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## Improving esthetics to improve behavior through enhancing phonetics

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# Improving esthetics to improve behavior through enhancing phonetics

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## Abstract

Denture characterization according to individual clinical findings has seen an upsurge in the recent decade with advances in techniques and dental materials. Increased aesthetic demands of the geriatric patients have in turn contributed to fuller understanding of psychosocial factors associated with denture aesthetics. Impaired denture esthetics have a direct bearing on patient's ability to speak and smile which in turn affect his social demeanor. This clinical report describes an unusual case of a patient wearing denture prosthesis that was not able to satisfy his esthetic needs. Prosthetic rehabilitation was based on understanding of social history along with necessary changes in his new prosthesis. Denture fabrication that emphasized denture characterization in the form of staining and stippling proved to be good to the patient whose social behavior was altered with early prosthesis.

## Introduction

Restoring facial esthetics in completely edentulous subject's present challenges that extend beyond simple rehabilitation and return of oral functions. The state of edentulism is complex because it not only involves the individual physically but also psychologically. One of the significant impacts of complete edentulism which has been less explored is its impact on phonetics. The relation between the two is hypothetical besides being psychological. No one can argue the fact that the anterior teeth play an important role in facial esthetics as well as phonetics. More important is the fact that the relation between the two is functionally dynamic in nature. A discrepancy of anterior teeth in any form impairs the person's ability to express. Functions like speaking and laughing are two varieties of human expression that can alter if anterior teeth are not symmetrical. The layer of embarrassment in these individuals may range from modest to serious.

In removable Prosthodontics concepts like Dentogenics<sup>1-6</sup> involves the art, practice and technique of creating illusion of natural teeth in artificial dentures,

based primarily on factors as suggested by patients' sex, personality and age.<sup>7</sup> Denture characterizations like tinting, staining, stippling, root contouring and gingival characterization are some of the examples that not only enhance esthetics of an artificial prosthesis but also help patient to demonstrate confidence in smiling and talking.<sup>8,9,10</sup> This article in the form of a clinical case report describes a patient whose confidence in expression was enhanced after characterization of the removable partial denture.

## Case Report(s)

An elderly male patient working in a religious place reported to the department of Prosthodontics with a primary complaint of dissatisfaction with the existing prosthesis with regard to its esthetics (Fig.1). Medical history was noncontributory and dental history disclosed loss of natural teeth due to mobility and decay. The patient was wearing a mandibular single complete denture opposing natural teeth and a removable partial denture. Social history revealed that the patient was working as a religious head in a temple and had a significant social interaction daily where he would meet his followers and others who visited the temple. Existing problems with the prosthesis included artificiality of the prosthesis revealed, tooth color and shade not matching and indirect effect on patients ability to communicate with people that included covering the mouth with a cloth while talking or laughing, shying away from people while conversing or inability to keep prolonged eye to eye contact with others. Less frequency of speech with decrease in tone and hoarseness were other areas in phonetics that were affected. Habits included high frequency of pan chewing and beverage consumption. Intra oral examination revealed presence of maxillary central incisors, left lateral incisor and left second premolar with denuded and stained roots (**Fig.2**). Examination of the existing prosthesis revealed well fabricated dentures with less or no emphasis on denture characterization. Treatment plan included characterization of existing dentures with colored acrylic, and fabrication of new prosthesis with emphasis on characterization. Important data collected during examination included extent, location, type and color (shade) of existing stains present on the

remaining natural teeth. Protocol for regular fabrication of the complete denture prosthesis was followed till the stage of denture processing. At this stage denture characterization was done by adding various stains on the denture base as well as the cervical portion of artificial teeth. Root contouring and stippling was also enhanced at this stage following which the prosthesis was processed and delivered to the patient (**Fig. 3 and 4**). The patient was given instructions regarding maintenance of the prosthesis and was put on follow up, during which the patient was monitored for the complaints that were associated with the older prosthesis. The patient's response with the characterized denture was prompt and successful and enabled him to smile and speak confidently (**Fig. 5**)

## Discussion

Aesthetic requirements of a patient for any dental prosthesis are essential factors that enhance patient satisfaction. Less determined areas of research interest in aesthetics are the psychological implications of non-aesthetic dental prosthesis. Human behavior is as complex as the brain itself, the difference being that there is no change in the form of the brain whereas the behavior is ever-changing. In the present context, the patient demonstrated an ample change in behavior with the previous prosthesis because it was not able to fulfill his aesthetic needs. The option between using and not using such prosthesis depends largely on individual's priority, especially those who are socially very active. The impact of non-aesthetic prosthesis on the patient's speech was largely evident by changes in behavior. A prosthesis that is aesthetically incorrect cannot impart confidence in a patient, thereby altering his method of expression. Human expression on the other hand is totally dependent on phonetics. A tooth or natural teeth that impart a non-aesthetic self-image in a person impairs his self-confidence which in turn affects his social behavior.

Denture aesthetics are dynamic in nature and should be always customized according to individual patient. Tinting of roots and denture base along with proper carving of roots, stippling and gingival carving add a marked naturalness to artificial dentures by enhancing the blend between the tooth and gingiva and dispersing the colors more harmoniously.<sup>12-16</sup> Inability of the observer to detect presence of artificial prosthesis in an individual besides being a technical skill should also be a biologically and psychologically well understood phenomenon by a prosthodontist. This requires a detailed social history as taken in the

present case.

## Conclusion

Denture aesthetics of impaired form bring changes in social behavior which every prosthodontist should be able to identify. Denture characterization according to individual's clinical findings proved to be highly beneficial in this case and is a subject for further research.

## References

1. Frush JP, Fisher RD; Dentogenics: Its Practical Application. *J Prosthet Dent.* 1959; 9: 914- 921.
2. Frush JP, Fisher RD; Introduction to Dentogenic Restorations. *J Prosthet Dent.* 1955; 5: 686-695.
3. Frush JP, Fisher RD; How Dentogenics Interprets the Personality Factor. *J Prosthet Dent.* 1956; 6: 441-449.
4. Frush JP, Fisher RD; The Age Factor in Dentogenics. *J Prosthet Dent.* 1957; 7: 5-13.
5. Frush JP, Fisher RD; The Dynesthetic Interpretation of the Dentogenic Concept. *J Prosthet Dent.* 1958; 8: 558-581.
6. Frush JP, Fisher RD; How dentogenic restorations interpret the sex factor. *J Prosthet Dent.* 1956; 6:160-172.
7. Martone AL; Effects of complete dentures on facial esthetics. *J Prosthet Dent.* 1964; 14: 31-255.
8. Winkler S; Colouring acrylic denture base resins. *J. Prosthet Dent.* 1961; 40: 4-7.
9. Hardy IR; Problem solving in denture esthetics. *Dent Clin North Am.* 1960; 7: 305- 320.
10. Williams JL; A New Classification of Human Tooth Forms with Special Reference to a New System of Artificial Teeth. *Cosmos,* 1914; 56: 627-628.
11. Pound, Earl; Esthetic Dentures and Their Phonetic Values, *J. Prosthet. Dent.* 1951; 1: 98-111
12. Kemnitzer DF; Esthetics and the Denture Base. *J Prosthet Dent.* 1961; 6: 603-615.
13. Pound E; Esthetic dentures and their phonetic values. *J Prosthet Dent.* 1951; 1: 98-111.
14. Rosenthal RL, Kemper JT; The "blow-wax" technique for stippling dentures. *J Prosthet Dent.* 1974; 32: 344-347.
15. Nayar S, Craik NW; Achieving predictable gingival stippling in labial flanges of gingival veneers and

complete dentures. J Prosthet Dent. 2007; 97:118.

## Illustrations

### Illustration 1

Extra oral view of patient showing visibility of remaining natural teeth



### Illustration 2

Intra oral view of remaining natural dentition showing stains and denuded roots



### Illustration 3

Denture characterization including stippling, carving and staining



### Illustration 4

Intra oral view of final prosthesis in place



## Illustration 5

Extra oral view of final prosthesis

