Bevacizumab for the treatment of rubeotic/neovascular glaucoma and uncontrolled Proliferative Diabetic Retinopathy prior to laser or vitrectomy (adults)

Application via Blueteq system

Policy Statement

Intravitreal Bevacizumab (IVB) is an anti-Vascular Endothelial Growth Factor (VEGF) and should only be used for the treatment of the following conditions- rubeotic/neovascular glaucoma and uncontrolled Proliferative Diabetic Retinopathy (PDR) prior to laser or vitrectomy in accordance with the criteria detailed below. IVB is unlicensed for use in these conditions. There are no anti-VEGFs that are licensed for these conditions currently.

Rubeotic/Neovascular glaucoma

A single dose of IVB can be used as adjuvant therapy, to facilitate treatment with laser photocoagulation, in the management of neovascular glaucoma secondary to Ischaemic central retinal vein occlusion, Ischaemic diabetic retinopathy or ocular ischaemic syndrome.

Uncontrolled Proliferative Diabetic Retinopathy (PDR) prior to laser or vitrectomy[1]

The long-term use of anti-VEGF treatment for PDR is not currently recommended.

However, numerous case series, sound biochemical mechanism of action, and increasing experience can be used to support the use of 1-2 doses of this treatment modality in selected patients prior to laser treatment or vitrectomy only.

Anti-VEGF drugs are found to be of use especially in those cases when there is difficulty in performing PRP (Pan-retinal photocoagulation), such as patients with vitreous haemorrhage and dense cataract, or prior to vitrectomy.

Further Requirements

1. The prescribing clinician must meet the governance requirements for using drugs off-label (http://www.gmc-uk.org/guidance/ethical_guidance/prescriptions_faqs.asp) including obtaining informed consent from the patient and understand that responsibility for prescribing drugs outside the terms of the product licence remains with the prescriber.
2. All patients treated within these policies must be included in prospective six monthly departmental clinical audit of all criteria specified in this policy. The audit will include criteria reflecting anticipated benefits including reduction in laser treatments required per patient), adverse events (ocular and systemic) and expenditure.
3. A maximum of 30 doses of Bevacizumab a year per provider will be commissioned. If a provider wishes to use more than the agreed amount, prior approval must be sought from the CCG.

Dr Rachel Hobson, Formulary Pharmacist, NHS Wiltshire CCG. Adapted with permission January 2017 from: NHS Swindon CCG policy: Bevacizumab for the treatment of retinal vein occlusion, diabetic macular oedema, neovascular glaucoma and choroidal neovascularisation. (September 2011). Updated June 2019.

Background to the treatment.

Bevacizumab is a monoclonal antibody that recognises and blocks vascular endothelial growth factor (VEGF). VEGF stimulates the growth of new blood vessels. When new blood vessels grow within the eye (in response to damage), the growth tends to be abnormal and leak fluid causing the layers of the retina to separate.
The evidence base for use of bevacizumab in rubeotic/neovascular glaucoma or PDR is limited. However, bevacizumab may facilitate the use of PRP in both conditions for specific patients and also prior to vitrectomy in some patients during the treatment of PDR.

Background to the conditions

Neovascular glaucoma is an acutely painful condition that presents a severe threat to vision. Pan-retinal laser ablation and topical treatment with eye drops are used, (sometimes in multiple sessions) but these treatments are often ineffective. Anti-VEGF treatment can regress neovascularization at the iris and anterior chamber angle, which allows optimal conditions for intraocular surgery.
Proliferative Diabetic Retinopathy occurs in approximately 1.5% of adults with diabetes. The Diabetes Retinopathy Study showed that about half of all eyes with PDR that are left untreated will have severe vision loss (i.e. visual acuity of <20/800 for at least 4 months).
PDR is characterized by retinal neovascularisation, serum leakage, haemorrhage, and fibro-vascular proliferation in the vitreous retinal interface, which further results in vitreous haemorrhage and traction retinal detachment. VEGF is considered to be the primary factor involved in neovascularization in PDR.

References:

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- Use of Avastin (bevacizumab) in age related macular degeneration. 15 December 2014 Updated Statement from The Royal College of Ophthalmologists https://www.rcophth.ac.uk/2014/12/use-of-avastin-bevacizumab-in-age-related-macular-degeneration/

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