

# Ophthalmology Macular Pathways



- Age related Macular Degeneration
- Diabetic Macular Oedema
- Macular Oedema secondary to Central Retinal Vein Occlusion
- Macular Oedema secondary to Branch Retinal Vein Occlusion
- CNV associated with pathological myopia
- Vitreomacular Traction

# Age-related Macular Degeneration (AMD)

- Diagnostics to
- Logmar visual acuity/ Amsler Grid
  - Slit Lamp Biomicroscopy
  - Fluorescein angiography - optional
  - OCT scanning
  - ICG\* angiography – optional

Outside of NICE criteria or Dry AMD

Eye Clinic Liaison Officer

Treatable wet AMD 6/12 – 6/96

## 1<sup>st</sup> Line

Drug choice takes into account cost effectiveness and patient preference

Ranibizumab  
TA 155

1<sup>st</sup> line sequential use is not supported; a business case should be submitted if this is required

Or

Aflibercept  
TA 294

Or

Photodynamic Therapy (PDT)  
TA 68

If all of the following apply:

- the best-corrected visual acuity is between 6/12 (0.3) and 6/96 (1.2)
- there is no permanent structural damage to the central fovea
- the lesion size is less than or equal to 12 disc areas in greatest linear dimension
- there is evidence of recent presumed disease progression (blood vessel growth, as indicated by fluorescein angiography, or recent visual acuity changes)

Intra-vitreous injection monthly for 3 months  
1 injection per month until max visual acuity is achieved (usually 3 or more) then monitoring and treatment intervals should be determined by the physician. The treatment interval should be extended by no more than 2 weeks at a time. PAS must be used.

OCT used to assess response to treatment.  
STOP treatment if a person's vision gets worse and there are changes inside the eye which show that treatment isn't working.

If not responding consider doing ICG angiography and PDT

If all of the following apply:

- the best-corrected visual acuity is between 6/12 (0.3) and 6/96 (1.2)
- there is no permanent structural damage to the central fovea
- the lesion size is less than or equal to 12 disc areas in greatest linear dimension
- there is evidence of recent presumed disease progression (blood vessel growth, as indicated by fluorescein angiography, or recent visual acuity changes)

Monthly appointments for intra-vitreous injection for 3 months THEN  
Regular intra-vitreous injection alternate months. Assess visual acuity at 12 months  
PAS must be used.

Only in classic with no occult subfoveal choroidal neovascularisation (CNV) and best-corrected visual acuity 6/60 (1.0) or better.  
PDT can be useful for specific patients with a rare variant of AMD and those patients with needle phobias

## 2<sup>nd</sup> Line

Photodynamic Therapy (PDT) TA 68

TA 68 says PDT is an option. It does not mention second line after failure of anti-VEGF. It is being proposed here for cases that fail who may have a rare variant of AMD.

Only in classic with no occult subfoveal choroidal neovascularisation (CNV) and best-corrected visual acuity 6/60 (1.0) or better.  
PDT can be useful for specific patients with a rare variant of AMD

# Diabetic Macular Oedema

*Prevention: management of blood sugar, BP, cholesterol and smoking cessation*

83% Type II diabetes progressing to diabetic retinopathy

**29% progressing to Diabetic Macular Oedema**

17% progressing to Clinically Significant Macular Oedema

- Diagnostics**
- Logmar visual acuity/ Amsler Grid
  - Slit Lamp Biomicroscopy
  - Fluorescein angiography
  - OCT scanning
  - ICG angiography – optional
  - Fundus autofluorescence – useful for accessing previous laser

Eye Clinic Liaison Officer

Untreatable

Treatable

1<sup>st</sup> Line

Ranibizumab  
TA 274



1<sup>st</sup> line or 2<sup>nd</sup> line sequential use is not supported; a business case should be submitted if this is required

Or

Aflibercept  
TA 346

Or

OCT used to assess response to treatment

Macular Laser photocoagulation

If the central retina thickness is 400 micrometres or more when treatment is started.  
Intra-vitreous injection monthly for 3 months  
1 injection per month until max visual acuity is achieved (usually 3 or more) then monitoring and treatment intervals should be determined by the physician. The treatment interval should be extended by no more than 1 month at a time.  
Usually 7 4 2 pattern of injections.

If the central retina thickness is 400 micrometres or more when treatment is started.  
Intra-vitreous injection monthly for 5 months, followed by 1 injection every 2 months  
After the 1<sup>st</sup> 12 months, the treatment interval may be extended based on visual and anatomic outcomes and should be determined by the physician.

If no centre involvement or centre involvement with no vision loss > 78 letters

2<sup>nd</sup> Line

If no improvement with previous therapy

Fluocinolone  
TA 301

Or

1<sup>st</sup>/2<sup>nd</sup> Line

Dexamethasone  
TA 349

Recommended as an option for treating **chronic DMO** that is insufficiently responsive to available therapies if, used in an eye with an intraocular (pseudophakic) lens **and** supplied with the discount agreed in the patient access scheme. (£5,500 less discount).  
NICE have strict criteria for chronic DMO. 36 month duration, but may be repeated after 12 months if deteriorates.

Recommended as an option if to be used in an eye with an intraocular (pseudophakic) lens **and** the DMO does not respond to non-corticosteroid treatment, or such treatment is unsuitable.  
Single implant, but may be repeated after approximately 6 months if there is decreased vision (with or without an increased retinal thickness) with recurrent or worsening diabetic macular oedema.

# Macular Oedema (MO) secondary to Central Retinal Vein Occlusion

## Diagnostics

- Logmar visual acuity
- OCT scanning
- Clinician assessment
- Fluorescein angiography - optional

Eye Clinic  
Liaison  
Officer

untreatable

treatable

OCT used to assess response to treatment

1<sup>st</sup> line sequential use is not supported; a business case should be submitted if this is required

1<sup>st</sup> Line

Ranibizumab  
TA 283

Or

Aflibercept  
TA 305

Or

Dexamethasone  
TA 229

Ranibizumab is recommended as an option for treating visual impairment caused by macular oedema secondary to Central Retinal Vein Occlusion if the manufacturer provides ranibizumab with the discount agreed in the patient access scheme.

Intra-vitreous injection monthly for 3 months

1 injection per month until max visual acuity is achieved (usually 3 or more) then monitoring and treatment intervals should be determined by the physician. If no response after 3 months STOP

Aflibercept solution for injection is recommended as an option for treating visual impairment caused by macular oedema secondary to central retinal vein occlusion only if the manufacturer provides aflibercept solution for injection with the discount agreed in the patient access scheme. Monthly appointments to assess visual acuity AT SAME TIME

Monthly appointments for intra-vitreous injections until stable for 3 months. Ongoing need for treatment should be reviewed.

(3 - 12 x £816 less discount)

If no response after 3 months STOP

Dexamethasone intravitreal implant is recommended as an option for the treatment of macular oedema following central retinal vein occlusion

Not for young patients or patients with glaucoma. May be helpful for patients who don't wish to attend every month. Single implant.

May be repeated at 6-monthly intervals (usually) up to a maximum of 6 implants (1 - 6 x £870)

# Macular Oedema (MO) secondary to Branch Retinal Vein Occlusion

## Diagnostics

- Logmar visual acuity
- OCT scanning
- Clinician assessment
- Fluorescein angiography - optional

Eye Clinic  
Liaison  
Officer

untreatable

treatable

1<sup>st</sup> Line

Ranibizumab TA 283  
(central oedema)

Or

Aflibercept TA 409  
(central oedema)

Or

Focal Laser Photocoagulation  
(off centre oedema)

2<sup>nd</sup> Line

OCT used  
to assess  
response to  
treatment

Dexamethasone  
TA 229

Ranibizumab is recommended as an option for treating visual impairment caused by macular oedema following branch retinal vein occlusion only if treatment with laser photocoagulation has not been beneficial, or when laser photocoagulation is not suitable because of the extent of macular haemorrhage **and** only if the manufacturer provides ranibizumab with the discount agreed in the patient access scheme. Intra-vitreous injection monthly for 3 months 1 injection per month until max visual acuity is achieved (usually 3 or more) then monitoring and treatment intervals should be determined by the physician. If no response after 3 months STOP

Aflibercept is recommended as an option within its marketing authorisation for treating visual impairment in adults caused by macular oedema after branch retinal vein occlusion, only if the company provides aflibercept with the discount agreed in the patient access scheme. Monthly appointments to assess visual acuity AT SAME TIME Monthly appointments for intra-vitreous injections until stable for 3 months. Ongoing need for treatment should be reviewed. (3 - 12 x £816 less discount) If no response after 3 months STOP

Dexamethasone intravitreal implant is recommended as an option for the treatment of macular oedema following branch retinal vein occlusion when treatment with laser photocoagulation has not been beneficial, **or** treatment with laser photocoagulation is not considered suitable because of the extent of macular haemorrhage. Not for young patients or patients with glaucoma. May be helpful for patients who don't wish to attend every month. Single implant. May need interim visits to measure pressures. May be repeated, usually at 6-monthly intervals, up to a maximum of 6 implants (1 - 6 x £870)

# CNV associated with pathological myopia

## Diagnostics

- Logmar visual acuity/ Amsler Grid
- Slit Lamp Biomicroscopy
- Fluorescein angiography - optional
- OCT scanning
- ICG angiography – optional

1<sup>st</sup> Line

Ranibizumab  
TA 298

Photodynamic  
therapy  
(Vertiporfin)

Laser  
photocoagulation

Vitrectomy

Fovial  
translocation

Ranibizumab is recommended as an option for treating visual impairment due to choroidal neovascularisation secondary to pathological myopia when the manufacturer provides ranibizumab with the discount agreed in the patient access scheme.

The treatment of visual impairment due to CNV should be determined on a patient by patient basis taking account of disease activity.

Many patients may only need one or two injections during the first year, while some patients may need more frequent treatment.

Follow-up visits can be combined with a treatment visit and would not incur any additional costs. However, there are occasions when follow-up visits are done without treatment.

For subfoveal if an anti-VEGF is unsuitable

For extrafoveal and juxtafoveal

For young people with large lesions

# Vitreomacular Traction (VMT)

## Diagnostics

- Fluorescein angiography - optional
- OCT scanning



## GASS Biomicroscopic Stage

- 1a} 50% resolve spontaneously
- 1b}
- 2 } **≥98% closure with early surgery (but waiting times)**
- 3 }
- 4 }

1<sup>st</sup> Line

Ocriplasmin  
TA 297

Ocriplasmin is recommended as an option for treating vitreomacular traction in adults, only if: an epiretinal membrane is not present **and** they have a stage II full-thickness macular hole with a diameter of 400 micrometres or less **and/or** they have severe symptoms.  
Single intravitreal injection at a dose of 0.125 mg  
(£2500 and administration £177)