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# Fomivirsen

## A Viewpoint by David W. Johnson

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Fomivirsen should be of interest to ophthalmologists experienced in the diagnosis and treatment of cytomegalovirus retinitis in patients with AIDS. It should also be of interest to internists or infectious disease specialists as an alternative therapy for cytomegalovirus retinitis. The antisense mechanism of fomivirsen is a first in human use and is complimentary to other currently available anti-cytomegalovirus drugs.

Fomivirsen is administered by intravitreal injection. The injection technique includes topical or subconjunctival anaesthesia and use of a 30 gauge needle for atraumatic delivery into the vitreous cavity. Injections are well tolerated and serious adverse effects are rare. Possible complications include subconjunctival haemorrhage, transient increase in intraocular pressure, intraocular haemorrhage or infection and retinal tear or detachment. In clinical studies of fomivirsen, the retinal detachment rate was lower than the expected rate due to cytomegalovirus retinitis. A common adverse effect with fomivirsen use is anterior and posterior segment inflammation, which is controllable with topical steroid medication. Patients may note the onset of mild to moderate floaters, which resolve with cessation of the drug.

The recommended dosage of fomivirsen is 330μg/0.05ml every 2 weeks for 2 doses, with monthly injections thereafter. Fomivirsen is supplied in single-use vials containing 1.65 mg (1650μg) in 0.25ml (concentration 6.6 mg/ml), allowing dosing of 2 eyes per vial in patients with bilateral cytomegalovirus retinitis. Care should be taken to avoid overdosage, as toxic retinal effects may be seen at higher doses. Fomivirsen has the advantage of being administered as monthly injections in the maintenance phase for control of cytomegalovirus retinitis. Other local therapies require weekly injections (ganciclovir, foscarnet) or increase the risk of inflammation and hypotony (cidofovir). The ganciclovir implant can provide superior control of cytomegalovirus retinitis, but requires a surgical procedure and replacement every 6 months. Surgical intervention may have a larger risk of bleeding, endophthalmitis, and retinal detachment compared to repeated intravitreal injections. ▲