



## Case Report

## Aesthetic Correction of Peg Lateral with Resin Composite using Putty Index Technique : A Case Report

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## ABSTRACT

Microdontia involving only a single tooth is a rather common condition affecting mostly maxillary lateral incisor. One of the common forms of localised microdontia is that which affects maxillary lateral incisor, a condition that has been called the 'peg lateral'. Instead of exhibiting parallel or diverging mesial and distal surfaces, the sides converge or taper together incisally, forming a peg-shaped or cone-shaped crown. The root of such a tooth is frequently shorter than normal. The following case report describes a restorative protocol using direct composite resin build up using a putty index.

**Keywords:** Peg lateral; Putty index; Direct veneer resin composite

## 1 INTRODUCTION

Anomalies in the tooth formation process during initiation or proliferation of the tooth bud cause hypodontia<sup>(1)</sup>. Maxillary lateral incisors which is most commonly affected show variation in size, shape and form. It is considered as developmental anomaly if the variation is too great. Alterations in shape, size, position, color or texture of the tooth may have a negative influence on the harmony of smile. Though porcelain laminate veneers have high abrasion resistance and color stability, they are relatively expensive. A conservative veneer technique is the application of the resin composite without reduction of the tooth structure. Resin composite can be altered and re-polished *in situ*, also direct resin composites are not as expensive as porcelain veneers.<sup>(2)</sup>

## 2 CASE REPORT

A 20-year-female patient reported to the Department of Conservative Dentistry and Endodontics with chief complaint of irregular appearance of upper front tooth. Patient history revealed no systemic diseases or medical conditions. Intraoral examination revealed a peg shaped lateral incisor with 12 (Figure 1). Following clinical and radiographic evaluation direct composite restoration was planned and informed to the patient.

Maxillary and mandibular diagnostic impressions using irreversible hydrocolloid were made (Figure 2) and diagnostic cast were obtained on to which, wax-up was done on 12 using Ivory wax (Figure 3). A palatal putty silicone index using vinyl polysiloxane was fabricated (Figure 4). The palatal half was then checked for the fit to serve as the reference guide to reconstruct the palatal aspect (Figure 5). Following shade selection, bevels were incorporated both on the labial & palatal aspects. Tooth was etched, bonded



Fig. 1: Pre-operative photographs

and composite build up was done. Finishing and polishing was done using the composite polishing kit (Figure 6). Oral hygiene instructions were given to the patient. The patient was instructed to floss regularly and also to avoid pigmented liquids that may cause staining of the restoration.



Fig. 4: Putty Index



Fig. 2: Diagnostic Impression



Fig. 5: Reference Guide



Fig. 3: Wax-Up



Fig. 6: Post-operative photographs

### 3 DISCUSSION

A peg lateral poses two problems consisting of malformation and presence of diastema between teeth. The treatment

options of peg laterals can vary from; A simple composite build up, porcelain laminates/ veneers, endodontic treatment followed by metal – ceramic or all ceramic crowns and extraction of the peg shaped tooth and orthodontic movement of canine into the space of lateral incisor which can be then re-contoured to resemble lateral incisors or replacement with a single – tooth implant/FPD supported restoration<sup>(3)</sup>.

Resin composites do not have the potential to cause catastrophic fracture, nor does it cause abrasive wear of the opposing dentition. If the patient avoids smoking or drinking, beverages with staining potential that can alter the color of the teeth, these can last for many years.

Esthetic bonding with resin composite may be the most conservative approach because the sound tooth structure will not be removed, the procedure may not require administration of local anaesthetic, the procedure may be

completed in a single appointment and the treatment is also relatively inexpensive. Direct composite restorations can easily change the emergence profile and alter the shape and length of the tooth. It can be repaired easily and be polished and repolished to a high lustre<sup>(3)</sup>.

#### 4 CONCLUSION

The clinical results for this report show that palatal putty index with direct composite restoration for aesthetic and functional restoration of peg laterals is a very reliable and inexpensive method.

#### REFERENCES

- 1) Izgi AD, Ayna E. Direct restorative treatment of peg-shaped maxillary lateral incisors with resin composite: A clinical report. *The Journal of Prosthetic Dentistry*. 2005;93(6):526–529. Available from: <https://doi.org/10.1016/j.prosdent.2005.03.016>.
- 2) Sultana A, Karim FA, Quader SA, Tasnim T, Hossain M, Nasrin KF. Composite facing of peg shaped lateral incisor- a case report. *Update Dental College Journal*. 2016;6(2):31–33. Available from: <https://doi.org/10.3329/updcj.v6i2.31726>.
- 3) Saatwika L, Prakash V, Anuradha B, Subbiya A. Esthetic Correction of Anteriors: A Case Report. *Indian Journal of Public Health Research & Development*. 2019;10(11):2826–2828.