

Randomized Trial of Intravitreal Corticosteroids

The preparation being used in the trial is specifically formulated for injection.

BY CONNI BERGMANN KOURY, EDITOR-IN-CHIEF

The Diabetic Retinopathy Clinical Research Network – DRCR.net – is a National Eye Institute-sponsored cooperative agreement. It seeks to develop a collaborative network that facilitates multicenter clinical research on diabetic retinopathy, diabetic macular edema (DME) and associated conditions.

Speaking at the American Academy of Ophthalmology's Retina Subspecialty Day 2004, Lloyd Paul Aiello, MD, PhD, said that the DRCR.net supports multicenter clinical research initiatives through the identification of trial needs, design of trial protocols, standardization of key study procedures, and the implementation of clinical trials. "We have more than 100 sites involved, including 40 states and more than 400 investigators," said Dr. Aiello, associate professor of ophthalmology at Harvard Medical School.

NEW PROTOCOL

A new protocol initiative, called "Randomized Trial Comparing Intravitreal Triamcinolone Acetonide and Laser Photocoagulation for Diabetic Macular Edema," is under way. Dr. Aiello explained the rationale for this randomized trial, saying that macular edema is a common cause of visual loss in patients with diabetes. "Although photocoagulation has been demonstrated to be beneficial in reducing further vision loss in 50% of patients, vision that has already been decreased by macular edema usually does not improve," Dr. Aiello said.

While short-term results of treating DME with intravitreal corticosteroids appear promising, a controlled study with longer follow-up is needed. Triamcinolone is currently being used for intravitreal injection because there is no preservative-free preparation available for intraocular use, Dr. Aiello said. "Because of the potential toxicity from the [triamcinolone] vehicle, development of a corticosteroid specifically for intraocular use would be highly desirable."

Several thousand patients have received intravitreal corticosteroids for DME, despite the lack of evidence regarding long-term efficacy. A randomized trial is needed.

"Since the risks and benefits of intravitreal corticos-

teroids as compared with laser photocoagulation are not known, randomization to either laser or intravitreal corticosteroids is not only scientifically important but also unequivocally ethical," Dr. Aiello said. "Because of concerns about the potential risks, patients in the trial will receive intravitreal corticosteroids in only one eye."

The triamcinolone acetonide preparation used in this study is specifically formulated for intravitreal injection and is provided by Allergan, formulated to DRCR.net guidelines. It is preservative free, endotoxin free and pH balanced, Dr. Aiello said. In the trial, 1-mg and 4-mg doses delivered in half of the usual volume required for Kenalog will be evaluated.

EVALUATE BENEFIT, SAFETY

The study objectives are to determine whether intravitreal triamcinolone injections at doses of 1 mg and 4 mg produce greater benefit with an acceptable safety profile than macular laser photocoagulation in the treatment of DME. The randomized, multicenter trial will enroll patients aged 18 years with diabetes and the follow-up will be 3 years.

The researchers are seeking a study size of 795 patients. The main efficacy outcomes are visual acuity and retinal thickening, and the main safety outcomes are intraocular pressure elevation/glaucoma, cataract, endophthalmitis and retinal detachment.

"Patients are currently being recruited and a limited number of patients have received the injection," Dr. Aiello said. There have been no complications in this short-term follow-up; further results are forthcoming. ■

Lloyd P. Aiello, MD, PhD, is associate professor of ophthalmology at Harvard Medical School and is associate director of the Beetham Eye Institute and head of eye research at the Joslin Diabetes Center. Dr. Aiello has a financial interest in Allergan (Irvine, Calif). He can be reached at 617-732-2427.



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