3 - Clinical Anatomy

PO-047 - (23866) - TRIGONOCEPHALY-ASSOCIATED HYPOTELORISM: AN ASSESSMENT OF ORBITAL SHAPES AND DIMENSIONS

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None.
Trigonocephaly occurs when the metopic suture fuses prematurely, and is characterised by a triangular-shaped forehead, shortening of the anterior cranial fossa, supra-orbital retrusion, hypotelorism, bitemporal narrowing, and occipitoparietal widening. This study aimed to document the orbital morphometry in trigonocephaly patients when compared to normal patients, and introduce a classification system for the different orbital shapes visualized in trigonocephaly.
Preoperative two-dimensional computed tomography scans of 15 non-syndromic, isolated trigonocephaly patients (13 males and 2 females) and 8 normal controls (4 males and 4 females), with median ages of 11 months and 22 months, respectively, were digitized and analysed (BREC/00004342/2022). Orbital height, width, surface area on both left and right sides, and interorbital distance was measured. Orbital shapes of trigonocephaly patients were classified into various categories according to different age groups.
More complex orbital shapes were observed in younger age groups, compared to less complex ones in older age groups. Orbital height on both sides showed weak but significant correlations to the interorbital distance between trigonocephaly and control groups ($r=-0.057$ left, $r=-0.024$ right). Orbital surface area on the right side showed a weak but significant correlation to the interorbital distance between trigonocephaly and control groups ($r=-0.056$).

The orbital anatomy is severely affected in patients with trigonocephaly. The various orbital shapes observed are dependent on both the degrees of severity and age of trigonocephaly patients. These findings could assist craniofacial surgeons in the type of surgical correction needed to obtain as near to normal orbital shape and function.

Palavras-chave : Dysmorphology, Hypotelorism, Trigonocephaly