Mapping the binocular scotoma in macular degeneration

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INTRODUCTION
When the scotoma is bilateral, it often obscures objects of interest, causing individuals with macular degeneration (MD) to miss information. Furthermore, the majority of individuals with MD are unaware of their scotoma, which causes further difficulties in tasks of daily living.

Here, we propose a method to map precisely the binocular scotoma.

METHODS

Step 1: Screening
Participants: 6 with a binocular scotoma (B; age: 56-89), 3 with monocular scotomas (M; age: 75-79) and 3 controls (C; age: 61-74)

Step 2: Binocular scotoma mapping

Step 3: SLO-based binocular scotoma estimate (Ghahghaei & Walker, 2016)

RESULTS

Coarse-to-fine manual selection of probed locations yields fine details of scotoma edges

The size and shape of monocular scotoma from the eyetracker is similar to the SLO map

The size and shape of binocular scotoma from the eyetracker is similar to the estimate from the Ghahghaei-Walker algorithm

CONCLUSIONS

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REFERENCES

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