Teaching NeuroImages: Distinguishing Papilledema From Pseudopapilledema Using Optical Coherence Tomography

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Figure 1 Ocular Imaging

Normal optic nerve head and optic nerve head showing multiple hyperreflective lesions. (A) Infrared image of the right optic nerve head. (B) Infrared image of left optic nerve head shows an irregular elevated shape with high reflectivity in the inferior nasal portion of the disc. (C) Cross-section optical coherence tomography volume scan of left disc shows multiple hyperreflective changes around hyporeflective drusen (arrows). (D) Optical coherence tomography blue autofluorescence en face image of the optic nerve head shows multiple autofluorescent lesions throughout the inferior, nasal, and superior portions of the nerve.

A 71-year-old man presented to the emergency department with bilateral blurred optic discs, referred by his optometrist following a routine eye test. He had no visual or headache symptoms. Visual acuity was 20/20 bilaterally; funduscopy concurred with the optometry findings. Investigations for presumed papilledema were initially interpreted as normal (CT head/lumbar puncture). In clinic, optical coherence tomography (OCT) imaging identified optic disc drusen (ODD) (figure 1).

The invasive investigations could have been avoided if an ophthalmology examination had been performed to exclude pseudopapilledema, as recommended.¹ ODD are common in the general

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Figure 2 Neuroimaging

Axial CT head slice shows a calcified drusen (bright white spot; arrow) at the left optic nerve head.

population (up to 2.4%).² They are clearly visualized with OCT imaging including cross-sectional optic nerve head volume scans and blue autofluorescence (figure 1D). Indeed, the CT head documented the drusen (figure 2). Although rarely ODD can coexist with papilledema, this is evident on both cross-sectional OCT imaging and dilated slit-lamp biomicroscope examination.

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Name	Location	Contribution
Jasvir Virdee, BMedSc (Hons), MBChB	Birmingham Neuro-Ophthalmology, Queen Elizabeth Hospital, Birmingham, UK	Data collection, revised the manuscript for intellectual content
Ahoane Qureshi, MBChB, BMedSci (Hons)	Birmingham Neuro-Ophthalmology, Queen Elizabeth Hospital, Birmingham, UK	Data collection, drafted the manuscript for intellectual content
Susan P. Mollan, FRCOphth	Birmingham Neuro-Ophthalmology, Queen Elizabeth Hospital, Birmingham, UK	Design and conceptualized study, study supervision, clinical care for the patient, critical comments during manuscript revision

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