

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/jpor

Case Report

Replacement of a mandibular implant-fixed prosthesis with an implant-supported overdenture to improve maintenance and care



Ken-ichi Matsuda DDS, PhD*, Yuko Kurushima DDS, Kaori Enoki DDS, Kazunori Ikebe DDS, PhD, Yoshinobu Maeda DDS, PhD

Osaka University Graduate School of Dentistry, Department of Prosthodontics, Gerodontology and Oral Rehabilitation, Japan

ARTICLE INFO

Article history:

Received 11 April 2013

Received in revised form

8 December 2013

Accepted 23 December 2013

Available online 6 March 2014

Keywords:

BPS

Implant overdenture

Complete denture

ABSTRACT

Patients: A 69-year-old woman presented to the Osaka University Dental Hospital. She had two chief complaints, (a) food accumulation under the lower teeth and (b) poor maxillary denture retention while eating. On clinical examination the patient presented with a maxillary complete denture and fixed mandibular implant prosthesis. For preventing food accumulation under the fixed implant prosthesis and to keep the maxillary denture stable by providing posterior occlusal contact for bilaterally balanced occlusion, the use of a mandibular implant-supported overdenture with self-adjusting magnetic attachments provided a prosthetic solution for this patient. After provided the new dentures, the patient was pleased and was comfortable with the aesthetic, stability and retention of the dentures. There were no discernable clinical or radiographic changes after 1 year of use.

Discussion: To prevent food accumulation beneath the fixed implant prosthesis and maintain the stability of the maxillary denture by providing posterior occlusal contact for bilaterally balanced occlusion, a mandibular implant-retained overdenture with magnetic attachments was used to provide a prosthetic solution for this patient.

Conclusion: In this clinical case, an implant-fixed prosthesis in the edentulous mandibular region was replaced into an implant-supported overdenture with considerations for (a) preventing the food accumulation beneath the lower prosthesis, (b) achieving the proper occlusion in the posterior part for maxillary denture stability and (c) ease of maintenance and care for the prostheses.

© 2014 Japan Prosthodontic Society. Published by Elsevier Ireland. All rights reserved.

1. Introduction

Implant dentistry has developed rapidly in recent years and the use of implant-supported dental prostheses that give a high and predictable success rate in rehabilitating the

edentulous mandible is well reported in the literature [1,2]. Though fixed implant prostheses have great advantages for edentulous patients, removable implant-supported overdentures have gained in popularity, offering an especially attractive treatment option due to their relative simplicity, minimal invasiveness, and affordability [3–8]. Indeed, the

* Corresponding author at: Osaka University Graduate School of Dentistry, 1-8 Yamadaoka Suita, Osaka 565-0871, Japan. Tel.: +81 0798 51 1239; fax: +81 6 6879 2957.

E-mail address: digiflex@dent.osaka-u.ac.jp (K.-i. Matsuda).

1883-1958/\$ – see front matter © 2014 Japan Prosthodontic Society. Published by Elsevier Ireland. All rights reserved.

<http://dx.doi.org/10.1016/j.jpor.2013.12.004>



Fig. 1 – First examination. Images show the mandibular ridge and the implants supporting the fixed prosthesis (A); the edentulous maxillary ridge (B); and a superior view of the mandible with implant-fixed bridge in place (C).

McGill Consensus Statement indicates that, as a minimal treatment objective, a mandibular two-implant overdenture should be considered as a first-choice standard of care for the edentulous patient [9]. Presently, this Consensus Statement may not be universally accepted. However, this is one of the many opinions, favouring the use of implant-supported overdentures. The advantages of these implant overdentures are their low cost and minimal invasiveness during placement. However, they have another less recognized but important strength, namely ‘ease of self-maintenance’. This is particularly important in the rapidly increasing elderly population that often requires extensive nursing care. Many older patients in nursing homes have poor oral health because of difficulty in accessing professional dental care and problems with dexterity that limit their ability to manage their own personal oral hygiene [10]. Prostheses should be easily cleaned, but many very complex fixed prostheses are hard to maintain with such limited dexterity, so treatment planning must take into account the patient’s ability to look after them. Removable prostheses are much easier to clean, precisely because of their removability. We can maximize the oral health and quality of life of such patients by providing a removable alternative to fixed implant prostheses.

This clinical report describes the replacement of an implant-fixed prosthesis with an implant-supported overdenture and the fabrication of a new maxillary complete denture. For the fabrication of both prostheses, the biofunctional prosthetic system (BPS[®]; Ivoclar Vivadent Inc.; Schaan, Liechtenstein) was used.

BPS[®] is a complete system for the fabrication of dentures, designed to provide patients with optimal form, function, and aesthetics [11]. This system comprises comprehensive techniques for impression-making, maxillomandibular

relationship recording, tooth placement, fabrication and processing. Furthermore, the system provides high-quality denture base material and artificial teeth, which demonstrate a high strength and a high resistance to wear.

2. Outline of the case

A 69-year-old woman presented to the Osaka University Dental Hospital with two chief complaints: (a) food accumulation beneath the lower teeth and (b) poor maxillary denture retention while eating. On clinical examination, the patient was found to possess a maxillary complete denture and an implant-fixed prosthesis in the mandible (Fig. 1). There were no significant features in the medical history although, as is common in older individuals, it was suspected that the patient had reduced manual dexterity. The dental history revealed that the patient had lost her teeth 15 years previously due to caries and periodontal disease. The mandibular implant prosthodontic treatment was performed 10 years earlier. Six implants were inserted in the anterior region supporting a cantilevered fixed bridge (Fig. 2). Subsequent resorption of marginal bone and atrophy of the gingival mucosa beneath the bridge resulted in a wide space between the oral mucosa and the superstructure (Fig. 1), which was the primary cause of food accumulation. Furthermore, dental plaque and calculus around the exposed fixture threads were detected. However, there were no signs of peri-implantitis, such as severe mucosal redness or deep peri-implant pockets.

The second chief complaint, of poor retention of the maxillary denture, occurred during mastication. Although the fit of this denture was apparently acceptable at rest, it was found that the lower prosthesis occluded disproportionately

Download English Version:

<https://daneshyari.com/en/article/10167468>

Download Persian Version:

<https://daneshyari.com/article/10167468>

[Daneshyari.com](https://daneshyari.com)