

Editorial

Can an optimal force be estimated?

Dr Brian Lee thinks so. In a carefully executed study Dr Lee calculated the associations between the lengths and areas of the roots of the permanent teeth and found some remarkably high values. He reports the correlations were improved when the product of length and width were used, and describes how to use his data and to obtain optimal rates of tooth movement. This extensive study provides a wealth of data for the clinician.

Decalcification around orthodontic attachments can be distressing for patients and clinicians. According to Drs Uysal, Amasyali, Koyuturk, Ozcan and Sagdic, amorphous calcium phosphate-containing composites replace the mineral lost due to decalcification and may lessen the risk of decalcification in patients with poor oral hygiene.

The cytotoxicities of separating elastics were investigated by Drs Pithon, Santos, Martins, Romanos and Araujo using neutral red over periods up to 168 hours. Both latex and non-latex separating elastics were investigated and clinicians will be pleased to learn both types were considered to be biocompatible.

In this latest study, Drs Miles and Weyant compare the efficiencies of self-ligating and conventional porcelain brackets and report that the self-ligating brackets were quicker to 'untie' and 'tie' than conventional brackets and there were no significant differences in the alignment or discomfort experienced by the subjects.

In a study of Brazilian subjects, Drs Motta, Souza, Bolognese, Guerra and Mucha report older Brazilians show less of their upper incisors and more of their lower incisors than young Brazilians. Some would argue that this is a good reason for the current concern about maintaining lower incisor alignment.

Drs Kilic, Catal and Oktay provide norms for the McNamara analysis for Turkish adolescents. They found some small gender differences, but conclude that it may be possible to use the same norms for boys and girls.

In an electron microscopic study, Drs Bhalla, Good, McDonald, Sherriff and Cash confirm that the slot

sizes of six self-ligating brackets were larger than the stated dimension: in some cases by quite large amounts. They caution that differences between slot widths and archwire sizes may lead to significant loss of torque with some prescriptions.

Drs Dause, Cobourne and McDonald investigated the sensitivity and specificity of the Royal London Space Planning and Korkhaus analyses. They report both analyses were clinically sensitive, but the Royal London Space Planning Analysis lacked specificity. Readers who are not familiar with these analyses will find their article interesting and informative.

In an interesting study of indirectly applied cyclic loading and unloading to the inter-premaxillary suture, Drs Uysal, Olmez, Amasyali, Karslioglu, Yoldas and Gunhan report that new bone was deposited in the expanded suture. They used two loading cycles and report that the greatest percentage of new bone was found in the group subjected to the higher loading cycle. Further studies will investigate additional loading cycles and whether it is loading or unloading that is important for the formation of new bone.

In an EMG study of muscle activity in the upper lip, Dr Nihat Kilic confirmed that lip activity did not appear to determine the positions of the incisors. In a prospective clinical trial, Drs Pandis, Polychronopoulou, Sifakakis, Makou and Eliades examine the effects of levelling the curve of Spee on the mandibular incisors and arch widths. They report that about 4 degrees of lower incisor proclination accompanied 1 mm of levelling with a straight-wire appliance.

Drs Ang and Dreyer compared the dental changes produced by two advancement appliances used by patients with obstructive sleep apnoea. Users of these appliances will be pleased to note that both appliances had similar, mild effects on the dentition and occlusion.

I was unaware that ozone water is used widely to disinfect water systems until I read this article by Drs Pithon and Santos. They report that ozone water did not affect the bond strengths of the adhesives they

used; a finding of interest to orthodontists and restorative dentists using these materials.

When the skeletal changes in young Class III patients treated with combined facemask and intermaxillary traction were examined, Drs Thiesen, Fontes, Zastrow and May found that the most significant changes occurred in the first three months of treatment.

The bond strengths of a number of different adhesives were not adversely affected when the same self-etching primer was used, according to Drs Scougall-Vilchis, Zarate-Diaz, Kusakabe and Yamamoto.

The final article in this issue is a case report by Drs Cuoghi, Bosco, Mendonca, Tondelli and Miranda-Zamalloa of an incisor with a fractured root. The tooth was extruded orthodontically and restored, following periodontal surgery. The authors point out the advantages of a multidisciplinary approach to treatment of these challenging cases.

Michael Harkness