PALLIATIVE CARE WITH HYBRID IMPLANT SUPPORTEDOVERDENTURE – A CASE REPORT

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Abstract

The complete denture has been standard of care in treating edentulous patients. Limitations exist with the function and esthetics of complete denture. The stability and retention are significantly affecting the quality of life in conventional complete denture patients. The quality of life can be significantly improved with implant supported prosthesis. Tooth and implant supported overdentures have been practiced over the years. The comfort and documentation of success is still pending in Indian clinical scenario. The implant supported overdenture offers many advantages in functions alike improved retention, stability, decreased prosthesis movement and significant improvement in mastication. This case report will brief on the success of the implant supported overdenture.

Keywords: Overdenture, Implant supported mandibular overdenture, Conventional denture

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1. Case report

A 52year oldedentulous female patient reported to the department for replacement of missing teeth. On intraoral examination patient was edentulous and had a history of complete denture fabrication. The patient was unhappy on the retention and function of complete denture fabricated.The evaluation of denture on retention, stability and support was satisfactory. The patient was educated on the limitations of conventional prosthesis[1-5]. Due to noncontributory medical history patient was provided with an option of implant supported prosthesis. The radiographic examinationrevealed compromised bone support in posterior mandible for implant supported prosthesis. Patient was suggested with the option of implant supported over denture prosthesis. The RP5 option was chosen due to decreased posterior bone support. Patient was educated on the treatment procedure.

2. Procedure:

1. Four implants (Adin) of dimensions 3.3 x 10mm was planned. The osteotomy site was prepared for four adin implants of dimensions 3.3 x 10mm. The implants were placed in both canine and central incisor region (Fig.2). The cover screws were placed and surgical sites were primarily closed. Delayed implant loading protocol was followed.
2. Three months post surgically the radiographs were evaluated. On successful integration the gingival formers were place. A week after that, impressions were made for fabricating the prosthesis.
3. Open tray impression technique was followed. Single step putty wash reline impression (Aquasil, DENTSPLY De Trey, GmbH) was made (Fig.3). Master cast was obtained from the impression with type IV gypsum product.
4. Conventional denture was fabricated for maxilla and the regular prosthesis procedures of maxillomandibular relationship, wax try- in were done (Fig.6).
5. A verification jig was done and the implant positions were evaluated.
6. Dentures were process and cured in conventional method.
7. Denture try in done, occlusal adjustments, regular finishing and polishing procedures were followed and denture was inserted connecting with the implants.(Fig .7)
8. Periodic review was done. (Fig.9).

3. Discussion

The different treatment modalities of complete denture, implant supported fixed prosthesis and implant supported removal denture were discussed with the patients[2,6-8]. The choice among the option was the implant supported denture (RP5) due to the clinical situation and patient needs. The functional comfort, better chewing efficiency, psychological reassurances are significant with the prosthesis. In clinical situations the patients are mostly uncomfortable with the retention and stability of mandibular denture than maxillary denture [9 -12]. The movement of tongues dislodgesthe mandibular denture. The support derived from implant reduced this limitation.The conventional maxillary denture was fabricated. The retention is comparatively easier in maxillary denture and discomfort is lesser. The combination of implant and conventional denture improved the function and it was cost effective prosthesis. The patient had to wait for 3 months for the implant supported prosthesis, slightly expensive than the conventional dentures[13]. The advantages of hybrid dentures overcome the limitations[14].The rigid bar type connector and the osseointegration of dental implants has helped in relieving the stress concentration over the distal part of the mandibular implant supported overdenture[15,16].The implant supported denture has superior advantages over conventional prosthesis. The support of denture, stability, retention of denture is enhanced compared to conventional prosthesis [17,18]. The patient was periodically followed in 6 months interval and the prosthesis is successful for over 2 years with satisfactory function.

4. Conclusion

The case report explained on the procedures and illustrated on the success of implant supported removable prosthesis over the conventional lower denture and implant supported fixed prosthesis The limitations of the CD were reduced and advantages of retention ,support and patient acceptance was increased in the patient.

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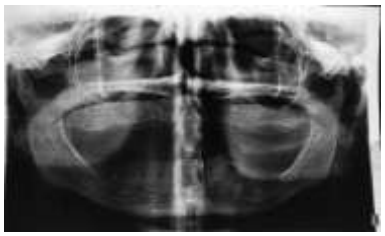
Picture Legend :

Fig 1: Preoperative radiograph
Fig 2: Implant placement with radiograph
Fig 3 : Final impression
Fig 4 : Implant supported mandibular overdenture
Fig 5 : Fabricated prosthesis on cast
Fig 6 : Prosthesis Try in
Fig 7 : Final prosthesis
Fig 8: Post operative in occlusion
Fig 9: Post operative radiograph



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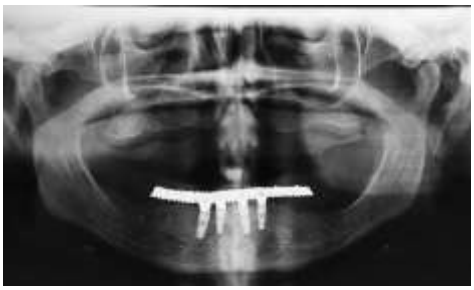

Fig 9: Post operative radiograph