Diastema closure with composite

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I. Introduction

Diastema is one of the most common esthetic complaints of patients. Treatment goal should be focused on not only function but also the esthetics to fulfill the patient's needs and expectations. To achieve the goal, the patient's esthetic needs should be analyzed profoundly before the treatment. One of the challenging tasks in clinical procedures is closing diastema without "black triangle" between the teeth. To close the diastema properly, the clinician should be aware of oral physiology and consider esthetic integration with soft tissue(proximal gingiva) and hard tissue(teeth) comprehensively. This paper reports a case of the diastema closure on maxillary anterior teeth accomplished by producing emergence profile with natural contours at the gingival-tooth interface and problems during procedures..

II. Case report

1. Sex/age : Female/50
2. Chief Complaint : I want to get my upper anterior teeth treated due to diastema on my maxillary central incisors. I don't want them to look too bigger than other teeth.
3. Past dental history : Class IV resin filling on #11, 21[Mesial]
4. Present illness : Restoration fracture & fallen out state on #11, 21[Mesial]
   with resin discoloration
5. Diagnosis : Restoration fracture & fallen out on #11, 21[Mesial]
6. Treatment plan : Removal of existing resin restoration and class IV resin filling on #11, 21[Mesial]

III. Conclusion

Diastema closure with composite resin is common clinical procedures in dentistry. However, if there is a wide space between the central incisors, simple closure of space may not resolve the problem due to disruption of golden ratio in esthetics and the "black triangles" remaining after treatment. In this case, golden ratio of esthetics and the patient needs were analyzed before the treatment. Diagnostic wax-up was done to reestablish balance between soft tissue and hard tissue. According to the study of Tarnow, interdental papilla is present when the distance between bone crest level and the contact point of central incisors is less than 5.0 mm. Therefore, measurement for the position of proximal contact and alveolar crest was verified on pre-operation radiographs and considered during the procedure and periodic follow-up for post-operative polishing.

In conclusion, excessive endeavor to get rid of "black triangles" by additional composite resin filling might produce unsatisfying results for the clinician and patient in terms of esthetics and oral physiology. .

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