

Intravitreal triamcinolone yields optimum cataract surgery outcomes in uveitis patients

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in London**

INTRAVITREAL triamcinolone acetonide applied at the end of cataract surgery in patients with posterior uveitis produces outcomes similar to cataract surgery in patients without uveitis, concludes a study conducted at Moorfields Eye Hospital in London

In the prospective study, 17 cataract patients with posterior uveitis received a pars plana injection of 4.0 mg of intravitreal triamcinolone acetonide intra-operatively after phacoemulsification and IOL implantation, said Narciss Okhravi FRCOphth PhD at the Moorfields Bicentenary Scientific Meeting.

The patients in the study had a mean age of 54 years (range: 33-67 years) and a median preoperative visual acuity of 6/36. At one day and one week post-operatively, median visual acuity was 6/12. At one and three months median visual acuity was 6/9, ranging from 6/6 to 6/24 at three months, said Dr Okhravi, adding:

"We suddenly find ourselves seeing visual acuity results with the rapidity that we would normally see in non-uveitic patients."

Furthermore, patients in the study had no macular oedema within the first four months of follow-up. Typically, at least 20% of cataract patients with posterior uveitis experience macular oedema following surgery. On the other hand, three patients did develop macular oedema, the earliest at 19 weeks, after the intravitreal glucocorticoid ceased to have an effect. One patient developed severe post-operative inflammation but no cases of sterile endophthalmitis occurred.

In order to reduce uveitic inflammation preoperatively, these patients would normally have received either prophylactic oral

steroids, at 0.5mg/kg prednisolone daily for two weeks prior to surgery or 500 – 1000mg intravenous methyl-prednisolone on the day of surgery. Instead they were given intravitreal triamcinolone at the time of cataract surgery. Patients welcome it because they want to avoid the side effects from systemic steroids, said Dr Okhravi.

No injection-related complications

There were no complications related to the intravitreal triamcinolone acetonide injection at the end of surgery. Cataract surgery is difficult in patients with posterior uveitis. It risks both exacerbating the underlying condition and inducing macular oedema, but both these problems were controlled in Dr Okhravi's study.

Intraocular pressure rose to 30 mmHg or more in two patients, but these cases responded well to topical hypotensive medications. Both patients were off all such treatment at three months.

A capsule rupture was the only surgical complication. Additional surgical procedures included iris hooks in three patients. One case required iris hooks and vision blue, three cases required iris hooks and corneal sutures, and one other patient required corneal sutures alone.

The study compared favourably with a previous study at the same centre, which used systemic steroids postoperatively in uveitis patients undergoing cataract surgery. In that study, only 53% of patients with posterior disease achieved a visual acuity of 6/12 or better at two-day follow-up, compared with this current study where 82% of the patients achieved 6/12 at day one.

Intravitreal triamcinolone

acetonide is already used in the management of uveitic cystoid macular oedema, diabetic macular oedema, central retinal vein occlusion, branch retinal vein occlusion and sub-retinal neovascularisation.

Effective in most refractory

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uveitis patients

In a separate presentation, Professor Susan Lightman MD PhD, also at Moorfields, told the meeting that the intravitreal glucocorticoid is so potent that virtually no uveitis patient can now be classed as untreatable until it has been tried. However, she also warned that the treatment can induce a large increase in IOP in some patients and is contraindicated in those in whom IOP increases in response to steroids given to the eye.

In a retrospective study involving 54 refractory patients from a cohort of over 200 who received intravitreal triamcinolone acetonide for uveitis at Moorfields, the mean improvement in visual acuity was at least two Snellen lines, which patients' reached after a mean of four weeks.

Improvement in visual acuity was greater for patients less than 60

years old and if the duration of cystoid macular oedema (CMO) before treatment with intravitreal triamcinolone acetonide was less than or equal to 12 months and, Dr Lightman told the meeting.

In 55% of patients treated with an oral steroid and/or a second line immunosuppressive agent before receiving the intravitreal glucocorticoid, the dosage could be reduced or at least one medication stopped altogether.

"This is the most important result to my mind," said Dr Lightman.

Six eyes developed cataract. Four cases in younger patients were classified as mild, while two eyes of older patients developed more significant cataract after the intravitreal treatment. The mean duration between treatment and recurrence of CMO was 13.5 weeks, ranging from four to 28 weeks.

IOP increase easily managed

IOP was a problem, with a mean increase of 10 mmHg and 43% experiencing a increase of more than 10 mmHg. Initial detection of IOP rise of more than 5 mmHg occurred in three to seven weeks. The mean duration to maximal IOP was six weeks. In 51% of the cases, patients were treated with anti-glaucoma medications and responded well. Mean duration of treatment was 17 weeks.

Dr Lightman said she treated the elevated IOP with topical beta-blockers and prostaglandin analogues, and uses oral Diamox when these are not sufficient. She emphasised that while clinicians should be concerned about the raised IOP, in most cases it is easily managed with topical hypotensive medications. She said it is essential to monitor patients' IOP on a weekly basis for the first six weeks post injection.

"It is easy to manage raised IOP

in these patients. You have to give them everything but, out of the 200 patients we've treated to date, only one needed a trabeculectomy," said Dr Lightman.

Dr Lightman noted that, in the past, refractory uveitis patients were often judged to be beyond treatment because of a permanent breakdown of the blood retinal barrier.

"All that has changed with intravitreal triamcinolone acetonide because when you put the steroid in you get patients vision to improve from 6/60 to 6/6 and the reason this works, when other drugs do not, is probably a drug delivery and dose effect.

You're actually getting the steroid in a high enough dose to have an effect on the inflammatory process where it's needed," Dr Lightman said.

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