

## Acute macular neuroretinopathy and COVID-19 vaccination

Dear Editor,

We read with interest the article by Vinzamuri *et al.*<sup>[1]</sup> The hyperreflective lesions seen on ganglion layer could represent sections across the vessels. It would be helpful if the optical coherence tomography images would be accompanied by section through which it was taken. Since acute macular neuroretinopathy (AMN) and paracentral middle maculopathy (PAMM) are possibly related to vascular occlusion either a fundus fluorescein angiography or optical coherence tomography angiography can add value to their case. In AMN, changes occur due to reduced retinal perfusion at the level of deep capillary plexus, which provides retinal perfusion to the zone between the retinal and choroidal circulations.<sup>[2,3]</sup> AMN multimodal imaging findings described could be dark lesions on red-free imaging, hypo-autofluorescence on fundus autofluorescence, and early and late hypofluorescence on fluorescein angiography. Infrared imaging also detected the lesions with a darkened outline.<sup>[4]</sup>

Despite complete visual recovery, there is a possibility of persisting scotoma which may be as a result of thinning of the affected retinal layers.<sup>[5]</sup>

We agree with the authors that AMN and PAMM following COVID-19 vaccine may not be causal and may have to be explored further.

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### Conflicts of interest

There are no conflicts of interest.

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## References

1. Vinzamuri S, Pradeep TG, Kotian R. Bilateral paracentral acute middle maculopathy and acute macular neuroretinopathy following COVID-19 vaccination. *Indian J Ophthalmol* 2021;69:2862-4.
2. Ashraf M, Goldstein D, Fawzi A. Optical coherence tomography angiography: Potential artifacts in acute macular neuroretinopathy. *JAMA Ophthalmol* 2017;135:675-6.
3. Kulikov AN, Maltsev DS, Leongardt, TA. Retinal microvasculature alteration in paracentral acute middle maculopathy and acute macular neuroretinopathy: A quantitative optical coherence tomography angiography study. *Retin Cases Brief Rep* 2020;14:343-51.

4. Lalezary M, Schoenberger SD, Cherney E, Agarwal A. Acute macular neuroretinopathy: An atypical case. *Retin Cases Brief Rep* 2013;7:5-8.
5. Aziz HA, Kheir WJ, Young RC, Isom RF, Dubovy SR. Acute macular neuroretinopathy: A case report and review of the literature, 2002–2012. *Ophthalmic Surg Lasers Imaging Retina* 2015;46:114-24.

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