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BURDEN OF CARE ANALYSIS OF INFANT ORTHOPEDICS FOR IMPROVEMENT OF NASOLABIAL AESTHETICS IN COMPLETE UNILATERAL CLEFT LIP AND PALATE

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Purpose: 1. To evaluate the burden of care of two pre-surgical infant orthopedic (PSIO) protocols for repair of complete unilateral cleft lip and palate (CUCLP) 2. To compare the aesthetic outcomes of a centre that has employed two different types of PSIO as part of their protocol for patients with CUCLP to those of centres not utilizing PSIO.

Samples and Methods: Four samples were collected: Two from the same centre that underwent either traditional infant orthopedics (TIO) or nasoalveolar molding (NAM), and two from centres not employing PSIO. Burden of care data were compiled for the PSIO groups and frontal and profile photographs at approximately 5 years of age were collected for all groups for ratings of nasolabial aesthetics using a modification of the Asher-McDade method.

Results: The burden of care of NAM was found to be significantly greater than TIO for both the number of visits (9.9 vs. 6.6, ($p < 0.001$)); and the number of days wearing the appliance (127 vs. 112, ($p < 0.05$)). Significant differences in nasolabial aesthetic ratings were noted among the three centres, with the centre that utilized some form of PSIO exhibiting improved nasolabial aesthetics across several categories. No significant differences were observed in the nasolabial aesthetic outcomes between the NAM and TIO groups.

Conclusions: Under the conditions of this investigation the following conclusions could be drawn: 1. Significant differences exist in the burden of orthodontic care when it involves NAM as compared to TIO for the treatment of patients with non-syndromic CUCLP, with NAM patients requiring more appointments and a greater number of days wearing the appliance. 2. No significant differences exist in the nasolabial aesthetics of patients who have received NAM as compared to TIO for the initial repair of non-syndromic CUCLP. 3. Significant differences exist in the nasolabial aesthetics between centres that utilize PSIO and those that do not, with centres not employing PSIO demonstrating poorer nasolabial aesthetics across several categories.