

IMAGES IN CLINICAL MEDICINE

Regression of Optociliary Shunt Vessels



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A PREVIOUSLY HEALTHY 53-YEAR-OLD MAN PRESENTED WITH HEADACHE, blurred vision, and pulsatile tinnitus. A lumbar puncture demonstrated meningitis with increased intracranial pressure (opening pressure, 37 cm H₂O), with a white-cell count of 154 per cubic millimeter, a protein level of 68 mg per deciliter (0.68 g per liter), and a glucose level of 75 mg per deciliter (4 mmol per liter). A serum sample was positive for West Nile virus–specific IgG antibody. Results of brain magnetic resonance imaging and magnetic resonance angiography were normal. Initial ocular examination revealed a visual acuity of 20/25 in the right eye and 20/20 in the left eye, decreased color vision, constricted visual fields with enlarged blind spots, and bilateral florid papilledema (Panel A, right eye).

Within 3 days after treatment with lumbar puncture and acetazolamide, the symptoms resolved. Over the ensuing months, the swelling of the optic disks resolved and optociliary shunt vessels became apparent (arrows, Panel B, right eye). After 7 months, visual fields had normalized and the optic disks were pale and flat with regression of the shunt vessels (Panel C, right eye).

Optociliary shunt vessels become apparent when elevation of central retinal venous pressure causes dilatation of collateral vascular channels connecting the retinal and choroidal venous systems. Causes include optic-nerve–sheath meningioma, chronic central veno-occlusive disease, and chronic increased intracranial pressure. These collateral vessels may regress after the normalization of intracranial pressure.

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