Non-operative correction of craniofacial anomalies in infants

CHAPTER 11

IMPACT PARAGRAPH

The central theme of this thesis revolves around the use of non-operative methods for the correction of craniofacial anomalies at a neonatal age. As extensively described in this thesis, it is of utmost importance to accurately evaluate the impact of craniofacial anomalies on the wellbeing of individuals and to find a proper treatment method. Contextually, this also indicates that when provided the right circumstances this also indicates conservative treatment methods as opposed to operative methods or no treatment as opposed to any treatment.

Parents of neonates are oftentimes worried about certain craniofacial elements, such as cranial shape, ear anomalies or cleft lip and palate. Not only are they worried about the physiological consequences of the different aspect of the craniofacial elements, but they are also concerned for the appearance of their child and the influence these anomalies may have on the child's social wellbeing later in life.

The Back to Sleep Campaign, initiated in 1992, has led to an increase of plagio- and brachycephaly in neonates and parents often present worried about the cranial shape of their child. This thesis shows that cranial shape is of lesser importance for eventual esthetic evaluation, but also that cranial shape seems to normalize as time progresses. Therefore, parents may now be comforted with the consensus that a deviating cranial shape will get better over time. However, it should be noted that helmet therapy, which is no longer insured due to other research, was shown to be of additional benefit in case of plagiocephaly. Unfortunately, this thesis is unable to provide enough evidence for its use in further practice. Physical therapy is a possible treatment option which may still be sought out in case of concern, but it does not increase the rate of decrease of deformation compared to no treatment.

Ear anomalies have been under investigation for a while, and as of late, ear esthetics seems to be making a rise in popularity. For non-operative correction of ear anomalies, ear molding has become more and more popular during the last decades. This thesis shows that ear molding is a relatively safe and effective treatment method for ear anomalies. It can be initiated at an early age and will therefore prevent possible bullying and surgical correction and its risks. Many forms of ear molding have been shown to lead to satisfying outcomes. Taking the rising popularity of ear esthetics into account, it is important to evaluate the average and ideal proportions of the adult human ear. This thesis provides a contemporary overview of the dimensions of the adult Dutch human ear and the objectified satisfaction with various proportions. It should be noted that it is hypothesized that a more average ear will likely be seen as more esthetically pleasing. Under- and overcorrection are both risks that may occur with surgical procedures, but in the case of standardized non-operative treatment methods, such as the EarWell Infant Corrective System, these risks are mitigated. The EarWell Infant Corrective System provides a low-risk, efficient and standardized treatment method for various ear anomalies in neonates. This thesis shows that treatment can still be initiated until

12 weeks of age, not impacting satisfaction of outcome, severity decrease or duration of treatment.

This thesis serves as a comprehensive exploration into the non-operative correction of craniofacial anomalies at the neonatal age. It not only contributes valuable insights into treatment approaches but also challenges established practices, advocating for the well-being and aesthetics of neonates. The implications of this research extend far beyond academic purposes, carrying the potential to reshape healthcare policies, increase awareness, and improve the lives of countless neonates. Future research, however, is still warranted to help optimize treatment protocols of non-operative treatment methods. Eventually, hopefully, this will lead to a mostly non-invasive and optimized treatment protocol for neonates to further prevent them from unnecessary harm in any form.