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Management Of Siebert's Class III Defect Using Fp3 Implant Prosthesis – A Case Report

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ABSTRACT: Replacement of missing teeth to restore function and esthetic is important. Esthetic rehabilitation of missing anterior teeth pose a challenge in fabrication of a prosthesis. Tooth loss can occur due to reasons like trauma, caries, periodontal problems, etc. Over a period of time, tooth loss results in loss of alveolar bone and loss of soft tissue. Restoring the combined defects of alveolar bone and soft tissue can be achieved by fixed prosthesis. FP3 prosthesis is considered as best treatment option for replacing the combined loss of tooth, bone and soft tissue structures as in siebert's class III defect.

KEYWORDS : Esthetic rehabilitation, Siebert's class III, FP3 prosthesis.

I. INTRODUCTION

Tooth loss is irreversible, and a final marker of the sequelae of preventable oral diseases[5][8]. Loss of tooth and its associated structures does not allownormal and proper functioning of the oral cavity. In order to carry out the normal function, the replacement of the tooth and its associated structures has to be made. When the tooth loss is present in the anterior region in addition to the function,aesthetics also play a major role in the prosthesis. The tooth loss may be due to trauma, extraction due to poor prognosis etc.[7] Siebert's classified the residual ridge deformities into three class .[1][4]This classification takes into account both Hard and soft tissues[2][3]

CLASS 1 – BUCCOLINGUAL LOSS OF TISSUE
CLASS 2 – APICO CORONAL LOSS OF TISSUE
CLASS3 – COMBINATION OF BOTH BUCCOLINGUAL AND APICOCORONAL TISSUE LOSS

These defects can be corrected by surgical management followed by prosthetic management. The surgical management is a complex procedure when compared to prosthetic management. So in this case prosthetic management of the lost tooth and soft tissue is carried out for the best outcome.

II. CASEREPORT

A 35 year old female patient came with the chief complaint of missing lower tooth in the front tooth region. The patient gave a history of trauma before 6 month which resulted in the dentoalveolar fracture of the lower front tooth region following which debridement and placement of implant in relation to 31 and 42. On extra oral examination patient had ovoid face with convex profile. Intra Oral examination reveals missing tooth in relation to 31, 32, 41, 42. Radiographic findings showed presence of osseointegrated implants in relation to 31 and 42.

III. TREATMENTOPTIONS

Based on the clinical findings of the patient the defect can be prosthetically manged by fabrication of FP2 or FP3 prosthesis (screw or cement retained)

The treatment procedure was explained to the patient. The advantages and disadvantages

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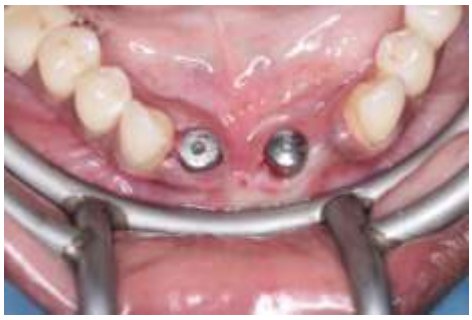
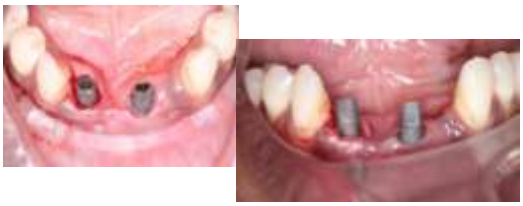
were presented to the patient in order to satisfy the need of the patient. Final consent was obtained from the patient before commencing of the procedure.

IV. TREATMENTPROCEDURE

The examination of the edentulous area was done. The radiographic examination also showed optimum bone level with osseointegrated implants which could act as an anchorage to hold the fixed prosthesis. A second stage surgery was performed to uncover the implant in relation to 31 and 42, following which a gingival former was placed over the implants and was allowed to heal for 3 weeks. An open tray transfer impression was made and Jig trial was performed to confirm the position of implant in relation to other natural teeth.



(Fig 1 : Gingival former placed over implants)

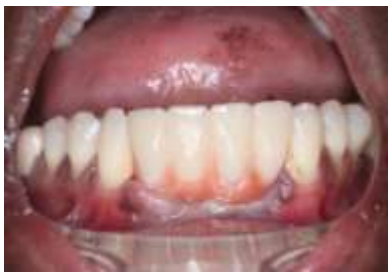


(Fig 2 : Stock abutments placed after 3 weeks)

Stock abutments were used on to which the crowns were designed and joined zirconia crowns with access holes were milled in the laboratory. Clinically the stock abutment were placed and fit of the crown were confirmed. The crowns have been cemented over the abutments, the prosthesis was carefully removed, and any residual cement was cleaned, after which the finished prosthesis is screwed with a force of 20N. Teflon was used to seal access holes, and then flowable composite restoration was placed on top. In addition to the placement of the missing tooth the FP3 prosthesis also replaces the soft tissue which was lost.

(Fig 3 : Open tray transfer)

(Fig 4 : Fabricated prosthesis)



(Fig 5 : Post operative cemented prosthesis)

V. DISCUSSION

Successful anterior fixed partial denture (FPD) must provide the patient with excellent long-term function and an attractive smile, which often is the primary motivating factor for patients to seek dental care. The interface between the soft and hard tissues and fixed partial denture is critical to achieving the desired esthetic results. In relation to this particular case the fixed prosthesis 3 is considered to be the best option. The advantages of fixed prosthesis is

- Passivity
- Reliability
- Good esthetics
- Longevity
- Psychological (fells like natural tooth)
- Less food entrapment
- Less maintenance

Carl E Misch prosthodontic classification [6]
FP1- Fixed prosthesis replaces only the crown looks like natural teeth
FP2- Fixed prosthesis replaces crown and a portion of root crown Contour appears normal in occlusal

half but is elongated or hyper contoured in gingival half

FP3- Fixed prosthesis replaces crown and gingival Color and portion of edentulous site prosthesis most often uses denture teeth and acrylic gingiva but may be porcelain to metal

The FP-3 fixed restoration appears to replace the natural teeth crowns and has pink-colored restorative materials to replace a portion of the soft tissue. Hygiene is more difficult to control, Although access next to each implant abutment is provided. There are basically two approaches for an FP-3prosthesis:[6]

(1) a hybrid restoration of denture teeth and acrylic and metal substructure

(2) a porcelain-metal restoration

VI. CONCLUSION

FP3 prosthesis replaces not only the teeth but also the hard tissue component that is missing due to either an extended period of bone loss. Predictable and long lasting results can be provided with the FP3 prosthesis. This prosthesis design helps make the procedure of esthetic rehabilitation precise and evident based. The patient in this case is treated with FP3 prosthesis and regular follow up is carried. The patient is comfortable with the prosthesis with out any problem in regard to the prosthesis. Also the esthetics of the patient is also well improved and patient fells more confident. This case report concludes in which the use of FP3 prosthesis insiebert's class III condition will provide good function and esthetics as well.

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