



Marko Hawlina

Intracameral triamcinolone provides good control postoperative inflammation in uveitic eyes

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in Berlin

A SINGLE intracameral injection of triamcinolone acetonide can safely and effectively control postoperative inflammation in uveitic eyes that have undergone cataract surgery, according to Marko Hawlina MD, PhD, University Eye Hospital, Ljubljana, Slovenia, with co-authors Nataša Vidovic-Valentinčič, MD, Petra Schollmayer, MD and Aleksandra Kraut, MD.

In a study involving 12 cataract patients with uveitis of different aetiologies who underwent intracameral injection of triamcinolone at the end of phacoemulsification, all eyes remained quiet throughout the early postoperative period, and there were no pressure spikes and no toxic effects, he reported.

The uveitic conditions in the patients' eyes included two cases each of sarcoidosis panuveitis, TBC panuveitis, and idiopathic panuveitis. There was also one case each of herpetic kerato-uveitis, anterior uveitis with epidermolysis bullosa, and Fuchs' cyclitis/glaucoma. There were three cases of idiopathic anterior uveitis.

All eyes in the study underwent intracameral injection of triamcinolone at the conclusion of phaco-emulsification and implantation of an AcrySof IOL (Alcon). Five patients also underwent systemic administration of 0.5 mg/kg methyl prednisolone, and seven patients received no systemic treatment.

Dr Hawlina divided the patients in the study into two dosage groups. One group received a 2.0mg (0.05ml) dosage of triamcinolone and the other group received a 1.0mg (0.025ml) dosage, resuspended in original volume of BSS. The procedures were performed using topical and intracameral anaesthesia. Additional procedures included synechiolysis in 12 cases, iris stretching in 10 cases, peeling of the fibrous rim of the iris in three cases. In addition, iris retractors were used in two cases and intracapsular tension rings were used in three.

"Cataract surgery in eyes with uveitic conditions is more traumatic because it requires more manipulation of the iris. The intraoperative trauma sets in motion an arachidonic acid cascade and increases production of prostaglandins and leukotrienes. This can in turn result in inflammation, fibrin formation, miosis, secondary synechiae and cystoid macular oedema," Dr Hawlina said.

Eyes quiet on first day

In both dosage groups, all eyes were quiet on the first postoperative day and there was a mean cell count of 1+ cells and

no fibrin formation in the anterior chamber. Triamcinolone had largely cleared from the anterior chamber on the first postoperative day and had disappeared completely within one week, in the 1.0mg dosage group, and within four weeks, in the 2.0mg dosage group. There were some cases with corneal deposits of triamcinolone in the 2.0mg group on the first postoperative day.

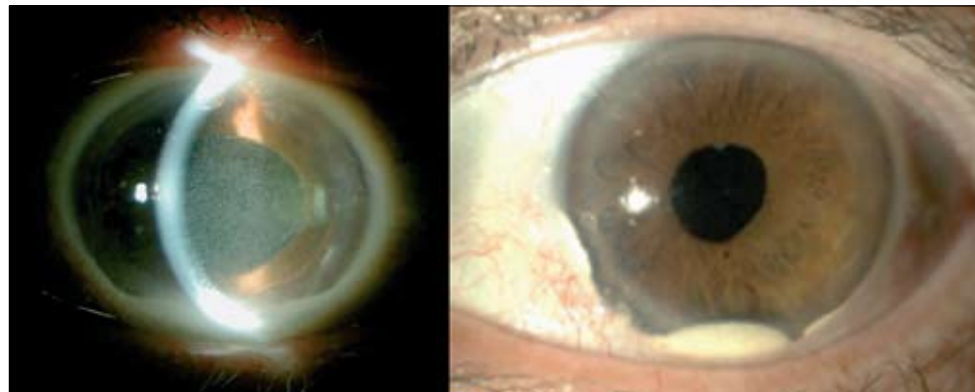
In addition those that received the anti-inflammatory agent as monotherapy remained as quiet throughout the early postoperative period as those that received the agent in addition to systemic administration of methyl prednisolone.

Dr Hawlina noted that cataract surgery in uveitic eyes using steroids will generally produce good results. However, a large proportion of patients have inflammation-related complications later on. He noted that in a study he conducted previously in which he followed a population of uveitis patients for five years after cataract surgery, around 10 per cent developed cystoid macular oedema and around 10 per cent developed secondary synechiae.

The conventional prophylaxis against postoperative inflammation in uveitic eyes 0.5-1mg/kg oral methyl prednisone to the baseline treatment five days before surgery and then tapering the dosage to baseline levels during the first three postoperative days. However, there are now several published studies showing that triamcinolone may achieve a superior result.

In one study, a single intravitreal injection of 4.0mg of triamcinolone provided a more effective prophylaxis against reactivation of inflammation and cystoids macular oedema than oral steroids and there were no local or systemic side effects from the agent (*Dada et al, JCRS 2007;33:1613-8*).

In another study, the same dosage of triamcinolone administered intracamerally resulted in less postoperative fibrin formation, cystoids macular



Triamcinolone crystals suspended in anterior chamber with larger dose used (2mg TA = 0.05ml) immediately after the operation (left) and first postoperative day (right). No uncontrollable pressure spikes were noted with the highest of 28 mmHg



Suspended triamcinolone in anterior chamber and in lower portion of angle (1mg TA = 0.025ml) one hour after the operation (left) and first postoperative day (right) in an eye with herpetic keratouveitis

oedema and hypotony than occurred with intravenous or oral steroids in cataract patients with juvenile idiopathic arthritis and uveitis (*Li et al, JCRS 2006 ;32(9):1535-9*).

"From our study it appears that a single intracameral injection of 0.02ml

triamcinolone acetonide is sufficient to control postoperative inflammation in the immediate postoperative period in cases of uveitis," Dr Hawlina added.

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Courtesy of Marko Hawlina MD, PhD

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