



CORRESPONDENCE

Comment on: 'Evaluation of retinal and choroidal microcirculation in Behçet's disease'

© The Author(s), under exclusive licence to The Royal College of Ophthalmologists 2022

Eye (2023) 37:578; <https://doi.org/10.1038/s41433-022-02252-7>

To the Editor:

We read with great interest the article by Şimşek et al. concerning the evaluation of retinal and choroidal microcirculation in Behçet's disease (BD) [1]. We congratulate the authors for their very interesting study, but we would like to make some comments.

The authors found vessel density values of the superficial and deep macular capillary plexus to be similar between BD group and control, with no significant difference in terms of choroidal thickness and total choroidal area values in the macula and in all peripapillary sectors. This seems to contradict the finding of significantly lower choroidal vascularity index (CVI) values in the BD group compared with controls in the macula and temporal, nasal, and inferior sectors of the peripapillary area.

In our opinion, the reason for this could be the so called blooming effect, which is well known in the echographic B scan [2, 3]. This effect is related to signal amplification. In particular when high signal amplification is used, the image will appear brighter, and the amount of white pixels will be greater; the opposite will happen using a low setting. This artifact could influence the binarization utilized in the CVI evaluation, increasing the low reflective areas, considered to be the luminal ones, when the amplification is low, and reducing them when the amplification is higher, making the results unreliable [4, 5].

Ciro Sannino ¹, Alessio Marino ¹✉ and Maddalena De Bernardo ¹

¹Eye Unit, Department of Medicine, Surgery and Dentistry, "Scuola Medica Salernitana", University of Salerno, Baronissi, Italy.
✉email: dr.alessiomarino94@gmail.com

REFERENCES

1. Simsek M, Aksoy M, Ulucakoy RK. Evaluation of retinal and choroidal microcirculation in Behçet's disease. *Eye (Lond)*. 2022. <https://doi.org/10.1038/s41433-022-01932-8>.
2. De Bernardo M, Vitiello L, Cornetta P, Rosa N. Ocular ultrasound evaluation of optic nerve sheath diameter in military environments. *Mil Med Res*. 2019;6:16. <https://doi.org/10.1186/s40779-019-0207-8>.
3. De Bernardo M, Vitiello L, Rosa N. Optic nerve ultrasonography for evaluating increased intracranial pressure in severe preeclampsia. *Int J Obstet Anesth*. 2019;38:147. <https://doi.org/10.1016/j.ijoa.2018.12.010>.
4. Cornetta P, Marotta G, De Bernardo M, Vitiello L, Rosa N. Ultrasound and optic neuritis. *Am J Emerg Med*. 2019;37:1598. <https://doi.org/10.1016/j.ajem.2019.02.001>.
5. Vitiello L, De Bernardo M, Capasso L, Cornetta P, Rosa N. Optic nerve ultrasound evaluation in animals and normal subjects. *Front Med (Lausanne)*. 2022;8:797018. <https://doi.org/10.3389/fmed.2021.797018>.

AUTHOR CONTRIBUTIONS

CS, AM and MDB wrote this letter.

COMPETING INTERESTS

The authors declare no competing interests.

ADDITIONAL INFORMATION

Correspondence and requests for materials should be addressed to Alessio Marino.

Reprints and permission information is available at <http://www.nature.com/reprints>

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.