Erratum

Erratum to "Evaluation of occlusal relationship reproducibility with CAD/CAM techniques"

(Asian Pac J Dent 2014; 14(2): 35-40.)

Yoji Ueda, DDS,[a] Daizo Okada, DDS, PhD,[a] Reiko Ogura, DDS, PhD,[a] Wataru Komada, DDS, PhD,[a] Shiho Otake, DDS, PhD,[a] Masaomi Ikeda, RDT, BSc, PhD,[b] and Hiroyuki Miura, DDS, PhD[a]

[a]Fixed Prosthodontics, Department of Restorative Sciences, Graduate School, Tokyo Medical and Dental University, and [b]Clinical Oral Science, Department of Oral Health Care Sciences, Faculty of Dentistry, Tokyo Medical and Dental University, Tokyo, Japan

Materials and Methods

Nine subjects (six male and three female subjects; mean age, 29.2±2.4 years) who had complete natural dentition except for the third molars and no symptoms of stomatognathic disorders were recruited for this study. All subjects provided informed consent to participate in this study. The maxillary right first molars of each subject were the subject teeth in this study. The research protocol was approved by the Research Ethics Committee of the Tokyo Medical and Dental University (Approval No. 717. 2011).

The surfaces of the subject tooth and adjacent teeth were air-dried, then sprayed with titanium oxide powder (Cerec Optispray, Sirona, Bensheim, Germany) uniformly. Optical impressions were taken using an intraoral camera (Cerec Blue-CAM, Sirona) and recorded via CAD software (Cerec AC, Sirona). These procedures were performed six times (P1-P6). An optical impression of each antagonist was taken and recorded only once (Q). For optical bite registration, optical impressions from the buccal side during clenching with moderate biting force at the intercuspal position were taken using the intraoral camera and recorded via CAD software. These procedures were performed six times (BS1-BS6). The occlusal contact regions obtained by optical impressions and optical bite registration were represented using CAD software. The occlusal contact regions were divided into several groups based on the distance between the maxillary and mandibular occlusal surface; specifically, light-blue-colored regions (within 100 μm of the close contact, A), green-colored regions (0-50 μm of the penetrated contact, B), yellow-colored regions (50-100 μm of the penetrated contact, C), and red-colored regions (over 100 μm of the penetrated contact, D) (Fig. 1).

The occlusal contact regions data were recorded on a computer and the areas of each occlusal contact region of the subject tooth were calculated using image-processing software (Win Roof, Mitani Corp., Fukui, Japan). The area of the occlusal contact region A ("clearance") and the total area of the occlusal contact regions B, C, and D ("penetration") were calculated. On CAD software (but never in the actual dentition in vivo), the occlusal surfaces of the maxillary and mandibular teeth overlapped at the occlusal contact regions B, C, and D. The mean values of the areas of clearance and penetration of P1, Q with BS1, P1, Q with BS2, and so on up to P1, Q with BS6 were calculated (mP1). The mean values of the areas of clearance and penetration were calculated in the same way for P2-P6 (mP2-mP6). Then, each absolute value of the deviation from the mean values of mP1-mP6 was calculated. The mean values of the sum of each absolute value were defined as

the variability of the areas of clearance and penetration depending on changes in the optical impressions. Next, the mean values of the areas of clearance and penetration of P1, Q with BS1, P2, Q with BS1, and so on up to P6, Q with BS1 were calculated (mBS1). The mean values of the areas of clearance and penetration were also calculated in the same way for BS2-BS6 (mBS2-mBS6). Then, each absolute value of the deviation from the mean values of mBS1-mBS6 was calculated. The mean values of the sum of each absolute value were defined as the variability of the areas of clearance and penetration depending on changes in optical bite registration. The variabilities derived from changes in the optical impressions were compared with those derived from changes in optical bite registration. The difference in the variabilities derived from changes in the two approaches was statistically analyzed using the Wilcoxon signed-rank test, and $p<0.05$ was deemed to indicate statistical significance.

The first and third paragraphs were omitted.
The publisher regrets the errors.

(Asian Pac J Dent 2015; 15(1): 1-2.)
January 1, 2015.
 Online ISSN 2185-3487, Print ISSN 2185-3479