

Management of Peg lateral Incisor by Orthodontic-Prosthodontic Interdisciplinary Approach: Novel Way

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ABSTRACT

Orthodontic treatment comprises different phases with unique characteristics and challenges. Tooth size discrepancies are considered an important variable especially in the anterior segment. Orthodontic treatment of patient with peg shaped lateral incisor becomes difficult due to problem encounter during bonding of orthodontic bracket on malformed tooth. Maintaining midline and space for final restoration on peg shaped lateral incisor during orthodontic treatment is mostly done using coil spring which is less efficient, tedious and uncomfortable to patient. This article presents a new method of management of Bolton discrepancy due to peg shaped lateral in conjunction with temporary prosthetic pontic by orthodontic method.

Keywords: Bolton discrepancy, peg shaped lateral incisor, pontic.

INTRODUCTION

Co-operation, coordination, and interaction between different specialties in dentistry are extremely important in establishing diagnosis and treatment planning. Interaction between the different disciplines is necessary and in some cases it is crucial in facilitating coordinated dental therapy. The interrelationship between orthodontics and prosthodontics often resembles symbiosis. Andrew¹ gives six keys of normal occlusion and the Bolton² ratio is one of the important factors for normal occlusion. In peg shaped tooth, there is a Bolton discrepancy. This article presents a new method of management of Bolton discrepancy in conjunction with temporary prosthetic pontic by orthodontic method.

CASE REPORT

This paper reports a case of a 23 year old man who reported with a chief complaint of spacing in the anterior maxillary region (Figure 1). An intraoral examination showed spacing in anterior teeth with deep bite and peg shaped right lateral incisor. The treatment of the patient began with good working model impression of the patient. On working model actual Bolton discrepancy was calculate by using Bolton's Formula². Wax pattern was prepared for temporary prosthetic pontic of peg shaped tooth by adding calculated Bolton discrepancy (by Bolton's formula) (Figure 2) and temporary prepare prosthetic pontic was prepared (Figure 3). Bonding in maxillary arch was done with 0.018 MBT except on peg shaped right maxillary lateral incisor (Figure 4). A good

working model impression was taken after bonding orthodontic brackets and a good second working model was prepared. Temporary pontic was placed on peg shaped tooth^{3,4} and bracket was bonded on temporary

pontic on second working model (according to other brackets of arch). Temporary pontic with bonded bracket was cement on peg shaped tooth in patient's oral cavity. Orthodontic treatment was continued for period of 6 months and final ceramic restoration was given after complete orthodontic treatment.^{5,6,7}



Figure 1 Patient with peg shaped upper right lateral

Advantages of this method

1. Esthetics at day one.
2. Very good method for maintaining midline coinciding.
3. Exact space maintaining for the final restoration.
4. Comparatively good method for space maintaining than coil spring.
5. Help in correction of individual malocclusion of peg shaped tooth like tipping, rotation, intrusion and extrusion.



Figure 2 Wax pattern for temporary prosthetic pontic by adding calculated Bolton discrepancy (by Bolton's formulae)



Figure 3 Temporary pontic on peg shaped tooth with bracket according to other brackets of arch



Figure 4 Patient before cementing the temporary pontic with bracket on peg shaped tooth.



Figure 5 Patient after cementation of the temporary pontic with bracket on peg shaped tooth.



Figure 6 Patient during fixed orthodontic treatment

6. it's easy to bond bracket on temporary pontic than normal peg shaped tooth.
7. Operator friendly mechanics.
8. Good patient co-operation.

CONCLUSION

In the non-compliant orthodontic cases; an interdisciplinary approach always provides additional

esthetic results. It helps in better finishing and result. Prosthodontics approach found always commendable towards end of orthodontic treatment.

Teamwork make a lot tough things easy.

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Figure 7 Patient after de-bonding of fixed orthodontic appliance and permanent restoration with peg shaped lateral incisor.

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