NEW DRUGS

Ocriplasmin

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Approved indication: vitreomacular traction

Jetrea (Alcon)
vials containing 0.5 mg/0.2 mL concentrate for injection
Australian Medicines Handbook Appendix A

Vitreomacular traction is an age-related eye condition caused by vitreomacular adhesion. It is observed after vitreous detachment when part of the vitreous remains firmly attached to the centre of the retina. This pulls on the retina and distorts the macula. Oedema also occurs and holes in the macula can form. Symptoms include blurred or distorted vision, particularly with central vision.

Vitreomacular traction can be treated by surgery (vitrectomy). However, because of the risk of complications, such as infection, retinal detachment, haemorrhage and cataract, it is reserved for patients whose vision is seriously affected.

Ocriplasmin is a truncated form of the human enzyme plasmin and is produced by recombinant DNA technology. After intravitreal injection, it works by breaking down matrix proteins involved in the adhesion between the vitreous and the retina. Most of the drug is cleared from the eye within 30 minutes and is rapidly catabolised once it enters the systemic circulation.

The evidence for ocriplasmin's efficacy is based on two identical phase III trials.[1] People with symptomatic vitreomacular adhesion were randomised to a single 100 microlitre intravitreal injection of ocriplasmin 0.125 mg (n=464) or placebo (n=188). The primary outcome was resolution of vitreomacular adhesion (assessed by optical coherence tomography) 28 days after the injection. In a combined analysis of the studies, resolution of adhesions was more common in people who received ocriplasmin compared with those who received placebo (26.5% vs 10.1%). Improved vision at six months (defined as a gain of three or more lines on an eye chart) was also more common with ocriplasmin (12.3% vs 6.4%). In those with a macular hole at baseline, closure of the hole was more likely in the ocriplasmin groups than in the placebo groups – 40.6% (43/106) versus 19.6% (5/47). A subgroup analysis revealed that treatment was more likely to work in patients with milder disease who did not have an epiretinal membrane (37.4% vs 8.7%). Based on this finding, the National Institute for Health and Care Excellence in the UK recommends that ocriplasmin only be used in patients without a membrane (www.nice.org.uk/guidance/ta297).

Some patients underwent vitrectomy during the studies, usually for persistent vitreomacular adhesion. This was less common in people who received ocriplasmin than those who received placebo (17.7% vs 26.6%).

Ocular adverse events were very common in the trials, affecting 68.4% of those who received ocriplasmin and 53.5% of those who received placebo. The most common events with ocriplasmin were vitreous floaters (16.8%), conjunctival haemorrhage (14.6%), injection-related pain (13.5%), photopsia (11.8%) and blurred vision (8.6%). Serious adverse events included macular hole (5.2% – 24 people), retinal detachment (0.4% – 2 people) and reduced visual acuity (0.6% – 3 people).

Eyesight may get transiently worse in the week following treatment. There is also a risk of inflammation, infection, haemorrhage and raised intraocular pressure with intravitreal injection, so monitoring is important and patients should be encouraged to report any adverse effects. Administration of ocriplasmin in both eyes at the same time or repeat administration in the same eye is not recommended.

Exclusions from the trial included people with proliferative diabetic retinopathy, neovascular age-related macular degeneration, retinal vascular occlusion, aphakia, high myopia, uncontrolled glaucoma, a macular hole over 400 micrometres in diameter, a history of retinal detachment or vitreous haemorrhage, recent eye surgery or eye injection. Ocriplasmin is not recommended in these conditions. There is limited experience in people with non-proliferative diabetic retinopathy, uveitis and eye trauma. Benefit was not found in a study of ocriplasmin in children scheduled for vitrectomy, so paediatric use is not recommended.

Although ocriplasmin is better than placebo at resolving vitreomacular adhesions, only about a quarter of patients benefited in the trials. Ocriplasmin is more likely to work in people who do not have an epiretinal membrane and it is not recommended for people with macular holes larger than 400 micrometres. Complications after the injection are not uncommon and ocriplasmin should be administered by an experienced ophthalmologist.

[T] manufacturer provided the product information

REFERENCE

1. Stalmans P, Benz MS, Gandorfer A, Kampik A, Girach A, Pakola S, et al.; MIVI-TRUST Study Group. Enzymatic vitreolysis with ocriplasmin for vitreomacular traction and macular holes. N Engl J Med 2012;367:606-15. http://dx.doi.org/10.1056/NEJMoa1110823

The Transparency score (T) is explained in New drugs: transparency, Vol 37 No 1, Aust Prescr 2014;37:27.

At the time the comment was prepared, information about this drug was available on the websites of the Food and Drug Administration in the USA (www.fda.gov) and European Medicines Agency (www.ema.europa.eu).