

SMILE DESIGNING: NOVEL WAY

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ABSTRACT

This case report describes of patient with maxillary anterior spacing, which was treated using a planned sequence of multidisciplinary approach for esthetic treatment. As the spacing is caused by tooth size discrepancy involving one or more teeth then an interdisciplinary treatment plan involving orthodontic, restorative, and periodontal treatment approach is recommended to achieve a harmonious esthetic result. Interdisciplinary approach needs to be utilized in a correct manner to get perfect results.

Keyword: - smile; generalized spacing; multidisciplinary approach; aesthetics

1. INTRODUCTION

Dento facial aesthetics has always been of importance since time immemorial, the artistic aspect has played a special influence in treatment procedures. Optimum results can only be achieved with the cooperation of various specialties. In 2000, the study of Albert Yarus showed that while analyzing facial photographs people tend to facial attention mostly on the mouth and eyes. So; a smile must always be respected and considered [1,2].

This article aims to present a clinical case describing a

Multidisciplinary management in a patient who presents with generalized spacing. Generalized spacing was initially treated with orthodontics, and after space calculation was correctly achieved prosthodontics rehabilitation was done by zirconia crowns.

2. Case Report

An 18 year old patient came complaining about spacing in the maxillary and mandibular anterior teeth [FIG 1]. On clinical examination, presence of uneven spacing in the maxillary anterior region from right canine to left canine was observed, with spacing also present in the lower arch. On his first visit, an irreversible hydrocolloid impression of both arches was taken to fabricate the diagnostic cast. The main requirement for the patient was an immediate treatment result due to his personal reasons and he was not willing for any surgical procedure. Based on the analysis of the patient's face, tooth size discrepancy and the diagnostic cast, a diagnostic wax-up was made. On the following visit, after thorough consultation and review of the treatment options with the patient, it was decided to perform intentional root canal therapy in 12, 11, 21, and 22 followed by fixed prosthetic replacement. Routine endodontic therapy was carried out. After establishing the working length, the root canals was cleaned and shaped using Universal Protaper rotary system up to F3 for 11 and 21 and F2 for both the laterals. Irrigation was performed with 1 ml of 2.5 % of NaOCl solution. The final irrigation was done with 2% chlorhexidine followed by normal saline. On his next visit, tooth preparation was done based on the mock wax up preparation made. An utmost care was taken to evenly distribute the interdental space among the anterior region. The final impression was taken for to process the Zirconia bridge. Based on the mock preparation, the acrylic bridge was ready and temporization was done on the same day [FIG 2]. The final Zirconia bridge was processed and was luted on her following visit using shade matched resin cement [FIG 3]. It is six months since the treatment is complete and the patient is happy with his present esthetic smile.



Fig -1: Pre-operative



Figure 2:Temporarization



Figure 3:Final Insertion

2.1 DISCUSSION

Treatment modalities in aesthetic cases often involve multidisciplinary approach, such as orthodontic treatment, periodontal evaluation, oral surgery, and restorative or prosthodontics treatment. To achieve the desired aesthetically pleasing treatment, smile analysis is essential. It is six months since the treatment is complete and the patient is happy with the outcome of the treatment through this comprehensive approach. A mock up preparation was done using the dental plaster models, which provided a three-dimensional source data, allowing dentists to examine the occlusion and the relation of the maxillary and mandibular dental arches. A diagnostic wax-up also act as a guideline in restoring the anterior maxillary teeth and aids in achieving a more harmonized space distribution. It also helped in turn to educate the patient and visually see the outcome of the treatment. The cosmetic improvement of the smile is possible with both direct and indirect techniques; the latter procedures might require more than one appointment, but are preferred when multiple teeth are involved in the treatment plan and accurate tooth reshaping or color matching is needed. With indirect technique, a pre-visualization of the final esthetic result is extremely useful both for the clinician and for the patient. In this way, desires and preferences related to the new smile are tested before carrying out irreversible teeth preparations.

The patient exhibited greater confidence with a new smile. Although, the patient is happy and satisfied with the appearance, a better result could have been achieved, if the gingival level of the central incisors also were corrected through periodontal approach. When considering treatment of the maxillary anterior teeth for esthetic purposes, the dentist must consider each case on its own merits. A step-by-step protocol was proposed from diagnostic evaluation, mock-up fabrication and trial, teeth preparation and impression, and adhesive cementation. The resolution of initial esthetic issues, patient's satisfaction, nice integration of indirect restoration confirmed the success of this anterior dentition rehabilitation. This case report is an example of well-planned sequences of treatment from the beginning till the end of the procedure. By practical treatment approaches used in this case, the dentist was able to manage and obtain the highest result of esthetic and the patient's demand was also met.

3. CONCLUSIONS

It is vivid from the above discussion that the smile we create should be esthetically appealing and functionally sound too. It is our duty to carefully diagnose, analyze and deliver the best to our patients, taking into account all of the discussed factors. The smile designing done by us has to be as conservative as possible unlike the past. Our aim has to be less reduction of tooth structure and greater esthetics and durability. This simply means that cosmetic dentistry has to be a multispecialty branch, wherein all treatments like orthodontics, periodontics, surgical procedures have to be performed whenever deemed necessary. Optimal integration and longterm stability of oral rehabilitations require correct diagnostic approach, appropriate pre-prosthetic treatments and accurate therapeutic protocols [3]. The treatment, comprising an interaction between restorative dentistry, orthodontics, and endodontics, allowed a favorable functional and esthetic result [4]

4. REFERENCES

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