COMMENTARY

ESTHETIC CORRECTION OF ANTERIOR DENTAL MALALIGNMENT: CONVENTIONAL VERSUS INSTANT (RESTORATIVE) ORTHODONTICS

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This excellent article describes a problem that has developed in recent years with continuing advances in adhesive dentistry, that is, the use of restorations rather than orthodontics to align malposed anterior teeth. In his well-crafted article, Dr. Spear provides restorative dentists with seven guidelines to delineate between patients who require conventional orthodontics to overcome anterior dental malalignment versus instant orthodontics with restoration of anterior teeth. These steps provide dentists with a logical, systematic, and practical approach that could apply to a wide variety of clinical situations. With each step, the restorative dentist concludes that either orthodontics is the correct solution or that the restorative dentist should continue with the evaluation process to determine whether restorative dentistry is eventually appropriate. Brilliant! Way to go Frank!

I would like to offer an additional perspective to the restorative dentist, that is, the view of an orthodontist. Yes, Dr. Spear has illustrated the steps necessary to identify the patient who would benefit from orthodontics, but upon referring this patient, will the orthodontist know what you want done? Will the orthodontist be able to interpret the correct positioning of the teeth in the patient who will require some future restorative dentistry? My point is this: when referring the patient, send along the vital information that will permit the orthodontist to know what specific treatment is necessary, or you may not be satisfied with the results of the orthodontic intervention. Let me illustrate what I mean for each of Dr. Spear's guidelines.

Question 1: Will the teeth need to be restored to satisfy the patients esthetic desires regardless of whether orthodontics is performed? If the answer is no, refer the patient to an orthodontist. In some cases, existing restorations may be replaced after orthodontics. If the final restorations are crowns, the orthodontist may position the teeth differently than for a patient who requires porcelain veneers.[1] The orthodontist needs to know your specific restorative plan to place the individual teeth in their appropriate relative positions.

Question 2: Can the occlusion be managed without orthodontics but with restorative dentistry? Dr. Spear refers to the common problem of anterior dental wear, which results in overeruption of the abraded teeth relative to adjacent nonworn teeth. If you conclude that orthodontics is necessary to reposition the worn teeth, the orthodontist must be aware of your intentions with regard to the final vertical tooth position. Should the teeth be intruded?[2,3] If so, by how much? Will gingival surgery be planned to crown lengthenthe teeth to achieve adequate resistance and retention for the restoration? The orthodontist needs to know.

Question 3: Is the most apical free gingival margin level esthetically acceptable? If not, orthodontics is recommended. But what do you want the orthodontist to accomplish? Do not expect the orthodontist to know your intentions. Do you want the orthodontist to intrude the coronally positioned gingival margins?[4] Do the apically positioned gingival margins require tooth extrusion?

Question 4: Are the papilla levels harmonious? If not, refer the patient to the orthodontist. However, simple orthodontic movement does not guarantee even papilla levels in all patients. As Dr. Spear alludes, the height of the papilla depends on the level of the bone, the size of the embrasure, the shape of the adjacent teeth, and the health of the tissue. In fact, the orthodontist must align the bone levels between adjacent teeth to initially establish

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commensurate papilla levels.[5] Then, the interproximal distance between adjacent teeth must be similar, as well as the mesial and distal shapes of the teeth, to provide the appropriate shape to the embrasure to eventually establish harmonious papilla levels.

Question 5: Can an acceptable contour and arrangement be created? As Dr. Spear describes, this is really a question of coronal width proportional to length. Orthodontists can accomplish these modifications for the restorative dentist in several ways. The correct treatment often requires the construction of a diagnostic wax-up to determine the correct contour and arrangement in concert with the restorative dentist.[6]

Steps 6 and 7: Are the structural compromises and biologic consequences of correcting the alignment restoratively acceptable? Although these principles typically apply to the nonrestored dentition, occasionally the restorative dentist may refer a patient to the orthodontist who already has had a previous restoration placed inappropriately on a malposed tooth or who already has a biologic width violation that needs to be corrected. If the patient will have orthodontic treatment as a part of the plan, the timing of correcting these existing problems prior to, during, or after the orthodontic treatment must be determined.[7] The timing differs in various situations, and the team must select one that is appropriate for each specific situation.

In summary, Dr. Spear provides an excellent method for the restorative dentist to determine when to restore or refer a patient to an orthodontist to correct malaligned anterior teeth. However, when orthodontics is selected as the appropriate solution, the restorative dentist and orthodontist must plan the treatment together in an interdisciplinary manner to provide the optimum result for the patient. My congratulations to Dr. Spear, who has made an outstanding contribution to the literature on esthetic dentistry.

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