TA/Steroids for Inhibition of Progression of DR

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Objective: Compare effect of intravitreal triamcinolone acetonide with focal/grid photocoagulation on progression of diabetic retinopathy.

Methods: Exploratory analysis performed on subjects with diabetic macular edema randomly assigned to laser or intravitreal triamcinolone acetonide (1mg or 4mg). Fundus photographs were obtained at baseline, 1, 2 and 3 years. Main Outcome Measures: Progression to proliferative diabetic retinopathy (PDR) or worsening of 2 or more severity levels on reading center masked assessment of 7-field fundus photographs, plus additional eyes that received panretinal photocoagulation (PRP) or had a vitreous hemorrhage.

Results: Cumulative probability of progression of retinopathy at 2 years was 31% (laser), 29% (1mg), and 21% (4mg), (compared with laser group, P=0.65 in 1mg group, and 0.005 in 4mg group). These differences appeared sustained at 3 years.

Conclusions: Intravitreal triamcinolone acetonide (4 mg) appeared to reduce the risk of progression of diabetic retinopathy. Given the exploratory nature of this analysis, and since intravitreal triamcinolone has cataract and glaucoma side effects, use of this treatment just to reduce the rates of progression of PDR or worsening of the level of diabetic retinopathy does not seem warranted at this time.