

A Case of Nonarteritic Anterior Ischemic Optic Neuropathy that Recurred in the same Eye within a Month

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DOI: [10.36347/sjmc.2024.v12i06.006](https://doi.org/10.36347/sjmc.2024.v12i06.006)

| Received: 21.04.2024 | Accepted: 30.05.2024 | Published: 01.06.2024

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Abstract

Case Report

A 78-year-old woman presented with an upper visual field defect in the left eye. On ophthalmic examination, her best-corrected visual acuity (BCVA) was 1.2 in both eyes. Fundoscopy revealed inferior optic disc swelling. Goldmann visual field test showed an upper visual field defect. The patient was diagnosed with nonarteritic anterior ischemic optic neuropathy (NAION) of the left eye and was followed up without treatment. One month after the initial visit, her BCVA decreased to 0.15 in the left eye. Fundoscopy revealed superior optic disc swelling. Goldmann visual field test showed an inferior visual field defect and central relative scotoma. Based on her clinical findings, she was diagnosed with recurrent NAION. Three months after the initial visit, her BCVA was 0.2 in the left eye, and the optic nerve developed atrophy. This case highlights the importance for clinicians to be aware of NAION recurred in the same eye within a short period of time.

Keywords: Nonarteritic anterior ischemic optic neuropathy, recurrence.

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INTRODUCTION

Nonarteritic anterior ischemic optic neuropathy (NAION) is an important cause of acute visual loss in middle-aged and elderly populations [1-3]. NAION, which develops in one eye, often occurs later, sometimes much later, in the fellow eye; whether further episode(s) of NA-AION develop in the same eye and how frequently, is much debated [3]. Herein, we report a case of NAION that recurred in the same eye within a short period of time.

CASE REPORT

A 78-year-old woman presented with an upper visual field defect in the left eye. Her medical history was unremarkable. On ophthalmic examination, her best-

corrected visual acuity (BCVA) was 1.2 in both eyes. Fundoscopy revealed inferior optic disc swelling (Figure 1A). Optical coherence tomography (OCT) confirmed inferior optic disc swelling (Figure 1A). Goldmann visual field test showed an upper visual field defect corresponding to inferior optic disc swelling (Figure 1A). The patient was diagnosed with NAION of the left eye and was followed up without treatment. One month after the initial visit, her BCVA decreased to 0.15 in the left eye. Fundoscopy revealed superior optic disc swelling (Figure 1B). OCT confirmed superior optic disc swelling and Goldmann visual field test showed an inferior visual field defect and central relative scotoma (Figure 1B). She was diagnosed with recurrent NAION. Three months later, her BCVA was maintained at 0.2, however, central relative scotoma was enlarged and the optic disc looked diffusely pale (Figure 1C).

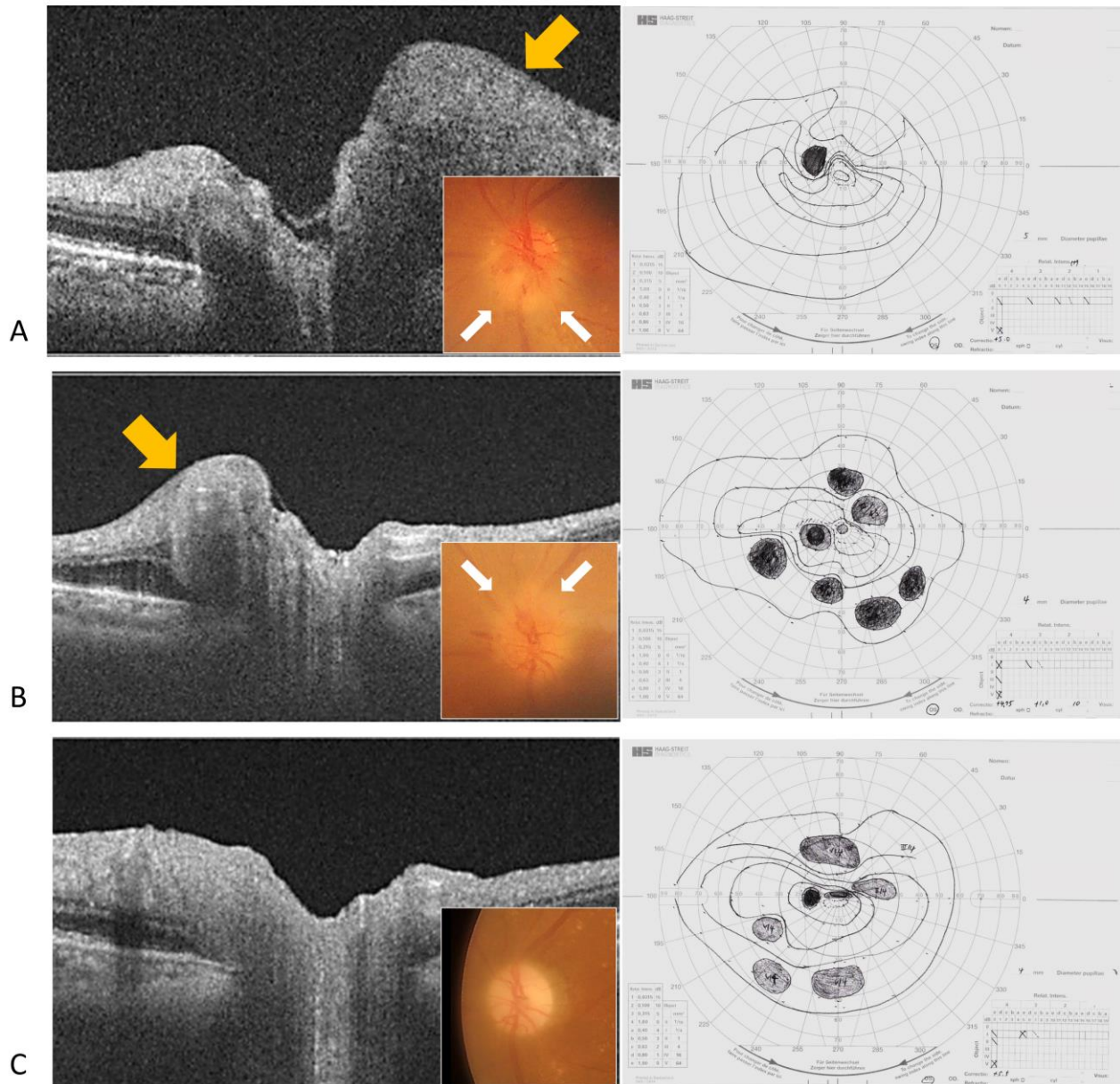


Figure 1: Optical coherence tomography, fundus photograph, and Goldmann perimetry of the left eye

- (A) At the initial visit, inferior optic disc swelling is evident (white and yellow arrows). Goldmann perimetry revealed a superior visual field defect.
- (B) One month after the initial visit, superior optic disc swelling is evident (white and yellow arrows). Newly observed an inferior visual field defect and central relative scotoma.
- (C) Three months after the initial visit, optic atrophy developed and central scotoma was enlarged.

DISCUSSION

The initial episode of visual field defect appeared to have been typical NAION. One month later, she returned with recurrent optic disc edema on the other side with a new visual field defect. We suggested this ischemic episode decompresses the optic disc in one sector but still leaves the unaffected portion of the optic disc at risk. The recurrent episode then involves the initially unaffected portion of the optic disc.

In the largest cohort study, Hayreh *et al.*, [3] reported the prevalence of recurrence of NAION in the same eye and possible contributing risk factors. Of the 594 patients (829 eyes) in their study, recurrence of NAION in the same eye occurred in 45 patients (53 eyes) with a median follow-up of 3.1 years (range 2 months to 30.5 years) from the first onset of NAION. The Kaplan–Meier survival curve showed cumulative percentage of recurrence of NAION from first episode to second episode at three months $1.0\pm 0.4\%$, at 6 months $2.7\pm 0.7\%$, at one year $4.1\pm 0.9\%$, and 2 years $5.8\pm 1.1\%$. Considering the recurrence rate in their report, we

inferred that this case, which recurred within one month and observed at another portion in the optic disc, was uncommon.

CONCLUSION

This case highlights the importance for clinicians to be aware of NAION recurred in the same eye within a short period of time.

Disclosure: The author declares no conflict of interest.

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