Esthetic Correction: A Case Report

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ABSTRACT

Introduction: "Quacks" is term for faulty prosthesis and its always a challenging task for a prosthodontist to rehabilitate it. The provision of fixed prosthodontic restorations that meets the patient's functional and aesthetic demands can be challenging, especially in the anterior maxilla. The selection of an appropriate treatment requires a careful evaluation and a sequential planning.".

Case Report: It deals with the esthetic management of a case with maxillary and mandibular anteriors with faulty bulky prosthesis, which led to inflammation and poor esthetics leading to "QUACK PROSTHESIS".

Conclusion: Any esthetic correction requires proper skills and knowledge. There are certain elements that are to taken into consideration while such management to achieve the lost essence of beauty.

Keywords: Elements of Smile, Maxillary and Mandibular Anteriors.

INTRODUCTION

Teeth are important not only from functional point, but also because they contribute substantially towards psychological well-being of the person. And, further, the tooth loss in the aesthic zone in younger patients is a catastrophic event, which is mainly attributed to the genetic, caries, and traumatic injuries.[1,2] Tooth loss due to any of the above reasons not only impairs function but also affects the social welfare of the patients. Replacement of this by an faulty prosthesis, lesds to compromised esthetics, inflammation and hyperplasia in the tissues and mechanical failures of the prosthesis.[3]

Absence of anterior teeth not only handipcaps the esthetics but also affects the phonetics, incising of food and most importantly affect the anterior guidance which is a necessity for the protection of posterior teeth. It is a major challenge for a prosthodontist to restores the balance between function and esthetics. And provide a treatment planning according to the knowledge of prosthetic limitations and esthetic outcomes.

This case report describes the management of a case of faulty bulky fixed prosthesis given to the patient in the upper and lower anterior region which lead to inflammation of the underlying tissues and failure of the prosthesis.

Longevity in fixed prosthodontics is not only dependent upon the precision and skill with which the work is carried out, but also to a large degree upon a proper assessment and diagnosis and the utilization and implementation of valid principles of design

CASE REPORT

18 year old male patient had reported to the Department of Prosthodontic, Sharad Pawar Dental College, DMIMS, Sawangi; with a chief complaint of poor appearance due to bulky prosthesis in upper and lower front region of jaw. Paitent provided history was of trauma 1 year back due o which he had lost his teeth in the upper and lower front region, he visited a private clinic and had undergone treatment for the same.

On Examination, lips were incompetent with intraoral finding of fixed dental prosthesis with 11, 12, 21, 22 and 31, 32, 33, 41, 42; poor oral hygiene and class II malocclusion.

Thus it was decided to remove the fixed prosthesis for complete examination. After removal of the prosthesis, the mucosa beneath was found to be red and inflamed and root piece with 32 was present. Moreover, inadequate tooth preparations with abutment teeth 11, 22 in upper arch (figure 1, 2).

Thus, the treatment plan decided,

- Removal of fixed dental prosthesis with upper and lower arch.
- Extraction of root piece 32
- Intentional RCT with 12, 13, 22, 23 and 33, 42, 43
- Fixed dental prosthesis with
  - FPD with 11, 12, 13, 21, 22 and 23.
  - FPD with 31, 32, 33, 41, 42 and 43.

Clinical Procedure

1. Removal of fixed prosthesis, followed by extraction with root piece 32.
2. Diagnostic impression made with irreversible hydrocolloid impression material (Align gum; Prime Chrome Alginate Impression Material) and cast poured in type II Dental stone (after healing of the extraction socket and inflamed mucosa).
3. Mounted on semi-adjustable articulator using facebow transfer (figure 3).
4. Mock-up and diagnostic waxup was done on the mounted casts to decide the treatment outcome (figure 4).
5. After this it was decided to go for intentional root canal treatment with 12, 13, 22, 23 in upper arch and 33, 42, 43 in lower arch (increased overjet).
6. Then tooth preparation with 11, 12, 13, 21, 22, 23 in upper arch and 31, 32, 33, 41, 42, 43 in lower arch and final impression was mad with double stage double technique and temporization (figure 5).
7. Metal try-in (figure 6).
8. Final prosthesis (figure 7).

DISCUSSION

Esthetic is defined as "Appreciative of responsive to, what is pleasurable to the senses of beauty and culture" (4)

Dental esthetics has become increasingly important in the practice of modern dentistry and is synonymous with a natural, harmonious appearance.[1,3] It influences to a large extent the social acceptance and well being of the individual. It is very important that when planning treatment for esthetic cases, smile design cannot be isolated from a comprehensive approach to

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Figure-1: Pre-operative photographs occlusal and frontal view

Figure-2: After removal of prosthesis root piece with 32, inadequate tooth preparation with the abutment teeth

Figure-3 and 4: Facebow transfer and mock-up

Figure-5: Tooth preparations with 12, 13, 21, 23 in upper arch and 33, 42, 43. Final impression made.

Figure-6: Metal try-in

patient care.Thus, loss of anterior teeth can be due to various reasons, but rehabliatating it is what is more challenging.

Pierre Fauchard (1678–1761) of France, together with several colleagues modernized and promoted dentistry and also advocated esthetic practices. It was not until the 18th century that dentistry was recognized as a separate discipline and its various branches were established where it was said that the lost function is also to be restored with the esthetics.[3,5]

Figure-7: Final fixed prosthesis

Likewise, function of anterior teeth are:

- Incising food, incisal edges of upper incisors help in incising food
- Aid in phonetics, it acts an articulation for speech propogation.
- Aids in esthetics, provides lip support and protects the posterior teeth and the provision of fixed dental prosthesis, meets the patient's functional and aesthetic demands.

The main determinents of esthetic correction which are to be considered while rehabilitating anteriors are[6]:

- Esthetics
- Phonetics
- Positional relationships of the maxillary and mandibular anterior teeth.
- Poportion (golden proportion).

Esthetics include the degree of tooth display, i.e, Degree of tooth display: When the mouth is relaxed and slightly open, 3.5 mm of the incisal third of the maxillary central incisor should be visible in young individual. And as age increases there is decline in the muscle tonus thus the degree of tooth diplay decreases.

Phonetics: Phonetics is a major determinant of the anterior tooth length and position, determined by the bilabial sounds (M sounds) after their pronunciation, the lips return to their normal rest position, allowing evaluation of the amount of the tooth display in rest position; dentolabial sounds (V and F sounds) help in determing the labiolingual positiong of the axillary anteriors; S sound, during pronunciation, the mandibular central incisors are positioned 1 mm behind and 1 mm below the maxillary incisal edge.

Proportion: Certain mathematical representation of beauty for numerically expressing the relationship of the various units that combine to make a composition, the term proportion is used.

Multiple factors like overbite, overjet, existing condition, lip support, phonetics, etc. All these factors should be carefully taken into consideration and modified to give
the most harmonious restoration with remaining structures.[5,6]

CONCLUSION

Case report is presented to describe the functional and esthetic rehabilitation of patient with faulty prosthesis using convential prosthetic approach. Treatment objectives were achieved by accurate diagnosis, meticulous treatment planning together with a dedicated team approach involving different disciplines in dentistry.

REFERENCES

1. Vipul Asopa. Management of Adverse Tissue Response to Faulty Pontic Design- A Case Report. International Journal of Prosthetic Dentistry. 2013:4:26-30.
2. M. Bhuneshwar. Principles of smile desgning. j.conservDent 2010
3. Lombardi RE. The principles of visual perception and their clinical application to denture Esthetics. Jprosthet Dent. 1973;29:358-82.
4. Webster international dictionary.

5. Evaluation, diagnosis and treatment of occlusal problems. Dawson. Published by Mosby, 1988. ISBN 10: 0801627885
6. Rupali Kamath et al. Smile Design: A Literature Review. Journal of Medical and Dental Science Research. 2016;3:12-16.
7. Stephen Broderson. Anterior guidance – The key to successful occlusal treatment. J Prosthet Dent. 1978;39:396-400.
8. Vipul Asopa et al. Management of adverse tisse response to faulty pontic design. International Journal of Prosthetic Dentistry. 2013:4:26-30.

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