

Reference guide for prosthetic occlusal plane orientation: An obscured dilemma

Sir,

The artificial replacement of lost teeth is generally desired for two prime reasons: esthetic and restoration of function. Prosthodontists are often confronted by edentulous patients complaining about ever increasing facial wrinkles and protruded chin with difficulties in function of mastication and speech. They have to limit the routine activities within the confines of anatomical, physiological and functional harmony, compensating for his losses and providing with optimum esthetic and function. Such rehabilitation requires ideal positioning of teeth so that they appear natural and create a pleasing profile and yet, are conducive to function, phonetics and mastication. This in turn is possible only if the occlusal plane which forms an indispensable part of the prosthesis is correctly oriented vertically in the neutral zone.^[1]

The Occlusal Plane orientation for the best esthetics and function has been of great concern to Prosthodontists because of its role in preservation and prevention of residual ridges. The stability of complete denture largely depends on the Occlusal Plane which is one of the most important factors that determines the success of removable prosthesis. Considering the importance of the accurate establishment of its location and effect of its inclination on function, esthetics and speech, a method to guarantee its conformity with the Occlusal Plane of the missing teeth seems necessary. The orientation of Occlusal Plane has led to innumerable controversies. A number of guides for its orientation have been implicated. These are Anthropometric, anatomic, biometric landmarks like Camper's plane and retromolar pad. Most of the Prosthodontist encountered difficulty in scheming an Occlusal Plane which is mechanically as well as esthetically acceptable. Preference is therefore given to the Occlusal Plane established midway between and parallel to edentulous ridge.^[2-4] The Camper's Occlusal Plane was the first effort in modern dentistry to establish occlusal plane. It was based on scientific research and was made parallel to ala-tragus plane posteriorly. Although clinical judgment and experience are invaluable, method of making a systemic analysis of the Occlusal Plane to the craniofacial structures using cephalometrics would be a definitive aid. This would be especially true for completely edentulous patients since many of the existing landmarks have been lost.^[5] So

as the location of Occlusal plane in complete denture fabrication is very subjective and it is widely variable depending upon the uncertainty of reference landmarks and the individual judgment. Therefore, the reliability of various reference planes as a clinical guideline for establishment of Occlusal plane needs to be tested. I hope this letter will prove to be a gentle nudge to steer the researchers in this direction.

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REFERENCES

1. Karkhazis HC, Polyzois GC. A study of the occlusal plane orientation in complete denture construction. *J Oral Rehab* 1987;14:399-404.
2. D'Souza N, Bhargava K. A cephalometric study comparing the Occlusal plane in dentulous and edentulous subjects in relation to the Maxillomandibular space. *J Prosthet Dent* 1996;75:177-82.
3. Mittal R. Comparison of the Occlusal Plane in dentulous and edentulous patients: A Cephalometric study. *J Indian Prosthodont Soc* 2008;8:195-200.
4. Hindocha AD, Vartak VN, Bhandari AJ, Dudani M. A cephalometric study to determine the plane of Occlusion in completely edentulous patients. *J Indian Prosthodont Soc* 2010;10:203-7.
5. Seifert D, Jerolimov V, Carek V, Ibrahimagic L. Relation of the reference planes for Orientation of the Prosthetic plane. *Acta Stomatol Croat* 2000;34:413-6.

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