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Teaching NeuroImage: Horizontal Diplopia Due to Extraocular Muscle Metastasis

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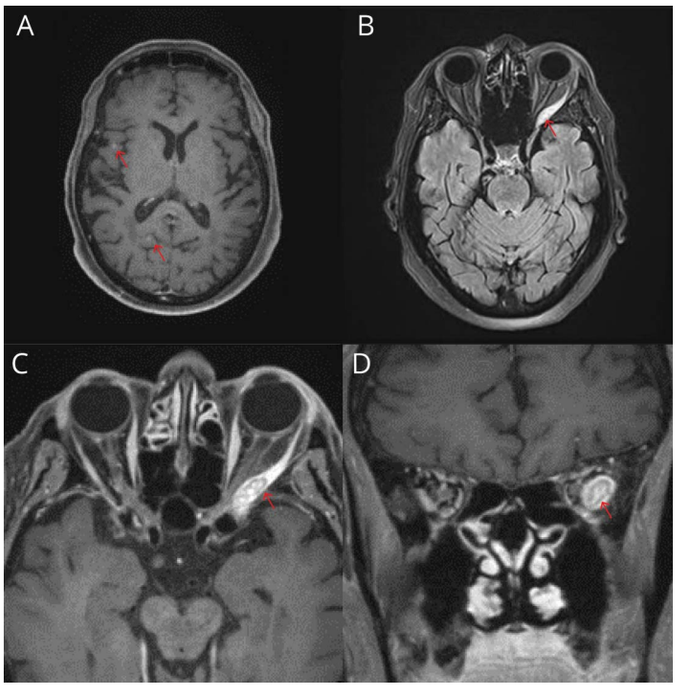
Figure MRI of the Brain and Orbits



(A) Postcontrast T1-weighted MRI axial demonstrating subcentimeter right frontal and right occipital enhancing lesions consistent with metastasis (arrows). (B) T2-weighted fluid-attenuated inversion recovery MRI demonstrating left lateral rectus lesion (arrow). (C) Postcontrast T1-weighted MRI of the orbits demonstrating enhancing lesion involving left lateral rectus (arrow) in axial view. (D) Postcontrast T1-weighted MRI of the orbits demonstrating enhancing lesion involving left lateral rectus (arrow) in coronal view.

An 80-year-old woman with previously resected melanoma of the right thigh presented with acute binocular diplopia. Neurologic examination demonstrated inability to abduct the left eye with normal right eye adduction. Examination was otherwise normal. This presentation of left lateral rectus palsy can occur due to ischemic, inflammatory, autoimmune, compressive, or neoplastic etiologies. MRI orbits identified an enhancing left lateral rectus lesion consistent with extraocular muscle metastasis. MRI of the brain revealed multiple subcentimeter-enhancing lesions (Figure).[1] Subsequent lymph node biopsy confirmed metastatic melanoma. Despite radiotherapy and BFRAF-targeted systemic therapy, rapid progression occurred, and the patient died 5 months after initial evaluation.[2]

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Name	Location	Contribution
Merve Atik, MD	Department of Neurology, Mayo Clinic, Rochester, MN	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; analysis or interpretation of data
David Nathan Abarbanel, MD	Department of Neurology, Mayo Clinic, Rochester, MN	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; analysis or interpretation of data
Ugur Sener, MD	Department of Neurology, Mayo Clinic, Rochester, MN	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; analysis or interpretation of data

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