

## **Morphological Variants of Soft Palate in Patients with Malocclusion – A Digital Cephalometric Research Study**

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### **ABSTRACT:**

Background- Patients with cleft lip and palate, swollen adenoids, snoring, poorly retained maxillary dentures, obstructive sleep apnea syndrome (OSAS), and skeletal craniofacial malocclusion are commonly associated with soft palate dysfunctions. We carried out a study in our institute to assess various shapes of soft palate in different malocclusions by Lateral cephalometry.

Materials & Methods- 100 OPD patients who came to the department of Oral Medicine and Radiology in our institute formed the study group. The patients were subjected for LC radiograph using Planmeca Proline XC LC along with software Planmeca Romexis 2.9.2.R with Exposure time – 17 sec, mA- 5, kVp- depending on physical status of patient. Radiographs were observed by two experienced oral radiologists at different time period to avoid bias. The soft palate morphology was observed and categorized into six types as suggested by You et al.

Results- Out of a total of 100 participants, 57 were classified as Class I, 39 as Class II, and 4 as Class III when malocclusion was examined. 48% had leaf-shaped palates, whereas 35% had rat-tail-shaped palates. Leaf shaped soft palate was most prevalent in males & females. Leaf shaped palate was evident in Class I and Class II, and Butt shaped soft palate was evident in Class III.

Conclusion- The comparison of the age, VL, VW and PD of soft plate among different genders, was done. It was found that VL, VW differed significantly. Malocclusion and malocclusion shape, have a strong positive association, based on Pearson correlation test.

**KEY WORDS:** LC, soft palate shape, malocclusion, velar width, velar length.