Treatment guidelines for choroidal neovascularisation secondary to non-AMD causes

Following an appraisal by the North East Treatment Advisory Group in July 2009 it is recommended that first line treatment of non-AMD choroidal neovascularisation should commence with an intravitreal anti-VEGF agent, specifically **bevacizumab 1.25 mg**. [1,2] All aetiologies and lesion types should be considered as eligible for treatment (classic, predominantly classic, minimally classic and occult).

The intravitreal preparation should be purchased from a recognised pharmaceutical compounding facility such as Moorfields Pharmaceuticals. [3]
It is therefore imperative that orders for intravitreal bevacizumab are communicated at the first opportunity to the appropriate pharmacy department to ensure that the preparation is available on the day that it is required.

Pathway

Upon presentation, the patient should have their best corrected visual acuity (BCVA) measured (LogMAR) and undergo a baseline fluorescein angiogram and optical coherence tomography (OCT). This will allow the diagnosis to be confirmed and provide baseline measurements for monitoring of treatment effect and facilitate subsequent audit.

Eligibility criteria for treatment

- Diagnosis of subfoveal choroidal neovascularisation (CNV) secondary to non-age-related macular degeneration causes (non-AMD)
- Best corrected visual acuity ≥ 25 ETDRS letters (6/96)
- Evidence of recent disease progression. For example a five letter drop in vision or worsening of symptoms – *document parameters and measurements in patient record*
- New haemorrhage
- Lesion less than 12 disc areas in size
- No obvious structural damage at fovea from RPE atrophy or scarring

Treatment regimen

The recommended regimen is one initial intravitreal injection of bevacizumab 1.25 mg followed by regular monitoring of the condition which may include assessment of BCVA using OCT.

If the lesion is still considered active according to the PrONTO definition of disease activity [4] the following options are recommended:

- Further treatment with intravitreal bevacizumab 1.25 mg
- Change treatment to photodynamic therapy (PDT) with verteporfin
- Discontinue active treatment

If further anti-VEGF injections are administered the patient should be reviewed on a monthly basis initially, and further injections given according to the PrONTO criteria [4] – see below.

Treatment should only be changed to PDT following the results of a fluorescein angiogram. The decision to change to PDT is at the discretion of the treating clinician. Reasons for changing to PDT may include:

- Patient reluctance to undergo intravitreal injection
- Structural abnormalities that increase the risk of damage during intravitreal injection
- Allergy or hypersensitivity to anti-VEGF therapies

If treatment is changed to PDT then review will be every three months with fluorescein angiography and OCT. Re-treatment decisions will be made in line with existing criteria.

PrONTO criteria for re-treatment of macular degeneration with anti-VEGF theapy [4]

- Five or more letter drop (vision loss) not caused by other pathology
- New haemorrhage
- New or persistent sub/intraretinal fluid or retinal thickening

Alternative treatments

Some patients may choose not to receive intravitreal anti-VEGF injections at all. These patients should be offered PDT from the outset as is currently practised in line with NICE guidance.

Discontinuing treatment

At present there are no guidelines and little evidence on the optimal duration for anti-VEGF therapy in the treatment of AMD of any aetiology. The treating clinician should consider permanently stopping treatment if:

- The disease appears inactive
- An adverse reaction occurs (allergy, endophthalmitis)
- BCVA is measured as < 15 letters on two consecutive visits
- ≥ 30 letter drop from baseline

References

1. NETAG treatment recommendation: AVG-CNV-SEP09 www.netag.nhs.uk
2. NETAG appraisal report: Bevacizumab (Avastin®) and Ranibizumab (Lucentis®) in the management of non-AMD choroidal neovascular disease. June 2009 www.netag.nhs.uk
3. Moorfields Pharmaceuticals, 0207 684 90 90 www.moorfieldspharmaceuticals.co.uk
4. Fung AE et al. An optical coherence tomography-guided, variable dosing regimen with intravitreal ranibizumab (Lucentis) for neovascular age-related macular degeneration. Am J Ophthamol 2007;143:566-83

Other useful references

- NICE technology appraisal guidance 155. Ranibizumab and pegaptinib for the treatment of age-related macular degeneration. August 2008.
- The Royal College of Ophthalmologists. Age-related macular degeneration guidelines for management. February 2009. www.rcophth.ac.uk/docs/publications/AMD_GUIDELINES_FINAL_VERSION_Feb_09.pdf

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