

Aesthetic And Functional Rehabilitation Of A Severely Mutilated Dentition

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ABSTRACT

Increased life expectancies have led to an increased demand for prosthetic rehabilitation of the elderly citizens who also are active socially. The subjects demand rehabilitation not only for function but also for aesthetics. The present case report describes treatment modality to restore a severely compromised dentition with the complete occlusal rehabilitation, in a fifty five year old male patient with missing posterior teeth and fractured anterior fixed partial denture prosthesis. The patient's aesthetic and functional expectations were fulfilled by adapting Pankey Mann Schuyler Philosophy.

KEY WORDS: Full mouth rehabilitation, aesthetics, severely compromised dentition, Broadricks Occlusal Plane Analyzer, Occlusal Plane,

INTRODUCTION

Tooth surface loss may occur either as a physiological process due to ageing or due to pathological processes such as caries or non carious lesions. Occlusal disease is the loss of the anatomical parts of occluding tooth surfaces, which ultimately result in functional impairment. Physiological wear results in progressive but very slow, excessive wear refers to any level of occlusal wear that can be expected to require corrective intervention in order to preserve the dentition. The physiological wear of teeth is probably an age-related phenomenon. As the teeth continue to function and be challenged by erosive, attritive and abrasive factors, there will be change to the surfaces of teeth.

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Patients with severely worn dentition and loss of multiple posterior teeth may result in reduced vertical dimension and occlusal instability. Raising the vertical dimension is then required to correct the occlusal relationship to restore function as well as aesthetics.

Reconstruction of a worn dentition is essential. In any restorative treatment plan, the first decision to be made is whether or not the restorations are designed to harmonize with the existing occlusion or make a change towards an ideal occlusion. The treatment can be either active or passive. The passive approach involves monitoring the degree of wear and plans various preventive strategies. Monitoring involves taking a series of repetitive examinations and certain measurements over a period of time in order to assess if a condition is progressive. Standardized intra-oral photographs, study models and measuring lesion dimensions are all potential approaches.

Performing a successful occlusal rehabilitation is an arduous task that entails meticulous treatment planning resulting in preservation of remaining natural teeth and healthy maintenance of supporting structures.

The present case report explains a simplified multidisciplinary approach to a functional and aesthetics restoration of a severely compromised dentition by adapting Pankey Mann Schuyler (PMS) philosophy, with minor modifications.

CASE REPORT

A 55 year old male patient who was moderately built reported to the department of prosthodontics. His chief complaint was difficulty in chewing food because of loss of posterior teeth and poor aesthetics due to loss of old fixed partial denture in relation to maxillary anterior region. Patient's personal and medical history was non contributory.

On intra oral examination, the maxillary arch showed, fractured fixed partial denture in relation to 11, 12, 13, 21, 22 and 23. Remaining teeth present were 11, 13, 14, 22, 23, 24, 25 and 27. 11, 13, 22 and 23 were subjected for root canal treatment (RCT) later followed by new fixed partial denture. Old crowns present on 14 and 25 were removed and also subjected for RCT along with 24, followed by crowns which were used as abutments for cast partial denture (CPD).

In mandibular arch 35 and 36 were missing and temporary filling in relation to 36 was seen, later subjected to RCT. All anterior teeth (31, 32, 33, 41, 42 and 43) were attrited and referred for intentional RCT in order to receive crowns.

Over all on intra oral examination there was decrease in vertical dimension due to loss of many posterior teeth and attrition of lower anterior teeth (Figure I). A diagnostic OPG (Figure II) was made and evaluated.

Diagnostic casts were mounted on a semi-adjustable articulator and wax mock up was done for the purpose of treatment planning. It was decided thereafter to adapt and modify PMS philosophy

to rehabilitate the dentition and increase the vertical dimension by 2mm (Figure III).Broadrick's occlusal plane analysis was then done to establish the occlusal plane (Figure IV).

In the next appointment, the lower anteriors were prepared and temporisation was done. Simultaneously, the root canal treated upper anterior teeth were subjected to post and core treatment in order to minimise the total number of visits. In the subsequent visit permanent cementation of the lower anterior restorations and tooth preparation and temporisation of the upper anterior teeth were accomplished (Figure V). An interim removable partial denture was also provided to the patient in order to increase the vertical dimension.

After the evaluation of the patient's adaptation and tolerance to the increased VD, cementation of the upper anterior restorations was done and the incisal guidance was established. The lower posterior teeth were then prepared and restored according to Broadrick's occlusal plane analysis (Figure V).

In the next visit preparation of the upper premolar teeth, which were to be used as abutments for the upper CPD, was done. The crowns with the rest seats were then temporarily cemented onto the abutments in order to make a pick up impression. The master cast thus obtained was surveyed and metal milling was done (Figure VII). A conventional upper cast partial denture was then fabricated and inserted (Figure VIII).

CONCLUSION

Managing full mouth rehabilitation cases are most challenging in dental practice. Several decisions have to be made concerning the occlusion. The clinician must take in to consideration not only the aesthetic and functional aspects but also ensure that the physiological restoration is in harmony with the stomatognathic system. We must also remember that not all patients can be successfully treated with a single preconceived treatment philosophy. Thus this report presents an adaptation of PMS in order to successfully rehabilitate the above severely mutilated dentition case (Figure IX).



Figure I Pre-operative view of maxillary and mandibular arch intra orally

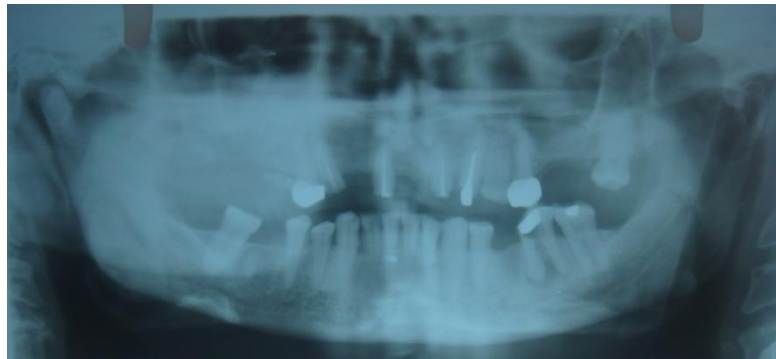


Figure II Pre-operative OPG

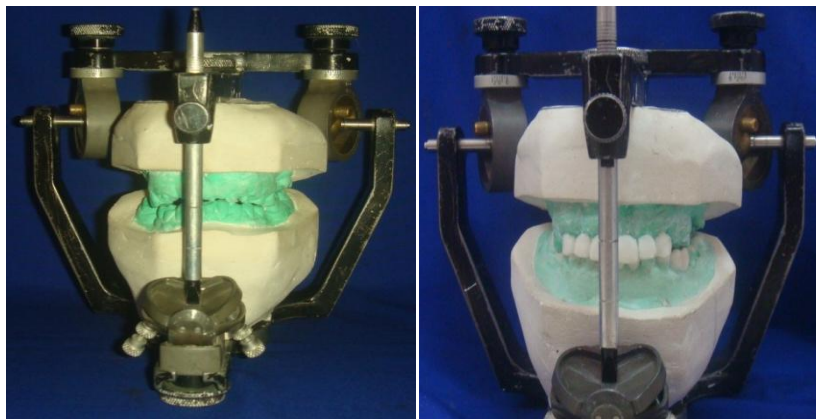


Figure III Diagnostic mounting and mock up done on the same according to broadricks occlusal plane analysis



Figure IV Mandibular arch mock up done according to Brodricks occlusal plane analysis



Figure V . Permanent cementation of the lower anterior restorations and tooth preparation and temporisation of the upper anterior teeth



Figure VI Analysing Brodricks Occlusal plane before cementation of lower posterior restoration



Figure VII Metal milling on abutment teeth for maxillary arch CPD posteriorly cation



Figure VIII Post-operative view of maxillary and mandibular arch intraorally



FigureIX Pre-operative and post-operative view after final

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