

Visual Hallucinations as a Presenting Feature of Posterior Cortical Atrophy, Alzheimer's Type

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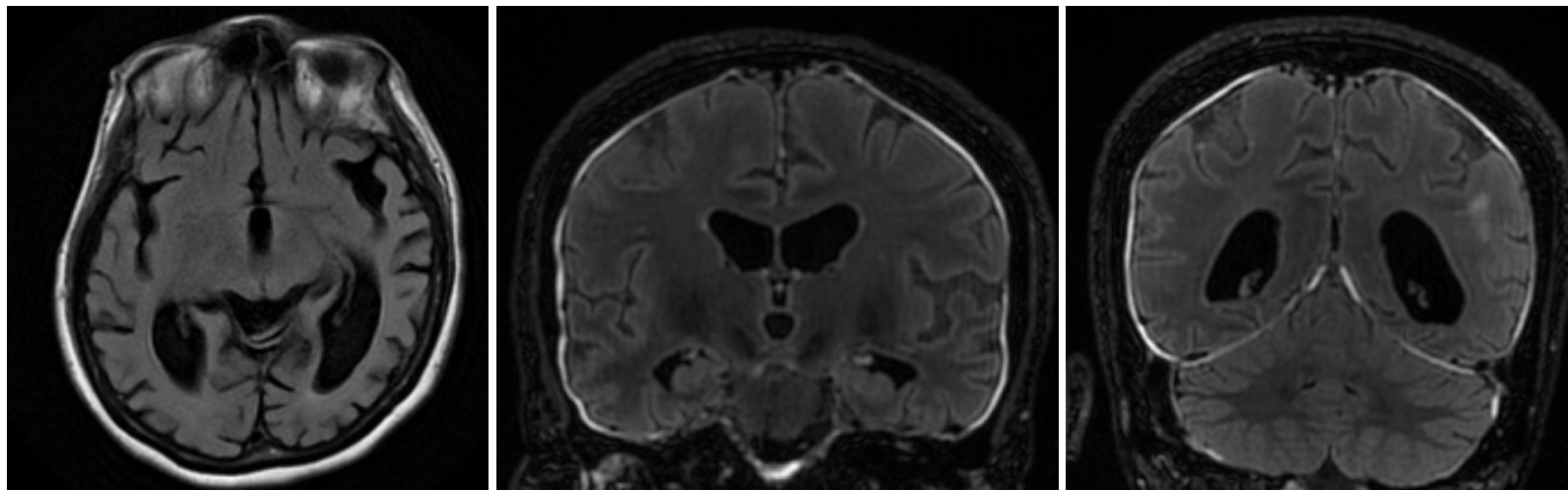
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Background:

- Posterior cortical atrophy (PCA) is a neurodegenerative disorder impacting occipital, parietal and occipitotemporal cortices.
- Previous studies indicated that visual hallucinations, which are present in up to 25% of PCA cases, to be exclusively limited to those with a synucleinopathy.
- We present a case that describes visual hallucinations occurring in a patient with PCA due to Alzheimer's pathology.

Imaging



MRI from left to right showing: bilateral temporoparietal atrophy, bilateral hippocampal atrophy, bilateral parietal lobe atrophy

Discussion:

- Prior research has shown that visual hallucinations in PCA is associated with parkinsonism and REM sleep disorders, which supported the DLB etiology.
- This case suggests that Alzheimer's pathology in PCA may also cause visual hallucinations.
- The differential diagnosis for visual hallucinations may include PCA due to Alzheimer's.

References:

- Crutch, S. J., Lehmann, M., Schott, J. M., Rabinovici, G. D., Rossor, M. N., & Fox, N. C. (2012). Posterior cortical atrophy. The Lancet. Neurology, 11(2), 170–178.
- Josephs KA, Whitwell JL, Boeve BF, et al. Visual Hallucinations in Posterior Cortical Atrophy. Arch Neurol. 2006;63(10):1427–1432.

- **A 52-year-old woman with a 10 year history of fully formed visual hallucinations admitted with severe malnutrition.**
- **3 years prior she began having difficulties with getting lost, finding things in her house, and remembering conversations and eventually her family members.**
- **2 years prior, confusion became more significant - looking for things that were right in front of her, saying she was going to die, losing appetite and dropping 60 lbs, and complaining of vision disturbance with multiple ophthalmology visits disclosing no ocular pathology.**
- **Months prior she became increasingly paranoid, attempted to hit family, started hitting her head on the walls, began speaking to someone who was not there, accusing family of trying to kill her and stating that they were “demons sent from the devil.”**

- **No evidence of REM sleep behavior disorder.**
- **Serial MRIs showed progressive global atrophy and periventricular FLAIR hyperintensities.**
- **EEG showed moderate diffuse cortical slowing.**
- **Alzheimer's disease biomarkers were found to be positive [p-Tau/Abeta42 ratio of 0.060 (ref: ≤0.023)].**
- **Negative for C9orf72 hexanucleotide repeat expansion.**
- **Workups for autoimmune encephalopathy, infectious etiologies and inborn errors of metabolism were negative.**
- **Whole exome sequencing was negative.**
- **SNP array analysis yielded a deletion within 10q21.1 of uncertain clinical significance.**