Editorial

Angle's classification – time to move on?

Within orthodontics there appears to be a preoccupation with Angle's classification of molar relationship that, arguably, offers little useful information about a particular malocclusion. When assessing a patient, the important questions that require an answer are: how difficult is treatment likely to be; what is the proposed duration of treatment; are extractions required; and will anchorage require supplementation? During treatment we are interested in knowing how well treatment is progressing and is there sufficient anchorage to achieve the desired result?

When enquiring about the above from enthusiastic postgraduate students, one is often first presented with the details of the Angle relationship of the molars, as if this is going to offer valuable information. Further confusion arises in the reproducibility of sub-divisions, which are meant to classify cases with Class I molars on one side and Class II molars on the other. For example, one study using Angle's classification found cases falling into different groups when diagnosed by different clinicians.[1] These authors suggested that Angle's system was not highly reliable and suggested that a separate classification both of buccal and incisor segments may prove to be more informative. In a more recent study,[2] 34 chairpersons of United States Orthodontic Departments were surveyed as to their understanding of Class II sub-division. Twenty-two respondents believed sub-division referred to the Class II side, eight believed it referred to the Class I side, and three teach neither meaning for sub-division. In one instance, the Chairperson supported the Class II side; however, the other Faculty members disagreed. Fewer than 65% of orthodontic educators agreed on the meaning of sub-division.

If only one measurement of the buccal segment was allowed to indicate: the complexity of the malocclusion, the anticipated difficulty in treating the case, the prognosis for a good result, and the need or otherwise for extractions and additional anchorage reinforcement, the canine relationship has no equal. In most malocclusions, where the tooth size discrepancy is minimal, the aim should be to treat to an ideal Class I canine relationship. At every stage in treatment the canine relationship offers more information than perhaps any other measurement. Both before and during treatment, specific measurement of the relative canine positions should be made, and documented in millimetres or fractions of a 'unit' pre- or post-normal on each side of the arch.

When we develop a treatment plan, the lower labial segment must be mentally realigned, which often involves distal movement of the lower canine to allow full alignment of the lower front teeth without untoward proclination. The canine relationship must then be reassessed after this mental repositioning of the lower canine. Only then does one have an indication (in most Class I and Class II cases) of how much posterior movement of the upper canine is required, to allow achievement of an ideal Class I canine relationship, thus how much anchorage the case really requires and, therefore, how difficult the case really is. The canine relationship also provides the most useful assessment of how treatment is progressing and often aides an accurate assessment of when treatment will be complete. This concept is not new and was clearly stated by Dick Mills in his seminal textbook almost 20 years ago.

To become preoccupied with Angle's molar classification is, at best, wasting time on an aspect of the malocclusion that is largely irrelevant and, at worst, will lull the clinician into a false sense of security about how well the case is progressing. Ignore the canine relationship at your peril!

References

1. Gravely JF, Johnson DB. Angle's classification of malocclusion: an assessment of reliability. *Br J Orthod* 1974; **1:** 79–86.
2. Siegel NA. A matter of class: interpreting sub-division in a malocclusion. *Am J Orthod Dentofac Orthop* 2002; **122:** 582–586.