

# VITREO RETINA

## A Case of High-Altitude Retinopathy following Long Distance Air Travel to Abuja, Nigeria

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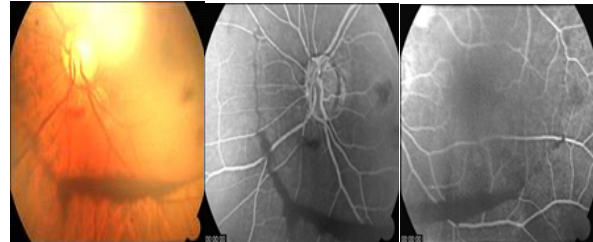
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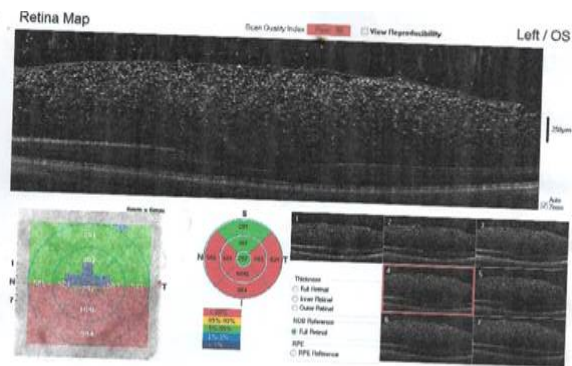
**Introduction:** High altitude retinopathy (HAR) is a rare cause of hemorrhagic retinopathy which occurs at heights over 9000 feet and is mainly seen in mountain climbers. A few cases associated with air travel have, however, been reported. High altitude retinopathy (HAR), can cause a reduction in vision but it is usually self-limiting.

**Case Report:** A 56-year-old gentleman from Venezuela presented with a sudden painless loss of vision in the left eye of 5 days duration. He suddenly lost vision in the eye while on a long-distance air travel to Nigeria. He is a not a known diabetic or hypertensive. He did not have a bleeding disorder nor did he have any known systemic comorbidity. Ocular examination revealed a visual acuity of 6/4 in the right eye, and counting fingers at 3metres in the left eye with intraocular pressures of 14 mmHg in both eyes. Anterior segment findings were normal in both eyes while posterior segment examination revealed a pink disc with normal retina in the right eye, and a pink disc with a preretinal hemorrhage overlying the macula area in the left eye. Fundus photographs showed preretinal collection of blood and a region of intraretinal hemorrhage just inferior to the optic disc while fundus fluorescein angiography showed hypofluorescence of the retina in the region of the blood collection and no evidence of neovascularization. Optical coherence tomography showed fluid collection in the preretinal space overlying the macula. An assessment of preretinal hemorrhage secondary to high altitude retinopathy was made. He was observed, and after the first week of follow-up vision had improved to 6/36,

and then 6/9 a month later with resolution of the preretinal hemorrhage.



**Figure 1:** Fundus photograph showing preretinal hemorrhage. Fundus fluorescein angiography showing hypo-fluorescence over the region of the bleeding.



**Figure 2:** Optical coherence tomography showing collection of fluid in the pre-retinal space overlying the macula.

**Discussion:** During air travel, the cabin pressure can be as low as 9000 feet altitude equivalent.<sup>1</sup> This causes about 30% fall in inspired PO<sub>2</sub> which in turn causes a fall in alveolar and then arterial oxygen tension.<sup>2</sup> The body elicits various compensatory mechanisms in response to the hypoxia such as vascular dilatation, engorgement and tortuosity. This hypoxic vasodilatation causes retinal vessels to be prone to sudden rise in intravascular pressure and hemorrhages. The hemorrhages seen are usually superficial because the choroidal circulation does not exhibit autoregulation. The signs of high-altitude retinopathy include dilated retinal vessels, diffuse or punctuate retinal or preretinal haemorrhage, vitreous haemorrhage, papillary haemorrhage, peripapillary hyperemia and papilloedema.<sup>1</sup>

**Conclusion:** We report a rare case of high-altitude retinopathy associated with air travel. Physicians need to keep this in view as a cause of unexplained retinal hemorrhages. This is the first reported case of HAR following air travel in Nigeria.

**References**

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**Transient Loss of Vision Associated with Sildenafil**

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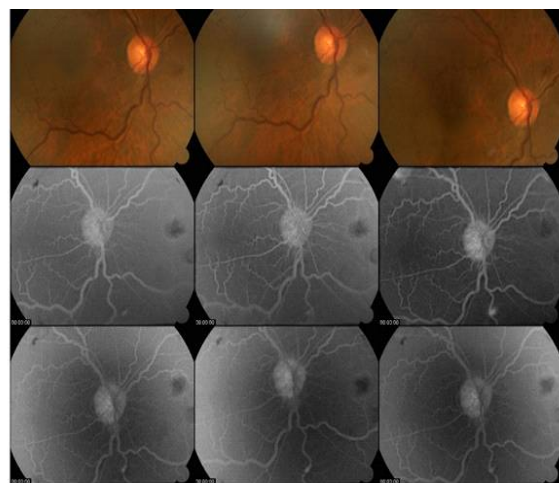
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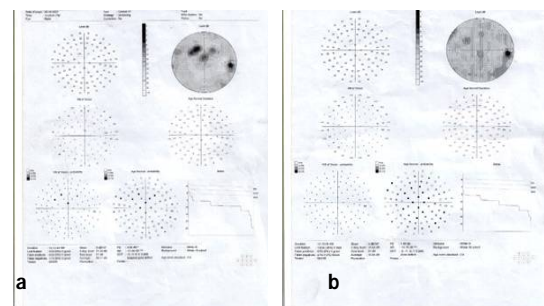
**Introduction:** Sildenafil is a recreational drug used to enhance sexual performance. It is also used in the treatment of erectile dysfunction, pulmonary hypertension, and age-related macular degeneration. Sildenafil has also been found to cause a reduction in vision which occasionally is reversible.<sup>1</sup>

**Case Report:** We report a case of a 62-year-old businessman who was found to have sudden painless reduction in vision which he described as a dark shade covering his vision with an occasional blue tint in his vision. This was his only eye as he had lost vision in the left eye following trauma 51 years ago. He takes

sildenafil on average, 100 mg thrice a month for 7 years, and used it a night before the onset of symptoms. At presentation, his unaided visual acuity in the right eye was 6/36 and remained the same with pinhole and NPL in the left eye. Retinal findings with direct ophthalmoscope and slit lamp with 90D lens revealed dot hemorrhages in the macula, dilated and tortuous retinal veins, and attenuated arterioles in the right eye. There was also a delay in dye filling in the inferior veins compared to superior on fundus fluorescein angiography (FFA) [Figure 1]. The central visual field (CVF) showed a central and paracentral scotoma (Figure 2a). Clinical features were suggestive of a mild non ischemic central retinal vein occlusion. He was observed, a week post-incident, his vision was 6/18, 1-month post his vision was 6/9, and 6 months post his vision



**Figure 1:** Fundus fluorescein angiography showing dilated tortuous venules, attenuated arterioles, delay in venous filling in the inferior venules.



**Figure 2a:** Central visual fields done 11 days after onset of symptoms, showing central and paracentral scotoma.

**Figure 2b:** Central visual field done 6 weeks post onset of symptoms, showing reduction of the central and paracentral scotoma.