

# Misdiagnosis of Meningioma

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Case Report Abstract

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Background:

Meningiomas are tumors that form from the meningeal layers surrounding the brain and spinal cord. While most are benign, they can still affect the function of surrounding neural structures, including the visual pathway. Because meningiomas (and other compressive lesions) are uncommon, clinicians may fail to recognize subtle findings that could help make the correct diagnosis, particularly if some findings overlap with more common diagnoses. This case is an example of a missed diagnosis and reviews the signs and symptoms that should prompt the clinician to order neuroimaging to discover potential compressive lesions.

Case Summary:

A 59-year-old white female was diagnosed with primary open angle glaucoma at an outside clinic and referred for glaucoma management. Cup/disc ratios were 0.3 OD and 0.15 OS. Baseline RNFL OCT and Humphrey Visual Fields were performed, showing superior RNFL thinning and a corresponding inferior nasal step OD. However, closer examination raised concerns that the patient had a non-glaucomatous optic neuropathy. Suggestive signs and symptoms included a patient-reported history of blurred vision in the right visual field, a 1+ relative afferent pupillary defect, and mild optic disc pallor. An MRI of the brain and orbits was ordered, detecting a right anterior paraclinoid meningioma compressing the prechiasmatic optic nerve. Transsphenoidal endoscopic surgical resection was performed approximately 5 weeks after the MRI was performed. Near total resection was achieved, but small portions of the meningioma were left around the internal carotid artery and optic nerve to avoid damaging these structures. The patient developed binocular diplopia during the post-operative period, which resolved at 6 weeks after surgery. Three months after

surgery, the Humphrey Visual Field showed a marked improvement in the depth of the inferior nasal defect and the patient reported complete resolution of her visual symptoms.

## Conclusions:

Meningiomas make up a large portion of adult intracranial tumors and often have a delayed or initially missed diagnosis. Most meningiomas are slow-growing, non-cancerous tumors. However, they can cause permanent vision loss if there is mass effect on the visual pathway. Prompt recognition of signs and/or symptoms of compressive optic neuropathy is important to minimize permanent vision loss.

## Case Report Abstract:

Ocular Disease

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