

## SHORT COMMUNICATION

# Herpetic optic neuritis associated with herpetic keratitis

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**PURPOSE.** *To report a case of herpetic optic neuritis associated with herpetic keratitis.*

**METHODS.** *A 65 year old woman presented with oedema in the nasal sector of his right papilla. Blood biochemistry, a haemogram, erythrocyte sedimentation rate and C-reactive protein were all normal. The patient was diagnosed as having a non-arteritic anterior ischaemic optic neuropathy. One week later slit lamp examination showed diffuse stromal corneal oedema and a dendritic lesion in the nasal zone of the corneal epithelium.*

**RESULTS.** *Serology for varicela-zoster virus was positive. Treatment was started with valacyclovir given orally and topical acyclovir ointment. A week later, the optic disc swelling and corneal lesions had resolved.*

**CONCLUSIONS.** *The precise mechanism through which the papilla and cornea were successively affected in our patient is unclear but the sensitive innervation of both these structures is provided by the nasal branch of the nasociliary nerve and the spread of herpes via this nerve could affect both sites. (Eur J Ophthalmol 2007; 17: 683-4)*

**KEY WORDS.** *Herpes, Nerve, Optic, Neuritis, Herpetic keratitis*

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## INTRODUCTION

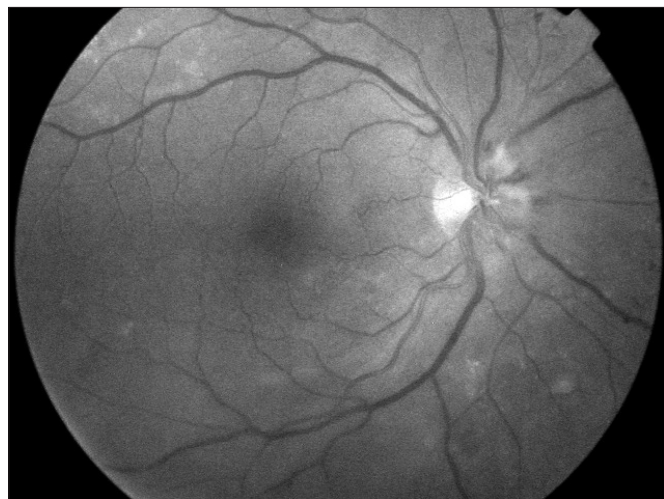
We report a patient with focal optic disc inflammation, initially diagnosed as an anterior ischemic optic neuropathy, who subsequently developed herpetic keratitis. The etiology of the clinical entity was confirmed by serology.

### Case report

A 65-year-old woman, with a history of hypercholesterolemia and high blood pressure, presented at our Ophthalmology Department with vision loss in the right eye. Two years previously, she had undergone cataract surgery in both eyes. Best-corrected visual acuity was 20/80 for the right eye and 20/20 for the left. A slit lamp examination was unremarkable. There was no afferent pupillary defect and motility was normal. A fundus examination revealed edema in the nasal sector of the right papilla with hemorrhages (Fig. 1); the left eye was unaffected.

Blood biochemistry, hemogram, erythrocyte sedimentation rate (ESR), and C-reactive protein were normal. The patient was diagnosed with a non-arteritic anterior ischemic optic neuropathy (NAION) and a standard automated perimetry (Humphrey 24.2; full threshold testing) was planned for a week later. When the patient returned for the perimetry test, she complained of worsening visual acuity. A slit lamp examination showed diffuse stromal corneal edema and a dendritic lesion in the nasal zone of the corneal epithelium. There was no relative afferent pupillary defect and the papilla lesion remained the same. Magnetic resonance tomography of the cranium and orbit were normal. Serology for herpes simplex virus and varicella zoster virus (VZV) (immunofluorescence) indicated a 1/320 anti-VZV antibody titer. Treatment was started with 1 g valacyclovir/8 h given orally and topical acyclovir ointment 5 times/day.

A week later, the optic disc swelling (Fig. 2) and corneal lesions had resolved and the patient's best-corrected visual acuity was 20/50 with a persisting altitudinal visual field defect.



**Fig. 1** - Photograph of right posterior pole showing edema in the nasal sector of the right papilla with hemorrhages.



**Fig. 2** - Photograph of right posterior pole showing resolution of inflammation of the nasal sector of the right papilla.

## DISCUSSION

There have been several descriptions of herpetic optic neuritis associated with acute retinal necrosis (1-5). In addition, some major histocompatibility complex haplotypes have been linked to a predisposition for these entities (2, 4). However, as far as the present authors are aware, there have been no descriptions of focal inflammation of the papilla associated with herpetic keratitis with no retinal involvement in the context of herpes zoster ophthalmicus (1-3, 5).

The precise mechanism through which the papilla and cornea were successively affected in our patient is unclear. However, it should be considered that sensitive innervation of both these structures is provided by the nasal branch of the nasociliary nerve (of the ophthalmic division of the trigeminal nerve) and that the spread of herpes via this nerve could affect two separate anatomic sites (6). In our opinion this possible mechanism would be more plausible than direct spread from the papilla to the cornea, since this would have resulted in the involvement of intermediate structures.

In our patient, focal optic disc swelling and a lack of inflammatory markers, along with a history of hypercholesterolemia and hypertension, raised a suspicion of NAION. Indeed, herpes virus infection is not normally included in the differential diagnosis for a typical NAION (focal inflammation of the papilla, older age, consistent systemic conditions).

We found no reports in the literature of an ocular herpes infection manifesting as focal optic disc inflammation that progressed to a typical herpetic keratitis. This report high-

lights this possible presentation of a herpes virus infection. Had we suspected a herpetic etiology at the time of diagnosis, antiviral treatment could have been promptly started, minimizing damage to the optic nerve head.

*The authors report no conflicts of interest.*

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