

Vision Recovery and Resolution of Pegylated Interferon-alpha Associated Cystoid Macular Oedema after Intravitreal Anti



Vascular Endothelial Growth Factor Therapy.

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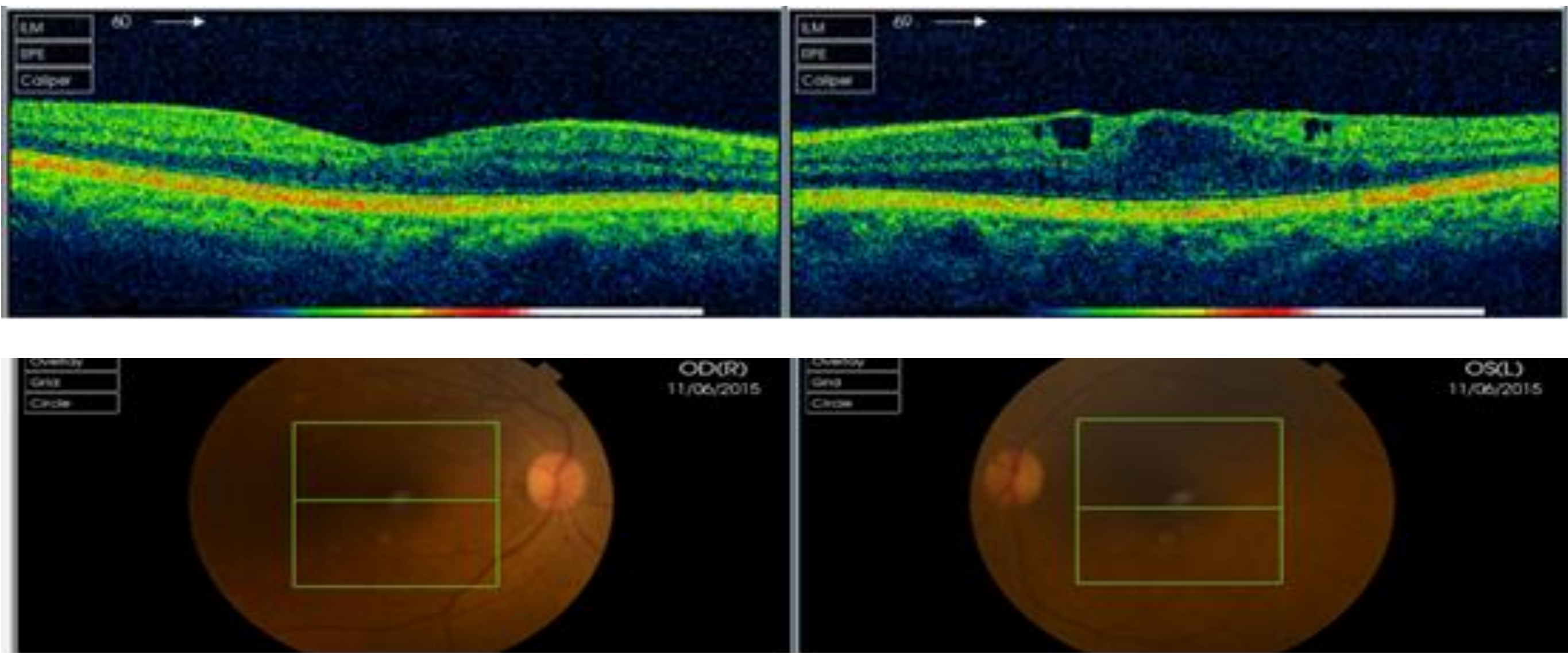
Introduction

nterferon associated retinopathy is common with a reported incidence from observational studies ranging from 4% to 60% mostly asymptomatic, non-sight threatening and transient¹.

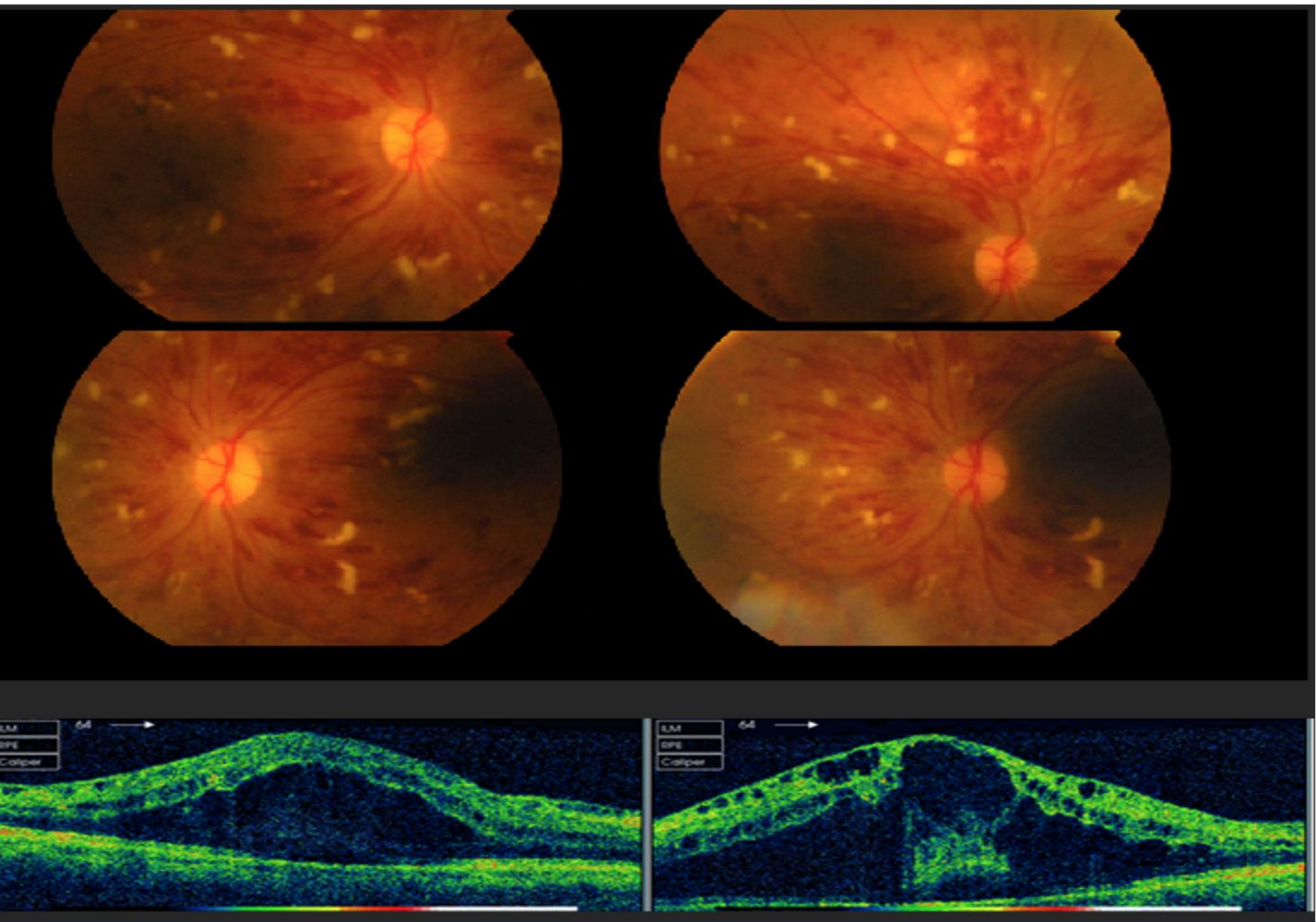
We report on a case of restoring vision using anti vascular endothelial growth factor (antiVEGF) in a patient with bilateral cystoid macular edema associated with interferon therapy.

Case Report

A 73 year old diabetic female with bilateral mild non-proliferative diabetic retinopathy underwent a course of 6 intravitreal ranibizumab injections to treat diabetic macular oedema in the left eye. Her macular oedema improved with the treatment and her vision was 6/6 in both eyes:



3 weeks later, under the care of Hepatology, she was commenced on treatment for chronic hepatitis C consisting of: pegylated interferon alpha 180mcg subcutaneously weekly, oral ribavirin 600mg twice a day and oral simeprevir 150mg once a day. She reported a sudden drop in vision in both eyes 1 month after commencing treatment:

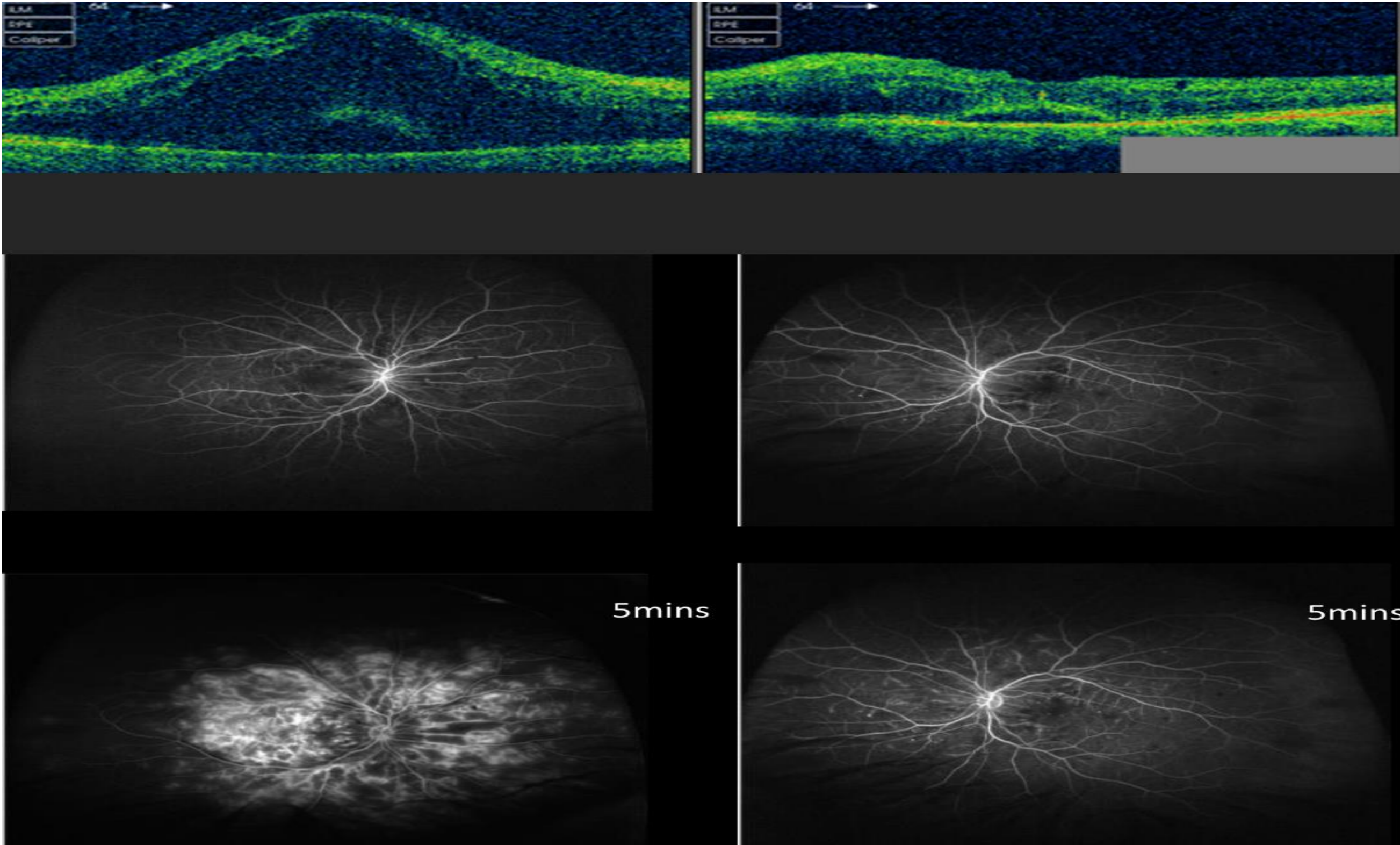


Vision was 6/36 OD and 6/36 OS, cotton wool spots and superficial retinal haemorrhages localized to the posterior pole of both eyes, bilateral severe macular oedema (CST 1092uM OD, 937uM OS) with associated foveal detachments. Anterior segments were unremarkable with quiet pseudophakia bilaterally.

Fluorescein angiography demonstrated diffuse retinal capillary leakage after the arteriovenous phase in both eyes, located throughout the posterior pole

Hepatitis C treatment was stopped by Hepatology. Vision and macular oedema were unchanged 4 weeks later. The left eye was treated with an intravitreal ranibizumab injection and the patient reviewed 2 weeks later using the right eye as an internal control.

Visual acuity had improved to 6/18 in the treated eye and deteriorated to 6/60 in the right eye. Wide-field angiography demonstrated persistent leakage from pre-equatorial retinal capillaries in the right eye with marked reduction in retinal capillary leakage and macular oedema in the treated eye:



Following a 4 month course of injections to both eyes, visual acuity had improved to 6/18 in both eyes with resolution of macular oedema. Following an 8 week period of injection free observation, macular oedema had rebounded significantly (CSFT 863mu OD 731um OS) with resultant drop in vision (6/60 OD and 6/36 OS) [Figure 5]. After re-initiating intravitreal therapy, visual acuities did not return to baseline despite the macular oedema resolving. An angio OCT 7 months after the onset of reported visual loss revealed loss of perifoveal capillary network which was not present at baseline.

Discussion

We describe the first successful treatment of interferon associated macular oedema with intravitreal anti-VEGF therapy. Despite the initial good response to treatment, there was severe rebound macular oedema on withdrawing anti-VEGF treatment. There was also evidence of worsening posterior pole ischemia in both eyes, although the cause for this is uncertain as the patient also had diabetic retinopathy and maculopathy. The pathogenesis of macular oedema in IFN-retinopathy is uncertain. This case highlights the importance of counselling patients on IFN-therapy as to the rare risk of sight loss due to adverse effects of interferon related retinopathy, particularly in the presence of pre-existing retinal vascular disease and the need for continued close liaison between ophthalmology and hepatology teams.

References

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