

Maximal Aesthetics with Minimal Intervention

Dr. Sushil Koirala
Vedic Smile, Kathmandu, Nepal

Correspondence:
Dr. Sushil Koirala, Email: skoirala@wlink.com.np

ABSTRACT

This case report describes a 19-year-old female with the chief complain discolored upper central and lateral incisors and a 26-years-old female with unsatisfying existing smile. These cases were managed with MICD protocol. The patients were extremely satisfied with the treatment outcome.

Keywords: Aesthetic dentistry; cosmetic dentistry; MICD; SRA; Vedic Smile concept.

INTRODUCTION

Many clinicians fail to distinguish between the aesthetic and cosmetic desire of the patients. Proper understanding and analysis of psychology, health, function and aesthetic (PHFA) components of smile design are essential for satisfying such desires.

In the practice of aesthetic dentistry, it is often seen that the cosmetic desire of most of the patients cannot be fulfilled by only applying the rules of natural smile aesthetics. Such desires are mostly at odds with their sex, race and age (SRA) factors but are guided by the trends and culture. For example, an older patient seeking white (A1, B1 or bleached white shade) teeth and a youthful looking smile has a cosmetic desire that is contrary to the natural aesthetics of the dentition according to his age. However, a young patient, whose anterior teeth are darker

(A3 or A3.5 shade) and attrited wants to restore the natural shade and shape should be regarded as an aesthetic desire. In other words, the aesthetic versus cosmetic desires of the patient can be best explained in the light of need versus want philosophies. Clinically, the patient's desire for dental treatment that are not harmonious with SRA factors and that do not directly benefit the health or function of the oral tissues should be categorized as cosmetic desires. And when such cosmetic desires are to be fulfilled, the non-invasive to minimally invasive restorative techniques should be preferred.

In the following cases, the patients' desires were within the natural parameters in terms of sex, race and age (SRA factors). Thus, we tried to mimic the natural aesthetics using minimal invasive techniques.

CASE REPORT 1

A 19-year-old female patient presented with discoloured upper central and lateral incisors. The teeth were non-vital and were treated endodontically. The patient's major concern was discoloration and uneven incisal edges of the upper anterior teeth. The patient was examined as per the Smile Design Wheel protocol taking psychology, health, function and aesthetic components into consideration.

Intra-oral examination and dental history revealed the habit of bruxism. During the patient counselling, various treatment options were discussed regarding her existing parafunctional habit and the aesthetic problems. Initially, the case was treated with selective walking bleach using

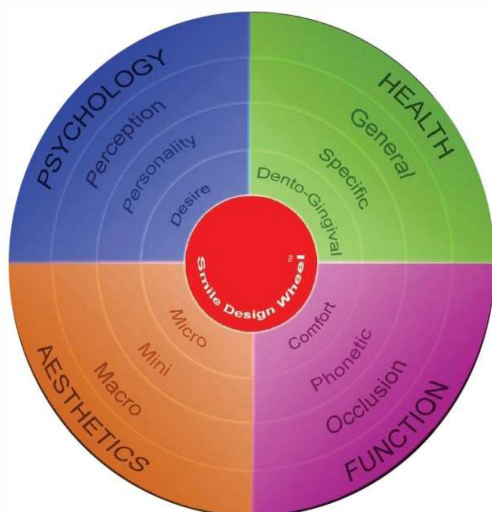


Figure : Smile design wheel.



Figure 1: Pre-operative smile showing discolored teeth #12 and #11 with uneven incisal edges.



Figure 2: Pre-operative full frontal view of the anterior teeth with lips retracted.



Figure 3: close up view of the upper anterior teeth.



Figure 4: planning for selective home bleaching (Note the spacer on the cast).



Figure 5: Bleaching tray placed in the upper arch.

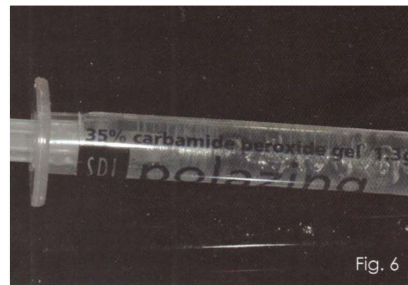


Figure 6: Polazing (35% carbamide peroxide gel used as walking bleach).

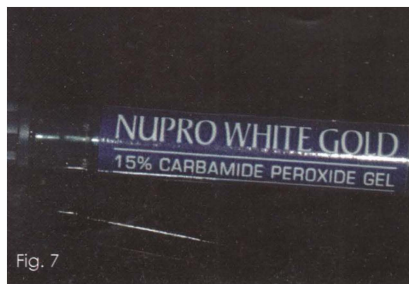


Figure 7: Nuprowhite gold (15% carbamide peroxide gel) used for home bleach.



Figure 8: Tooth #12 and #11 seven days after bleaching.



Figure 9: Close-up view of tooth #11 and #12 after bleaching (Note uneven incisal edges).



Figure 10: Planning for cosmetic contouring (Note the area to be contoured marked in black).



Figure 11: Contouring of the incisal surface with Super-Snap black disk.

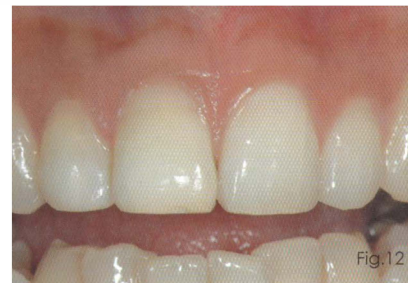


Figure 12: Anterior view after cosmetic contouring



Figure 13: Close-up view with black background.



Figure 14: Night guard fabricated to present bruxism.



Figure 15: Smile after completion of the treatment.



Figure 16: Pre-operative smile (Note excessive maxillary gingiva, poorly restored midline diastema, and less prominent upper central incisors).



Figure 17: Pre-operative frontal view of the anterior teeth with lips retracted.



Figure 18: Maxillary gingival re-contouring.



Figure 19: Close-up view of the upper central incisors after gingival re-contouring and removal of previous composite restorations.

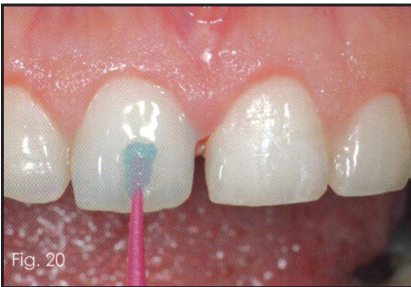


Figure 20: Application of acid etchant on tooth #11.

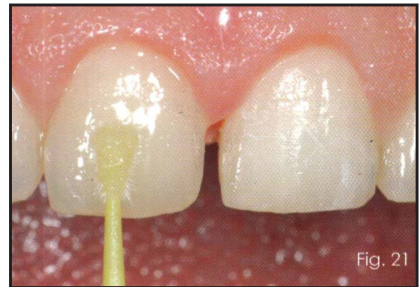


Figure 21: Application of bonding agent on tooth #11.



Figure 22: Flowable frame technique using Beautifil Flow, Shofu Inc.



Figure 23: Lingual frame ready on tooth #11.



Figure 24: Final application of enamel layer (Beautifil II, Incisor shade, Shofu Inc.) and the restoration of tooth # 21 completed in a similar manner.



Fig. 25



Fig. 26



Fig. 27

Figure 25: Post-operative frontal view of the anterior teeth with lips retracted.

Figure 26: Close-up view of the restorations.

Figure 27: Aesthetic smile after completion of the treatment (Note harmonious gingival level and the central dominance).

Polazing i.e., 35% carbamide peroxidegel and home bleach using Nupro white gold i.e., 15% carbamide peroxidegel on teeth #12 and 11, followed by there con-
touring of upper incisors using Super-Snap black disk. A vacuumformed night guard appliance was fabricated to prevent the lost of tooth structure due to bruxism habit.

CASE REPORT 2

A 26-year-old female patient was presented with unsatisfying existing smile. Her aesthetic desires were less visible gum and obvious upper incisor teeth during her smile. On examination, excessive maxillary gingiva with gummy smile, poorly restored midline diastema, and less prominent short upper central incisors were diagnosed. After thorough clinical evaluation and smile analysis, the patient was informed about her smile defect and advised possible treatment options. It was decided to treat the case with minimally invasive techniques. The patient was treated with minor gum recontouring and direct bonding restorations using Beautifil II (Shofu Inc. Japan) with universal incisor shade on maxillary central incisors. The treatment outcome was well-appreciated by the patient and her family.

DISCUSSION

The treatment modalities of any health care service are basically aimed at establishment of health, conservation of the human body in its natural form, function and aesthetics. Aesthetic dentistry should follow the concept and treatment protocol that can provide a simple, comprehensive, patient friendly and minimally invasive

treatment approach with the emphasis on psychology, health, function and aesthetics of the patient. Therefore, to properly address these facts and to integrate the evidence-based minimum intervention philosophy; minimally invasive cosmetic dentistry (MICD) protocol has been introduced in the field of aesthetic dentistry. Such a holistic concept and basic treatment guideline would surely provide maximum aesthetics with minimal intervention.

The given cases were managed with MICD protocol. The patients were extremely satisfied with the treatment outcome. The minimally invasive cosmetic dental treatment provided to the patients is believed to promote health, function as well as aesthetics of the oral tissues and set a positive impact on psychology of the patient preserving the sound tooth structures while achieving the desired aesthetic results. Furthermore, while increasing the patients' confidence due to improved smile aesthetics, the treatment promote trust and enhance professional image of the dental service.

Reprinted from Dentistry South Asia, 2009;3(1) with the permission from author.