

VIRTUAL MEDICAL RESEARCH SYMPOSIUM



MEDICAL RESEARCH
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ABSTRACT BOOK



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**UNILATERAL ISCHEMIC CENTRAL RETINAL VEIN OCCLUSION IN A YOUNG
HEALTHY ADULT: A CASE REPORT**

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Central retinal vein occlusion (CRVO) is an obstruction of the central retinal vein due to the impingement from the fellow central retinal artery. It is the second most common retinal vascular disease after diabetic retinopathy. Risk factors of CRVO include diabetes mellitus, hypertension, hyperlipidaemia, cardiovascular disease, male gender and age above 50 years; with 90% of the cases occurring in individuals aged 55 years and above. We report a rare case of left eye ischemic CRVO in a 24-year-old healthy gentleman who later on found out to have hypercholesterolemia. He presented with a sudden onset of reduced vision of his left eye. Examination revealed visual acuity (VA) of the left eye was 6/120. Fundus examination showed marked papilloedema with dilated and tortuous blood vessels and extensive flame-shaped haemorrhages with cotton wool spots in all four retinal quadrants. There was a presence of macular edema as well. The ancillary tests confirmed the diagnosis of left eye ischemic CRVO with significant macular edema. The blood investigation revealed elevated cholesterol levels. For treatment, 6 times of monthly intravitreal Ranibizumab injections were planned for the macular edema and oral Atorvastatin 40 milligrams daily was started. Following the intravitreal Ranibizumab injection, his VA has significantly improved with a reduction of macular edema. This report highlights the importance of prompt diagnosis and investigation of CRVO, especially in the younger age group. Early treatment of macular edema secondary to CRVO is able to reduce the edema thus leads to VA improvement.





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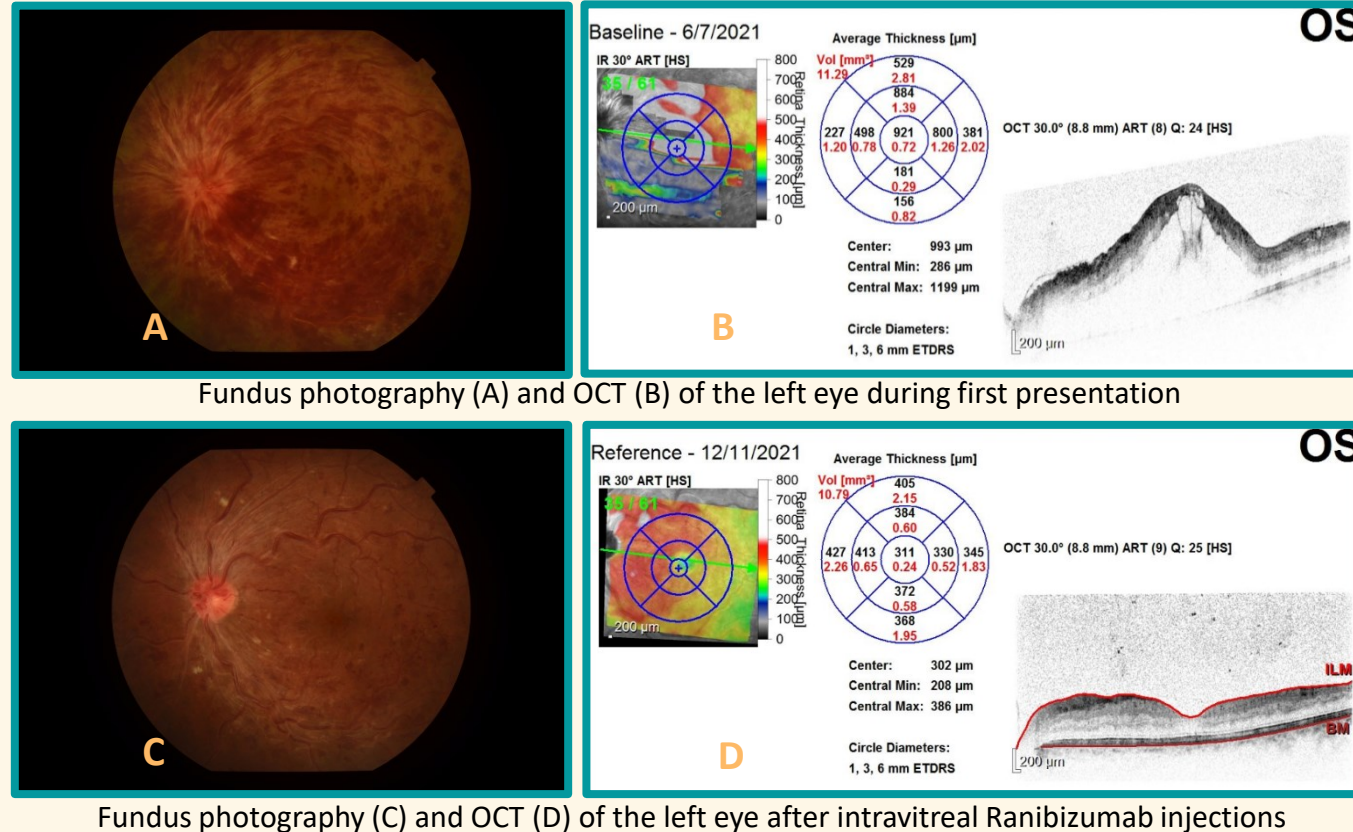
INTRODUCTION

- Central retinal vein occlusion (CRVO) is an obstruction of central retinal vein due to the impingement from the fellow central retinal artery
- Ischemic CRVO accounts for 25% of all cases, characterized by sudden and severe visual impairment

CASE DETAILS

- 24-year-old healthy gentleman presented with a sudden onset of reduced vision of his left eye
- No other symptom was complained
- Examination revealed visual acuity (VA) in the right eye was 6/12 and the left eye was 6/120
- Anterior segment examination was unremarkable
- Fundus examination showed extensive flame-shaped hemorrhages with cotton wool spots in all four retinal quadrants of the left eye with marked disc swelling and dilated, tortuous blood vessels
- There was a presence of macular edema as well

CLINICAL IMAGES



INVESTIGATION AND MANAGEMENT

- The blood investigation revealed elevated cholesterol levels
- Ocular coherent tomography (OCT) of the left eye exhibited marked macular edema
- For treatment, 6 times of monthly intravitreal Ranibizumab injections (0.5mg/0.05mL/injection) were planned for the macular edema and oral Atorvastatin 40 milligrams daily was started
- Following the intravitreal Ranibizumab injection, his left eye VA has significantly improved (6/30) with a reduction of macular edema

DIAGNOSIS

Left eye ischemic CRVO with significant macular edema

DISCUSSION

- CRVO is the second most common retinal vascular disease after diabetic retinopathy¹
- Risk factor of CRVO includes diabetes mellitus, hypertension, hyperlipidemia, cardiovascular disease, male gender and age above 50 years²
- CRVO is uncommon in young individual unless the person has underlying blood dyscrasias and vasculitis
- Prognosis is poor in ischemic CRVO where 50% will develop rubeosis and neovascular glaucoma in 3 months (100-day glaucoma) and extremely poor visual outcome due to macular ischemia
- Ischemic CRVO can be managed with intravitreal anti-Vascular Endothelial Growth Factor (anti-VEGF) and optimization of underlying systemic disease³

CONCLUSION

- This report highlights the importance of prompt diagnosis and investigation of CRVO especially in the younger age group
- Early treatment of macular edema secondary to CRVO is able to reduce the edema thus leads to VA improvement

REFERENCES

- Cugati, S., Wang, J. J., Rochtchina, E., & Mitchell, P. (2006). Ten-year incidence of retinal vein occlusion in an older population: the Blue Mountains Eye Study. *Archives of ophthalmology*, 124(5), 726-732.
- Klein, R., Klein, B. E., Moss, S. E., & Meuer, S. M. (2000). The epidemiology of retinal vein occlusion: the Beaver Dam Eye Study. *Transactions of the American Ophthalmological Society*, 98, 133.
- Brown, D. M., Campochiaro, P. A., Singh, R. P., Li, Z., Gray, S., Saroj, N., ... & Cruise Investigators. (2010). Ranibizumab for macular edema following central retinal vein occlusion: six-month primary end point results of a phase III study. *Ophthalmology*, 117(6), 1124-1133.