alternative in long-term perspective. Regarding retention, they are labeled into splinted and unsplinted ones, in which interconnecting bars and retentive clips are used for splinted device and lots of which include ball attachments and magnets are used or unsplinted.

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supported overdenture, non-significant results were obtained. Budtz-Jørgensen E studied effect of denture wearing habits in 35 overdenture wearers (20 day-and-night wearers, 15 day-wearers) during a period of 3 yr with controlled oral hygiene. Prior to prosthetic treatment intensive instruction and motivation in oral hygiene were carried out and the patients were recalled 2-4 times yearly during the study period. Before treatment mean Plaque Index (PII) and Gingival Index (GI) were 1.5 and 1.6, respectively, in both groups of patients. At day 0, 1 yr, 2 yr and 3 yr mean PII and GI were 0.3-0.5 and 0.6-0.8, respectively, in the group of day-wearers and 0.5-1.0 and 1.0-1.2, respectively, in the group of day-and-night wearers. This difference was statistically significant. Furthermore, during the study period 16% of the abutment tooth surfaces showed attachment loss (1-4 mm) in the group of day-and-night wearers against 7% of the tooth surfaces in the group of day-wearers. This difference was statistically significant. During the 3 yr 36 carious lesions developed in the group of day-and-night wearers, but none in the group of day-wearers. The results of their study showed that day-and-night wearing of dentures is a major periodontitis and caries risk factor in complete overdenture wearers with controlled oral hygiene.¹¹

In an in vitro study, Sadig et al. concluded that Locator attachments had greater retention and stability than ball or magnetic attachments. Van Kampen et al. also argued that magnetic attachments had a weaker retention and needed more maintenance than ball or bar attachments. Weinländer et al. in a comparative study among 76 patients wearing a mandibular ISO, some with resilient ovoid bar and some with rigid milled bar over four implants, concluded that milled bars required less maintenance. As well, Krennmair et al., in a 5 year follow-up study among 51 patients wearing same mandibular ISOs, arrived at the same conclusions. According to Bueno-Samper et al., milled bars constitute a predictable treatment alternative due to their retention and stability as a fixed denture and have the advantages of a removable denture.¹²⁻¹⁶

CONCLUSION

From the above results, the authors concluded that both tooth supported overdenture and implant

supported overdenture have comparable long term success rate.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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