Triamcinolone acetonide may help treat intraocular disorders

INTRAVITREAL triamcinolone acetonide may potentially prove a valuable as an adjunctive treatment of intraocular oedematous and neovascular disorders, according to new research findings.

The lead researcher in charge of the studies, Dr. Jost Jonas, Department of Ophthalmology, Ruprecht-Karls University in Heidelberg, Germany told the AOPT congress that the effect of a single intravitreal injection of triamcinolone can last for up to nine months and the effect is probably dosage dependent.

Triamcinolone acetonide is a steroid-based drug in the class of glucocorticoids possessing anti-inflammatory and immunosuppressive properties. Glucocorticoids are involved in carbohydrate metabolism through promotion of gluconeogenesis and the formation of glycogen at the expense of lipid and protein synthesis. In recent years a body of data has established that an intravitreal application of triamcinolone acetonide may have potential use as a treatment for cataract and corneal disease. In this and subsequent issues, I will report on some of the more significant presentations from the three-day meeting.

AOPT, with a web address of www.aopt.org, says it is committed to “encourage and advocate research, training, publication and dissemination of knowledge in ocular pharmacology and therapeutics.” In other words, the association is committed to developing drugs and technologies that ophthalmologists may one day use to fight ocular disorders.

The meeting provided a significant volume of information from representatives of university research groups, clinics, teaching hospitals, and such pharmaceutical companies as Pfizer, Bausch & Lomb, Allergan, Alcon and Genentech.

Presentations at this year’s meeting included a number of talks on regulating IOP in glaucomatous eyes, a potential role for cannabinoids in glaucoma medicine, intravitreal use of triamcinolone in the treatment of macular oedema and a range of therapeutic treatments for glaucoma.

For instance, a session on the retina looked at the role of a variety of endogenous and therapeutic molecules on the survival of retinal ganglion cells, a critical issue in the pathophysiology of glaucoma. Another session looked at potential therapeutic targets for treating dry eye.

AOPT has the potential to become an exciting organisation at the confluence of academic and industry ophthalmic research. AOPT holds its scientific meetings only once every two years so if you missed the recent conference you will have plenty of time to prepare for the 8th AOPT Scientific meeting in 2007. For now, however, watch this space.

“The best response in terms of gain in visual acuity after the intravitreal injection of triamcinolone acetonide was found in eyes with intraretinal oedematous diseases.”

In terms of side effects, Dr. Jonas was cautious. “The complications of intravitreal triamcinolone therapy include secondary ocular hypertension in about 40% of the eyes injected, cataractogenesis, post-operative infectious and non-infectious endophthalmitis, and pseudo-endophthalmitis,” he reported.

However, previous studies have shown that ocular hypertension occurring as a side effect of triamcinolone injection could be treated by topical antihypertensive medication without the development of glaucomatous optic nerve damage.

The se of the corticosteroid drug does not appear to be a contraindication for other intraocular surgeries such as cataract surgery, Dr. Jonas added. He showed that data proving that cataract surgery performed a number of months after the injection of triamcinolone acetonide does not cause any significant rise in reported complications.

According to Dr. Jonas’ study triamcinolone has now been applied to over 550 patients with various diseases and follow-up analysis has not yet observed any side effects attributable to the dosage of 20 mg used.

Dr. Jonas also remarked that the most significant aspect to the data was that injecting as little as 20mg triamcinolone in the eye can have real therapeutic benefit in patients with macular oedema. Dr. Jonas suggested that although still an experimental procedure, it would appear from current studies that treatment with triamcinolone may prove both highly feasible and cost effective as a viable treatment option.