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CASE STUDY

OVERDENTURES

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ABSTRACT

Preserving natural roots for overdenture treatment is basically to improve support, rentention and stability of the prosthesis. This article gives an overview about tooth supported overdenture and implant supported overdenture of overdentures. A brief description has been made of the cases.

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INTRODUCTION

Root supported overdenture

The use of natural roots to support an overdenture is not a new idea. In 1856, Ledger's encouraged the dental profession to leave 'stumps' under artificial teeth. This is a treatment option for patients with low income who can't afford implant supported prosthesis and also should be considered a preferred alternative to complete dentures, especially in patients with insufficient alveolar bone support. Prosthodontics, endodontics and periodontics make possible to preserve roots of affected teeth by caries and periodontal disease. The concept of root retained overdentures with castable overdenture attachments is based on the reduction of the coronal surface of the tooth to the gingival level and the incorporation of radicular stud overdenture attachments to improve retention of the prosthesis. An important aspect is the need of recall regimes and proper patient instruction in oral health to avoid abutment failure.

Case Report

My patient 67 year old male reported to the department of prosthodontics with a chief complaint of missing teeth in the upper and lower arch.

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On examination it was seen that in the maxillary arch teeth present were 12, 15 and 25 and the mandibular arch teeth present were 31-37, 35, 36 were root pieces and 41-45. Interocclusal distance was measured to make sure there is enough space for the denture base and teeth. Root canal treatment was advised for the maxillary teeth. A short coping type of overdenture was planned for the patient. After root canal treatment the teeth were prepared and made short in height leaving on 2-3 mm of the height. Impression of the upper and lower arch was made in medium body polyvinyl siloxane. Short copings were fabricated and cemented using glass ionomer cement. The lower arch a cast partial denture was planned. After the lower cpd framework was fabricated a interocclusal jaw relation was recorded for the teeth setting and trial. After the trial the denture was fabricated.

Implant supported overdenture

Introduction

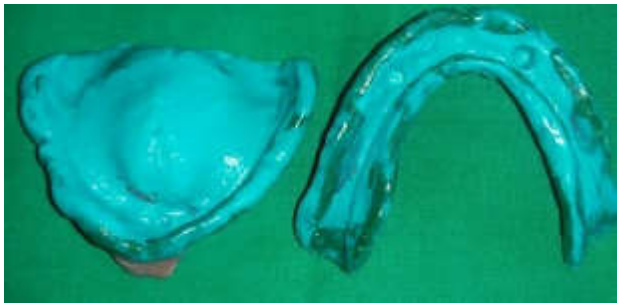
The use of implants to retain and support mandibular full overdentures has helped to fulfill the functional requirements of patients with this challenging treatment indication. A mandibular implant overdenture on two implants is thus a well-established and effective option, also in a long term perspective. It has even been suggested that it should become the first choice of treatment for the edentulous mandible.

Studies reported that overdentures have been shown to enhance the quality of life of edentulous patients and contribute significantly to the patients psychological well-being. Other improvements include: a better chewing ability, an increased satisfaction with the implant-retained overdenture rather than conventional complete dentures. The overdenture requires limited clinical time and financial expensesof the denture, it has been suggested that the presence of implants to support an overdenture will preserve the remaining residual bony ridge.

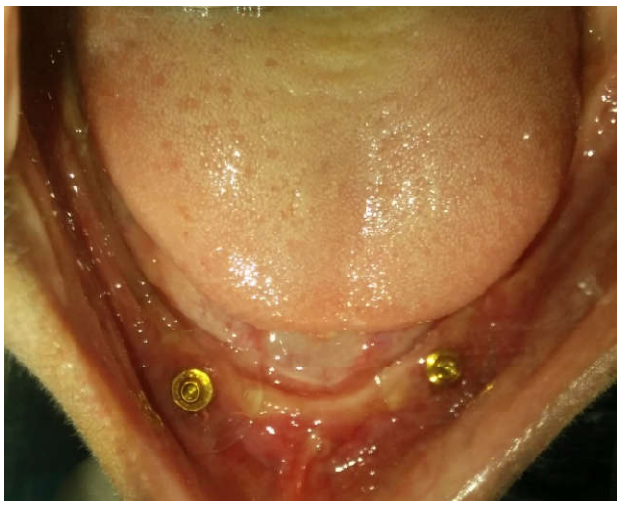
Maxillary arch

Short copings

Post operative



The attachment planned for the patient was a locator attachment



Attachment placed with a white block out spacer ring pressed down to the tissue

Place the male component the least retentive to start with

Final Denture

Case Report

My patient 31 year old female patient came to the department of prosthodontics with a chief complaint of missing teeth in the upper and lower arch. On examination it was found that the upper and lower archwere completely edentulous. Conventional dentures were fabricated for the patient and advised for a lower implant supported overdenture as the mandibular denture was not very stable.

- 2 alpha bio implants were place
- 2 in the canine regions.
- A new denture was fabricated.

DISCUSSION

1.Indications of root supported overdentures:

- When the patient presents with 4 or less retainable teeth
- Stability and retention of conventional dentures will be a problem
- As a practical measure in preventive dentistry
- Loss of teeth in one arch while the other is dentulous or partially dentulous
- Patients with unfavourable tongue positions and muscle attachments

2.Advantages of root supported overdentures:

- Improved support, retention and stability of the prosthesis
- Proprioception is maintained
- Alveolar bone in the area of retained roots may be preserved from resorption
- Alternative treatment option in patients with insufficient alveolar bone support
- Increase chewing efficiency

3.Implant treatment decisions must be made for each patient according to individual circumstances. Age itself is not an exclusion criterion, however age related factors frequently influence treatment planning in elderly patients.

4.There should be a reduction in the number of prescribed implants: two in the mandible and four in the maxilla. Although mandibular treatment has been extraordinarily successful, the moderate to severly resorbed maxilla is a much bigger treatment challenge.

5.Both patient and tissue stresses should be minimized with a short surgical intervention.

6.Traditional and impeccable complete denture fabrication techniques must be combined with the required surgical protocol to optimize the technique's potential.

Conclusion

The incorporation of attachments to root supported overdenture provides support, stability and mechanical retentive properties by improving crown-root ratio and attenuating ridge resorption. At least 5mm of bone is necessary to support the root of an abutment tooth that will be used for overdenture. Overdentures supported by osseointegrated implants overcome many of the complications observed with overdentures supported by natural teeth. Dental implants are free of biologic consequences associated with natural teeth, such as dental caries and periodontal disease. Bone undercuts adjacent to implants do not mimic those found adjacent to natural tooth roots. Implants are used to provide predictable retention, support, and stability for overdenture prostheses. When lip or facial support is required, the overdenture is the treatment of choice. Likewise the overdenture may improve phonetic deficiencies associated with alveolar bone loss and acknowledgements.

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