In spite of this, pain perception in relation to the 2 methods significantly differed statistically. To what extent the results are operator dependent demands further study.

One previous study found that time of onset was shorter after injections with The Wand.[14] This study could not confirm this, which might be due to the fact that complete alveolar nerve block may not be obtained until approximately 1.5 ml of anesthetic is disposed.

Conclusions

The present study indicates that mandibular block injections performed using The Wand are less painful than injections performed using traditional methods. No difference in time of onset could be found.

Acknowledgements

References

1. Liebermann WH. The Wand. *Pediatr Dent.* 1999;21:124.
2. Friedman MJ, Hochman MN. The AMSA injection: A new concept for local anaesthesia of maxillary teeth using a computer-controlled injection system. *Quintessence Int.* 1998;29:297-303.
3. Friedman MJ, Hochman MN. P-ASA block injection: A new palatal technique to anesthetize anterior teeth. *J Esthet Dent.* 1999;11:63-71.
4. Friedman MJ, Hochman MN. Using AMSA and P-SAS nerve blocks for esthetic restorative dentistry. *Gen Dent.* 2001;18:506-511.
5. Primosch RE, Brooks JD. Influence of anaesthetic flow rate delivered by the Wand local anaesthetic system on pain response to palatal injections. *Am J Dent.* 2002;15:15-20.
6. Allen KD, Kotil D, Larzelere RE, Hutfless S, Beiswanger BB. Comparison of a computerized anaesthesia device with a traditional syringe in preschool children. *Pediatr Dent.* 2002;24:315-320.
7. Saloum FS, Baumgartner JC, Marshall G, Tinkle J. A clinical comparison of pain perception to the Wand and a traditional syringe. *Oral Surg Oral Med Oral Pathol.* 2000;89:691-695.
8. Gibson RS, Allen K, Hutfless S, Beiraghi S. The Wand versus traditional injection: A comparison of pain related behaviors. *Pediatr Dent.* 2000;22:458-462.
9. Ram D, Peretz B. The assessment of pain sensation during local anesthesia using a computerized local anesthesia (Wand) and a conventional syringe. *J Dent Child.* 2003;70:130-133.
10. Hochman M, Chiarello D, Hochman CB, Lopatkin R, Pergola S. Computerized local anesthetic delivery versus traditional syringe technique. *N Y State Dent J.* 1997;63:24-28.
11. Asarch T, Allen KA, Petersen B, Bairaghi S. Efficacy of a computerized local anesthesia device in pediatric dentistry. *Pediatr Dent.* 1999;21:421-424.
12. Evers H, Haegerstam G. *Handbog i Odontologisk Lokalanalgesi.* Copenhagen, Denmark: Schultz Medical Information; 1981:138-149.
13. Jones CM, Heidmann J, Gerrish AC. Children's rating of dental injection and treatment pain, and the influence of the time taken to administer the injection. *Int J Paediatr Dent.* 1995;5:81-85.
14. Aboushala A, Kugel G, Efthimiadis N, Korchak M. Efficacy of a computer-controlled injection system of local anesthesia in vivo. *J Dent Res.* 2000;79:490.

ABSTRACT OF THE SCIENTIFIC LITERATURE

PREDICTING MAXILLARY CANINE IMPACTIONS

The purpose of this retrospective study was to identify measurements from posteroanterior cephalograms taken in the mixed dentition that could accurately predict maxillary canine impaction. A formula derived from the data provided over 95% accuracy in predicting maxillary canine impaction.

Comments: Most of us obtain a panoramic film in the mixed dentition, and certainly the information gleaned from these films is very useful in assessing maxillary canine position. But the accuracy in predicting impaction is not nearly as good as this study's results (see Warford, *Am J Orthod Dentofac Orthop* 2003;124:651) While landmarks on PA cephalograms are sometimes difficult to make out, those used in this study are readily identifiable. **ALS**

Address correspondence to Tiziano Baccetti, DDS, PhD, Universita degli Studi di Firenzi, Via del Ponti di Mezzo, 46-48, 50127 Firenze, Italy.

Sambataro S, Baccetti T, Franchi L, Antonini F. Early prediction variables for upper canine impaction as derived from posteroanterior cephalograms. *Angle Orthod.* **2004;75:28-34.**

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