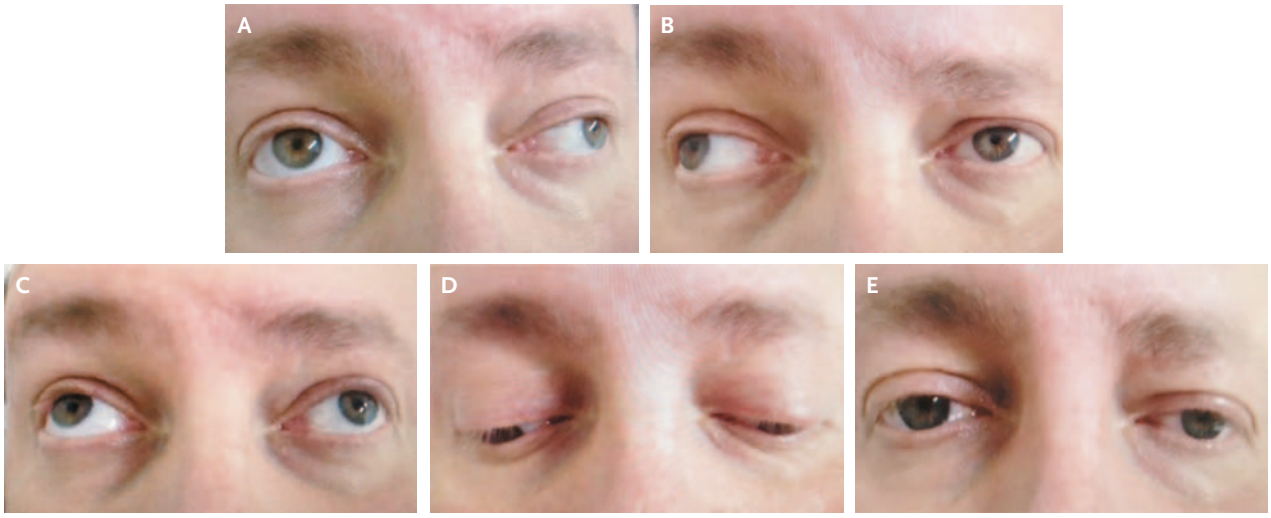
IMAGES IN CLINICAL MEDICINE

Bilateral Internuclear Ophthalmoplegia in Multiple Sclerosis



A 45-year-old man with multiple sclerosis presented with worsening weakness in his right leg and double vision. Neurologic examination revealed horizontal diplopia during lateral gaze in both eyes. The patient had an adduction deficit in the right eye and nystagmus in the left eye on leftward gaze (Panel A). He also had an adduction deficit in the left eye and nystagmus in the right eye on rightward gaze (Panel B). Upward gaze (Panel C), downward gaze (Panel D), and normal primary position (Panel E) were unremarkable (video). Internuclear ophthalmoplegia is characterized by impaired horizontal eye movement that is caused by a lesion in the medial longitudinal fasciculus, a fiber tract that rises from the abducens nucleus in the pons to the contralateral oculomotor nucleus in the midbrain. Lesions in the medial longitudinal fasciculus result in the failure of adduction on attempted lateral gaze. Any brain-stem syndrome can interrupt the medial longitudinal fasciculus and result in impaired horizontal eye movement, but the most frequent underlying cause is multiple sclerosis. This patient had internuclear ophthalmoplegia in both eyes due to demyelinating lesions. Glucocorticoids were administered intravenously, but the deficits did not resolve. On follow-up at 2 months, the patient's gait had improved, but the internuclear ophthalmoplegia remained.

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