

Title: Seeing Double Trouble: A Case of Internuclear Ophthalmoplegia with a Diabetic Twist

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Introduction: Internuclear Ophthalmoplegia (INO) is a gaze abnormality characterized by impaired horizontal eye movements, with weakness and adduction of the affected eye. This may be accompanied by nystagmus in the contralateral eye. INO is caused by damage to a specific bundle of nerve fibers in the brainstem called the medial longitudinal fasciculus, carrying signals between the ipsilateral medial rectus subnucleus of the cranial nerves III and the contralateral cranial nerve VI nucleus.

Case Description: A 53-year-old gentleman with underlying hypertension and Diabetes Mellitus, presented with sudden onset of double vision for 4 days. He preferred to close his left eye to avoid double vision. He denied headache or giddiness. His right eye was unable to adduct past midline, while his left eye was able to adduct and abduct, with non-sustained nystagmus upon abduction. Diplopia was present during eye assessment. His neurological examination was unremarkable. MRI brain was done and reported as recent right occipital lacunar infarct. Despite persistent diplopia, he reported improvement in his eye symptoms. His HbA1c was 10.9 and fasting blood sugar was 9.0. Neuromedical team treated him as mononeuritis multiplex secondary to Diabetes Mellitus.

Discussion: This case highlights the challenges of diagnosing INO in the emergency department (ED) due to the broad spectrum of potential causes, in the resource-limited ED setting. It also emphasizes the importance of distinguishing INO from third nerve palsy for early diagnosis and appropriate management. The case also emphasizes the need to consider diabetic complications in patients with INO. Early referral to neurology for definitive diagnosis and targeted treatment is essential.

Conclusion: Diagnosing internuclear ophthalmoplegia in the ED is a complex task due to the multitude of potential causes and the limitations of the emergency setting. While a high index of suspicion for stroke is necessary, a detailed history, physical examination, and appropriate investigations are crucial to identify other common causes, including diabetic mononeuritis multiplex.

Keywords: Internuclear ophthalmoplegia, Diplopia, Diabetes Mellitus.