



CFAO GRADUATE STUDENT POSTERBOARD ABSTRACTS

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A COMPARISON OF SPECIFIC DENTAL OUTCOMES FOLLOWING PRE- AND POST- PERMANENT MAXILLARY CANINE EMERGENCE ALVEOLAR BONE GRAFTING IN COMPLETE UNILATERAL CLEFT LIP AND PALATE

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Background: The ideal timing of secondary alveolar bone grafting (SABG) to repair clefts of the maxillary alveolus in patients with cleft lip and/or palate (CLP) remains controversial. SABG is most commonly completed prior to the cleft-side permanent maxillary canine's emergence from the alveolus (pre-CE) to favor canine eruption and survival. SABG performed after the cleft-side canine's emergence (post-CE) is associated with concerns for survival of the cleft-adjacent teeth due to inadequate bone support and other deleterious outcomes such as root resorption.

Aim: To evaluate the dental survival and specific dental outcomes of the cleft-side permanent maxillary canine, central and/or lateral incisor in subjects with complete unilateral CLP (UCLP) who received pre-CE or post-CE SABG.

Materials and Methods: A retrospective analysis of 20 pre-CE and 20 post-CE subjects with UCLP was conducted. All cleft-related surgeries were performed by one surgeon. Intraoral radiographs and clinical chart notes were studied from age 6 years to 3.94 years post-SABG. Spontaneous eruption or need for exposure, survival of teeth, need for prosthetic replacement, root development, and root resorption were analyzed.

Results and Conclusions: The pre-CE group required more canine exposures. One canine was extracted in the post-CE group following impaction and severe root resorption. Lateral incisor survival was poor in both groups. More prosthetic replacements were planned in the post-CE group. Root development of canines and central incisors was similar between groups. Root resorption defects in cleft-adjacent teeth presented 2.92 years after SABG, more frequently in the post-CE group (23.08%) than the pre-CE group (13.63%).