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Ortho-Perio Inter-Relationship

Debasree Varma, Manoghna S, Mohit Awaradi, Pooja Sharma
Department of Orthodontics and Dentofacial Orthopedics, FDS, Ramaiah University of Applied Sciences,Bangalore

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ABSTRACT
In adult patients, the loss of teeth or periodontal support can result in pathological teeth migration involving either a single tooth or a group of teeth. Orthodontic treatment can often correct these problems, or at least prevent them from progressing. The short- and long-term successful outcomes of orthodontic treatment are influenced by the patient's periodontal status before, during, and after active orthodontic therapy. No matter how talented the orthodontist, a magnificent orthodontic correction can be destroyed by failure to recognize periodontal susceptibility. Therefore, identifying periodontally susceptible patients is critical for the outcome of treatment. This article describes about the inter-relationship between orthodontics and periodontics in various situations.
Keywords: Ortho-perio inter-relationship, recession, biologic width

I. INTRODUCTION

[1] In this present era, when a significant number of patients seeking orthodontic treatment are adults, importance of multidisciplinary treatment approach cannot be overemphasized.The term synergy refers to two or more distinct influences or agents acting together to create an effect greater than that predicted by knowing only the separate effects of the individual agents. This definition is applicable to the classic relationship between orthodontic and periodontics specialties in treating patients. Making the most of what these two specialties offer each other begins with the identification of periodontal problems that could become more complicated during orthodontic therapy and, conversely, those that could benefit from orthodontic therapy



In adult patients, the loss of teeth or periodontal support can result in pathological teeth migration involving either a single tooth or a group of teeth. This may result in the development of a median diastema or general spacing of the teeth with or without incisal proclination, rotation or tipping of bicuspids and molars. This can cause the collapse of the posterior occlusion and decreasing vertical dimension. Orthodontic treatment can often correct these problems, or at least prevent them from progressing.

The biologic width is essential for preservation of periodontal health and removal of irritation that might damage the periodontium (prosthetic restorations, for example). The millimeter that is needed from the bottom of the junctional epithelium to the tip of the alveolar bone is held responsible for the lack of inflammation and bone resorption, and as such the development of periodontitis.

HOW CAN ORTHODONTIC TREATMENT AFFORD SOME DEGREE OF PROTECTION AGAINST PERIODONTAL BREAKDOWN? [2],[3]

1. **Extrusion, or forced eruption**, of a tooth or several teeth, along with reduction of the clinical crown height, is done usually in case of severe fractures of the crown. it has been reported to reduce infrabony defects and decrease pocket depth. Extrusion of an individual tooth is used specifically for correction of isolated periodontal osseous lesions. Studies have shown that eruption in the presence of gingival inflammation reduces bleeding on probing, decreases pocket depth, and

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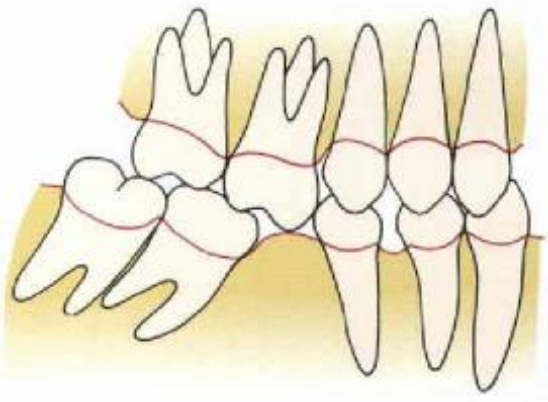
even causes the formation of new bone at the alveolar crest as teeth erupt.

2. **Single incisor extraction**:In severe crowding, removing one lower incisor and using the space to align the other three incisors can produce a satisfactory result.Provides easier access to plaque control and enhances the labial bone thickness.

3. **Molar Uprighting**:When a first permanent molar is lost during childhood or adolescence and not replaced, the second molar drifts mesially and the premolars often tip distally As the teeth move, the adjacent gingival tissue becomes folded and distorted, forming a plaque-harboringpseudopocket that may be virtually impossible for the patient to clean Repositioning the teeth eliminates this potentially pathologic condition and has the added advantage of simplifying the ultimate restorative procedures.



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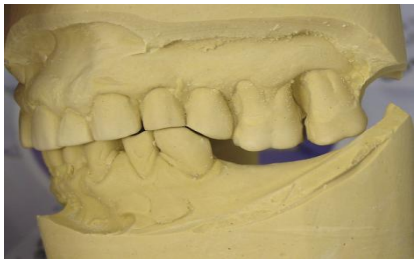
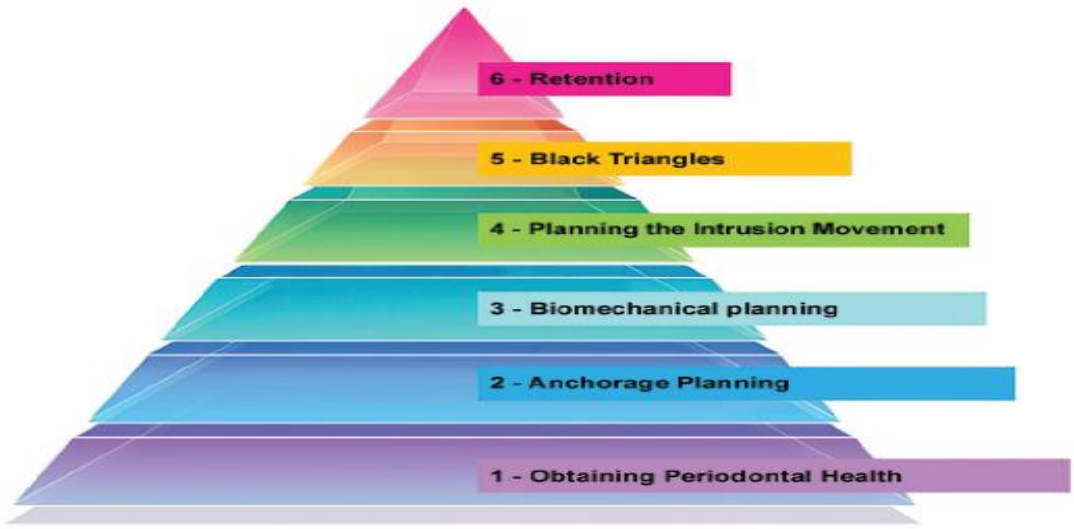
4. **Root proximity**:The health of the periodontium and accessibility for restoration of posterior teeth is compromised in cases where the interradicular distance is less. Root proximity can be exacerbated when a molar supererupts and tips mesially. So in such cases the roots can be moved apart using orthodontic treatment leading to formation of bone in the adjacent roots. However, with appropriate orthodontic treatment, this situation can be corrected without periodontal surgery by intruding the first molar, leveling the bone, and opening up the embrasure space between the first and second molar roots.



5. **Furcation defects**:Furcation areas are difficult-to-maintain areas that can deteriorate during orthodontic treatment. Such patients require thorough instrumentation and need to be maintained for a 2 to 3 months follow-up schedule. In advanced furcations requiring hemisection, orthodontic treatment should be considered first as it simplifies the concentration of tooth movement. After orthodontic treatment, tooth may be hemisectioned.

THE PYRAMID OF ORTHODONTIC-PERIODONTAL PLANNING [4]



II. CONCLUSION

• Harmonious cooperation of the orthodontist and the periodontist offers great possibilities for the treatment of combined orthodontic–periodontal problems.

• Undoubtedly, application of oral hygiene measures is difficult during orthodontic treatment.

• Orthodontic treatment along with patient's compliance and absence of periodontal inflammation can provide satisfactory results without causing irreversible damage to periodontal tissues.

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