Management of DMO and PDR in 2019

BY ROD MCNEIL

An evidence-based approach to the management of diabetic macular oedema (DMO) and proliferative diabetic retinopathy (PDR) in 2019 was outlined by Sobha Sivaprasad, UK, in presentations during the Diabetic Retina scientific session September 6 2019, at the 19th European Society of Retina Specialists (EURETINA) Congress in Paris, France. **Rod McNeil** reports.

The recommended approach for centre-involving DMO (CI-DMO) is to stratify and manage patients according to their baseline visual acuity, said Prof Sivaprasad. Figure 1 summarises initial DMO treatment options.

Robust evidence supports the role of ophthalmologists in helping patients with diabetic eye disease understand the ongoing importance of metabolic control with respect to levels of glycaemia and blood pressure. The Diabetic Retinopathy Clinical Research (DRCR) network for example showed that lower haemoglobin A1c (HbA1c) levels were associated with greater improvement in visual acuity following anti-vascular endothelial growth factor (anti-VEGF) therapy for CI-DMO.

Observation without treatment unless vision worsens is a reasonable strategy for eyes that present with CI-DMO and good visual acuity.

EURETINA guidelines recommend anti-VEGF treatment as first-line therapy for visual impairment due to CI-DMO. In the comparative DRCR.net Protocol T study, aflibercept, bevacizumab and ranibizumab yielded similar gains in vision for CI-DMO patients with 20/32 or 20/40 vision at the start of treatment. In CI-DMO eyes with baseline best corrected visual acuity (BCVA) below 69 letters, aflibercept showed superiority to bevacizumab over two years and over ranibizumab in the first year of treatment.

The DRCR.net Protocol I study also shows that visual acuity improvement with anti-VEGF therapy can be sustained through five years, with a diminishing treatment burden beyond the first year. The numbers of patients with chronic persistent DMO also reduces over time. In Protocol T, less than 3% of eyes with chronic persistent oedema through two years lost ≥10 letters and approximately 50% gained at least two lines of vision from baseline at two years.

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Steroids may be considered as first-line agent for CI-DMO if anti-VEGF therapy is contraindicated, unavailable or unaffordable or if patient factors or logistic issues prevent use of a robust anti-VEGF treatment schedule.

Steroids have a largely second-line role for the management of chronically persistent DMO and are preferred for pseudophakic patients who are 'unresponsive' to anti-VEGF treatment.

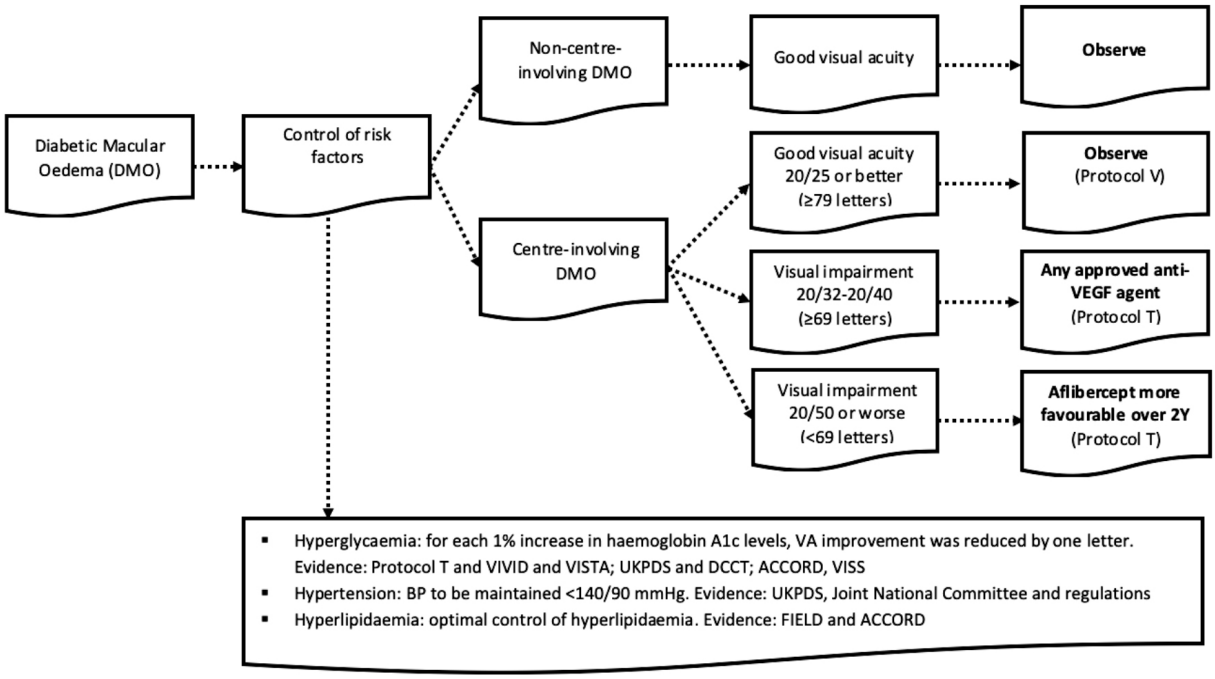
But findings from DRCR.net Protocol U need to be considered, cautioned Prof. Sivaprasad. In this study, the addition of intravitreal dexamethasone to continued ranibizumab therapy did not improve visual acuity at 24 weeks more than continued ranibizumab therapy alone among eyes with persistent DMO following anti-VEGF therapy.

Laser remains standard of care for PDR

Prompt panretinal photocoagulation (PRP) remains the standard of care for PDR, despite significant advantages of intravitreal anti-VEGF therapy, said Prof Sivaprasad.

The DRCR.net Protocol S study in PDR showed that ranibizumab therapy is noninferior to PRP, while the CLARITY

Figure 1: Evidence-based summary of initial management options for DMO in 2019.



study demonstrated that aflibercept is noninferior and superior to PRP over one year in eyes with active PDR without baseline CI-DMO. With anti-VEGF treatment for PDR, a good surveillance programme is needed to ensure prompt treatment for recurrence or reactivation of neovascularisation to avoid potentially devastating complications.

Elisabetta Pilotto, Italy, commented: "In proliferative DR, PRP treatment is remarkably effective in preventing visual loss and preserving vision long term. Panretinal photocoagulation remains a standard treatment in PDR without DMO, while DMO with limited foveal elevation and good VA may be treated with laser (or observation)."

Dr Pilotto added that newer laser technologies such as subthreshold micropulse laser offer potential tissue sparing benefits over modified ETDRS laser for DMO, and may help reduce injection frequency when used as adjunctive therapy to anti-VEGF treatment.

Recent takeaway lesson from DRCR clinical trials

Since 2003 DRCR Retina Network studies have contributed evidence to guide standard of care for diabetic eye disease. Dr Neil Bressler, USA, outlining recent lessons from the DRCR.net clinical trials, underscored one recent takeaway lesson: change in optical coherence tomography central subfield thickness (CST) does not equate very well with change in visual acuity in DMO.

Optical coherence tomography CST is an important guide for treatment but not as a prognostic indicator of future vision outcomes, said Dr Bressler.

He explained that having chronic persistent DMO through two years with continued anti-VEGF therapy has no negative impact on vision outcomes – the percentage of eyes that had substantial vision loss is the same whether a patient has persistent DMO through two years or whether it is resolved between months six and 12.

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