Case E1

A 58-year-old woman with no known vasculopathic risk factors received radiation (dose unknown) for recurrence of a pituitary adenoma 5 years after initial resection. Eight months later, she developed sudden painless loss of vision in her left eye to CFs over 2 weeks. Visual acuity and automated visual field were normal in the right eye. Initially both optic discs had a normal ophthalmoscopic appearance, but 1 month later, optic disc pallor developed on the left. Visual acuity improved to 20/150 in the left eye, within 1 month and, thereafter, stabilized at that level. Two months after initial presentation, automated testing revealed a full right field and marked constriction on the left (mean deviation -30.26). MRI performed at the time of vision loss revealed enhancement of the left prechiasmatic optic nerve with associated expansion of the affected segment (See Supplemental Digital Content, Figure E1, <http://links.lww.com/WNO/A347>). T2 abnormalities could not be assessed. There

was no imaging evidence of tumor recurrence. Repeat MRI 11 months later displayed persistent enhancement of the left prechiasmatic optic nerve, with accompanying volume loss. The

patient was last evaluated 4 months after the onset of vision loss without change in visual function.

Case E2

A 55-year-old man without vasculopathic risk factors suffered from sclerosing pseudotumor of the right orbit and underwent multiple orbital reconstructive procedures

and local irradiation (no radiation details available). Nineteen years later, he was diagnosed with right paranasal sinus squamous cell carcinoma for which he underwent surgical

resection, chemotherapy, and irradiation (radiation dose unknown). Approximately 27 months after his most recent irradiation, he developed painless right vision loss over 2 weeks, declining from 20/60 to NLP. The left visual field was normal. There was diffuse pallor of the right optic disc, whereas ophthalmoscopy on the left was normal. A radiology report from an outside MRI study performed at the time of right vision loss indicated enhancement of the right optic nerve (no details regarding optic nerve expansion or T2 signal available). MRI repeated at our institution 17 months after vision loss and 12 months after enucleation of the affected eye revealed enhancement of the right prechiasmatic optic nerve with accompanying expansion and increased T2 signal within the affected segment (See Supplemental Digital Content, Figure E2, <http://links.lww.com/WNO/A337>). There was no sign of tumor recurrence.

The patient was last evaluated 35 months after onset of vision loss without change in visual function.

Case E3

A 64-year-old woman with hypertension, hyperlipidemia, and a left temporal lobe lesion underwent surgical resection with a pathologic diagnosis of glioblastoma multiforme and

was subsequently treated with chemotherapy and radiation (total focal dose: 60 Gy). Eight months after completion of radiation, the patient noticed slow decline in left vision of

her left eye. At the time of presentation, visual acuity was 20/15 in the right eye and 20/60 in the left eye, (baseline unknown). A left RAPD was present. Automated visual

field testing revealed a superotemporal defect on the right, most likely related to previous resection of the left temporal lobe mass, and marked constriction on the left. Ophthalmoscopy

showed a normal right optic disc and temporal pallor of the left disc. MRI performed 6 weeks before the onset of left vision loss displayed enhancement of the left prechiasmatic optic nerve (See Supplemental Digital Content, Figure E3, <http://links.lww.com/WNO/A338>). Repeat MRI completed approximately 2 months after onset of left vision loss demonstrated persistent enhancement of the left prechiasmatic optic nerve with expansion and T2 hyperintensity of the enhanced segment. There was no evidence of recurrent tumor. The patient was only evaluated

by our service once at the time of admission.

Case E4

A 73-year-old woman with hypertension, hyperlipidemia developed lung carcinoma with multiple brain metastases. She underwent whole brain radiation (total dose 30 Gy, 10

fractions). Ten months after completing radiation, she developed left vision loss with a decline of visual acuity from 20/50 to NLP over 4 weeks. Over the next 6 months, right visual acuity declined from 20/30 to CF at 16 months after radiation. At our initial neuro-ophthalmic examination, occurring at the time of vision loss in the left eye, the right optic disc appeared normal, and the left optic disc had marked pallor. The right optic disc developed marked pallor

6 months later. MRI performed at the time of initial vision loss disclosed no abnormalities (See Supplemental Digital Content, Figure E4A, <http://links.lww.com/WNO/A339>). But MRI performed 5 months later (as vision loss of the right eye was developing) displayed enhancement of the right prechiasmatic optic nerve with accompanying T2 hyperintensity

and subtle expansion within the affected segment (See Supplemental Digital Content, Figure E4,

<http://links.lww.com/WNO/A339>). There were no compressive lesions along the anterior visual pathways. It was not until repeat MRI was completed 2 months later, 7 months after the onset of left vision loss that enhancement of the left prechiasmatic optic nerve was seen (See Supplemental Digital Content, Figure E4C, <http://links.lww.com/WNO/A339>). Enhancement of the right optic nerve persisted for at least 4 months; enhancement of the left optic nerve persisted for at least 2 months. The patient was last evaluated 9 months after the onset of vision loss without change in visual function.

Case E5

A 63-year-old woman without known vasculopathic risk factors received local radiation (total 133 Gy) to the nasopharynx and neck for nasopharyngeal carcinoma. Seven months later, she suffered acute vision loss in the right eye from20/20 to NLP. She also noted a significant decline in her peripheral vision, left eye. Visual acuity was 20/20 in the left eye. Automated visual field testing revealed a dense temporal defect in the left eye. Ophthalmoscopy was normal. Reexamination 6 months later disclosed a markedly pale right optic disc and a mildly pale left optic disc. Over the ensuing 4 months after initial vision loss, visual field abnormalities

progressed to cover the entire right field, but visual acuity remained 20/20. MRI performed at the time of initial presentation revealed enhancement of both prechiasmatic optic nerves (See Supplemental Digital Content, Figure E5, <http://links.lww.com/WNO/A340>). The affected segments were expanded and displayed subtle T2 hyperintensity. There were no compressive lesions along the anterior visual pathways. Follow-up MRIs documented that the enhancement

persisted for at least 4 months, resolving by 6 months. The patient was last evaluated 52 months after the onset of vision loss without change in visual function.

Case E6

A 68-year-old hypertensive man received radiation (unknown dose) for postresection residual right clinoidal meningioma. The patient experienced sudden painless decline of vision in

his left eye 2 years after completion of radiation with visual acuity dropping from 20/30 to CF. At the time of initial presentation, 2 months after vision loss, there was a left RAPD.

Automated visual field testing of the right eye revealed a left hemianopic defect, residual from an earlier study and attributed to optic tract compression from the meningioma. Ophthalmoscopy showed temporal pallor of the right optic disc and diffuse pallor of the left disc. MRI completed 4 months after the onset of vision loss showed persistence of

a right tuberculum meningioma displacing the right optic nerve but without compression of the left optic nerve. Imaging also revealed subtle enhancement of the left prechiasmatic

optic nerve without expansion, but with increased T2 signal of the enhancing segment (See Supplemental Digital Content, Figure E6, <http://links.lww.com/WNO/A348>). This enhancement

became more apparent over 2 months’ time. The patient was last evaluated 13 months after the onset of vision loss without change in visual function.

Case E7

A 55-year-old woman with no known vasculopathic risk factors received radiation (dose unknown) for a partially resected sinonasal adenocarcinoma extending into ethmoid

and sphenoid sinuses. Approximately 27 months later, visual acuity suddenly declined in the right eye to 20/30. There was a right RAPD and mild right optic disc pallor. Visual acuity in

the left eye was 20/20. Over the next 6 months, visual acuity slowly dropped to NLP in the right eye and 20/40 in the left eye. The optic disc appearance remained normal in the left eye

through this time. MRI performed at the time of vision loss revealed a focus of right prechiasmatic optic nerve enhancement without expansion or accompanying T2 abnormalities

(See Supplemental Digital Content, Figure E7, <http://links.lww.com/WNO/A342>). Imaging failed to reveal any compressive lesions along the anterior visual pathways. The patient was

last evaluated 6 months after the onset of vision loss without change in visual function.

Case E8

A 54-year-old man with a history of hypertension underwent a transfrontal pituitary adenoma resection followed by pituitary irradiation (dose unknown) for residual tumor. Four years later, he suddenly lost vision in his right eye, dropping from 20/25 to CF and to NLP 6 months later.

Although visual field data were not available, clinic records indicate dense temporal hemianopic defects preoperatively. Both optic nerves revealed diffuse pallor at the time of presentation. MRI at the time of presentation revealed enhancement of the right intraorbital optic nerve with slight expansion but no T2 signal abnormalities (See Supplemental Digital Content, Figure E8, <http://links.lww.com/WNO/A343>). It did not appear as though the intracanicular segment was involved, but the prechiasmatic segment was not well visualized. Imaging failed to reveal any tumor recurrence. The patient was last evaluated 6 months after the onset of vision loss without change in visual function.