



Post-COVID Visual Hallucination

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A 52-year-old male with a history of diabetes mellitus and hypertension for 10 years presented with complaints of visualization of colored sparks and absurd figures in the left eye (LE) for the last 3 days. These were very disturbing for the patient. He had history of mild headache but no complaints of giddiness or vomiting. There was no history of trauma or any medication intake other than that for diabetes and hypertension. He had suffered COVID infection 30 days back (RT-PCR positive) for which he received treatment outside (oral azathioprine, hydroxychloroquine, steroids and favipiravir). Also, he complained of having poor vision in the right eye (RE) since 8 years for which no treatment was received. On examination, RE had visual acuity of perception of light with the projection of rays (PR) inaccurate and LE had a vision of 6/18 with accurate PR. RE had divergent squint with RAPD and neovascularization of iris. Intraocular pressure was 16 mmHg in RE and 12 mmHg in LE. On fundus examination, RE had proliferative diabetic retinopathy (DR) with neovascularization of disc with old retinal detachment while LE had non-proliferative DR with clinically significant macular edema without any disc involvement. The confrontation test suggested the constriction of the temporal field of left side. Perimetry of left eye showed left side temporal hemianopia

(Figure 1a). His blood sugar (BS) were deranged (fasting - 400 mg/dl; post-prandial - 832). Based on history and examination, magnetic resonance imaging (MRI) was performed which showed few small acute infarctions in the right-side occipital lobe (Figure 1b and 1c). Thus, the diagnosis of post-COVID visual hallucination related to right-side occipital lobe infarction was made. Patient was then admitted for sugar control and stroke management protocol. There was control of blood sugars and improvement in the visual hallucination symptoms but visual field defects were persisting.

COVID has diverse presentation involving multiple system and varied post-infection recovery course. Visual hallucination in a post-COVID patient may be related to disorientation, delirium, encephalopathy, or psychosis [1-3]. Other differential could be the Charles Bonnet syndrome (CBS) where visual hallucinations are experienced by cases with previously decreased vision (0.4 to 30% individuals) which can be influenced by stress, trauma or social isolation in COVID-19 pandemic times [4,5]. Though visual hallucination in COVID-19 may be related to neuropsychiatric association, a detailed history and simple confrontation test may help us in recognizing such cases with organic involvement early. This case highlights the importance of simple tests in normal clinical practice.

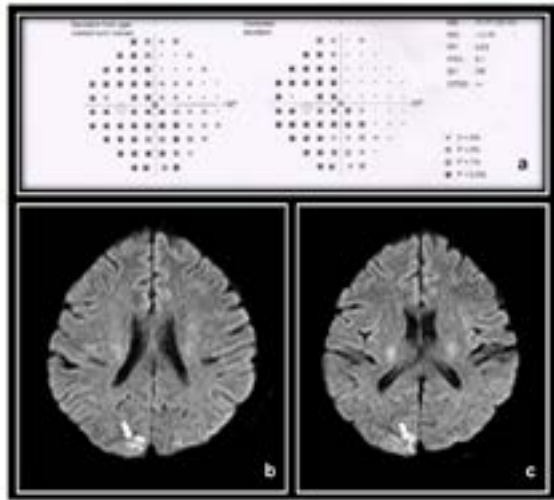


Figure 1: Oculus centerfield perimeter (30-2 program) of left eye (a) showing prominent temporal hemianopia defect involving macular area. Magnetic resonance imaging - Diffusion Weighted Images (b, c) showing small areas of true restricted diffusion (white arrow) in right occipital lobe suggestive of acute infarction.

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