

Evaluation of anterior chamber inflammation

Dear Sir,

We read the article "comparison of intracameral dexamethasone and intracameral triamcinolone acetonide injection at the end of phacoemulsification surgery" by Gungor *et al.* With a great interest.^[1] The authors aimed to compare the results of intracameral dexamethasone and intracameral triamcinolone acetonide injection in patients that underwent cataract surgery with phacoemulsification. And they concluded that these two treatment modalities were similarly effective in controlling postoperative inflammation following phacoemulsification. However, the intraocular pressures (IOPs) on postoperative 1st day were higher in patients receiving intracameral triamcinolone acetonide. Therefore using intracameral dexamethasone seemed to be a better alternative to apply at the end of surgery to suppress the inflammation during the first 24 h. We congratulate the authors for their lightening study about an actual subject and would like to make some contributions and criticism about study.

The authors used the slit lamp technique to evaluate the anterior chamber inflammation. The thickness and height of the slit light were 0.5 mm × 8 mm. A standardization of grading anterior chamber cell and flare level is important for reporting clinical data and scientific communication. In literature there are commonly used a few grading methods such as scale of Hogan *et al.* and scale of Standardization of Uveitis Nomenclature working group.^[2] Measures of the slit light was 1 mm × 1 mm in both of these scales. Only count of the cells in each grade was a little bit different from each other. The measures of the slit light used in this study were different from these two accepted scale and this may change the results. On the other hand, slit lamp technique is a subjective method and has some limitations. If anterior chamber is flue due to reasons other than cell and flare it will be very difficult to determine the cell count and flare level correctly. Hence, it can be much more difficult, especially in a triamcinolone acetonide injected anterior chamber.

Laser flare/cell meter is an alternative quantitative method to measure intraocular inflammation and has been reported to be superior to slit lamp flare and slit lamp cells to assess and monitor anterior chamber inflammation.^[3] On the other hand, this measurement method does not look suitable for triamcinolone acetonide injected anterior chambers. Because this technique measures all particles in aqueous containing triamcinolone acetonide crystals. Another way of evaluating anterior chamber inflammation is measuring the level of inflammatory mediators such as prostaglandin E2, tumor necrosis factor, nitric oxide, interleukin-8 (IL-8), IL-9, IL-10, IL-12, interferon gamma (IFN- α), IFN- γ in aqueous sample. This alternative way of detecting anterior chamber inflammation could be a better choice in triamcinolone acetonide injected patients.^[4]

Intraocular pressure is a dynamic parameter with a circadian rhythm and has fluctuations. It's commonly measured higher in night time (2–4 a.m.) and lesser in day time (2–4 p.m.). The average IOP difference between night time and day time is 4–5 mmHg.^[5] In this study, the authors did not inform when IOP measurements were performed. Hence, this may change the results also.

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