

COMMENTARY

Comparison of Mesiodistal Crown Dimension and Arch Width in Subjects with and without Hypodontia¹

TUNG NGUYEN, DMD, MS*

What will you do when a patient walks into your office with generalized maxillary and mandibular spacing and multiple missing teeth? What questions go through your mind at that point? How many implants will the patient need? Where are the best locations for the implants? Can the space be redistributed or consolidated to reduce the number of implants needed? Cases like these require careful planning using an interdisciplinary approach with orthodontics and restorative dentistry to maximize the esthetic and functional outcomes.² The article titled *Comparison of Mesiodistal Crown Dimension and Arch Width in Subjects with and without Hypodontia* reminds us to look at the entire mouth, occlusion, and interarch tooth size discrepancies when tackling these cases.^{1,3}

Patients with hypodontia tend to have decreased intermolar width and therefore more likely to have narrow buccal corridors.^{4–7} When smiling, the width of the mouth increases by as much as 30%. Studies have shown that a larger buccal corridor on full smile is considered less attractive.^{4–7} Although posterior expansion might not be indicated or even desirable in some of these cases, the orthodontist must make sure to have adequate buccal crown torque on the premolars and molars to avoid these esthetic issues. Furthermore, patients with hypodontia tend to have decreased mesiodistal width of their maxillary lateral incisors and mandibular central incisors. This can create an interarch tooth size discrepancy making it more difficult to finish orthodontic treatment with ideal overjet, overbite, and Class I canines. The orthodontist and restorative dentist should work together to determine if build-ups/veneers or interproximal reduction is most appropriate to produce the optimal results.

REFERENCES

1. Fekonja A. Comparison of mesiodistal crown dimension and arch width in subjects with and without hypodontia. *J Esthet Restor Dent* DOI 10.1111/jerd.12026.
2. Kokich VG, Spear FM. Guidelines for managing the orthodontic-restorative patient. *Semin Orthod* 1997;3:3–20.
3. Brook A, Elcock C, Al-Sharood M, et al. Further studies of a model for the etiology of anomalies of tooth number and size in humans. *Connect Tissue Res* 2002;43:289–95.
4. Ker AJ, Chan R, Fields HW, Rosenstiel S. Esthetic and smile characters from the layperson's perspective: a computer-based survey study. *J Am Dent Assoc* 2008;139:1318–27.
5. Moore T, Southard KA, Casco JS, et al. Buccal corridor and smile esthetics. *Am J Orthod Dentofacial Orthop* 2005;127:208–13.
6. Parekh S, Fields HW, Beck FM, Rosenstiel SF. The acceptability of variations in smile arc and buccal corridor space. *Orthod Craniofac Res* 2007;10(1):15–21.
7. Roden-Johnson D, Gallerano R, English J. The effects of buccal corridor spaces and arch form on smile esthetics. *Am J Orthod Dentofacial Orthop* 2005;127:343–50.

*Assistant Professor, Department of Orthodontics, University of North Carolina School of Dentistry, Chapel Hill, NC 27599-7450, USA

This commentary is accompanied by article, "Comparison of Mesiodistal Crown Dimension and Arch Width in Subjects with and without Hypodontia," Anita Fekonja, DMD, MSc, DOI: 10.1111/jerd.12026.

Copyright of Journal of Esthetic & Restorative Dentistry is the property of Wiley-Blackwell and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.