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Feeding Outcomes in Children with Craniofacial Anomalies

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Title of Proposal:
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Abstract of Proposal:
Feeding disorders in children with craniofacial anomalies, specifically cleft lip and/or palate, have been documented in the literature as a source of parental stress and can lead to difficulties with the early parent-infant bonding process, as well other medical co-morbidities including poor growth, impairment to the respiratory and developmental health of the child, and increased hospitalizations (Miller, 2011). However, there is a dearth of information in the literature regarding atypical craniofacial anomalies and early feeding difficulties. By utilizing an interdisciplinary team approach, we present a series of three case studies of early feeding difficulties in children with varying degrees of atypical craniofacial anomalies. The case series aims to identify specific feeding outcomes to demonstrate the importance of early identification using a team-based approach to evaluation, treatment recommendations, and tracking clinical outcomes to provide a foundation of evidence-based medicine that can be utilized in future studies.

Summary of Proposal:
The infant feeding process depends on consistent coordination of the suck-swallow-breathe sequence while bottle or breastfeeding. Sequential swallows occur during the apneic portion of the cycle to protect the airway. Infants with anatomic, neurological, or respiratory issues that cause difficulty in any of the components in that cycle, can lead to decreased safety of swallowing. Inadequate airway protection and feeding impairments may have implications leading to aspiration, recurrent respiratory illness, possible lung damage, and pneumonia.

Concomitant feeding difficulties and dysphagia are common in children with craniofacial anomalies due to differences in structure and function. The palate is vital in separating the oral and nasal cavity, and this separation is crucial for swallowing (Bzoch, 1997). As such, oral feeding difficulty occurs in varying degrees for children with cleft lip and/or palate and can be directly related to the extent of clefting and differences in anatomical structures (Miller, 2011). For example, an isolated cleft palate may result in difficulty achieving adequate suction due to the lack of separation of the oral and nasal cavities (Arvedson & Brodsky, 2002), but it can be addressed with minor modifications made to the feeding process and use of specialty cleft feeders.

Difficulties with oral feeding occurs in varied degrees for children with atypical craniofacial anomalies, however, and can be related to the extent of differences in anatomy, underlying genetic syndromes, neurodevelopmental delays, number of hospitalizations, and the provision of therapeutic services. Consequently, identification of feeding difficulty, parental education, and treatment are essential steps to best support infants and their families after an initial diagnosis. Medical best practice dictates that medical professionals use treatments that are evidence-based; however, there is a lack of evidence supporting specific strategies in infant feeding disorders and management in patients with atypical craniofacial anomalies (Miller, 2011).

We present a case series of three atypical craniofacial anomalies and the importance of using a team-based interdisciplinary care model approach to address early feeding difficulties. Case reports include: 1) craniofacial anomaly resulting from a severe ulcerated beard-distribution hemangioma; 2) rare Tessier 7 facial cleft; and 3) combination unilateral and bilateral cleft lip and palate with an early intervention utilizing nasoalveolar molding.

References:

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