

Peg Lateral Build After Comprehensive Orthodontic Treatment

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Abstract: Anomalies affecting the maxillary lateral incisors, such as shape, size, or agenesis, are common, occurring in 1.6% to 4.9% of cases, with a higher prevalence in women. These anomalies can occur on one side or both, with a higher frequency observed on the left side. Peg-shaped lateral incisors which occur IN between 2-5 % of the general population, leads to a change the tooth's shape, with its structure mostly normal and function not disturbed.

Introduction: The array of management options can be challenging, particularly with the evolving aesthetic preferences of patients, complicating therapeutic decision-making in certain clinical scenarios. Numerous cases of peg-shaped lateral incisors often exhibit skeletal irregularities in the maxilla and discrepancies in maxillomandibular teeth alignment, indicated by a Bolton index surpassing 77.2% with a deviation of approximately 0.22%. In such cases, orthodontics must be considered the first line of treatment before prosthodontic rehabilitation, as the final therapeutic options will depend on the orthodontic objectives and methods used to establish ideal occlusion.



BEFORE



PANORAMIC X-RAY



WAX-UP



SHADE SELECTION



Case: The patient is a 15 years-old male, presented to the clinic after orthodontic treatment for peg-laterals build-up. The orthodontic treatment started April 2019 and completed on December 2022 at TUSDM. The patient has been having periodic appointments at TUSDM pediatric clinic since 2010. The patient is ASAI, with no medication or NKDA and low caries risk.

During the extraoral examination, the patient's orofacial functions, vertical and horizontal facial proportions as well as the maxillary labial protrusion and the nasolabial angle to ascertain the extent of labial and dental support. Observation of the chin position, smile under different conditions, including without teeth visible, as well as social and spontaneous smiles.

Impressions of the upper and lower jaw were taken and reviewed. While maxillary lateral incisors' golden ratio is often cited as 62%, patient preferences tend to favor ratios ranging from 67% to 72%. Additional studies suggest that the ideal mesiodistal width of a maxillary lateral incisor is typically 2 mm narrower than that of the adjacent central incisors. However, due to the patient's peg-lateral proportions and the referral for the build-up after completing the orthodontic treatment, to ideally distribute the space proportionally, the build-up would include the centrals and canines.

Peg-Lateral Composite Build-up:

No anesthetic was necessary for the build-up of #7, #9, and #10. the facial surfaces were thoroughly polished. The teeth were minimally prepped for better adhesion. The build-up was done using an index of the wax-up. The teeth were etched with 35% phosphoric acid etch for 20 seconds. Excite F bond was used and Filtek supreme composite shades layered in the following order: A2 opaque, A2 body, A1 body, White enamel (gray).



BEFORE and AFTER By Dr.Javadian

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