

## Visual Loss and Retinal Vein Occlusion: Have We Lost Sight of the Problem?

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Received: January 27, 2015

Revised: February 10, 2015

Accepted: February 14, 2015

Published online: June 1, 2015

### ABSTRACT

CRVO is a common cause of sight loss. Treatment modalities such as intravitreal anti-VEGF, intravitreal steroids and laser do not address the cause of the pathology, but rather its effects as this letter highlights.

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**Key words:** Retinal vein occlusion; Intravitreal steroid; Anti-vegf; Thrombolysis

Glasman PJ, Clearkin LG. Visual Loss and Retinal Vein Occlusion: Have We Lost Sight of the Problem? *International Journal of Ophthalmic Research* 2015; 1(1): 34-35 Available from: URL: <http://www.ghrnet.org/index.php/ijor/article/view/1039>

### LETTERS TO THE EDITOR

Thrombosis of the central retinal vein causes central retinal vein occlusion (CRVO)<sup>[1]</sup>. Current standard treatment modalities, including intravitreal steroid implant, intravitreal anti-vascular endothelial growth factor and laser, are directed at the consequences of the CRVO, rather than the cause itself. Whilst these are useful for

treating the effects of vascular leakage and capillary non-perfusion, clearly it would be preferable to reverse the root cause of the pathology if possible.

Kohner showed in 1976<sup>[2]</sup> that systemic streptokinase was beneficial in CRVO, with approximately a 3 Snellen line benefit in favour of the treated group. However, this was balanced against a 15% vitreous haemorrhage rate - at the time an untreatable and often blinding complication as it pre-dated modern vitrectomy techniques. The study was also limited by small sample size and wide inclusion criteria, with patients included despite presenting many days after the onset of symptoms. Several authors since have considered "primary" intervention by other methods, including tissue plasminogen activator<sup>[3]</sup>, haemodilution<sup>[3]</sup>, and low molecular weight heparin<sup>[4,5]</sup>. Whilst these have shown promise, they are limited by a lack of standardisation, and in particular a wide variation in time to treatment, often up to 30 days.

It is tempting to make an analogy with the recent change in the management of acute stroke. Whereas management had previously been mainly supportive, the focus is now on timely (within 4 hours) thrombolysis, often at regional centres. Whilst funding such a service may be an issue, the current NICE-approved therapies in CRVO, Lucentis and Ozurdex, are costly at £26,200 and £22,831 per QALY respectively. The real-world cost is unknown as both licenses are open-ended, therapy is usually prolonged, and it may be associated with serious complications. We therefore suggest that Kohner's idea is worth revisiting.

### Abbreviations

NICE: National Institute for Health and Clinical Excellence, United Kingdom;

QALY: Quality Adjusted Life Year

### CONFLICT OF INTERESTS

The author has no conflicts of interest to declare.

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