

## **Intereye difference in exudative age-related macular degeneration with minimally classic or occult subfoveal neovascularization after unilateral intravitreal injection of triamcinolone acetonide.**

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**PURPOSE:** To report on visual outcome after intravitreal injection of triamcinolone acetonide for exudative age-related macular degeneration.

**DESIGN:** Interventional comparative non-randomized clinical trial.

**METHODS: SETTING:** Institutional. **PATIENTS:** Twenty consecutive patients with bilateral exudative age-related macular degeneration with minimally classic or occult subfoveal neovascularisation.

**INTERVENTIONS:** Unilateral intravitreal injection of about 20 mg triamcinolone acetonide into the eye (study group) more severely affected or showing more pronounced progression of the disease. Mean follow-up was 13.5 +/- 4.1 months. **MAIN OUTCOME MEASURES:**

Visual acuity. **RESULTS:** In the study group, visual acuity increased significantly ( $P < 0.001$ ) from 0.96 +/- 0.32 logMar to a mean maximum of 0.76 +/- 0.30 logMar during follow-up. An increase in best visual acuity during follow-up was found in 18 (90%) eyes. In 11 (55%) eyes and 7 (35%) eyes, respectively, best visual acuity increased by at least two Snellen lines and three Snellen lines, respectively. In the control group, visual acuity at baseline and the highest visual acuity measurements during follow-up did not vary significantly ( $P = 0.90$ ).

Comparing study group and control group, visual acuity gain was significantly ( $P = 0.003$ ) higher in the study group. Correspondingly, the number of eyes with an increase in visual acuity ( $P = 0.002$ ) and with an increase in visual acuity higher > or = 3 lines compared to a loss of > or = 3 lines was significantly ( $P = 0.027$ ) higher in the study group.

**CONCLUSIONS:** Intravitreal triamcinolone acetonide may temporarily

increase visual acuity in eyes with exudative age-related macular degeneration.

Publication Types:

\* Clinical Trial

Br J Ophthalmol. 2004 Dec;88(12):1557-62. [Related Articles, Links](#)

## **Factors influencing visual acuity after intravitreal triamcinolone acetonide as treatment of exudative age related macular degeneration.**

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AIM: To evaluate factors influencing change in visual acuity (VA) after intravitreal injection of triamcinolone acetonide as treatment of exudative age related macular degeneration (AMD). METHODS: This prospective, interventional, comparative non-randomised clinical case series study included 94 patients (99 eyes) showing progressive exudative AMD with occult (n = 61 eyes), minimally classic (n = 18), predominantly classic (n = 1), or totally classic (n = 8) subfoveal neovascularisation. Mean follow up was 8.5 (SD 4.7) months (median, 7.3 months; range 3.1-24.5 months). All patients received an intravitreal injection of 20-25 mg of triamcinolone acetonide. RESULTS: An increase in best VA of at least one line on the Snellen charts was found in 63 (63.1%) eyes. Correspondingly, mean VA increased significantly ( $p < 0.001$ ) from 0.17 (SD 0.13) to 0.22 (SD 0.17) after the injection. Postoperative increase in VA was significantly ( $p < 0.001$ ) and negatively correlated with preoperative VA (correlation coefficient, -0.49). Gain in visual acuity was significantly ( $p = 0.009$ ) higher if preoperative visual acuity was less than 0.08 (gain: 3.2 (SD 2.9) Snellen lines) than if preoperative VA ranged between 0.08 and 0.20 (gain: 1.2 (SD 2.2) Snellen lines). Change in VA was significantly ( $p = 0.016$ ) less if preoperative VA was higher than 0.20 (change: -0.8 (SD 3.4) Snellen lines). Maximal gain in VA was significantly ( $p = 0.035$ ) larger in eyes with retinal pigment epithelium detachment than in eyes with minimally classic subfoveal neovascularisation. This was statistically independent

of age ( $p = 0.99$ ), refractive error ( $p = 0.88$ ), sex ( $p = 0.92$ ), and duration of follow up ( $p = 0.46$ ). **CONCLUSIONS:** Gain in VA after intravitreal injection of 20-25 mg of triamcinolone acetonide is significantly and negatively correlated with preoperative VA. It is significantly larger in eyes with retinal pigment epithelium detachment than in eyes with minimally classic subfoveal neovascularisation.

Arch Ophthalmol. 2004 Feb;122(2):218-22. [Related Articles, Links](#)

## **Intravitreal reinjection of triamcinolone for exudative age-related macular degeneration.**

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**OBJECTIVE:** To evaluate the outcome of repeated intravitreal injections of triamcinolone acetonide for the treatment of exudative age-related macular degeneration. **METHODS:** This prospective, comparative nonrandomized clinical interventional study included 13 patients with progressive exudative age-related macular degeneration with occult, or predominantly occult, subfoveal neovascularization. All patients had shown an increase or stabilization of visual acuity after a first intravitreal injection of 25 mg of triamcinolone acetonide. They received a second intravitreal injection of 25 mg of triamcinolone acetonide 3.1 to 18 months after the first injection. Mean  $\pm$  SD follow-up time after the second injection was  $5.2 \pm 3.6$  months (median, 5.3 months). A control group included 24 patients with exudative age-related macular degeneration who did not receive treatment for their maculopathy. The main outcome measures were visual acuity and intraocular pressure. **RESULTS:** In the study group, mean  $\pm$  SD visual acuity increased significantly ( $P = .005$  and  $P = .003$ , respectively) from  $0.17 \pm 0.11$  to  $0.32 \pm 0.26$  and from  $0.15 \pm 0.14$  to  $0.23 \pm 0.19$ , respectively, after the first and second injections. An increase in visual acuity was found for 10 patients (77%) after the first and second injections. In the control group, visual acuity did not vary significantly during follow-up ( $P = .81$ ). The difference in change in visual acuity between the study group and control group was significant ( $P = .01$  [Snellen lines] and  $P = .05$

[logMAR units]). The peak in visual acuity and, in a chronologically parallel manner, the peak in intraocular pressure elevation occurred 2 to 5 months after each injection. **CONCLUSIONS:** Repeated intravitreal injection of 25 mg of triamcinolone acetonide may lead to an increase in visual acuity in patients with exudative age-related macular degeneration, with the peak in visual acuity and intraocular pressure elevation occurring about 2 to 5 months after each injection.

Br J Ophthalmol. 2003 Apr;87(4):462-8.

[Related Articles, Links](#)

## **Intravitreal triamcinolone acetonide for exudative age related macular degeneration.**

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**AIM:** To evaluate the effect of intravitreal triamcinolone acetonide on the visual acuity of patients with exudative age related macular degeneration, to assess the duration of a possible effect, and to evaluate clinical side effects of the treatment. **METHODS:** The study included 67 patients (71 eyes) who presented with exudative age related macular degeneration of predominantly or total occult type (n = 68) or classic type (n = 3), and who received once, or repeatedly, an intravitreal injection of 25 mg of crystalline triamcinolone acetonide. Mean follow up time was 7.46 (SD 3.54) months (range 3.1-19.57 months).

**RESULTS:** Visual acuity increased significantly (p <0.001) from 0.16 (0.11) to a mean maximum of 0.23 (0.17). Postoperative visual acuity was highest 1-3 months after the injection. 47 (66.2%) eyes gained in maximal visual acuity and 11 (15.5%) eyes lost in visual acuity.

Intraocular pressure increased significantly (p <0.001) from 15.1 (3.1) mm Hg at baseline to a maximal value of 23.0 (8.25) mm Hg. At the end of follow up, intraocular pressure again decreased significantly (p<0.001) to 16.8 (4.9) mm Hg. No cases of postoperative infectious endophthalmitis, rhegmatogenous retinal detachment, or proliferative vitreoretinopathy occurred. Owing to a decrease in visual acuity after an initial increase, six patients received a second intravitreal triamcinolone

acetamide injection after which visual acuity increased again in three eyes. **CONCLUSIONS:** Intravitreal injection of 25 mg of crystalline triamcinolone acetamide merits further study for the treatment of exudative age related macular degeneration.

Eur J Ophthalmol. 2005 May-Jun;15(3):415-9. [Related Articles, Links](#)

### **Intravitreal triamcinolone in the treatment of serous pigment epithelial detachment and occult choroidal neovascularization secondary to age-related macular degeneration.**

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**PURPOSE:** To report two cases of occult choroidal neovascularization (CNV) and serous pigment epithelial detachment (PED) treated with intravitreal triamcinolone (IVT) injections. **METHODS:** Interventional case reports. **RESULTS:** Both patients showed an increase in visual acuity and a complete flattening of the PED at 10 months (Case 1) and 4 months (Case 2) after IVT injections. No complications or adverse effects are reported. **CONCLUSIONS:** Future studies should be designed to investigate if IVT can effectively influence the clinical and functional outcome of eyes with serous PED and occult CNV secondary to age-related macular degeneration, for which at the moment no treatment has been shown to be effective.

Retina. 2000;20(3):244-50. [Related Articles, Links](#)

### **Intravitreal triamcinolone acetamide in exudative age-related macular degeneration.**

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**PURPOSE:** To examine the effects of intravitreal injection of 4.0 mg triamcinolone acetamide on the visual and clinical course of exudative age-related macular degeneration. **METHODS:** A randomized clinical trial of a single injection of triamcinolone acetamide into the vitreous

cavity of experimental eyes at baseline versus observation of untreated subjects was performed in 27 patients followed up for 6 months. Inclusion criteria included exudative age-related macular degeneration with subfoveal or occult choroidal neovascularization, and visual acuity between 20/40 and 20/400. Examination, acuity assessment, fundus photography, and fluorescein angiography were performed at baseline and at 3 and 6 months after enrollment. LogMAR visual acuity was compared between groups by a repeated measures analysis of variance model. Masked assessment of photographic studies was performed and groups were compared with Fisher's exact test. RESULTS: Visual acuity was significantly better in the treated group compared with control subjects at 3 and 6 months ( $P < 0.005$ ). Fundus photography and angiography were more likely to show stability or improvement at 3 and 6 months in the treated group ( $P = 0.05$ ). Intraocular pressure elevation was seen in 25% of treated patients, but was controlled with topical medications. Progression of cataract was more frequently seen in the treated group. CONCLUSIONS: Intravitreal triamcinolone acetonide may provide short-term improvement in visual acuity and fundus findings in exudative macular degeneration. These findings must be considered preliminary and should be followed by multicenter, masked, placebo-controlled trials with long-term follow-up.