



Hanna Lif

Correlation between the skull base and orbit in Unicoronal craniosynostosis

Duration	6 months
Short Bio	Variability of severity in non-syndromic Unicoronal craniosynostosis varies greatly, but it is not known why. The variability in skull base, orbital and frontal asymmetry is strongly associated with unpredictable outcomes. Orbital asymmetry is associated with poor ophthalmic outcomes, but it is not known how it relates to skull base deformation. There are different ways to surgically treat Unicoronal craniosynostosis, but usually one approach is used for all patients at each center. If two methods are used, age and parents preference determine choice of surgical treatment. However, aesthetic and ophthalmic outcome is related to patient-specific variability in preoperative severity.
Home Institution	Uppsala Craniofacial Centre, Plastic Surgery, Uppsala University Hospital, Uppsala, Sweden
Host Institution	Hôpital Necker les Enfants Malade, Chirurgie plastique- et maxillofaciale, AP-HP, Paris, France
Project Description	The aim of this study was to identify explanatory factors of severity associated with variation in deformity to investigate if there is a need for more individualized surgical treatment. Asymmetry of the skull base and orbits, degree of anterior plagiocephaly and Harlequin deformity was automatically calculated to determine severity in each patient. Then, correlation between severity and other preoperative factors were investigated to see if they should be considered when choosing surgical treatment based on their influence on severity; age, SD of head circumference, suture fusion around the pterion, posterior plagiocephaly, and lateralisation.
Personal Statement	The fellowship has strengthened the collaboration between our centers, leading to further ongoing collaborative projects. The results from this multi-center study have had great impact because of its relevance and bounteous study design. The fellowship has boosted my career both as a clinician and researcher.