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NEURO-OPHTHALMOLOGY
An International Journal of Neuro-Ophthalmology

Neuro-Ophthalmology

ISSN: 0165-8107 (Print) 1744-506X (Online) Journal homepage: www.tandfonline.com/journals/ioph20

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To cite this article: Kemal Örnek (2025) Letter to the Editor: Comment on Tsiogka Et al.'s "Compound Heterozygosity for the C6777T Mutation of the MTHFR Gene and the FII G20210A Mutation of the Prothrombin Gene in Sequential Bilateral Anterior Ischemic Optic Neuropathy", Neuro-Ophthalmology, 49:5, 431-431, DOI: 10.1080/01658107.2025.2538138

To link to this article: https://doi.org/10.1080/01658107.2025.2538138

Published online: 01 Aug 2025.

NEURO-OPHTHALMOLOGY
2025, VOL. 49, NO. 5, 431
https://doi.org/10.1080/01658107.2025.2538138

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Dear Editor,

I read with great interest the paper entitled "Compound heterozygosity for the C6777T mutation of the MTHFR gene and the FII G20210A mutation of the prothrombin gene in sequential bilateral anterior ischemic optic neuropathy" by Tsiogka et al.[1] The authors reported a case of bilateral, sequential non-arteritic anterior ischemic optic neuropathy (NA-AION) in a 52-year-old patient who was found to have mutations for the prothrombin and methylene-tetrahydrofolate reductase (MTHFR) genes.

Non-arteritic anterior ischemic optic neuropathy is a multifactorial disease of the optic nerve which may be either unilateral or involve the fellow eye later. Main cause is the acute ischemia of the optic nerve head causing a sudden and painless visual loss. Besides various local and systemic risk factors, thrombophilic disorders may have a role in the pathogenesis of NA-AION.

I would like to share my ideas on this interesting paper. I am concerned about the presumed diagnosis of bilateral, sequential NA-AION suggested by the authors for the following reasons; 1) At the time of initial visual loss, the patient did not have any acute optic disc edema in the right eye. This is not compatible with the suggested diagnosis of anterior ischemic optic neuropathy, which by definition, requires the presence of optic nerve head edema. 2) Although altitudinal visual field defects are often found in patients with NA-AION, they are not characteristic of NA-AION and may also be found in numerous other retinal and optic nerve diseases like branch retinal artery occlusion, other optic neuropathies (including inflammatory optic neuritis); therefore, the diagnosis of bilateral, sequential NA-AION should not be based on the visual field and fundoscopy.

According to the ophthalmic history of the patient, he had a previous anterior ischemic optic neuropathy in the right eye which was fully recovered. It seems that worsening of the visual symptoms in the left eye during the systemic steroid treatment suggested the authors to reevaluate the possible causes including thrombophilic defects. It is interesting to see that although the right eye seems to recover after a previous optic neuropathy attack, a similar improvement could not occur in the left eye despite prompt anticoagulation therapy. In the paper, the authors comprehensively discussed previous studies including NA-AION patients with thrombophilic abnormalities, but the role of anticoagulation therapy for the initial treatment and prevention of related optic neuropathies remained unclear for us.

Author contributions

CRediT: **Kemal Örnek:** Conceptualization, Data curation, Methodology, Validation, Visualization, Writing – original draft, Writing – review & editing.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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1. Tsiogka A, Vlachos G, Galanopoulos A, Rotsos T, Kandarakis S, Nikolopoulou A, Karmiris, E. and Chatzistefanou, K.I. Compound heterozygosity for the C6777T mutation of the MTHFR gene and the FII G20210A mutation of the prothrombin gene in sequential bilateral anterior ischemic optic neuropathy. *Neuroophthalmology*. 2025;49(3):193–199. doi: 10.1080/01658107.2024.2402725.

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