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Risk factors associated with incisor injury in elementary school children

Michael J. Kania, DDS;[b] Stephen D. Keeling, DDS, MS;[a] Susan P. McGorray, PhD;[d] Timothy T. Wheeler, DMD, PhD;[e] Gregory J. King, DMD; DMSc[f]

[a]Stephen D. Keeling, DDS, MS, Box 100444, JHMHC, Dept. of Orthodontics, College of Dentistry, University of Florida, Gainesville, FL 32610. S.D. Keeling, Department of Orthodontics, College of Dentisty, University of Florida.

[b]M.J. Kania, Department of Orthodontics, College of Dentistry, University of Florida, Gainesville, Fla.

[d]S.P. McGorray, Division of Biostatistics, Department of Statistics, College of Liberal Arts and Sciences, University of Florida.

[e]T.T. Wheeler, Department of Orthodontics, College of Dentistry, University of Florida.

[f]G.J. King, Department of Orthodontics, School of Dentisty, University of Washington, Seattle, Wash.

ABSTRACT

This study examined risk factors associated with incisor injury in 3396 third and fourth grade school children in Alachua County, Florida. One of six orthodontists completed a standardized examination form for each child to assess severity of incisor injury, gender, age, race, skeletal relationships, morphologic malocclusion, incisor exposure, interlabial gap, TMJ sounds, chin trauma, and history of lower facial trauma. One in five (19.2%) exhibited some degree of incisor injury. This was limited to a single tooth in 73.1% of those with injury, while enamel injury predominated (89.4%). The majority of the injuries (75.4%) were localized in the maxillary arch, with central incisors the most frequently traumatized. Chi-square tests of association indicated that gender, race, school, orthodontist, history of lower facial trauma, chin trauma, profile, and maxillary and mandibular horizontal positions were associated with incisor injury (P<O.05). Wilcoxon rank sum tests identified differences in age, overjet, time of screening, and interlabial gap between those with and without injury (P<O.05). Results of logistic regression analyses indicated risk of incisor injury was greater for children who had a prognathic maxilla, a history of trauma, were older, were male, and had greater overjet and mandibular anterior spacing.

KEY WORDS: Incisor injury, Children, Epidemiology, Statistical models, Malocclusion.

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