

Ophthalmoplegia Unveiled: A Spectrum from Tumor to Infection to Vascular Lesions

Background:

Ophthalmoplegia is a striking yet nonspecific sign. It may progress insidiously or appear abruptly, masking conditions as varied as malignancy, invasive infection, or vascular catastrophe. Identifying the cause without delay is critical for saving vision and, at times, life.

Purpose:

To present three diverse cases that illustrate the dramatic spectrum of ophthalmoplegia.

Methods:

Three patients with ophthalmoplegia of different etiologies were evaluated:

- **Case 1 – Orbital metastasis:**
A 60-year-old woman with a known case of breast carcinoma on chemotherapy developed slowly progressive drooping of her right eyelid. Over weeks, she noticed restriction of upward gaze, first subtle, then disabling, accompanied by abaxial proptosis. The gradual yet relentless course raised suspicion of an infiltrative orbital lesion. CT imaging confirmed an orbital mass, consistent with metastatic disease, making her ocular complaint the sentinel of systemic involvement.
- **Case 2 – Invasive mucormycosis:**
A 45-year-old diabetic male presented with one week of complete drooping of the left eyelid and inability to move the eye in any direction. Examination revealed a complete ophthalmoplegia. He had a history of pneumonia admission six weeks earlier. MRI showed a destructive sinonasal lesion extending into the orbit. Biopsy confirmed mucormycosis—an angioinvasive fungal infection. The patient underwent urgent systemic antifungal therapy and surgical debridement, underscoring how ophthalmoplegia may herald a fulminant, life-threatening infection.
- **Case 3 – Carotid–cavernous fistula:**
A 26-year-old male, following a high-speed road traffic accident, developed acute, painful proptosis, marked conjunctival chemosis, and complete ophthalmoplegia. The congested, pulsatile orbit suggested a vascular emergency. Digital subtraction angiography demonstrated a carotid–cavernous fistula with a grossly dilated superior ophthalmic vein. He underwent endovascular closure of the fistula, leading to rapid relief of venous congestion and stabilization of vision.

Results:

All patients presented with ophthalmoplegia, ptosis, and proptosis, yet the etiologies ranged from neoplastic to infectious to vascular. Radiology was pivotal in establishing the diagnosis. Outcomes varied: oncological referral for metastasis, aggressive medical and surgical treatment for mucormycosis, and successful endovascular repair for the fistula.

Conclusion:

Ophthalmoplegia is not a diagnosis but a manifestation of diverse and potentially dangerous diseases. It may unmask systemic cancer, signal an invasive fungal infection, or announce a vascular crisis. Recognizing this spectrum and acting promptly with multidisciplinary care is essential to optimize outcomes

