Authors' response

Thank you for the interest in our article. We agree with the comment that cone-beam computed tomographic (CBCT) imaging provides more accurate information and we never contradicted that fact.

Radiation dosage with the use of x-rays should benefit the patient and simultaneously provide the dentist with accurate information, which is the reason for principles such as ALARA (as low as reasonably achievable) turning to ALADA (as low as diagnostically acceptable).[1] The purpose of our study was to examine to what extent angulation and sector position in palatally displaced canines (PDCs) differed between the panoramic radiograph and the CBCT image. We found that angulation and sector position deviated, but clinically the differences were modest. Overlap in frontal view to determine the sector position and angulation of PDC to midline was not hard to pin down in the panoramic radiographs, and these references have been used widely in the literature on interceptive treatment of PDCs. The lateral incisors near the PDC do not always have shorter roots.[2] The main conclusion to draw from the article is that CBCT should not be used routinely for diagnosis of PDC. The decision making regarding interceptive extraction of deciduous canines in PDC cases could be undertaken with the use of panoramic radiographs at an early age, around 10-11 years.[3] There are cases, however, where CBCT is indicated, for example, if there is suspicion of root resorption or lesions that could result in a change of therapy.

Despite the shortcomings of a panoramic radiograph, it is a diagnostic tool that could be considered good enough for rendering PDC position when CBCT is not crucial for treatment planning, in line with the principle of ALADA.

Margitha Björksved
Anders Magnuson
Silvia Miranda Bazargani
Rune Lindsten
Farhan Bazargani
Eskilstuna, Örebro, and Jönköping, Sweden

Am J Orthod Dentofacial Orthop 2019;155:756
0889-5406/$36.00

http://dx.doi.org/10.1016/j.ajodo.2019.03.012

REFERENCES

1. Jaju PP, Jaju SP. Cone-beam computed tomography: Time to move from ALARA to ALADA. Imaging Sci Dent 2015;45:263-5.
2. Brin I, Becker A, Shalhav M. Position of the maxillary permanent canine in relation to anomalous or missing lateral incisors: a population study. Eur J Orthod 1986;8:12-6.
3. Bazargani F, Magnuson A, Lennartsson B. Effect of interceptive extraction of deciduous canine on palatally displaced maxillary canine: a prospective randomized controlled study. Angle Orthod 2014;84:3-10.

Importance of photographic standardization

We sincerely acknowledge the contribution of the authors for their study published in the January issue, "Resin-modified glass ionomer cement versus composite for orthodontic bonding: A multicenter, single-blind, randomized controlled trial" (Benson PE, Alexander-Abt J, Cotter S, Dyer FMV, Fenesha F, Patel A, Campbell C, Crowley N, Millettf DT. Am J Orthod Dentofacial Orthop 2019;155:10-8).

It was a pleasure to read this article because currently, orthodontists have different alternatives of adhesion materials. One of these is the glass ionomer, which releases fluorine and does not have as strong adhesion as resin. It is also known that obvious lesions at the level of the tooth enamel after the cementation of the brackets are a problem that orthodontists face frequently in the dental office.

In current scientific articles, enamel lesions can be diagnosed photographically, but this requires a standardized protocol.[1] This recent article presents flaws in describing the method that can affect the results, because the authors did not report the technical characteristics of the camera or illumination conditions.[2] It is also unknown if the diagnosis was made on a computer screen or on photographic paper, and not finding these specific conditions could lead to a diagnostic error.[3]

The photographs presented in the article show different color contrasts, and this condition could modify the results.[2] Furthermore, a nondetailed photographic record does not allow the descripition of future investigations. On the other hand, a process of calibration of the observers that is not detailed can also affect the results because there may be errors in the diagnosis. These aspects must be taken into account by the readers, and a response clarifying these topics from the authors is necessary. Our intention is not to criticize the methodology of the article, but to draw attention to the use of standardized protocols to ensure a correct diagnosis.

Patricia Safra
Lima, Peru

Am J Orthod Dentofacial Orthop 2019;155:756-7
0889-5406/$36.00

http://dx.doi.org/10.1016/j.ajodo.2019.03.014

REFERENCES

1. Palomo JM, Wolf Gr. Use of digital photography in the Case orthodontic clinic. Am J Orthod Dentofacial Orthop 2004;126:381-5.
2. Jackson TH, Kirk CJ, Phillips C, Koroluc LD. Diagnostic accuracy of intraoral photographic orthodontic records. J Esthet Restor Dent 2019;31:64-71.
3. Sandler J, Murray A. Digital photography in orthodontics. J Orthod 2001;28:197-201.

Authors' response

We thank the reader for her interest in our article and for the comments regarding the standardization of the clinical photographs used in the study. As we stated in the Methods section, all clinicians involved were trained and experienced in the routine use of clinical photography. We think that this was sufficient to produce images that, when viewed by the assessors on a computer screen, allowed them to make judgements about the presence or absence of new demineralized lesions (DLs) and, if present, whether these DLs would be considered unesthetic. The use of multiple assessors allowed disagreements between assessors to be resolved through a majority consensus opinion. We think that these are the most relevant and clinically useful outcomes in the assessment of demineralization during orthodontic treatment.

Other researchers might consider the size or "whiteness" of DLs to be important outcomes. If so, then we agree that more rigorous standardization, including a calibration scale in each image, would be required to ensure that comparable measurements could be achieved across all images. We would suggest that the use of quantitative light-induced fluorescence (QLF) would be a more appropriate method of obtaining images for these outcomes.[1] QLF is capable of producing standardized images, with more accurate positioning over the long periods required when following participants for the full length of orthodontic treatment. However, we consider that, although QLF no doubt increases the precision and reproducibility (as well as the cost) of recording demineralization, the outcomes are not as clinically relevant as a straightforward visual assessment of the presence or absence of new DLs.

Philip Benson
Jonathan Alexander-Abt
Stephen Cotter
Fiona M.V. Dyer
Fatma Fenesha
Anjli Patel
Ciara Campbell

Niamh Crowley
Declan T. Millett
Sheffield, Stevenage, and Crewe, United Kingdom, and Killarney and Cork, Republic of Ireland

Am J Orthod Dentofacial Orthop 2019;155:757
0889-5406/$36.00

http://dx.doi.org/10.1016/j.ajodo.2019.03.013

REFERENCE

1. Miller CC, Burnside G, Higham SM, Flannigan NL. Quantitative light-induced fluorescence-digital as an oral hygiene evaluation tool to assess plaque accumulation and enamel demineralization in orthodontics. Angle Orthod 2016;86:991-7.

A case for invincible first premolar extraction

The December 2018 Clinician's Corner article by James L. Vaden et al on Class II correction is a treat for any orthodontist.[1] The cases shown in the article align with the notion that correction was achieved by a deliberate conscious effort and laser-sharp focus from the very start and throughout the entire treatment, while adapting and adjusting for multiple variables along the way toward an excellent finish. But I was left with a few questions and judgments.

The authors propounded that the maxillary first premolar and mandibular second premolar extraction protocol is an acceptable method of gaining the required space for patients with moderate to low mandibular plane angle in Class II management. Was this a formula or a clinical judgment? The notion is not new and has existed since the extraction modality came into effect.

I love the ancient Indian story of 6 blind men and an elephant. Any time I find myself struggling with something I know I am capable of handling, this is the story that pops into my mind: each of us doing what we think will move us along, though each of us is only partially right. The story illustrates an extreme case of differing viewpoints that is not very different from what exists in our profession. When it comes to treating a certain patient, some would treat teeth and others would treat the face. Some would postpone a treatment and others would start immediately. Some would retract and others might advance. Some would extract and others would preserve a full set of teeth.

Let me come straight to the point: After 18 years of orthodontic management of patients, it is still perplexing for me to plan on extraction of second premolars for a borderline discrepancy or Class II malocclusion. I often realized that when minimal retraction of lower