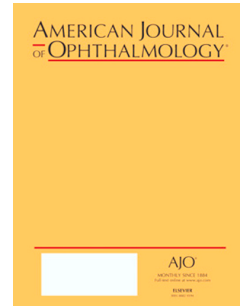


# Accepted Manuscript

Visual Function Twenty Years After Childhood Hemispherectomy for Intractable Epilepsy

Sian E. Handley, B.Med Sci, MSc, Faraneh Vargha-Khadem, PhD, Richard J. Bowman, MD, FRCOphth, Alki Liasis, PhD



PII: S0002-9394(17)30074-0

DOI: [10.1016/j.ajo.2017.02.014](https://doi.org/10.1016/j.ajo.2017.02.014)

Reference: AJOPHT 10050

To appear in: *American Journal of Ophthalmology*

Received Date: 20 October 2016

Revised Date: 10 February 2017

Accepted Date: 15 February 2017

Please cite this article as: Handley SE, Vargha-Khadem F, Bowman RJ, Liasis A, Visual Function Twenty Years After Childhood Hemispherectomy for Intractable Epilepsy, *American Journal of Ophthalmology* (2017), doi: 10.1016/j.ajo.2017.02.014.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**Abstract:**

**Purpose:** To investigate visual function in adults post hemispherectomy in childhood.

**Design:** Non-comparative case series.

**Methods:** All participants underwent visual acuity, binocular function, visual field, optical coherence tomography (OCT) of the retinal nerve fiber layer (RNFL), and monocular pattern reversal visually evoked potentials (prVEP).

**Participants:** 6 adults who had a hemispherectomy in childhood (median 21.5 years post-op).

**Main Outcome Measures:** Comparison was made of visual acuity, visual field height, global RNFL thickness and prVEP amplitude evoked by full and half field stimulation. Comparison of the eye ipsilateral to the side of surgery to the contralateral eye was achieved employing paired t-tests to the visual function measures.

**Results:** All participants had homonymous hemianopia. The residual seeing visual field was constricted in all cases when compared to normative data despite crossing the midline into the blind hemi field in 11/12 eyes. This observation was supported by prVEP's to stimuli presented in the blind half field. The height of visual field was smaller in the eye contralateral to side of surgery compared to the ipsilateral side ( $P=0.047$ ). Visual acuity and RNFL thickness also showed greater diminution in the eye contralateral ( $P=0.040$  and  $P=0.0004$ ). Divergent strabismus was in four participants with greater field loss.

**Conclusions:** Adults post hemispherectomy in childhood may have better visual function in the eye ipsilateral to the side of the hemispherectomy compared to the contralateral eye. Possible mechanisms of the inter-ocular difference are discussed. Though visual fields and prVEP responses demonstrate evidence of re-organization in to the blind half field, they also reveal significant un-expected constriction of the functional field.

Download English Version:

<https://daneshyari.com/en/article/5703210>

Download Persian Version:

<https://daneshyari.com/article/5703210>

[Daneshyari.com](https://daneshyari.com)