Eye tracker based study: Perception of faces with a cleft lip and nose deformity

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AIM
Quantification of visual attention directed towards cleft stigmata and its impact on the perception of selected personality traits.

METHODS
Forty observers were divided into two groups and their visual scan paths were recorded. Both groups observed a series of photographs displaying full frontal views of the faces of 18 adult patients with clefts, nine with residual cleft stigmata and nine with digitally-corrected stigmata (each patient only appeared once per series). Patients that appeared with residual stigmata in one series appeared digitally corrected in the other series and vice versa. Visual fixation times on the upper lip and nose were compared between the original and corrected photographs. Observers subsequently rated personality traits as perceived using visual analogue scales and the same photographs that they had observed in the series.

RESULTS
In faces depicting cleft stigmata observers spent more time looking at the oronasal region of interest, followed by the eyes (39.6%; SD 5.0 and 35.1%; SD 3.6, respectively, p = 0.0198). Observers spent more time looking at the cleft lip compared with the corrected lip (21.2%; SD 4.0 and 16.7%; SD 5.0, respectively, p = 0.006). The differences between questionnaire scores for faces with cleft stigmata compared with faces with corrected stigmata for withdrawn-sociable, discontent-content, lazy-assiduous, unimaginative-creative, unlikeable-likeable, and the sum of individual personality traits were not significant.

CONCLUSION
According to these findings, cleft lip and cleft nose have an attention-drawing potential with the cleft lip being the major attention drawing factor. These data do not provide supportive evidence for the notion reported in literature that patients with clefts are perceived as having negative personality traits.