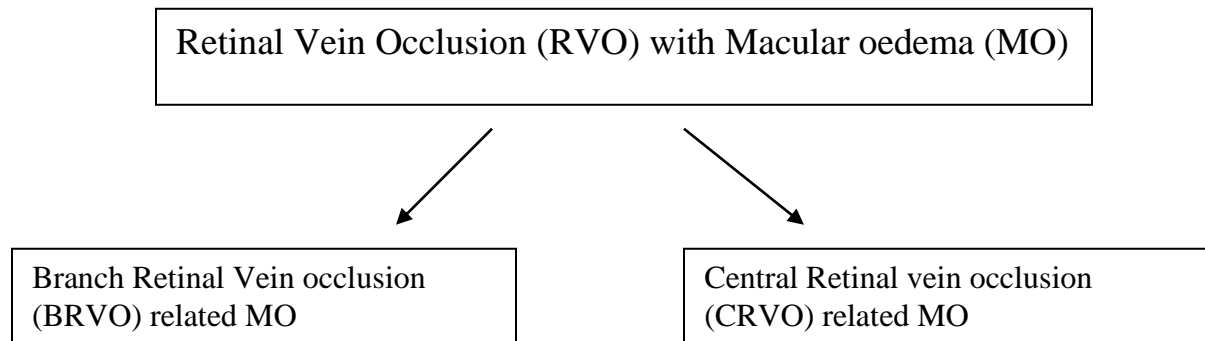


Retinal Vein Occlusion (RVO) Treatment pathway- Northeast England

(Royal Victoria Infirmary, Sunderland Eye Infirmary, James Cook University Hospital, Darlington Memorial Hospital, University Hospital North Durham)

Formulated based on guidance from Northeast retina Group



Proposed Timeline

Centre involving retinal vein occlusion with macular oedema should be seen soon.

Baseline assessment should include:

- Visual acuity , IOP check
- Slitlamp
- Fundus
- OCT scan
- Blood tests to exclude systemic risk factors (if not performed recently by GP or in casualty at presentation) -see RCOphth guidance
- Fundus fluorescein angiogram (based on clinician's discretion)

Branch Retinal Vein Occlusion with macular oedema

Treatment is recommended if:

- Macular oedema post BRVO and no history of spontaneous improvement in visual symptoms
- Treat with anti VEGF or Ozurdex if hemorrhagic BRVO and/ or laser not possible or unresponsive to laser (as per NICE recommendation)
- Hemorrhagic BRVO (clinician discretion)

Management options for 'first-line' treatment include

- Intravitreal Anti-VEGF: *Ranibizumab (Lucentis™)*
- Intravitreal Dexamethasone implant (*Ozurdex™*)
- Laser
- Observation

Consider Anti VEGF

(OCT & IOP check at each visit and re-inject monthly/bi monthly as needed)

- Young age
- Glaucoma
- Ocular Hypertension
- Steroid Responder
- Patient willing for frequent injections and monitoring

Consider Ozurdex

(OCT & IOP check at each visit and re-inject 4-6 monthly intervals)

- Pseudophakic
- Recent Stroke
- Recent Myocardial infarction
- Unable to make frequent visits for injections or monitoring

Consider Laser

(Grid, sectoral or pan retinal photocoagulation)

- MO not involving foveal centre
- Rubeosis
- NVD or NVE
- Vitreous Haemorrhage
- As an add-on therapy to anti VEGF/Ozurdex where incomplete response has been observed to first line treatment

Central Retinal Vein Occlusion with macular oedema

Treatment is recommended if:

- Macular oedema post CRVO and no history of spontaneous improvement in visual symptoms

Management options for 'first line' treatment include (based on NICE guidance):

- Intravitreal Anti-VEGF (*Ranibizumab (Lucentis™); Aflibercept (Eylea™)*)
- Intravitreal Dexamethasone implant (*Ozurdex™*)
- Laser (*if new vessels present in anterior or posterior segment, severe clinical signs of ischemia- based on clinician discretion*)
- Observation

Clinician in partnership with patient to decide the most appropriate first line treatment

Consider Anti VEGF

- Young age
- Glaucoma
- Ocular Hypertension
- Steroid Responder
- Patient willing for frequent injections and monitoring
- Adverse reaction to Ozurdex

Consider Ozurdex

- Pseudophakic
- Recent Stroke
- Recent Myocardial infarction
- Unable to make frequent visits for injections or monitoring
- Adverse reaction to anti VEGF

Consider Laser (Pan retinal or sectoral photocoagulation)

- Rubeosis
- New vessels on disc or elsewhere
- Vitreous Haemorrhage
- Significant peripheral retinal non perfusion

Treatment Guidance

- Check NICE compliant.
- Give information material on Retinal vein occlusion and treatment offered.
- Take Informed consent.
- Anti VEGF Treatment commenced with a 'Loading phase' should be given monthly for 3 consecutive months in the affected eye or until VA stabilization and /or OCT dry followed by prn / bimonthly or treat and extend regimen based on clinician discretion.
- For first line steroid option- Treatment commenced with an Ozurdex implant injection in the affected eye.
- Anti VEGF patients monitored monthly for repeat injections until macula dry and/or stable maximum VA is reached. While Post Ozurdex implant injection patients thereafter monitored at 1 month for IOP check and regular (1-3 month) intervals based on clinical findings.
- Repeat intravitreal anti VEGF/ Ozurdex injection should be considered if monitoring indicates a loss of VA and/ or recurrence of fluid on the OCT scan. Treatment continued if some response to treatment (macular oedema settling and vision improving).
- The interval between doses for anti VEGF should not be shorter than 1 month. The interval between Ozurdex injections should not be shorter than 4 months.
- Discontinue treatment if macular oedema resolved (OCT dry) but no useful improvement in vision or vision deteriorates despite regular treatment.

Switching to second line treatment

Patients should be 'Re-evaluated' prior to switch to decide if

- Potential for visual gain
- Cause for lack of response
- New clinical signs/symptoms
- Presence of side effects/ tachyphylaxis

Reasons for switch from Anti VEGF to Ozurdex or vice-versa

- Raised uncontrolled IOP with ozurdex but with demonstrable positive clinical response (i.e. improved vision and/or significant reduction in OCT thickness). *Uncontrolled IOP defined as >25 mmHg despite maximum tolerated topical anti glaucoma drops or progressive increase in IOP following successive Ozurdex implant.*
- Allergy or toxic response or other disabling side effects to previous agent
- Tachyphylaxis: Documented previous positive response to agent now with reduced (i.e. less than previous) and insufficient response (e.g. very short duration i.e. less than 3 weeks Lucentis and less than 4 months Ozurdex)

Suboptimal response – defined as lack of clinical response (defined as less than 5 letter improvement and/or less than 15% CRT reduction) following initial loading phase and 3 further monthly injections in case of anti VEGF; lack of response following 2 consecutive ozurdex implants. Re-evaluate and consider switch to alternative treatment.

No response and no useful vision: defined as 'deterioration of VA (Counting Fingers OR > 30 letters below baseline despite regular treatment or no evidence on any improvement (visual/anatomical) with permanent macular scarring based on clinical discretion. Consider discontinuing treatment.

Abbreviations

Anti VEGF: Anti Vascular endothelial growth factors

BRVO: Branch retinal Vein Occlusion

CRVO: Central Retinal Vein occlusion

MO: Macular oedema

IOP: Intra ocular pressure

VA: Visual acuity

NVD- New vessels on Disc

NVE- New vessels elsewhere